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Karur
Salem
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Tiruppur
Ootacamund
Mettupalayam
Coonoor

Editor's Preface

WITH this volume the Wenner-Gren Foundation inaugurates a new series of publications, intended to increase its service to the anthropological profession with which it has become affiliated. The purpose of the present work is to report on the major accomplishments and trends during 1952–1954 in aspects of the field of anthropology.

The *Yearbook of Anthropology* began as the idea of the Foundation's President, Dr. Paul Fejos. The importance of the undertaking was fully appreciated, for it had long been Foundation policy to work as closely as possible with and for the anthropological profession. The Foundation's experience had come from eleven years of publishing its monograph series, *Viking Fund Publications in Anthropology;* from eight years of its *Yearbook of Physical Anthropology;* and from the three recent publications resulting from its 1952 International Symposium on Anthropology: *Anthropology Today; An Appraisal of Anthropology Today;* and *International Directory of Anthropological Institutions.*

The idea of a yearbook seems both timely and of great value. The discipline of anthropology in recent years has grown spectacularly in its influence and in its numbers of students and professional workers. We feel that it is most opportune to bring into existence a publication devoted solely to summarizing recent scholarly achievements through articles of wide scope accompanied by extensive, selected bibliographies. There is not in existence such an authoritative and up-to-date reference volume for day-to-day use. With the establishment of this Yearbook, anthropology joins the company of such other fields as law, education, psychology, etc., which have their own yearbook series.

Our Intended Audiences

Those preparing any yearbook must assume a variety of audiences. While the services of a large number of specialists have been utilized to insure that such a pioneering effort achieves a satisfactory order of merit, it has been necessary to keep in mind the threefold nature of the kinds of readers who would be referring to such a volume: other professional specialists in anthropology, the vast audience of the lay public, and the students and scholars in disciplines other than anthropology.

Ours is an age of specialists, and it is not surprising that anthropology, too, should have its specialists. We have our experts in radiocarbon dating and in ceramic typology and our specialists in anthropometry and linguistic analysis. We long have had anthropologists who have centered their attention on culture history and even on a single subject, such as kinship, relating to the organization of human groups. Further, we have those who specialize on a single phase of kinship or on single tribes or cultural groups whether in the American Southwest, Africa, or Melanesia. One has only to consult the catalogue of courses for any major university which has a department of anthropology and offers an advanced degree in the subject to see how far subdivision has gone.

To be sure, much of the credit for the progressive change in anthropology that has occurred in recent years rightfully belongs to the specialists who have influenced professional thought and practice in many ways. By focusing their efforts on a single aspect of the complex process of human existence, they have been

able to see problems long unnoticed and to effect changes sorely needed. Of course, the path of change has not always been straightforward. More than one proposal which was hailed as an epoch-making discovery and given immediate application—sometimes with more enthusiasm than critical judgment—subsequently has been found to be neither a discovery nor an improvement. It nevertheless is true that our specialists have made significant contributions to modern anthropology. The future holds the promise of even greater developments.

The layman's stereotype of an anthropologist as a scholar concerned only with skulls, weird customs, and potsherds reflects too simple a picture, for modern anthropologists assert that their discipline holds up a "mirror for man," and is, indeed, "the study of man." In a culture which places value on the widest possible diffusion of knowledge to the greatest number of people, the relationships between professional scholars and laymen is a fundamental problem in communication and education. To a much greater extent than is sometimes recognized, the contributions of anthropological research become significant only as they are understood and applied by individuals, whether for personal information and use or in their role as researchers or instructors. If teachers are able to see the total pattern of anthropology, while engaged in their specific tasks, they may better accelerate the pace of anthropological progress. It is hoped that by its summary of current achievements, the *Yearbook of Anthropology* will be a stimulus and encouragement to anthropological research and education.

Professional anthropologists, however, are not the only ones who have a vital interest in the principles and practices of the discipline. Just as the professional anthropologists have become increasingly aware of the contributions of other disciplines, so have the heads of schools and planners of curricula taken more and more interest in the contributions of anthropology. In the United States of America, for example, education traditionally has been a matter of public opinion. Boards of education, the bodies that decide local policy, are generally composed of laymen rather than professional educators. What is needed is an alert, informed public opinion that is sensitive to the implications of anthropological theories and that understands the goals toward which anthropologists are striving. Though public opinion tends to see immediate problems rather than more basic issues, the informed layman sometimes sees social and economic implications in anthropological research to which a research scholar may not be sensitive. Thus, thoughtful public opinion may serve to supplement professional judgment. It is hoped that the *Yearbook of Anthropology* will add to the understanding that public-spirited citizens have of anthropological problems.

This volume is intended also for a third group of readers: those, other than anthropologists, who are scientifically or professionally trained. These include the psychologist and the sociologist, the geneticist and the anatomist, the geologist and the ecologist, the legislator and the journalist, and others whose activities bring them into contact with anthropologists, their writings, and their theories. To our colleagues in related fields it is hoped that the *Yearbook of Anthropology* offers a means of deepening their insight into the problems confronting anthropologists today.

Organization and Use

Part One of the present volume introduces a "Guest Editorial," as a statement for anthropologists by a prominent scholar who has observed the field closely and is reporting on his observations and reflections. Part Two, "Man's Past," touches upon those anthropological subjects, methods, and theories, which have the

common element of considering man and his activities through the dimension of time. Part Three is devoted to some of the other theoretical interests in present-day anthropology not touched upon in Part Two. Part Four represents reports of newer efforts by some anthropologists to apply their knowledge and methods to problems in current affairs. Part Five, on Southwest Asia and Europe, is the first in an annual series of "Regional Round-Ups," comprised of articles reporting on the activities and accomplishments in various countries and regions of the world as seen and evaluated by a scholar from each of those particular countries or regions. Part Six contains "Reference Data," some of which will be cumulative and repetitive, as is usual in almanacs and handbooks. This is a section which is expected to expand in future years as additional data are received. Each Part of the volume is independent of all other Parts. The blocks of color on the "Table of Contents" that follows are intended to guide the reader quickly to the appropriate color-bands which mark the pages introducing the respective Parts.

As originally conceived, the Yearbook was to be as complete as possible a record of the accomplishments in anthropology during the immediately preceeding year, to include world-wide summaries on all aspects of the discipline as well as reports from all countries and regions of the world. It was discovered quickly that such a volume would have been very unwieldy in size and most inefficient to produce on an annual basis. Instead, we consciously adopted the procedure of cyclical coverage of anthropology—topically in alternate years, and regionally over a four-year period. For example, Part Two of the next volume will be entitled "Man's Present: Human Activities, Societal Functions, and Cultural Processes," and will consist of articles reporting on anthropological endeavors during 1952–1955, with emphasis on those aspects of the field concerned with the study of contemporary phenomena.

A major problem in the preparation of the first two-year sequence of Yearbooks was the selection of topics to be included. The master list of items treated in this present volume was prepared after prolonged research on the subject-matter content of many journals, monographs, and textbooks. The tentative master list was examined in turn by many anthropologists representing specialized fields, so that the present "Table of Contents" represents a consensus of informed opinion. While it was often disappointing to omit a given topic, the omission of relatively less urgent subjects was necessary in order to insure the adequate treatment of more significant problems. The selection of items was complicated further by the fact that modern anthropology deliberately does not attempt the study of an isolated body of subject matter. Thus, it was often difficult to decide where to draw outer boundaries. There are, for example, no fixed lines of demarcation between human biology and physical anthropology, between human geography and cultural anthropology, between ethnology and folklore, nor any ready means for determining when blood grouping remains solely a problem for genetics rather than a method of significance to anthropology.

Consequently, as in the nature of first attempts, we have neither striven for, nor make claims for, completeness. Future volumes will contain other topics, will change as the discipline of anthropology changes, and will be as flexible as the field of anthropology itself.

There is much that a yearbook of anthropology can offer. As a reference work, it should clarify the reader's difficulties without necessitating research in a large professional library. A yearbook also may be a useful guide for further professional reading. The many demands that are made on research scholars and professors often lead to the narrowing of reading interests. A teacher who is interested

in new trends within aspects of the field beyond his special interests may well begin his study by reading the appropriate articles in the Yearbook.

Our major interest has been to make possible a volume that would aid the student of anthropology, as well as teachers, research scholars, and other interested persons, to find clear and concise discussions of current developments and basic ideas and trends. A yearbook should answer a reader's immediate needs, but more frequently it should stimulate further questioning and additional reading. The concise articles each prepared by a specialist in the subject are intended to meet immediate needs for information; the appended, carefully selected reference lists indicate sources for further study.

A Request

This volume, as we have said, is the first in a series of a new publication, *Yearbook of Anthropology*. We wish to emphasize the experimental nature of the Yearbook, both as a publication series, as well as in the content, organization, and means of presentation in any particular volume. The present format establishes no precedents that must be followed rigidly. We know that the very next volume will not duplicate the present one. The articles will be on different topics and by a wholly different group of invited contributors.

We recognize the necessity for discipline and discrimination that accompanies the responsibility of editorship. We wish never to print anything by way of routine, or because we have a schedule to meet and pages to fill. Thus it is that we feel that the Yearbook series, if it is to meet the needs of its intended audiences, must be receptive and adaptable to expressions of need. For example, the active participation of members of the anthropological profession is required not only as contributing authors but also as constructive critics.

Our request, which carries with it our earnest hope, is that our readers send to us any and all imaginative ideas in order that future issues of the Yearbook may be improved in quality and usefulness. We both desire and encourage such responses from the recipients and readers of this volume.

Acknowledgments

On our dedicatory page preceding this preface we offered this volume to Dr. Axel Leonard Wenner-Gren, whose insight and wisdom in founding The Viking Fund, Inc., fourteen years ago made possible the organization which has come to be the Wenner-Gren Foundation for Anthropological Research. We are indebted to the Foundation's Board of Directors for their faith in authorizing this Foundation-sponsored project and providing the necessary funds in its support.

Those members of the Foundation's staff who merit special recognition are Mrs. Sylvia Corwin and Mrs. Katharine Klein who generously lent their skills in language; Miss Nancy Silbowitz, for her patient efforts to complete bibliographies; and Miss Susan Davis for her work on the reference data. We were also fortunate to have the aid of the late Dr. Pierre Teilhard de Chardin who so magnanimously gave of his time. A great deal of this volume "belongs" to Mrs. Jean S. Stewart, who, from the inception of planning, has collaborated as secretary and editorial assistant. Her artistic talents produced the title-page layout, the lettering, and the choice of colors used throughout the volume. Her eye for details and spirit of steadfast and enthusiastic cooperation over long hours have provided a keen assist to all phases of the editorial process.

The human figures on the title-page, used also on the Foundation's seal, are derived from the design by Miguel Covarrubias for the Viking Fund Medal. We are grateful to the American Geographical Society, New York, for permission to reproduce as end-papers a portion of their map, "The World," printed by A. Hoen & Co., Inc., Baltimore. We acknowledge, too, the considerable assistance of Mr. Thomas Garner and the staff of The Lord Baltimore Press.

Any volume as comprehensive as this one must be the product of many minds. It is the contributing authors who give the volume the merit it has; in anticipation of the aid that the *Yearbook of Anthropology* will give to readers, we thank the authors publically for their assistance. Since there are more than forty contributors, space limitations prohibit our enumerating the ways in which each of them has made this work possible. The names which appear at the head of each article are those of the scholar or scholars who prepared it, but we have found no convenient way of indicating the names of our many other contributors and advisers who assisted in formulating the scope and content of the Yearbook. That our contributors come from most of the major institutions of higher learning that conduct research and education in anthropology in the United States, from foreign countries as well, and also from fields other than anthropology, indicates that the progress of the discipline depends on no small group of people or institutions. The willing cooperation of the many contributors to this volume has been possible largely because of their faith in the enduring achievements of anthropology and their hopes for its future. It is in their name that the Wenner-Gren Foundation offers the *Yearbook of Anthropology* to their professional colleagues and to the growing number of laymen who appreciate their stake in anthropology today—that the "study of man" includes themselves.

William L. Thomas, Jr.

New York, N.Y.
1 July 1955

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Part One

Guest Editorial

Part One

Guest Editorial

ABOUT THE AUTHOR

Julian S. Huxley, M.A., D.Sc., F.R.S., has achieved fame as a biologist and a teacher, as director of many learned societies, as a governmental advisor, and through his contributions to the cause of science as a writer. It is from his vantage point as an eminent biologist become scientist-philosopher that he was invited to contribute this guest editorial.

He was born in London on June 22, 1887, the second son of the late Leonard Huxley, grandson of T. H. Huxley, and great-grandson of Thomas Arnold. He was educated at Eton and Balliol College, Oxford, where he won the Newdigate Prize for verse. After World War I he was a Fellow of New College, Oxford, until 1925, when he was appointed Professor of Zoology in King's College, at the University of London. In 1946 he was made Executive Director of the Preparatory Commission of UNESCO, and in November 1946 was elected its first Director-General, a post at which he served until 1948. He is the recipient of many honorary degrees and awards, including the Huxley Memorial Lecture and Medal (1950) of the Royal Anthropological Institute of Great Britain and Ireland.

Dr. Huxley is the co-author of such volumes as: *Animal Biology, The Science of Life,* and *Elements of Experimental Embryology.* Among his books are: *Essays of a Biologist, Science and Social Needs, Man Stands Alone, Evolution: The Modern Synthesis, On Living in a Revolution, Man in the Modern World.* His most recent works include: *Evolution in Action,* 1953; *Ancient and Modern,* 1953; and, as editor, *Evolution as a Process,* 1954.

Evolution, Cultural and Biological

JULIAN S. HUXLEY

WHEN I was invited by the Wenner-Gren Foundation to prepare "a guest editorial on a subject of my choice," concerning my views on anthropology, I was naturally flattered, but also experienced considerable trepidation. Even if an evolutionary biologist had any views on anthropology, how could they be of any value to professional anthropologists? However, I reflected, an evolutionary biologist, if he should not aspire to views *on* anthropology, might be expected to have some view *of* anthropology in relation to the overall process of evolution. This, then, is what I shall attempt—a view of anthropology *sub specie evolutionis,* in the belief that the general concepts and principles derived from biology will prove to have illuminating applications in—or at least implications for—the more restricted and younger sister science of anthropology.

Let me at the outset disarm your natural suspicions by a comprehensive disclaimer. I do not believe that any purely biological concepts and principles can be immediately applied or directly transferred to anthropology. In fact I know they cannot; I also know that the various attempts which have been made in the past at such direct transference and application, have been misguided and have always resulted in confusion rather than clarification. The reason is simple: although the history of man is clearly part of a more general evolutionary process, its basis and mechanism is something *sui generis.* Man is a unique organism with unique properties, and there must be anthropological concepts and principles which are specific and restricted to man in their application. With this anticipatory disclaimer, let me proceed to a presentation of my argument.

In the last few decades, it has become clear that the whole of phenomenal reality is a single process, which properly may be called evolution. Further study has enabled us to give a general definition of evolution: evolution is a self-maintaining, self-transforming, and self-transcending process, directional in time and therefore irreversible, which in its course generates ever fresh novelty, greater variety, more complex organization, higher levels of awareness, and increasingly conscious mental activity.

Though the process of evolution is unitary, embracing the entire universe both in space and time, it is divisible into three very distinct sectors or phases, each with its own mechanism of self-transformation, its own characteristic tempo of change, and its own type of products. The earliest and also the largest is the inorganic or cosmological sector; the much restricted organic or biological sector arose as a later phase from the inorganic; and the still further restricted human or psycho-serial phase arose much later from the organic.

Here I shall be concerned only with the two later phases. The biological phase operates by the method of natural selection. This is an inevitable result of the basic capacity of living matter for self-reproduction—for multiplying itself by self-copying. However, the copying is not always exact, so that living matter is both self-reproduc-

ing and self-varying. The different self-reproducing variants will differ in their average chances of surviving and perpetuating their kind; and this automatically results in natural selection—which is merely a brief phrase to denote the differential survival and reproduction of variants.

In all organisms, the units of self-reproduction are the genes, which together constitute the gene-complex or genetic system, carried by the chromosomes. The primary units or quanta of variation are the mutations, or reproducible variations, in the genetic system—variations in number of chromosome-sets or chromosomes, in parts of chromosomes, or (the most important type) in single genes.

The evolutionary effectiveness of variation is much increased by the sexual process, for this enables mutations occurring in separate lines to be combined in a single strain: the variation we find in nature in sexually-reproducing animals and plants, though dependent originally on mutation, owes its actual extent to the recombination of mutants due to past mutations.

Since such extensive variation is itself of selective advantage, in enabling organisms to adjust themselves more quickly to changes in conditions and also to exploit new resources of the environment, the capacity for sexual exchange and the resultant recombining of variants must have been one of the earliest properties acquired by evolving life, and is in fact practiced by the immense majority of organisms, including at least some bacteria and even some viruses.

It can be calculated that even a very small selective advantage, down to half of one per cent and less, though its detection in nature would be impossible, and would need breeding experiments on a prodigious scale to establish in the laboratory, will be effective in producing evolutionary changes at the rates actually found to occur.

The evolutionary changes thus produced inevitably will be adaptive, in the sense that they will improve the adjustment of life to its environment, and at the same time the obverse of adjustment, namely the exploitation of the environment by life. During evolution, this two-faced improvement is manifested by a steady rise in the efficiency of performance of separate functions, such as muscular contraction, nervous conduction, digestion, sensory acuity and awareness, in their coordination and integration, and in the level of general organization attained.

The environment available to life is extremely varied. Accordingly one important kind of biological improvement consists in the better adjustment of life to this variety of conditions, and its exploitation of a greater variety of environmental resources. However, even with the aid of sexual recombination, living matter can only reproduce itself in the form of separate strains, between which no exchange of variation is possible. In the few non-sexual organisms, these "variation-tight" strains are single lines of descent. In sexual organisms the spread of variation is not so fully impeded, but is still restricted within the limits of groups capable of fertile interbreeding—in other words, separate species; each such "variation-tight" species is then a network of intercrossing lines of descent, but is biologically insulated from all others.

As a result of this limitation of genetic systems, improved adjustment to, and exploitation of, the variety of the environment is possible only through evolutionary divergence. This involves the radiation of living matter into a number of separate strains, incapable of sharing new variations, and each adjusted to one level of living, one way of life, one ecological niche, one facet of nature's multitudinous variety. To take an example, the weasel and stoat of Britain, though so alike as to be both grouped in the same genus *Mustela,* are two completely distinct species of placental mammal. The entire Class of placental mammals is undoubtedly descended from one original common stock. During some fifty or sixty million years, this single stock diverged or radiated into a number of Orders, of which Rodents, Bats, Primates, Cetaceans, Elephants, odd-toed and even-toed Ungulates, Insectivores, and Carnivores are the most familiar. The Carnivores in their turn underwent further divergent evolution, eventually radiating into a num-

ber of Families, such as seals, sea-lions, walruses, cats, dogs, bears, raccoons, civets and mustelids (weasels in the broad sense). Each family radiated further into a number of Genera, and those into a number of Species. The family Mustelidae thus produced various genera, such as *Martes* (martens), *Lutra* (otters), *Gulo* (gluttons), and *Mustela;* and the ancestral Mustela has produced many distinct species in different parts of the world, of which the European stoat and weasel, *Mustela erminea* and *M. nivalis,* are two.

The variety of distinct patterns of organization and levels of living arising by evolutionary divergence on the large scale is illustrated by the list of major groups or Phyla of organisms—Bacteria, Fungi, Algae, Mosses, Ferns, Flowering Plants, Protozoa, Sponges, Coelenterates, Flatworms, Roundworms, Annelid worms, Molluscs, Arthropods, Echinoderms, Vertebrates, each with its own peculiar type of organization, biologically incommensurable with all others, and in their totality reflecting the prodigious variety of the environment and environmental opportunity. At the other end of the scale, the degree to which living matter has been cut up into biologically separate units can be realized from the fact that the total number of distinct species or ultimate non-interbreeding groups now in existence (which can be only a small fraction—perhaps ten per cent at most—of the total number which has ever existed) is at least one and a quarter million, and that the Beetles, which are but one Order of one Class of one Phylum of one Kingdom, comprise over 300,000.

However, in addition to divergence, or adaptation to variety, evolution includes advance, or improvement in organization. Such biological improvement may be of several rather different kinds. It may consist in the specialization of a stock for a particular way of life, as in the classical example of the horse stock (Equidae) with its fifty-million-year specialization for rapid running, browsing, and then grazing; or to fit a particular ecological or adaptive niche, as in the protective cryptic colors and shapes of insects inhabiting green foliage. As we have just seen, it may consist in the divergent radiation of a primitive type into a number of specializations, leading to an improved exploitation of environmental variety. Or it may consist in better physiological performance of some function: the speed of conduction in nervous tissue has been increased nearly a thousand-fold during metazoan evolution, the efficiency of flight is far higher in modern birds than in the ancestral Archaeopteryx, and the care of the young was radically improved in the hundred-million years of mammalian evolution from egg-laying to marsupial and finally to placental types. The most spectacular and important of such improvements in particular capacities is mental improvement, or, in more general terms, improvement in awareness. The earliest animals were blind, deaf, and wholly brainless. During evolution sensory capacity was prodigiously improved, culminating in organs like the eyes of birds and the ears and noses of mammals, and so was the capacity for coordinating and utilizing experience through knowing, feeling, and willing, culminating in the cerebral cortex of dogs, elephants, and apes.

Finally, advance may consist in an improvement in general organization. This is evidenced by the improvements in methods of coordination, nervous and humoral, notably of homoeostatic mechanisms for self-regulation like those of higher land vertebrates for maintaining a constant temperature or a constant acidity and chemical composition of the blood; in greater individuation; and finally in the organization of mental capacities and awareness and the utilization of stored experience, leading to a greater continuity and individuation of mental life.

Evolutionary advance is achieved through a succession of dominant or successful types, each embodying some improvement in general organization. The new type becomes dominant on the evolutionary stage by what is called adaptive radiation—multiple specialization leading to improved exploitation of environmental variety. Each specialized trend shows a steady improvement in respect of its own specialization, until it

reaches a limit and becomes stabilized. If now a type is evolved possessing some new improvement in general organization, it may become dominant in its turn and if so, its success will be marked not only by its rapid and varied radiation, but also by a reduction, a partial or total extinction, of the previous dominant type.[1]

This replacement of one dominant group by another related but improved type has marked most important major advances of which we have evolutionary record—of trilobites to crustaceans, jawless pre-fish to true fish, lower to higher cephalopods, amphibians to reptiles, reptiles to mammals, mammals to man.

The failure of highly specialized lines to evolve beyond a certain point is a particular case of a general phenomenon—the phenomenon of evolutionary limitation or stabilization. Every biological improvement appears eventually to reach a limit. After this, though minor alterations are possible and new variations may be played on the old theme, no further extension of the improvement can occur, no new major theme be developed: the possibilities of that particular trend have been exhausted. This is well-known in trends toward specialization. It applies also to improvements in biological performance: it appears to be impossible, for histological reasons, to evolve an eye with an acuity of vision higher than that of a falcon, and impossible, for reasons of natural selection, to evolve a temperature-regulating mechanism more accurate than that of adult higher mammals and birds. Again, some types of organization are eventually self-limiting: the method of insect respiration, by means of air-tubes or tracheae, while admirable for small animals, is impossible for large ones: so that insects could never grow big, and therefore could never develop big brains and a high degree of intelligence.

In the succession of dominant groups, the new successful group appears almost always to originate from a relatively unspecialized member of the old. But its new improvement in turn will become exploited to the limit, or distributed among specialized and therefore self-stabilizing lines.

To make a long story short, it appears that before the mid-Pliocene period, some five million years ago, all the purely physiological and material possibilities of life had been exhausted—size, power, speed, sensory and muscular efficiency, chemical coordination, temperature-regulation and the rest. After nearly two thousand million years, biological evolution on this planet had reached the limit of its advance.

* * * * *

You will have noted that I expressly qualified my statements on evolutionary limitation. By the mid-Pliocene, a limit had been reached in the realization of the *physiological* and *material* potentialities of life, and no further major advance was possible in purely *biological* evolution—in other words, in the organic phase of the total evolutionary process. But evolution was by no means at an end. Major advance was still possible, for other major potentialities of life had not been realized, one of its most important capacities scarcely exploited.

The fact that evolution was still continuing in full force is demonstrated by the spectacular post-Pliocene rise of man to the position of dominant evolutionary type, and the even more spectacular achievements of his subsequent history. The still unrealized potentialities of life were its pos-

[1] The details of the interrelation of old and new types vary. Sometimes the reduction seems to be directly due to the greater success of the new dominant type (as with the reduction of large mammals caused by the rise and spread of man), sometimes it seems to be brought about by environmental changes, so leaving an evolutionary vacancy into which the new type can then step (as with the widespread extinction of reptilian and marine molluscan) types toward the end of the Mesozoic, which apparently preceded the rise of mammals (and modern cephalopods) to dominance. The complexity of the interrelations between major types is seen in the history of the mammals. Wherever the placentals spread, their success brought about the total extinction of the egg-laying mammals, and the subordination and drastic reduction of the marsupials; but where no placentals existed, as in Australia, a few egg-laying mammals persisted, and the marsupials, far from being reduced, were able to produce a radiation on their own, and to realize a large number of possibilities denied to them elsewhere by placental competition.

sibilities of fuller awareness, its mental or psychological attributes; and the hitherto unexploited capacity whose fuller utilization not only made possible the rise of man to evolutionary dominance but initiated a new phase of evolution, was the cumulative communication of experience. The resultant shareable, transmissible, and progressively transformable tradition gave rise to the new type of entity or organization technically called cultural, and evolution in the psycho-social phase has been essentially cultural, not biological or genetic.

My main thesis is then as follows: We have in the last half-century arrived at an adequate general understanding of the biological sector of the evolutionary process. This has been due to detailed study, first of what evolves—lineages of organisms of various types, including their structure, physiology, and ontogeny, and their ecological relations; secondly, of the genetic basis of evolution—the mechanism of reproduction, hereditary transmission and transformation, including the gene-complex, variation, and natural selection; thirdly, of evolution as a process—the mechanisms and modes of its self-transforming course, as revealed in phases of change and stabilization, in radiation and extinction, in succession of dominant types, in emergence of higher material and mental organization; and finally by a synthesis of the relevant results in all three fields. Our knowledge of this interlocking trinity of subject-matter—the mechanisms for maintaining existence, the bases of reproduction and variation, and the modes of evolutionary transformation—had first to be gathered and then synthesized, to give us an understanding of life's total process.

The same must assuredly hold for the human or psycho-social sector. Anthropology is the science of the psycho-social sector. It cannot expect to make full and comprehensive progress if it restricts its field. The study of social psychology and of the psychological mechanisms underlying various culture traits is important; so is a study of social structure and cultural working; and that of personality; and of social institutions and of systems and methods of education; and of culture-contact; and of kinship systems, totemic organizations, and religions; and of material artifacts; and of linguistic, technological, aesthetic, scientific, and other partial modes of evolution: but none is sufficient by itself.

As in the biological sector, so in the human: we need a knowledge of the mechanisms for maintaining psycho-social existence, of the bases of their reproduction and variation, of the mechanisms and modes of their transformations in time, together with a synthesis of the relevant results, to give us a general understanding of the psycho-social process as a whole—in other words, of man.

But anthropology was inevitably a late starter in the scientific race, and it has to cope with a subject matter both more complex and more confused than that of any other science. No wonder that understanding of the psycho-social sector of reality lags behind that of the biological and the inorganic.

Long before biology was born as a science, it seemed obvious that the individual organism provided the mechanism for maintaining existence in the biological sector. However, though this holds for most higher animals, and though there is a marked trend toward sharper and fuller individualism in the course of biological evolution, later study showed that this naïve conclusion was not quite so obvious as it at first sight had appeared. In many forms it is difficult and in some impossible to determine the limits or even the nature of the individual organism. However, there does always exist some organization of living matter whose function it is to maintain itself in direct interaction with its environment. In the terminology of modern genetics, we may speak of this as the phenotypic system. It may be composed of single individual organisms, usually of two sexes, or of communities or societies of such separate individuals (as in gregarious mammals or social insects) or of colonies in which the individuals are physically united and lose much of their pristine individuality (as with the cells of a Metazoan or the individuals of a Siphonophore or a bath-

sponge). But it is always a system for maintaining existence. The study of its structure and form constitutes anatomy and morphology; that of its methods of working constitutes physiology and behavior; that of its relations with the environment, including other organisms, constitutes ecology; and that of its development and growth constitutes embryology and ontogeny.

The biological mechanism of reproduction and variation proved much harder to define. Its discovery awaited the invention of the microscope and the elaboration of scientific method, both experimental and statistical. It now appears that in almost all organisms, both plant and animal, the mechanism of self-reproduction is sharply distinct from that of self-maintenance. It may be called the genotypic system. In opposition to the phenotypic system, it is locked away and sheltered as far as possible from contact or direct interaction with the environment. It consists of the gene-complex—a system of self-reproducing bodies or genes, arranged in a definite order in larger bodies called *chromosomes,* and detached in the act of reproduction within a unit of general protoplasm (cytoplasm). The chemical behavior of the cytoplasm is determined by the genes; but the gene-complex cannot survive and function without an envelope of cytoplasm. The two are interdependent, but with the gene-complex as dominant partner.

The mechanism of transmissible variation, again in all organisms, is twofold—*mutation* or change in intrinsic properties of parts of the gene-complex, and *recombination* of already existing mutants to produce new variants. You will observe that I expressly refer to *transmissible* variation. One of the notable facts established by modern genetics is the non-transmissibility of certain types of variation. Only those in the gene-complex of the reproductive cells are permanently transmissible: those affecting all other parts of the organism are not. Non-transmissible variance includes all so-called somatic variation—variations in the characters of the individual body, whether occurring in the course of normal development (as in the development of various differentiated tissues from the relatively undifferentiated ovum, spore, or other reproductive body, or in the alternation of generations in a moss or a fern); or induced by changes in the environment (as in the suntanning of white human beings, or the production of worker bees by a restricted diet); or the result of individual experience (as in the learning by solitary wasps of the location of their burrows, or by birds of the nauseous or dangerous properties of warningly-colored insects).

The two latter categories of variation embrace all so-called "acquired characters," so that the proof of their non-transmissibility is a disproof of Lamarckism and all other similar theories of evolution. The first category, however, must be characterized as reproducible but genetically non-transmissible. The distinction between transmissible and non-transmissible variation coincides almost exactly with the earlier distinction made by Weismann between *germ-plasm* and *soma.* Though Weismann's original formulation needs to be slightly modified in the light of later knowledge, the opposition between germ-plasm and soma is still basic to all our genetic thinking. Some parts of the organism—in higher animals all the somatic tissues—are debarred from playing any role in reproduction, and variations in them cannot be transmitted; other parts—the gene-complexes of actual or potential reproductive cells—are the organs of heredity, and variations in them can be and are transmitted to later generations.[2]

Thus in the light of modern biology, variations fall into the two opposed categories of genetic and non-genetic; the former resulting from changes in the properties of the gene-complex of the germ-plasm, the latter from all changes in those of

[2] In this discussion I have neglected the plasmagenes, or self-reproducing cytoplasmic factors in heredity. Plasmagenes do exist, notably in plants, but they are few in number and small in importance compared with the nuclear genes, and furthermore are often subordinated to them in their effects. For our purpose, they thus constitute a minor and subordinate fraction of the germ-plasm.

the cytoplasm or of the gene-complex of the soma.

Furthermore, we can distinguish sharply between the mechanism of maintenance—the soma, including not only the living somatic cells but also their non-living products such as horn or chitin; and the mechanism of transmission—the germ-plasm, or more specifically the gene-complex or genetic system in the reproductive cells.

However, the sharpness of the distinction tends to break down in the simplest organisms, such as the bacteria, where the germ-plasm is much less cut off from contact with the environment; or the crystallizable viruses, which are in a sense nothing but germ-plasm, and whose "soma" is provided by the tissues of their host.

The course and modes of biological evolutionary transformation I leave until later.

The greatest present handicap to the science of man would seem to lie in its lack of agreement in defining the objects of study in the three members of the interlocking trinity of its subject-matter.

The third member, the course of psycho-social transformations, I shall discuss later. As regards the mechanism for maintaining psycho-social existence, there is by no means agreement as to what should be analyzed. This somewhat startling fact emerges clearly from works such as Bidney's *Theoretical Anthropology*. Some anthropologists say society, others culture, still others the individuals who make up the society or share the culture: and within each sect there is still a cleavage between the materialists and the mentalists (if I may coin a word)—between those who want to explain human affairs solely or primarily in psychological terms, and those who insist on a purely or mainly materialist interpretation of everything. There is not even agreement on the definition of *culture*, that central anthropological concept: some anthropologists maintain that culture is an abstraction, others that it is the sum of human activities, or the patterns of human behavior within a given society, still others that it includes all "artifacts, socifacts and mentifacts," to use Bidney's convenient terms for the different types of products of a culture or human society.[3]

A further confusion arises owing to a radical difference between psycho-social and biological evolution—first, the lack of any sharp distinction in the psycho-social sector between soma and germ-plasm; secondly, the presence of an increasing trend toward convergence superimposed upon that toward divergence. Culture, in the objectively definable sense which seems natural to a biologist, is at one and the same time both soma and germ-plasm, both a mechanism of maintenance and a mechanism of reproduction or transmission. This statement needs some minor qualifications, for instance, the system of material production is more concerned with maintenance, the educational system more with transmission. But the material objects produced and the skills that produce them also are directly transmissible (unlike the metabolic products and activities of the animal soma); and the knowledge and attitudes transmitted by education are also directly concerned with the maintenance of culture and the body politic (unlike the germ-plasm tucked away within the body organic).

This union of somatic and germinal functions in culture is another consequence of the new evolutionary mechanism available to life in the psycho-social phase—the

[3] In some ways, the situations in anthropology recalls that of biology some fifty years back. Then we had the protagonists of comparative morphology contending with those of physiological analysis; the violent (but as it turned out unreal) quarrel between the biometrician gradualists and selectionists and the mendelian mutationists and anti-selectionists, the dispute between the ultra-materialistic and the ultra-psychological students of animal behavior; the curious preformationist theories of Bateson; the confusion between genetic determinant and character; the last stand of the Lamarckians and the vitalists against the advancing regiments of the mechanists.

Today, this confusion has been largely abolished, partly by the final disproof of certain views, partly owing to the reconciliation of opposing theses in a higher synthesis, and partly by a linking-up of separatist movements in a combined attack on a unified front. We may reasonably hope that anthropology will undergo a similar development.

mechanism of cultural tradition based on cumulative experience. This follows from the fact that cultural tradition depends on communication. Since communication occurs both extensively, in space, between contemporary members of a culture, and progressively, in time, between individuals of different generations, tradition and the culture arising from it inevitably combine maintenance and transmission functions—in other words, serve both as soma and as germ-plasm in the psycho-social phase of evolution. Furthermore, transmission may occur by diffusion of various sorts between cultures, as well as within single streams of culture.

The new basis and mode of transmission and transformation available to psycho-social evolution also has had important consequences for its course, notably in leading to a process of convergence. Man differs radically from all preceding successful types in not having diverged into numerous biologically separate species and lineages. An incipient divergence, based doubtless on geographical isolation, permitted the differentiation of *Homo sapiens* into what in biology would be called subspecies—the races of mankind, each physiologically adapted to its geographical habitat. But since most human adaptation and improvement is cultural, genetic divergence did not proceed farther, and was soon overtaken by the effects of genetic convergence, as man's expansive or migratory urges brought previously isolated populations into contact. Biologically, modern man has thus remained one species, a single interbreeding group.

However, the two complementary processes, of evolutionary divergence by increase of variety, and of evolutionary advance marked by improvement in general organization and leading to the emergence of new successful types, have continued to take effect in the psycho-social sector, but in the domain of culture. Evolutionary advance, or general improvement in organization, has in the long run been of decisive importance. As in the biological phase, major advance proceeds by large steps, each marked by the spread of the successful new type of organization. Among obvious examples are the discovery and spread to agriculture, of urban civilization, of alphabetic writing, of monotheism, and of science as a method of understanding and controlling nature.

The complementary process of divergent cultural evolution has always been a striking feature of man's history, and was markedly accentuated in its later stages, after the advance to the level of urban civilization. We need only think of the range and variety of cultures in the ancient world—Sumerian, Egyptian, Indus Valley, Hittite, Assyrian, Phoenician, and the rest. On the other hand, the same unique trend toward convergence after divergence, seen in the genetic make-up of man, operated also in his cultural evolution: the main difference is that in the human type a much greater degree of cultural than of biological divergence took place, and that the degree of unity produced by cultural convergence is still far below that reached on the genetic level. Whereas biological convergence must be achieved by physical interbreeding of divergent types, cultural convergence operates by various forms of culture-contact and diffusion, and ultimately is based on the same specifically human mechanism of shareable and transmissible tradition and communication as is the development of culture itself.

With this preliminary clearing of the air we are now in a position to analyze cultural evolution in more detail. I must first justify the view that what evolves in the psycho-social phase is not the genetic nature of man, or individuals, or society, or minds-in-society, but a new supra-organismic entity, demanding an appellation of its own. *Culture* is the appellation by which anthropologists denote this central subject of their science.

Culture, if I understand it aright, is a shared or shareable body of material, mental and social constructions ("artifacts, mentifacts, and socifacts") created by human individuals living in a society, but with characteristics not simply explicable or directly deducible from a knowledge of the general psychological or physiological prop-

erties of human individuals, any more than the characteristics of life are simply explicable or directly deducible from a knowledge of the general chemical and physical properties of inorganic matter, or those of mind from a knowledge of the properties of neurons. Culture has a material basis, in the shape of resources of food, raw materials, and energy; but though the quantity and quality of material resources available will influence or condition the character and development of a culture, they do not determine it in detail, so that differences between cultures are no more explicable or deducible from a knowledge of their material basis than from that of their psychological basis in the minds of individuals.

In describing and analyzing a culture, we thus need to distinguish a number of distinct components. First, the material or resource basis; secondly, the basis of communication or language; thirdly, skills and techniques; then the material objects and other products constructed with the aid of the skills and techniques, including tools and machines, dress and adornment, buildings and vehicles, and works of art; then systems of social organization, including kinship and marriage systems, law, political and economic systems, administration, and status systems such as class and caste; then knowledge systems, including education, science, and higher learning; and finally attitude systems, ranging from manners to religions, and including personal and social ethics, taboos, and rituals.

But the mass enumeration of cultural components is obviously not enough. We must also undertake the analysis of culture as a self-operating and self-reproducing system. Here, the best method of approach would seem to be the functional one, analogous to the broadly physiological approach in biology. How does a culture work? What operations and functions must it perform, and how and with what organs does it do so? The chief alternative is the structural or morphological approach, analogous to the method of comparative anatomy in zoology. This is obviously necessary as a first step, but can and should be incorporated in a broad functional analysis. It is dangerous when utilized to the exclusion of the functional approach, or as dominant to it, for it inevitably gives an incomplete picture.

The dangers of over-emphasis on the structural approach are evidenced by the history of zoology. As Radl wrote in his *History of Biological Theories* (1930), many zoologists in the late nineteenth century were so busy comparing one structure with another that they forgot to ask what the structures were or did. The first effect was the growth of a forest of largely hypothetical (and we may add also largely sterile) family trees; the second was a compensatory over-reaction in favor of physiology and experimental analysis. The next step was an attempt at reconciling purely structural anatomy with purely experimental physiology in the concept of the organism as a working or functioning whole; and the final result has been the development of an all-round approach (as evidenced, for instance, in J. Z. Young's recent *The Life of Vertebrates*), in which comparative anatomy, though still basic, is treated functionally so far as possible, physiology has become broadly comparative, and both have been combined in an ecological-evolutionary approach.

I feel sure that a similar synthesis or reconciliation will take place in anthropology, though the details of the process will be different—for instance, the comparative anatomy of structural patterns is much easier to study in zoology than in anthropology, while the reverse is often true for the analysis of function.

Let me now return to the problem of culture and its investigation. Culture in the broadest objective view appears *sub specie evolutionis* as a self-maintaining system or organization of intercommunicating human beings and their products, or if we wish to be a little more precise, of the results of the intercommunication of the minds of human individuals in society.

Though a culture thus depends on individual human beings and their psychological activities, its characteristics, as I already have emphasized cannot be deduced from theirs. The intrinsic (genetic) psycho-physi-

cal properties of the human population of a society, and the intrinsic peculiarities of single individuals within it, can and do to some extent condition the form and development of the culture, but do not determine it. In fact the boot is on the other foot, or at least the emphasis is the other way round: the effective (or in biological parlance the phenotypic) characterization and achievements of human beings in a society are to a very large extent the result of the pattern of culture in which the human individuals live and the cultural forces which play upon them.

The studies of Kroeber on genius have shown that geniuses appear—that exceptionally gifted individuals are able to realize their talents effectively—not at a constant or even approximately constant rate in time, nor with a uniform extension in different areas, but in bursts; and these bursts are related to the stage of development of the culture into which the men of genius are born.

Meanwhile the work of Ogburn and Thomas, following up Kroeber's earlier studies, has demonstrated that the progress of scientific discovery shows a somewhat similar phenomenon: outstanding discoveries and inventions are often and perhaps usually made independently by more than one man at about the same date. Here again the determining factor appears to be the stage and type of cultural development.

This fact of multiple independent discovery is of course only a special, though outstanding, feature of what many thinkers have noted—the intrinsic momentum of science. Once a science has reached the stage of having a coherent theoretical basis, it will inevitably proceed (provided is not discouraged by authority) to make further discoveries and further extensions of its theory. It becomes, in fact, a quasi-autonomous cultural entity, an organization of facts, ideas, and practices which is bound to progress until it has exhausted its possibilities—in other words, has realized the implications of its theoretical basis.

Analogous phenomena are found in other cultural fields; for instance, the localized outbursts of masterpieces and the deterministic trends of style in the arts as in ancient Greek sculpture, or in European painting since the Renaissance; the development of Christian theology within the first millennium A. D., and of scholastic philosophy within the second.

Indeed, this "inner momentum" appears to be a general property of all cultural organs involving creative thought or activity. It results in what may be called trends of cultural evolution. These resemble the trends of improvement I have already mentioned in biological evolution, in an interesting way: both types of trend continue in the same general direction for a considerable period of time, until they reach a limit of some sort, when they become stabilized (and often enfeebled, reduced or extinguished).

The limit, when the biological or cultural system has "exhausted its capacities for development," "fully realized its possibilities," or however else we may describe it, may be determined either intrinsically, by the very nature of the evolving system or faculty, or extrinsically, through the interference of some other system, or by the operation of external forces. In biology I have given examples of these different types of limits, in the limitation of visual acuity by minimum size of visual cells; of size and intelligence in insects, by their tracheal system; and of accuracy of temperature-regulation in mammals by the efficacy of the forces of natural selection. I leave it to my anthropological colleagues to find comparable examples in cultural evolution.

I must add an important caveat. Some "culturologists," and some believers in economic or social determination maintain that individuals as such play no part in moulding human history, but are wholly moved by superorganic social and cultural forces. However, while it is clear that the "great man" theories, according to which single individuals are responsible for all or most of the decisive advances and regressions, turns and twists of history, cannot

possibly be upheld, neither do the facts warrant the extreme opposite view.[4]

Indeed, it is one of the uniquenesses of man that in him the broad trend toward individuation and the greater importance of the individual organism and the individual event, which characterizes evolution in general, has reached and passed a critical point. In the inorganic phase, differences between individual atoms and molecules are submerged in the statistical behavior of aggregates. In biology, individual events such as mutations produce the differences between individual genes which provide the basis for evolutionary improvement; and in higher animals, notably birds and mammals, selection operates largely on the differences between the highly individuated single organisms within a species, though the operation is still on a statistical basis. But in man, individual differences no longer are wholly submerged in statistical processes, and the behavior of single individuals may affect the course of psychosocial evolution. Thus, while the Mongols would assuredly have become an important organized power in the Middle Ages, the extent of that power would certainly have been less and its form different if it had not been for Genghiz Khan; and similar considerations apply to the influence of Napoleon on the development of post-revolutionary France.

The importance of individuals is perhaps most clearly evident in the arts, for it is of the essence of a great work of art that it should be individually unique. In Italian painting, for instance, while inescapable cultural forces were influencing a high percentage of talented men to become artists, and were producing overall trends of style, it is the masterpieces of individuals which have been of decisive value for man and his cultural evolution. Although in a different culture, such as that of modern America or Russia, Giotto and Titian, Michelangelo and Leonardo quite likely would not have become artists, and certainly would have painted quite different kinds of pictures, the fact remains that if these particular individuals had not existed, not only would the world be a poorer place, but the history of art would have been different.

Since scientific discovery is a cumulative process, and since it concerns objective fact, the distinctive role of individuals is not so marked in the sciences as it is in the arts, and simultaneous discovery is not infrequent. All the same, it is difficult to believe that the advance of science would have been so speedy, or indeed quite the same, without individuals like Newton or Einstein. Even where independent or simultaneous discovery has occurred, the actual contribution or effect of one individual may be much greater than that of the others. Thus Wallace hit on the theory of evolution by means of natural selection independently of Darwin; yet, for various valid reasons, we can be certain that the advance of biology into its evolutionary stage would have been both slower and different if Darwin had not existed.

An example which illustrates both aspects of the relation between individual and culture is that of particulate inheritance. As is well known, Mendel discovered and published the basic facts of this and established its elementary laws. But the development of science as a cultural process was apparently not ripe for their acceptance, and his discovery remained ignored until it was re-made independently by these workers thirty-four years later. Only after this did Mendel become recognized as the founder of the science of genetics.

Here I must make a brief methodological divagation. The *method of approach* to any scientific problem is clearly of extreme importance, and will to a large extent determine the type of discovery made. Putting the matter the other way round, the method of approach is itself largely dictated by the type of answer you want to obtain: it is, in fact, a kind of question. Furthermore, the question will alter with time and the progress of discovery: when one method has yielded the main crop of answers that it

[4] Even Plekhanov (*The Role of the Individual in History*, International Publishers, New York), while upholding cultural determinism in general ("For a great man, the general character of his epoch is 'empirically given necessity' "), admits the importance of the exceptional individual.

could be expected to provide, it is time to ask another kind of question, by adopting a new method.

A biologist cannot suggest methods for anthropology to practice. What he can do, however, and what I shall here briefly attempt, is to summarize the various methods of approach adopted in biology, in the hope that anthropologists may be able to discover implications helpful for their own science.

The original approach inevitably was descriptive: biologists set out to describe as accurately as possible the variety of organisms and the phenomena which they exhibit. This approach is designed to answer the basic question, what are the facts?

The descriptive was soon supplemented by the comparative approach. This was first focused round the question of grouping or classification. What pattern or system of characters does an assemblage of organisms have in common; and, arising out of this, what distinct types are there at various levels of characterization? This led to the classification of organisms in a hierarchical system of groups—species grouped in genera, genera in Families, Families in Orders, Orders in Classes, and so on.

Implicit in such a system was the idea of physical relationship. With the acceptance of the fact of evolution, this implicit postulate became explicit, and the question posed by the comparative method became correspondingly altered; behind common patterns, men were reaching for common origins. The result was a phylogenetic classification, a classification intended to express evolutionary descent and relationships as well as a convenient pigeon-holing system. The animals placed in the Order Carnivora, for instance, were so classed because they were all presumed to be descended from a single common carnivore ancestor; and a common mammalian ancestor was postulated for them and all the other Orders placed in the Class Mammalia.

However, while common ancestry accounted for the shared resemblances of a group, the problem of the differences exhibited by its members remained. For this, a new method of approach was needed, a method which we may call that of differential analysis. It asked the question, what is the cause of the differences between the members of a related group? The method has been most successfully (because most easily) employed in analyzing the visible differences between minor varieties of a single interbreeding population, and demonstrating that those which were heritable depended on differences in one or more hereditary unit-factors, later called genes. The modern science of genetics is built on this, the mendelian method, of analysis after crossing.

When the different forms are populations inhabiting geographically different areas, such as two geographical races or subspecies of one species, extrinsic factors also must be taken into account. In such cases it is found that their differences, though due genetically to differences in their intrinsic genic make-up, also have a historical component, which is correlated with the geographical or ecological difference in their habitats, and with the degree and duration of biological isolation between them. The differences are thus the result of an evolutionary process of divergence requiring time.

Finally, when the different forms cannot be interbred to yield a fertile cross, as occurs between different species or higher taxonomic categories, the genic factors involved in producing the difference cannot be experimentally discovered, and only can be partially deduced through analogy and other comparative procedures. In such cases, where experimental crossing is impossible and the number of causative factor-differences is large, special methods of multivariate analysis may be required to give satisfactory results.[5]

However, there are limits to the usefulness of such differential analytic method. Mendelian analysis, for instance, tells us that a *difference,* say in flower-color between two varieties of plant, is due to a *difference* between two genetic factors or genes.[6] But it tells us nothing, or at least

[5] See, e.g., Stroud, C. P., 1953, *Systematic Zoology* 2, p. 76.

[6] Strictly speaking, two *alleles,* or forms of one kind of gene.

nothing worth knowing, about what the genes *are,* or of how they work.

To obtain answers to such questions we must utilize other methods of approach—constitutive as well as differential, integrative as well as analytic. By constitutive I mean an approach involving questions as to the constitution or nature of what is being investigated; and by integrative I mean one which attempts to comprehend the interrelationships and total pattern of a system of analytically detectable components.

In regard to genes, constitutive inquiry has already shown that they are portions of chromosomes, that they consist of a certain kind of nucleic acid in association with proteins, and possess a molecular structure permitting binary multiplication by self-copying. And the integrative approach has led to the concept of the *gene-complex,* a system of interrelated units with mutually adjusted interactions. For the problems of complex yet unitary patterns, *Gestalt* and other similar approaches are required, and non-quantitative mathematical formulations of patterned systems are being attempted.

The constitutive approach soon demands vectorial diachronic enlargement, by the addition of a directed time-dimension. We then ask questions about processes—how does a given initial state of things become converted in time into a different state? In genetics, for instance, we try to unite gene and character by considering them as the end-points of a single chemical and physiological process or chain of processes—and in the case of micro-organisms are already meeting with considerable success.

Similarly, once we have introduced a historical component into our study of differences between taxonomic groups (subspecies, species, and higher categories) and have arrived at the conclusion that evolutionary divergence has been at work, we inevitably are impelled to ask what trends are involved, what is their shape and their direction, how do they operate, and how do they produce their observed results? This approach, in the hands of men like Simpson and Ford, Mayr and Dobzhansky, is already giving us interesting answers in terms of the effects of natural selection in different circumstances—adaptive improvement, minor nonadaptive diversification, trends of specialization, parallel evolution, limits to improvement, stabilization, and so forth, so that we are beginning to work out a science of evolutionary processes.

The evolutionary biologist, fortunate in the more mature stage of development which his science has reached, perhaps may be permitted to suggest some lines of study to the anthropologist.

In the first place, an evolutionary approach seems to me essential. We shall never fully understand human culture unless we look at it as a portion of the evolutionary process—both a product of past evolution and an agent of possible future evolution.

I want to emphasize once more that, while none of these methods of approach by itself was able to give any but very partial answers to the central problems of biology, all made necessary contributions to our present understanding; and that the great and sudden advance registered in evolutionary biology during the past thirty years has been due primarily to the synthesis of many previously separate (and indeed sometimes arrogantly separatist) lines of inquiry.

The evolutionary approach in anthropology has been bedeviled by false starts and false premises—notably the erroneous idea that biological evolution could be represented by a single straight line of inevitable progress, and the Comtian conversion of this into an evolutionary straitjacket for culture.

When anthropologists realize the fact that evolution always involves divergence as well as advance, stabilization as well as improvement, and when they have reached a fuller understanding of the mechanisms of cultural maintenance, transmission, and transformation, we may reasonably forecast a broadly similar course for anthropology, including the prospect of an eventual triumphant synthesis.

If anthropology is a science, then for anthropologists culture must be defined, not

philosophically or metaphysically, nor as an abstraction, nor in purely subjective terms, but as something which can be investigated by the methods of scientific inquiry, a phenomenal process occurring in space and time. The process has subjective as well as objective components, but both of these can be studied naturalistically. As a naturalistic and operative entity, the culture of a given society cannot be understood merely as the sum of the behavior and products of the individuals comprised in the society. It is composed of super-individual patterned systems of activity, potential as well as actual, all to a certain degree unified in an overall pattern of integration. In this general respect, cultures inevitably resemble organisms, although in particulars they show many differences.

In any scientific attempt to study and understand cultures, it is the patterned systems that are important and significant, rather than the individual activities in which they issue. Thus in human communication, Cassirer cites de Saussure's distinction between *la langue*—the super-individual system of grammar and syntax—and *la parole*—the actual words or way of speaking used by particular individuals. We find the same distinction in every cultural activity—in law, between the legal system of rules and precedents and its specific application in particular cases; in art, between a style and the individual works of art produced; in social structure between a system of local government, say, and the actual work of local bodies; in science, between a comprehensive theory and the mass of phenomena which it ties together; in kinship relations, between the theoretical system and the way it works out—or does not work out—in everyday life; in morality, between the system of tabus or ethical injunctions and individual moral actions.

Further, we observe that a cultural pattern-system may be either latent or patent, either needing to be deduced from the individual phenomena or already consciously formulated by the culture. As is to be expected *a priori,* conscious formulation is usually a later development; thus all languages are highly complex systems, but it is only late in human development that the system is consciously formulated in rules of grammar and syntax; and theories of aesthetics do not emerge until after millennia of the practice of art. Even where some conscious intellectual formulation exists *ab initio,* its extent and its precision in general will increase with time. Thus, in religion there is the development from fluid and non-rational myth to precise and highly rationalized theology; while science grows from a mere recognition of empirical regularities into an elaborate system of theories and laws capable of increasingly precise mathematical formulation.

This increasing patency of cultural pattern-systems in psychosocial evolution is analogous to the increasing differentiation of functional organic systems in biological evolution. An Amoeba has no visibly differentiated systems of support, locomotion, circulation, digestion, conduction, sense-perception, or reproduction; among Metazoa, a separate circulatory system did not appear until the Annelid level of organization was reached, a temperature-regulating system not before the later Mesozoic: sense-organs such as eyes and ears show a steadily increasing degree of differentiation and also of precision: behavior-systems become more differentiated (with greater variety of instincts), and at the same time more flexible and precisely adjustable (with the development of learning capacity).

But since biological evolution depends essentially on the self-reproduction of matter, and cultural evolution on that of mind, it is inevitable that the differentiation of organic functional systems will be manifested in increased material specialization, that of cultural systems in increased mental specialization—that is to say, increasingly full, precise, and conscious formulation.

With these preliminary considerations out of the way, let me try to define and analyze the cultural process a little further. In the most general terms, a culture consists of the self-reproducing or reproducible products of the mental activities of a group of human individuals living in a society. These can be broadly divided into artifacts—ma-

terial objects created for carrying out material functions; socifacts—institutions and organizations for providing the framework of a social or political unit and for maintaining social relations between its members; and mentifacts—mental constructions which provide the psychological framework of a culture and carry out intellectual, aesthetic, spiritual, ethical or other psychological functions.

The categories inevitably overlap, since all cultural activities have a mental component, all artifacts have been shaped by mind, all mentifacts have a material basis or vehicle, and all cultures are embodied in societies. Thus a piece of pottery may be both a useful artifact and a beautiful mentifact; socifacts like codes of law and morals incorporate much of spiritual and ethical mentifacts; and we all know how the intellectual mentifacts we call scientific theories and laws become transposed into technological artifacts. Nevertheless, the distinction is a useful one.

A more satisfactory analysis, however, is made possible by changing the basis of classification of cultural elements from origin to function. In such a teleo-functional view, we perceive that every culture has certain components. In the first place it exists in a particular material environment, and has a certain material basis. The environment does not *determine* the culture, but does *condition* and may *limit* it—for instance, through extremes of climate, or the prevalence of debilitating disease.

Secondly, the material basis, though by no means the sole determinant of culture, has a still greater influence: it is not possible for a society dependent on hunting or food-gathering to develop the kind of culture found in agricultural peasant societies, or for a pre-scientific society to develop the kind of culture found in technological civilizations based on machine-power.

Then all cultures are embodied in societies, and all societies must have a structure. Cultures therefore must include institutions and other social components. The most obvious of these are systems of kinship, law, armed forces, and administration, together with political and economic institutions on the one hand, codes of manners and social customs on the other. Functionally, they may be classified into those which subserve the survival and well-being of the social unit as such, and those which regulate the personal relations of its members. Or, alternatively, they can be grouped under the heads of authority or custom. In addition, there is social quantity. The number of people included in a given social group, and still more the density of population, have a marked effect on the culture.

We also have the material components of culture (as opposed to its material basis). These include utensils, tools, buildings, vehicles, machines, manufactures, and industrial products. Functionally they can be simply classified according to the human needs and desires which they subserve—nourishment, health, shelter, clothing, enjoyment, adornment, communication, and so forth. The type of material production has repercussions on social organization: thus, industrialization has involved the supersession of guilds of artisans by trade unions, and the rise of the joint stock company and the giant firm or ring. It also has repercussions on thought and ideas.

But before proceeding further we must mention the function of communication. This is fundamental: all culture depends on communication between individuals and between generations. The basic cultural organ of communication is language, so that linguistics must always be a basic branch of anthropology. The effectiveness of transmission of communication is later enhanced by various inventions—writing, the alphabet, printing, telegraphy, radio.

Other methods of communication are provided by symbols, and still others by the various arts, notably poetry and drama (including the cinema), painting and sculpture, and in special ways by architecture and music. But with these we reach the last category of cultural components—those with primarily mental or psychological functions, as against primarily material or primarily social functions. For while language is the medium of communication, the arts provide mentifacts—organized construc-

tions of significance to be communicated from one human mind to others.

Symbols like the cross or a national flag have an intermediate function. On the one hand they have a denotative function like words, and can serve in the same sort of way as do recognition-markings and other releaser patterns in animals; but, on the other hand, they can also function as vehicles of complex and multiple significance.

Mentifacts thus serve as the psychological framework of culture, the mental organs of man in society. They express awareness or experience in various organized ways—aesthetic and symbolic as well as intellectual—and communicate and transmit these organizations of experience to others. There appears to be no accepted term to denote these "awareness organs" collectively. As I have ventured to suggest elsewhere,[7] their function may be called *noëtic,* and collectively they would then constitute the noösystem.

In addition to symbols and works of art, the noëtic components of a culture include rituals and formal celebrations, beliefs and superstitions, mythology and theology, tradition and history, philosophy and science. They include the totality of accumulated and available factual knowledge as well as the organized formulations of knowledge provided by mathematics and logic, scientific theories, and philosophical ideas; and finally the assumptions and attitudes that characterize a culture, including the vitally important epistemological premises on which its thinking is conducted.

Such an analysis of culture is essentially static. But the biologist is driven to view culture historically, as cultural evolution, and to see cultural evolution as a part, albeit a special part, with its own peculiar methods and results, of the evolutionary process as a whole. Once we adopt this approach, we cannot escape the conclusion that the most important characteristic of a culture is what for brevity's sake I have called its noösystem—the sum of its mentifacts, and the way they are organized.

Artifacts often give a readier characterization and indeed may provide the easiest or, in the case of extinct cultures, the only measures of classification; institutions and other socifacts express more simply the physiology of a culture—the ways of its social working. But its evolutionary position and possibilities are ultimately determined by the quantity and quality of its awareness and the modes in which it is organized.

From a slightly different angle, we find that a culture may appear as in large measure determined by its economic and material basis; or, as by Rousseau or in a rather different way by Marx, institutions may be regarded as barriers to progress set up by vested interests, which need only be destroyed for an ideal society of men to come automatically into being. Yet these again are but partial or short-term views. The existing material basis and economic organization of a culture depend on the utilization or application of past knowledge. Again, institutions and their forms—like a Church or a Monarchy, a Council of Elders, or a Civil Service—depend on human ideas and beliefs about human nature and about men's relations with each other and with the universe: and though they may become fossilized or corrupt and impede or resist progress, yet even if they were swept away, new institutional embodiments of human ideas and beliefs would have to be constructed to serve as the culture's social framework.

Once more, biological parallels are available. Description of physical structure—comparative anatomy—provided the readiest method of classifying organisms; and analysis in terms of mechanics, physics, and chemistry—comparative physiology—gave the simplest understanding of organisms as working mechanisms. Again, the material environment does in large measure determine the characters of its organic inhabitants—think of the contrast between the faunas of the deep sea and the surface waters, between the floras of the subarctic, the desert, and the humid tropics. Further-

[7] See my "Man's Place and Role in Evolution," in the Columbia University Bicentennial Conference, No. 5, The Unity of Knowledge. Père Teilhard de Chardin and others have spoken of the *noösphere* constituted by human culture, as opposed to the *biosphere* of organic life.

more, what an animal type inherits from the past, in the way of genetically determined anatomy and physiology and behavior, conditions and limits its capacities in the present and its potentialities for the future. But the environmental determination is not complete, as is shown by the coexistence of high and low types in the same environments, or the evolutionary emergence of quite new types in an essentially unchanged habitat; and the limitations imposed by the framework of genetic structure cannot be transcended by abolishing that framework, but only by adaptively altering it. Further, comparative anatomy gives only a static picture, and comparative physiology only an immediate one. Fuller comprehension awaited their synthesis in the concept of evolutionary process.

We can now obtain a picture of biological evolution as a whole. It is a process of deployment of self-reproducing and self-varying matter, directed by the forces of natural selection. It involves two main types of change—diversification and advance. Diversification connotes an increase of specialized variety. Advance connotes a rise in the upper level of organization, both of material physiology and of awareness: it involves the realization of fuller control or fuller exploitation of the resources of the environment, fuller self-regulation or independence of its arbitrary or hostile forces, and an increasingly comprehensive and increasingly accurate picture of its events and operations. From the point of view of life as a whole, diversification also represents an advance, for it means a fuller and more efficient exploitation of resources in favor of a larger and richer biomass. And diversification and advance taken together involve the emergence of new or fuller realizations in the self-reproducing material of life.

Thus biological relativity holds throughout the process of organic evolution, in that all organisms show adaptation—their genetic properties and capacities are adaptively related to the business of maintaining and reproducing themselves in their environments: if this were not so, they would have become extinct. Yet this temporary relatedness of immediate adaptation is in point of fact included in or transcended by a more inclusive and dynamic relatedness. We can and must also consider the relation of the organic type to the general process of biological evolution—a directional relatedness which takes account not only of its position in the process, but also of its direction of change, in relation to an increased realization of those possibilities of life concerned with a more effective exploitation of the environment, including a fuller awareness of the environment to be exploited.

In the psycho-social section, the same broad scheme of evolutionary relatedness still holds, but the process operates with different methods and with different principles of action. Once the cumulative transmission of experience was available, and accordingly mind as well as matter became capable of self-reproduction and self-variation, it was inevitable that evolution would take place overwhelmingly in the cultural rather than in the biological sphere, and with an enormous acceleration of tempo; and equally inevitable that the noëtic or mentifact system would be the most important part of evolving cultures.

With the aid of reason and imagination, cultures build up a volume of more or less extensive and more or less organized factual knowledge, together with resultant ideas and ways of thinking, and a system of more or less coherent and more or less conscious beliefs and attitudes, together with resultant values and purposes, which constitute the decisive long-term factors in cultural evolution.

In the long run, knowledge is the more important, because it conditions and modifies the beliefs and attitudes. Knowledge is potential action and potential control, both in the external material world and in the inner world of thought, valuation, and belief. Putting the matter somewhat differently, the mentifact system—in other words, the amount and organization of human awareness—is a mental microcosm, a system which internalizes the environment, more or less completely and more or less accurately, in men's minds.

Cultures, too, all show adaptation: if

they were not adaptively related to the business of maintaining themselves in their environments they would have become extinct. The result is cultural relativism—the fact that no cultural absolutes can be shown to exist, whether in the cognitive, the aesthetic, or the moral sphere. Insistence on the relativism of human values, especially perhaps moral values, has been very fashionable in certain circles. Just as the biological relativism of organic adaptation led some biologists to dispute the validity of distinguishing higher and lower types of organism, and so to deny the possibility of anything which properly could be called advance or progress in biological evolution, so the notable discovery of the cultural relativism of moral and other values has led a number of social scientists to dispute the idea that one culture can be *higher* than another, and so to deny the very possibility of advance in cultural evolution—in other words, of human progress.

However, as in biology, the adaptive relations subsumed under the head of cultural relativism are essentially temporary or immediate, and are transcended by a more inclusive and dynamic evolutionary relatedness. In this case, however, the properties of the culture (including the speed and direction of its change) must be considered not only in relation to the more effective utilization of its environmental resources, but also in relation to the more satisfying enjoyment, by its human members, of their capacities for experience and achievement, for knowing and feeling, willing and acting. The scale of culture thus has a dual measure: it is related not only to efficiency of exploitation but also to fulfilment of potentiality.

The overriding importance of knowledge—the cognitive portion of the mentifact system, concerned with the discovery, organization, and transmission of experience—for progressive cultural evolution is obvious as soon as we take a broad view. It was the capacity for cumulative transmission of experience which enabled animals to become men, and permitted our Pliocene ancestors to pass the critical point between biological and psycho-social evolution and to open the path toward human evolutionary dominance. All the major steps toward greater efficiency of material exploitation or of social organization, and toward alleviating or improving the human lot, have depended on increases or improvements in knowledge of some sort or other.[8] The improved knowledge may be in the form of skill, as revealed by the slow improvement of tool-making technique in the Lower and Middle Paleolithic. Or it may be constituted by an empirical discovery, like the discovery (doubtless fully realized only during a span of many generations) of agriculture, which initiated an entirely new and higher level of cultural organization, or it may be an invention concerned with the transmission of experience, like writing, printing, or radio. Or it may be in the form of an improved organization of knowledge, experience, as in ancient Greek philosophy, or in the comprehensive world-picture organized by Christian theology. Or it may be pure scientific discovery, with immediate applications, like the discovery of bacteria and its application to the treatment of infectious disease; or pure scientific discovery without immediate practical application, but with the effect on man's world-picture and his view of destiny, like the discovery of the fact and mechanism of evolution. Or, finally, it may be in the form of a new and improved organization of assumptions and methods of approach, as in the adoption of scientific method in field after field of inquiry during the past three centuries, with simultaneous abandonment of magical assumptions or explanations in supernatural terms.

Clearly, some of these advances are partial, and help to internalize outer reality only in a limited field, or with a very imperfect degree of accuracy. The most important for cultural evolution are those which open up possibilities of quite new

[8] I have avoided using phrases such as "steps toward cultural advance" or "human progress," in case I should be accused of begging the question. However, from what I have written above, it should be clear that cultural advance properly can be defined and estimated, though only in the rather complex terms of combined efficiency and fulfilment.

modes of material existence (like the discovery of agriculture); which provide radical improvements in the mechanism of cultural transmission (like the invention of writing); which alter man's general approach to the intellectual and practical problems of life (like the adoption of scientific method); and above all those which lead to a new picture or model of human destiny (like the emergence of the higher religions, or the discovery of evolution). The effectiveness of such organizations of knowledge can be estimated by the degree to which they lead to the emergence of new types of cultural organization, comparable to new dominant types in biological evolution, which spread and increase at the expense of previous types of culture. Examples are afforded by the spread of Neolithic culture (based on agriculture), of civilization or urban culture (based on writing and division of labor), and, in recent centuries, of industrial and technological culture (based on scientific method in the natural sciences).

Those which involve a new picture of human destiny are the most comprehensive, and may include elements of all the others. They are, in fact, the true noëtic microcosms, and their importance can be estimated in terms of their relatedness to the overall process of reality. The more fully and the more accurately they internalize the evolutionary process, the more effective will they be, in the long run, the more valuable systems of potential action. To put the matter in the terms of my earlier treatment, the clearer man's picture of nature (including his own nature) and the fuller his understanding of his place and role in nature, the more efficient will be the resultant culture in enabling him to fill that place and to perform that role. Greater knowledge and fuller truth alone permit a correctly directed type of cultural change.

From this angle, the most important single step in cultural advance so far is that which we are now in process of taking—the application of scientific method to the problem of man's evolutionary possibilities. To start with, it markedly changes the directedness of culture, and may even reverse its sign. Most noëtic systems consciously or unconsciously look backward, are based on traditional authority or on a nostalgic belief in a prior Golden Age or state of perfection, and the cultures built on them are accordingly in large measure resistant to change, and especially to the idea of change.

A few noëtic systems have looked forward instead of backward, but usually to some millenary and final fulfilment. In so far as Imperial Rome had a conscious goal besides that of increased power, it was to impose the Pax Romana and the efficient Roman system on the rest of the world. Soviet Communism deliberately proclaims the classless socialist State as its inevitable millennial goal. But in so far as the goal is a final one, it imposes limits and it distorts the process of cultural change by imposing on it both the myth of an ideal but static end-state, and the dogma of authoritative truth. In Marxist Communism we can see clearly how the myth of an ideal final state has taken the place of the salvation myths of earlier religions, and how the authoritarianism of Marxist doctrine has impeded scientific and cultural freedom just as much as the Church ever did in the past.

The scientific method of acquiring truth and knowledge is free from these objections, since it explicitly recognizes that man's knowledge can never be complete or his truths absolute. But it does enable man to discover more knowledge and to arrive at a fuller approximation to truth, and so at once introduces a positive vectorial component into any culture which practices it.

However, so long as it is applied in a limited field (for instance only in the natural sciences), or is still liable to be overridden by dogmatic authority (as in Soviet biology in recent decades), it has no more than partial importance. It is only when a forwardly directed, positively dynamic ideal of cultural advance is combined with scientific method, or—what comes to the same thing—when scientific method is consciously adopted and prosecuted in all fields of human endeavor, it is only then that the noëtic system can begin to be a true microcosm, only then that cultural relativism in the narrow sense will become transcended

by a more comprehensive relatedness, and cultural change will begin to adapt itself adequately to the overall evolutionary process of greater realization of inherent possibilities.

The capacity for the cumulative transmission of experience marked a critical point in the evolutionary process—the passage from a biological to a cultural mode of evolution. The attainment of a correctly related noëtic system will mean the passage of a critical point within the process of cultural evolution—from the proto-cultural to the full cultural phase, from mainly unconscious evolution to change consciously directed. And just as the passage of the former critical point permitted the emergence of man as a new dominant type, the psycho-social type, in evolution as a whole, so the passage of the latter will permit the emergence of a new and dominant pattern of organization within the cultural process, and will enable the psycho-social type to fulfil itself by relating its modes of change to its inherent possibilities. In other words, it will permit the full humanization of man within a continuous process of self-transcendence.

But I must not soar too far up into the clouds: the nöosphere has its earthy base, which it quits at its peril, and with which it must always keep vital contact. I will conclude with a re-statement (illuminated, I hope, by the foregoing analysis) of the evolutionist's view of human culture.

Biological and cultural evolution resemble each other in both showing a combination of two major trends, one to differentiation or divergence, the other to improvement or advance. In addition, cultural evolution shows a trend which is almost absent in animal evolution—toward convergence and consequently toward a final unity superimposed upon diversity. Both of these trends are subject to limitations, and in point of fact frequently reach final limits. In biological evolution, the amount of divergence possible to a group such as the teleost fish or the birds is limited by the variety of habitats or ecobiological niches which are available to their type of structural or physiological organization. It is, for instance, impossible for teleost fish to produce a type adapted to terrestrial desert existence, and equally impossible for birds to increase their variety by colonizing the deep sea. And I have already pointed out how most trends of improvement or advance eventually and inevitably reach a limit and become stabilized.

Occasionally, however, a biological lineage finds its way out of the limitations of its relatives of the same general type up to a new level of organization. Such major steps in advance are recognizable *ex post facto,* by the emergence of the lineage as the progenitor of a new dominant type, which demonstrates its dominance by its rapid development into a new fanning-out of combined divergence and improvement. This did not occur among either birds or teleost fish: they both appear to be incapable of breaking through their organizational limitations. It did occur, however, among bony fish as a whole, when one lungfish-like lineage evolved to the Amphibian level of organization capable of terrestrial life; even more strikingly, it occurred among the Reptiles, when one lineage of one of the numerous major divergent types of the reptilian radiation gave rise to the new dominant type we call the Mammalia, by reaching a new level of organization which combined hair and milk, and therefore the possibilities of temperature-regulation and of maternal care and family life. The other reptile lineages, though diverging to produce types as strikingly different as snakes and dinosaurs, tortoises and crocodiles, flying pterodactyls and whale-like ichthyosaurs, all remained on the reptilian level of organization, and have either become extinct or have persisted on that level up to the present.

This brings us to a further point. Biological classification aims at reflecting the facts of biological evolution. It is often assumed by zoologists that it does so by distinguishing groups according to their ancestry. Each taxonomic group, according to this view, is distinguishable because it is descended from one ancestral lineage. Thus, to go back to my earlier example,

all species of weasels and stoats are pigeonholed together in the genus *Mustela* (and are capable of being so pigeonholed) because they are all descended from a single weasel-like ancestor; all families of carnivores are pigeonholed in the Order Carnivora because even such divergent creatures as seals, tigers, bears, and weasels are all descended from a single proto-carnivore lineage; all Orders of mammals in the Class Mammalia because their universal possession of hair, milk, and warm-blood is only comprehensible if they are all descended from a single proto-mammalian lineage with these properties.

Recently, however, it is becoming apparent that these taxonomic assumptions are fully valid only for a classification concerned with evolutionary divergence. Others are needed for a classification which also takes account of evolutionary advance. Thus G. G. Simpson in his *Meaning of Evolution* states that the latest and dominant group of bony fish "called Teleostei in formal classification," is "apparently a structural [and functional] grade" independently evolved by several lines; and this parallel evolution of improvements appears to be a common feature in smaller-scale deployments, like that of the horses (Equidae).

Actually, the idea of a common grade of improvement in place or in addition to that of a common ancestry is implicit in much taxonomic practice. Thus from the strict common-ancestry point of view, birds and mammals are parts of the great reptilian radiation, and should be classed as Orders on a par with other reptilian Orders like Crocodiles or Dinosaurs. However, they both developed such outstanding improvements in general organization that they became new dominant groups more varied and more abundant than any reptilian Order—the birds primarily in the air and the mammals primarily on the land. For this reason, they are called Classes, with new Orders as their major subdivisions. Both are actually monophyletic groups; but whereas this fact of common ancestry is the basis of our classification of other products of the reptilian radiation, in their case advance to a new level of organization is the decisive factor. *Aves* and *Mammalia* are grade labels as well as ancestry labels.

Sometimes, indeed, our taxonomy designates only grades. This would be so for Teleost fish if Simpson's views are confirmed. It was once so for the Subkingdom Metazoa, originally intended to cover all multicellular animals. Later, however, when it became clear that Sponges had evolved independently to the multicellular level, the zealots for ancestry classification placed them in a new Subkingdom, the Parazoa, leaving Metazoa as a combined grade and ancestry label for the rest of the multicellular animals.

I personally would like to see a new, evolutionary classification, which would combine the advance and ancestry principles. We would then have *groups* of common ancestry—Classes, Orders, and other familiar designations, and *grades* of advance (advance sometimes independently achieved, sometimes in common), for which new designations would have to be coined.[9] I would hope that *Metazoa* would be restored to its original use as a grade label, and that Man would be placed in a new major grade, which might be called *Psychozoa.*

Of course it is not the labels that are important, but the principles and assumptions on which the necessary labeling is done. I venture to suggest that the adoption of a broadly similar outlook would permit real progress in anthropology. The assumptions of principle are roughly these. That evolution still operates in man, but overwhelmingly as a cultural, not a biological process. That cultural (psycho-social) evolution shows the same main features as biological evolution. From one angle, short-term improvement ("adaptation") and long-

[9] To take one example, Birds & Mammals, as separate ancestry groups, would continue to rank as two Classes, but would both be included in a single grade, which might be called *Homotherma,* since temperature-regulation is their diagnostic improvement. Other obvious grade labels for Vertebrates would include terms already in use, such as *Gnathostomata* for forms with jaws, *Tetrapoda* for those with walking limbs, and *Amniota* for those with a protective "private pond" for the embryo.

term improvement ("advance") together with some apparently non-adaptive accidental and consequential results; from another, divergence (resulting in greater variety), advance (resulting in progressive improvement), and limitation (resulting in stabilization or regression); and from still another, less relativist and more comprehensive angle, a succession of dominant types, resulting in progress, as manifested by a rise in the upper level of achievement and an increased realization of possibilities.

But finally, that cultural differs importantly from biological evolution in respect of selection and mechanisms of change, of transmission of the old and incorporation of the new, of the presence of diffusion and a consequent tendency to convergence as against divergence, of the immensely increased importance of mind and mentifacts, notably the accumulation and better organization of knowledge, and in many other ways.

If this were accomplished, the sterile controversies about cultural evolution (sterile because based on misconceptions) would be resolved; anthropologists would be able to see their subject in the conceptual framework of combined divergence, stabilization, extinction, and advance; they would reach a truer and more satisfying picture of cultural evolution than those provided by historians and sociologists like Spengler, Sorokin, or Toynbee; and they would open the door to a scientific theory of human progress, free from wish-fulfilment and over-optimism on the one hand, and from captious relativism and over-pessimism on the other.

By envisaging the problem of acculturation in the world of today as an inevitable accompaniment of the emergence of a new dominant cultural type, they could bring a new illumination to bear upon it; and by reminding politicians and administrators of the value of variety-in-unity—variety of cultural expression within a unitary framework of knowledge, ideas, and purpose, they could help to minimize the evil effects of the process and maximize its desirable results.

Finally, by insisting on the overriding importance of knowledge and its organization in the form of ideas, assumptions, and beliefs, they would ensure that anthropology would make a vital contribution to the march of history. By clarifying the role of man's ideas of destiny in cultural evolution, they would make it easier for man to achieve his destiny by fuller realization of his possibilities.

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Part Two

Man's Past:

Environments, Relics, Ancestors

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Environments, Relics, Ancestors

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Introductory

THE significant achievements of 1952–1954 in the growth of man's knowledge of his past—his environment, relics, and ancestors—are considered in nine essays which treat of methods, results, interpretations, and theory for those aspects of anthropology that emphasize historicity.

SEARS makes the point that man's physical-biological environment is itself highly evolved and specialized, and continually is undergoing change by means of processes independent of man. But the most rapid, extensive, and effective change at present seems to be that due to man's own activity, especially through the application of scientific knowledge. Among the environmental changes by man that Sears considers are the effects on vegetation, land use, soil erosion, forest regions, grasslands, water, atmosphere, and mineral resources.

SCHULTZ is concerned with the benefits which anthropology can and should gain from close cooperation with primatology. Recent contributions to primatology are in descriptive and comparative studies, taxonomy and phylogeny, growth and devolopment, pathology, and behavior. The comforting old gap between the morphology of man and ape has practically disappeared with the latest fossil finds.

EISELEY reports that the Darwin-Wallace argument of nearly a century ago still is before us. Three times in the course of a year, scholars independently have inquired into the curious uniqueness of the human brain. The elimination of the Piltdown cranium has called for re-organization of thinking on human evolution. The major rise of the human brain in the Pleistocene seems to demand some other evolutionary mechanism than Darwin's "struggle for existence." If men, with all their cultural diversity are, throughout the world, so intellectually similar, how did they atttain this status? The factor missed by Darwin and Wallace both was the societal nature of human beings—the basic innovation among all varieties of mankind was the production of the sociocultural world. The disparity between man and ape is great, not small—it is the disparity of mind.

WARD indicates that Old World archeology is emerging from a restorative, reconstructive period. Museums and schools have reopened, many journals have been resumed, and new publications begun. Ward reports on the meetings of several Congresses, on governmental activities, on UNESCO, and on archeological techniques and field methods. Outstanding pieces of field work are reviewed in a survey by periods, and by areas and countries. Lastly is considered the extent of America's contribution to Old World archeology, including the founding of the Council for Old World Archaeology. Activities in the Soviet Union are mentioned on pages 80, 81, 85, 86, 89.

EKHOLM supplies a guide to the recent literature on New World culture history. Particularly emphasized are syntheses of materials on an area or subject, new

trends in research and thought, and sizeable contributions of new data. General considerations of the New World as a whole are followed by summaries on North America, Mesoamerica, and South America.

HAURY sees the emergence of trends in archeological theories and interpretations, changing concepts, and shifts in emphasis. There has been an increasing number of problem-conscious projects, and a shift from purely historical to functional interpretations. Among methodological advances in fields other than archeology, but of aid to it, lexico-statistical dating is singled out. Haury considers recent works on ecology and economy, and the Arctic and early man. Other notable advances are in the relation of archeology to ethnography and history, in trans-Pacific diffusion, in submarine archeology, and in epigraphy.

GRIFFIN pays particular attention to the considerable progress in radiocarbon dating—the establishment of additional laboratories and the improvement and variety of dating techniques. Comparison is made of the advantages and disadvantages of the various methods of radiocarbon dating: solid carbon, scintillation, CO_2 Geiger counter, CO_2 proportional counter, acetylene proportional counter, methane proportional counter. Techniques are being developed for the extraction of carbon by flotation and by acetone. Advances in radiocarbon dating are increased time depth, back 40,000 to 50,000 years, and increased precision of dates. Other technical advances reviewed are in geology, pollen analysis, chemistry, dendrochronology, paleography, and glottochronology.

FÜRER-HAIMENDORF finds the most significant trend in culture history to be the increasing dependence of ethnologists on prehistoric archeology. Emphasis is on cooperation in interpreting material from particular areas rather than world-wide generalizations. There is continued recognition of the significance of present-day primitive cultures, no less than of prehistoric cultures, as representative types of early forms of cultural life. Important works on the Americas, Africa, and Asia are reviewed, and a growing interest in the social and cultural problems of higher civilization reported.

KOPPERS links ethnology and prehistory to history proper. History in its wider meaning comprises the entire period of man's existence. The principle of diffusion is particularly important, but will not suffice to explain every historical development. Though research is based primarily on cultural parallels, there are no fixed laws in diffusion, either in transmission, or in acceptance or rejection. Graebner's and Schmidt's "Kulturkreise" have rightly been abandoned for quite some time, though their deductions should not be rejected wholesale.

PART TWO on "Man's Past" is selective of those aspects of anthropology in which time-depth is of major significance. The other face of the coin, expressive of another stream of thought in anthropology today, deals with phenomena and processes that are expressly contemporary. "Man's Present: Human Activities, Societal Functions, and Cultural Processes" will be the Part Two of the next *Yearbook of Anthropology.*

Changing Man's Habitat: Physical and Biological Phenomena

PAUL B. SEARS

Dr. Sears is Chairman of the Conservation Program and Professor of Botany at Yale University, New Haven, Connecticut, and for 1953–1955 is also Chairman of the Department of Plant Science. He has been President of the Nebraska Academy of Science, Ohio Academy of Science, Ecological Society of America, and is President-elect (for 1957) of the American Association for the Advancement of Science. His present research interests are on Pleistocene vegetation, pollen analysis, and applied ecology. His works include: Deserts on the March, 1935; This Is Our World, 1937; and Charles Darwin, the Naturalist as a Cultural Force, 1950.

THE PHENOMENON OF CHANGE

MAN is the product of change. Unquestionably he has become a major agent of change. And environmental change may make him variously its beneficiary or its victim. Like the organisms which sustain him and those which are his rivals for space and sustenance, he has arisen by evolutionary change. The earth which he inhabits is an expression of geological change. And from change has developed the intricate pattern of biological and physical processes which, by orderly energy and material transformation, have made the earth habitable for him.

It follows, then, that change in the environment is important not only as it affects the amount and availability of materials used by man, but also in its influence on those processes and systems which, up to the present at least, have been essential to man's survival. Should he—or other agencies—disrupt them there must at the very least be set up to replace them other systems which guarantee the same results. Thus far such systems—e.g., hydroponics or soil-less agriculture—involve elaborate mechanisms far less resilient, far more vulnerable than those of nature. As Walter Pretzer of Cleveland, one of the nation's leading horticulturists, puts it, "I grow tomatoes under glass in water culture and out-of-doors as well. Things may go wrong in the field. If they do, I lose money. But when anything goes wrong with the hydroponic system, I lose not hundreds, but thousands."

So impressed are we by the technical efficiency arising from the application of science that we are likely to overlook the huge element of compounded risk which it involves. The hill people ("poor whites") of the Ozarks, with what Forrest Clements called "essentially a Neolithic culture" took the shock of depression during the 1930's in their stride, while shutdowns, bread-lines, foreclosures, and failures were prevalent in even moderately industrialized areas. Again there were times in the Korean campaign when enemy foot-troops, accustomed to the carrying of heavy packs, had the advantage over our highly mechanized forces, especially on difficult and trackless terrain. As a Scandinavian officer put it, "Americans are forgetting how to walk. Orientals are not."

The net effect of our present applications of scientific knowledge is to produce change, and the current emphasis of scientific investigation is such as to intensify this

process. It would seem, however, that high priority should be given to the study of change itself and the analysis of its effects. At present, this is the concern of relatively few scientists, being otherwise dealt with by intuition and polemic. Considering their potential benefits to mankind, studies of the changing interrelations of life and environment are meagerly supported among scientific disciplines. This, of course, is explainable by the fact that the benefits of such studies are widely diffused and cannot as a rule be directly channeled into our economic system. But since the ultimate fate of that economy is involved, the neglect of studies of the effects of change is equivalent to having an elaborate industrial enterprise without a set of accounting controls.

MAN'S PLACE IN NATURE

To understand and measure change, it is first necessary to view man's place in nature. His flexibility as an organism is often emphasized, sometimes being referred to as his unspecialization. What is meant is his freedom from evolutionary characteristics that would sharply restrict his activities and choice of habitat. That he is highly evolved cannot be questioned. What is often overlooked is that he exists by virtue of an environment which is itself highly evolved and specialized, having become so in the course of more than two billion years of earth history.

The most obvious features of this specialized environment include the presence of an angiosperm flora—notably grasses and legumes—and a mammalian fauna dependent upon it. From these sources man is able to derive sustenance with an ease and efficiency that would have been inconceivable had he been surrounded only by organisms of the remote geological past. Less obvious is the presence of a complex population of micro-organisms and invertebrates which, among other functions, takes care of the breakdown of organic wastes and their return to chemical forms that can be reused to sustain life. Of major importance also is the persistence of numerous species of gymnosperms that, along with many kinds of woody angiosperms, furnish facilities without which man would have been severely handicapped throughout his existence. Indeed, that existence appears to have hinged upon trees, for his arboreal ancestors were obliged to develop the free shoulder articulation, grasping hands, and stereoscopic vision which serve him so well.

Least obvious, at any rate to modern urbanized man, is the effect of our present highly complex fauna and flora, organized as they are into communities, upon the environment itself. Through reaction upon habitat these communities not only insure an orderly cycle of material and energy transformations, but regulate the moisture economy, cushion the earth's surface against violent physiographic change, and make possible the formation of soil. In short, man is dependent upon other organisms both for the immediate means of survival and for maintaining habitat conditions under which survival is possible.

Man is also dependent upon minerals, his consumption of the two used longest, water and stone, still ranking first by volume. His present economy rests chiefly upon the use of fossil fuels and metals, both irregularly distributed and present in finite amount. The fossil fuels, once used, can only be restored by the slow organic and tectonic processes which formed them, while the use of metals results in the dissipation of the ore concentrations by which they have been made available to man. Their present convenient form, like the character of the organic world, is the result of prolonged earth history before the coming of man. Man is clearly the beneficiary of a very special environment which has been a great while in the making. This environment is more than an inert stock-room. It is an active system, a pattern, and a process, as well. Its value can be threatened by disruption no less than by depletion.

Any species survives by virtue of its *niche*—the opportunity afforded it by environment. But in occupying its niche, it also assumes a *role* in relation to its surroundings. For further survival it is at least necessary that the role not be a disruptive

one. Thus one generally finds in nature that each component of a highly organized community serves a constructive, or at any rate a stabilizing, role. The habitat furnishes the niche, and if any species breaks up the habitat, the niche goes with it. The guest who helps with the chores may prolong his stay, but the inhospitable one may wreck the house. Systems or processes which involve organic activity resemble purely physical systems in being expressions of thermodynamic law, tending to approach a condition of minimum stress and unbalance. But since living systems are active and dynamic, they tend to approximate what is known as a steady state, rather than a condition of repose. That is, to persist, they must be able to utilize radiant energy not merely to perform work, but to maintain the working system in reasonably good order. This requires the presence of organisms adjusted to the habitat and to each other, so organized as to make fullest use of the influent radiation, and to conserve for use and re-use the materials which the system requires. The degree to which a living community meets these conditions is therefore a test of its efficiency and stability. This gives us a criterion by which the effects of environmental change can be judged.

While these principles have been shown to apply to what is generally called the world of nature, that is, the world apart from man, there is considerable resistance to the idea that they apply to him in any serious way. Much of this resistance is emotional, having its roots in that part of Judeo-Christian tradition which separates man from nature to a greater extent than perhaps was common in Oriental and Mediterranean thought. Some of it certainly comes from those who resent, for whatever reasons, any warning sign along the road to a perpetually-expanding economy. And surprisingly, perhaps, some resistance comes from scientists and technologists, especially those unacquainted with the general field that used to be called natural history. In defense of this last group it must be said that they are as aware of still unexploited reserves as the ecologist is of the existence of limiting factors. And in view of the fabulous results they have produced, they are perhaps less concerned with the law of diminishing returns than their colleagues, whose business it is to study the interrelationship of life and environment. As responsible scientists, both groups have an obligation to collaborate and to weigh scrupulously any pronouncements, whether these be cautions or promises. Mankind is not well served either by hysteria or false visions.

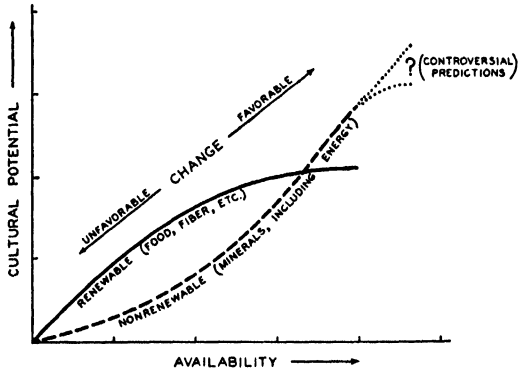


FIG. 1.—Per capita requirements of resources in relation to cultural potential (based on living standards).

CHANGE AND CULTURE

The significance of environmental change can be shown conveniently by a diagram (Fig. 1). This curve is based upon Megger's thesis (1954) that cultural potential rises with the quality of agricultural land, but differs in considering her class 4 as land of optimal, rather than unlimited, capacity. Limiting factors are always present. It is also based upon the fact that as the level of living rises, per capita consumption of renewable resources—nutrients in particular—rises with it but reaches a plateau. Consumption of minerals, both for energy and materials, continues to rise with living level, however. The consensus among technologists, even the most optimistic, is that this phenomenon is unavoidable. Any scheme for increasing the capacity of the earth to sustain human activity assumes the steadily increasing use of energy, the present source of which is largely mineral

and non-renewable. This applies not only to the concept of expanding industrial technology, but to that of lifting the present limits on food-production as population increases.

Thus the diagram sums up in greatly simplified fashion some very complex ideas and phenomena. Water, for example, is involved in both segments of the curve, although it is classed as a renewable resource. It is one of the major limiting factors in the nutrient potential of the environment, but its increasing use in technology resembles that of other minerals. So, too, does the free oxygen of the atmosphere in industrial centers, the problem of both water and air being aggravated by contaminant wastes.

The diagram also serves to indicate the crux of the present controversy among resource specialists. One group (e.g., biologists and demographers) believes that the energy and mineral curve, like the nutrient one, must eventually become asymptotic. The other group (largely technologist) appears to regard it as a straight-line function, a view widely reflected as the unqualified notion of an expanding economy.

While the question of this extrapolation is of paramount importance in the formation of social theory and the consequent establishment of values, it is not our present concern. The latter is indicated by the arrows on the diagram, which are based upon tangible and measurable phenomena. Changes in the environment can and do definitely raise or lower the availability of components essential to our culture. Even if one maintains that the superabundance of material things is not essential to the highest culture, nevertheless man must eat to live, live to think and create, and have a reasonable amount of leisure and material security for any culture worth the name.

We address ourselves, therefore, to a consideration of the kinds of change which do affect man's environment and their effects upon his cultural activities of whatever sort. Some changes fall under the legal category of "Acts of God," as being beyond man's present responsible control. They may be physical, for example climatic, tectonic, and volcanic change, or biological—e.g., the evolution of new strains of pathogenes. But the most rapid, extensive, and effective change at present seems to be that due to man's own activity and therefore to be his moral responsibility, whether he can help himself or not. We shall consider first those changes for which he cannot be held accountable.

NATURAL CHANGES IN THE PHYSICAL ENVIRONMENT

Considering first changes other than climatic, the most spectacular are probably those due to volcanism or tectonic activity, both frequently being accompanied by earthquake. More general and consistent in operation is the process known as base-leveling, that is, topographic change whereby uplands are worn down and depressions filled. All three processes result in alteration of the surface form of the earth. Volcanism tends to be restricted to certain zones, and its effects, while violent, are generally local. Tectonic change and base-leveling operate more gradually, the effects often being unobserved during a lifetime, or even generations, so that human activity can be adjusted gradually to them. An important exception occurs when the process of base-leveling (erosion and deposition) is accelerated by man. This will be considered subsequently.

Finally there is climatic change. Of various degrees of intensity and duration, such change affects man primarily through its influence upon the other living organisms which sustain him. Their limits of tolerance are set by evolution. Plants and animals, unless domesticated or otherwise protected by man, cannot, to the same degree as man, adjust themselves to change through modified behavior.

Volcanism

Volcanic activity in populous areas may, through lava-flows, ash and cinder falls, or associated earthquake, cause severe disaster. People may be killed or rendered homeless. On the other hand archeological material

of great scientific importance may be preserved, either at the cost of human life and urban structures as at Pompeii in 79 A. D., or through the sacrifice of tilled land, as at Copilco in the Pedregal south of Mexico City.

Ash-fall when severe may destroy vegetation. Frequently, however, it may bring long-range benefit through the renewal of nutrient minerals lost by rapid leaching in tropical regions. Thus in Indonesia, notably the island of Java, population is dense where there have been rather frequent ash-falls, but sparse where none has occurred within recent time.

Where volcanoes are still active, settlement must be looked on as a calculated risk, meliorated somewhat by improved means of prediction. An example is afforded by the fertile slopes of Mt. Etna. The sudden appearance of a cinder cone at Paracutin, while destroying fertile farmland, has been more than compensated for by increased revenue from tourism.

Tectonic Change

Uplift and subsidence of the earth's crust is ordinarily gradual in terms of human experience. Occasionally, as in the New Madrid earthquake of 1811 which formed Reelfoot Lake in Tennessee and altered the lower Mississippi, there may be accompanying disaster and changes in land use. The effect of tectonic earthquake upon land-use patterns is usually small as compared to the disaster to life and property. Estimates of death due to earthquakes during the past three centuries include such figures as 50,000 for the Lisbon quake of 1775 and 300,000 for the Indian catastrophe of 1737. For the Japanese earthquake of 1923, accurate figures are available: 99,331 killed, 103,733 wounded, and 43,476 missing. Fire following the quake is usually a major source of property loss.

The rise or fall of coast-lines may result in opening new areas to occupation, or in submerging those previously in use. The submergence and later elevation of the Temple of Jupiter Serapion on the Mediterranean shore is an example. In relation to the totality of land surface, such events are local. Uplift of the land north of the Great Lakes after removal of the weight of the Pleistocene continental ice-mass drained water from the northern shore of Lake Erie but caused it to encroach upon the south shore, as the tilting of a cup brings coffee to the drinker's lips while it exposes the raised inner portion of the cup. This tilting of the lake basin raised the water level on the south some thirty-three feet above the Nipissing low stage. To the west, from Toledo to Sandusky, this drowned the shallow estuaries of rivers that drain fertile lands, producing one of the world's richest fresh-water fisheries. East of Sandusky, however, the shore is higher, and here the encroachment of the lake has produced heavy erosion that is particularly costly in view of the heavy demand for recreational sites in this densely populated region. Thus the same phenomenon that has resulted in an increased food supply at one place has brought about destruction of property and loss of facilities needed by our present culture in another place.

One of the effects of steady or repeated mountain-building is the consequent erosion, by agencies next to be considered.

Base-leveling

Wherever differences in elevation occur, the forces of weathering and transport, operating under the influence of gravity, tend to reduce them by wearing down the hills and filling the depressions. The theoretical limit, seldom reached, is the condition of minimal relief known as the peneplain. As a rule tectonic activity renews the cycle before it comes to repose. Much of the world's most productive land is the result of base-leveling, valley alluvium being a familiar example. This may extend out into great deltaic deposits such as those of the Mississippi or Nile or expand as great outwash plains. Much of the Indian peninsula and our own Great Plains and western prairies, produced by the detritus from high mountain sources, are examples of such plains. Their fertility is proverbial, limited only by the amount of available water.

The rate of erosion in base-leveling is influenced by vegetative cover, which in turn, under natural conditions, is related to climate. So likewise are glacial transport and wind movement of materials.

Climatic Change

The general norm of geological climate has been considerably milder than the present, which may be regarded as still within the Pleistocene, or Glacial Age. Man is essentially a Pleistocene mammal and the biogeography of the present is largely an expression of the numerous advances and retreats of the Glacial Age. Human cultures have moved and changed and the associated organisms have shifted position in response to these movements and the correlative climates.

Since 1750, existing alpine and arctic glaciers have been receding and temperatures rising. These glaciers developed during the early part of the Christian Era, a time generally moist and cool. Earlier, there was an extended interval marked by warm dry vegetation and the development of forests in Alaska, which were overridden by the subsequent glaciation.

The limits of this warm dry period are uncertain, but it evidently included the dates of 1500 B. C. and 500 B. C. The extension of Neolithic agriculture into the Baltic area and of high maize culture into the upper Mississippi and Ohio valleys took place during this interval. The drier forest types then prevalent were amenable to clearing by stone and fire. The subsequent moist period produced marshes or fens in Europe and may have facilitated the advance of forest cultures in the Ohio valley at the expense of the agricultural moundmakers. Minimum lake level in the Basin of Mexico toward the end of a long dry period around 500 B. C. marked the transition from the Archaic lake culture to the upland Teotihuacan. Nahua lake culture once more appeared during the humid period around 800–900 A. D. after the water level had risen. Current dating suggests that the pre-Christian dry interval may have favored Mayan occupation of the later more humid, tropical forest regions.

Complications come into the record because of severe fluctuations within these longer moisture trends. If one examines a continuous record of any climatic factor—temperature or moisture especially—he will be impressed by the fact that its only contact with the line of normality is to cross it at intervals. Thus wet years tend to come in groups and so do dry ones. For this reason it may happen, during a long period of relatively favorable climate, that a group of unfavorable years ranging from two to ten in succession will disrupt cultural activities in marginal regions. This is the explanation advanced for pueblo abandonment at Bonito in the thirteenth century. It is also suggested as the driving force which more than once has led to the incursions of pastoral raiders into civilized territories, and is clearly documented for the considerable exodus of dry-land farmers during the drought of the 1930's in our own country.

On the other hand, long general trends such as those associated with glacial advance and retreat will shift the positions of marginal zones and those of the appropriate human cultural activities.

ENVIRONMENTAL CHANGES PRODUCED BY MAN

Changes by man, sometimes referred to as man's reaction upon the environment, now surpass in extent and intensity the various kinds of natural change just reviewed. As demonstrated by Marsh, man has become a major agent of geological change. Marsh further showed that the kind of change produced by human activities very often, if not always, works to man's own ultimate disadvantage. This thesis, although of the greatest practical significance, was long neglected except by those concerned with a particular natural resource, such as forests or wildlife. Since the nineteen-thirties, however, a considerable literature has appeared, much of it fairly well documented. The general trend of this writing is to show that man has in the past lowered and is now rapidly lowering the long-time potential of the landscape to sustain him. This condition is attributed in

part to sheer pressure of growing populations, in part to inefficient patterns of land use, and in part to the powerful applications of science in a technology not much concerned with its ultimate consequences.

To this thesis there have, of course, been rejoinders, the most impressive of them based on the premise—and promise—that technology will in the end be able to solve problems as they become really serious. Before considering the merits of the controversy, it is in order to examine the record.

Man's Influence on Vegetation

How much effect man had before the origin of agriculture and pastoral life is not known. The incidence of fires, even during the hunting stage of economy, must certainly have increased. Man is known to have hunted Pleistocene mammals, for example, the mammoth and the bison. The mammoth, horse, and camel evidently became extinct in the Americas after man's arrival there.

Human influence on vegetation registers in many pollen profiles through the abrupt appearance of certain weeds, notably composites, amaranths, and chenopods. These multiply when the natural cover is destroyed and show up in pre-human pollen profiles following volcanic activity or erosion due to tectonic change. The chenopods are still used for food; thus they may be regarded as precursors of agriculture. Of especial interest is the recent evidence of their appearance during the second interglacial, in association with artifacts of pre-Acheulean age.

Agriculture requires the removal of native vegetation, while pastoral life is sustained by such vegetation. The effectiveness of stone tools and fire in clearing the drier types of forest has been strikingly demonstrated by Iversen's recent experiments. This milpa system consists of clearing patches and using them until the yields decline, then abandoning them and moving on—a process not particularly harmful until the increasing pressure of population extends the system to the hills and shortens the cycle needed for the vegetation and soil to recuperate. Erosion then follows.

Similarly, so long as a pastoral economy has sufficient space to permit nomadic life, the grasses and other herbs which sustain it can recuperate between periods of heavy use. Moreover, the pastoral cultures tend to be somewhat more aggressive than the legend of Abel and other "gentle shepherds" would suggest. One cannot doubt that primitive herders knew good pasture when they saw it and took vigorous measures to prevent undue trespassing. Even so, the growth of population brought steady pressure on the world's natural grasslands. Under such conditions, the floral composition of these grasslands is modified and less nutritious species come in as weeds. If the pressure continues, and particularly if it is extended to arid or hilly land, erosion by wind and water ensues. All of these effects are intensified and extended to forest country when goats, valuable as they are to man otherwise, are present in great numbers. The goat is a thin-lipped, destructive grazer, as is the sheep, but, to a greater extent than sheep, he is a resourceful browser, damaging to woody vegetation.

Changes in Land Use

With agriculture, urban life and the leisure arts and crafts became possible. Repeatedly in human history, this appears to have thrown the art of husbandry and the importance of good land use out of perspective. Except perhaps in China, the status of the man who worked the land was gradually demeaned as cities grew in size, power, and prestige. The effect of such change on the quality of rural techniques was probably bad, and the effect on the land itself, intensified by increasing food demands, was clearly so.

Two aspects of the growth of cities were particularly important. One was the expansion of irrigation works, the other, the harvesting of timber for fuel and structural purposes, thus clearing land not needed for, or suitable to, agriculture. Early irrigation in both hemispheres seems to have been well engineered, probably because the

irrigators of arid lands had the stark choice of doing a proper job or being eliminated.

Where such irrigation depended upon wells, these afforded a positive check upon expansion, and an equilibrium of land use was reached which persisted in parts of the Near East for millenia, only to be broken by the growing cone of depression of the water-table incident to modern pumping for water used in oil refining.

Important irrigation works of great antiquity, notably in Mesopotamia, were based on the use of streams arising in forested uplands. Here, the clearance of forests, no doubt followed by heavy grazing, stimulated erosion. Vast amounts of silt were washed down so that increasing labor had to be used for the clearance of the otherwise excellent system of irrigation ditches. While it is true that this interfluvial culture persisted long after the empires which it built—until its ditches were wrecked by Mongol invaders during the thirteenth century—the immense piles of silt alongside the ditches show that the system was well on the way toward being choked out before it was destroyed.

It is in the world of today, where industrialization and death-control have produced an explosive growth of population, that land-use problems have become most acute and dramatic. Man has long competed with other forms of life for space. Increasingly he is his own competitor—a situation made worse by the diversity of his interests as they affect land use. Residence, business, industry, transport, waste-disposal, water supply, agriculture, forestry, military needs, recreation—not to mention many intangibles—all have intensified their rival claims, frequently upon the same limited area. The effect has been confusing almost to the point of disaster, as can be seen in any metropolitan "urban fringe" area.

Allocation of space by planning and zoning, while not a new idea, has been outlined on a scientific basis by Geddes and his followers. It has been rather effectively developed in Great Britain by Stamp and others, and in some parts of Western Europe. But in Holland where it is extremely advanced, it now faces the crisis of a saturated population. In the United States it faces grave political obstacles, made worse by the fact that we do still have a margin of safety, and by the prevalence of our conviction that an economy can continue to expand without limits. This of course runs counter to the scientific experience that the factors in any process must ultimately work toward some kind of equilibrium. This principle, so widely applied in the purely physical sciences, seems to be as widely ignored—or disbelieved—when it comes to land use. A curious and dangerous phenomenon in a technological culture!

Soil Erosion

It would be misleading to say that man is the cause of erosion, or that erosion *per se* is a bad thing. As pointed out previously, it is a normal part of the natural process of base-leveling and has been the source of some of the richest alluvial terraces and plains on earth. But under natural conditions, and except in very arid mountainous regions, the rate of erosion is controlled by the presence of vegetative cover in the form of stable communities. Under these conditions, erosion proceeds so slowly as not to interfere greatly with the normal process of soil formation, which, in turn, is a resultant of the interaction of living communities with the physical environment. It is when this natural cover is removed *without providing a substantial artificial equivalent* that the rate of erosion is accelerated to a dangerous degree.

Where this occurs, soil is removed from the uplands and the rich alluvium of the lowlands is buried, first by upland soil, later by the sterile mineral materials which have underlain the upland soil. In either instance, the productive capacity of former surfaces is greatly reduced even where, as in sheet erosion, the surface form is not much affected. But sheet erosion, if not checked, rapidly passes into gullying, which destroys the previous topography and renders it difficult to use.

Forest Regions

Because forest regions are usually well supplied with water and, at first, with fuel and building material, they often become heavily populated. But it is a characteristic of forest soils that the most fertile organic layer of the surface is shallow, thinly overlying a mineral layer from which the plant nutrients have been largely leached. This kind of soil profile under pressure of use rapidly loses its productivity; the result is likely to be extensive abandonment. This explains much of what happened in New England, which was under extensive cultivation in the early nineteenth century, later largely changed to pasture, and is today two-thirds in forest of such inferior quality that it yields less than ten per cent of the total rural income.

The situation is less serious where, as in Ohio, the minerals in the deposits brought in by glaciation are rich in nutrients and fairly deep. Here it is possible, through the use of cover crops and improved pastures and woodlots, to stabilize the surface and tap the underlying minerals, thus restoring the fertility lost when the original top-soil was removed. In Western Europe, where relief is low, rainfall gentle, and where economic pressure has enforced good husbandry, damage from removal of the original vegetation is relatively slight. Except for hunting preserves, the original forests of Western Europe were largely destroyed during the Middle Ages in order to obtain not only building material but also charcoal for fuel and for the manufacture of steel. This is surprising, in view of the fact that in the seventeenth century some 360 tons of steel more than met the annual needs of England—at least from the seller's point of view. Today, the art of forestry has reached such levels that, from Denmark to Italy, one finds that good agricultural land can be used profitably for the production of wood. Moreover, the forests of France and the pasture lands of Britain fill admirably the role of natural vegetation as a stabilizer of the landscape.

Grasslands

Changes in forest cover are more obvious and better known than those in the grassland regions. Thus Ohio, once about ninety per cent forested, now is about fifteen per cent in such cover. Farther west the proportion of native tall-grass prairie that has been destroyed is probably even greater. This is especially serious because of the remarkable resilience with which the rich prairie flora can adjust itself to the recurrent crises of climate—a property not shared by the plant cover which agriculture has substituted.

Where precipitation does not exceed the evaporating power of the atmosphere measured in inches of water, grassland, scrub, or desert occur. The subhumid grasslands of the world have developed a deep and fertile topsoil, well supplied with mineral nutrients and remarkably suited to the production of high yields of cereal protein. Because the thickness of the humus horizon varies from three to five feet, erosion goes largely unnoticed, and the use of artificial fertilizers can be postponed for decades. Yet, there is evidence that in Iowa, for example, an average of perhaps one-third of the original A-horizon of the surface has been lost since settlement, while the depletion of mineral nutrients is now making necessary the use of chemical additives.

The semi-arid grasslands sustain a growth of short-grasses and other low-growing herbs which have served to bind the soil into a turf or sod. Here there is a marked excess of evaporative power over precipitation, and a consequent upward movement of water, bringing nutrient minerals to the surface. The soil is inherently productive, except for the lack of moisture. Under natural conditions, good, though sparse, grazing was afforded by the native grasses, which not only held the surface in place, but cured on the stalk, retaining their value as forage.

Outward pressure from the centers of population brought these lands under settlement, and techniques of dry farming were developed. The level land being well

suited to mechanized farming, good yields of high-protein cereal at minimum cost were found to be possible. The concurrence of moist years with periods of high demand and good prices encouraged the extensive plowing up of the original short-grass sod during both World Wars. But in both instances the moist years were followed by dry, and the autumn-planted wheat either failed to germinate or made such feeble growth that it could not stabilize the lighter types of soil against the strong dry winds of late winter and spring. Severe dust storms were produced by the resulting erosion. This phenomenon is all the more remarkable for having repeated itself in less than a quarter century in a literate, highly technological culture that had made remarkable efforts to repair the effects of the first series of dust storms and was well-informed of the consequences to be expected from repeating the mistakes which had led to them. However, the entire fault does not lie alone with the more speculative and less responsible aspects of the free enterprise system. Influential spokesmen for scientific agriculture, more concerned with the latent fertility of arid soils than with the inevitable pattern of recurrent drought, did too little to discourage exploitation, and in some cases encouraged it.

Some confusion is due to the clear evidence of periods of rapid erosion and gully formation in recent geological time, but before the known advent of man. This is especially noticeable in our own Southwest, and has led some scientists to minimize the effects of overgrazing as a cause of accelerated erosion today. Past erosion cycles were due to intervals of dry climate, and we have been in the beginning of such an interval since about 1700; so, runs the reasoning, why blame man for a natural phenomenon? The answer lies in comparing such overburdened ranges as those of the Navaho with others which have been subjected to reasonable use. It is possible to find hillsides on which a fence separates a field of gullies from one which is intact. That we are in a time of increased climatic hazard is certain. It would seem equally certain that a scientific culture therefore should exercise more, rather than less, caution in its pattern of land use.

The effect of destroying or damaging natural communities is not confined to increased erosion. Water, with wind, is the chief erosive agent. Beside stabilizing the land surface, natural vegetation is a major regulator of the hydrologic cycle—indeed it is chiefly in this way that the surface is stabilized.

The Problem of Water

If the water cycle be roughly described as (1) evaporation from the seas, (2) transport over the land, (3) rain or snow fall, and (4) flow back to the sea, it is chiefly during stage (4) that water is available for the sustenance of life on land. By prolonging this stage, terrestrial life gets the maximum benefit from moisture. Whatever shortens the time that water is in or on the land decreases its utility to land life, including our own.

Continuous vegetative cover retards the flow of water. It also renders the ground more permeable, thus maintaining the water table. We now have clear evidence that natural forest soil is far more permeable than adjacent agricultural land of various types. In one instance it has been shown that, while pasture and cultivated land soon become saturated, forest absorbs the equivalent of nearly 500 inches of rainfall. It seems reasonable to suppose that the same relationship holds as between native prairie and average farmland derived from it. A number of factors, not the least of which is compaction due to increasing use of heavy farm machinery, are responsible for this reduction in permeability.

A closely related phenomenon is the rapid increase of virtually waterproofed surface areas represented by cities and highways. Except in isolated cases, notably parts of Texas where highway drainage is channeled into storage ponds, the water falling on roofs, sidewalks, and roads is speeded on its way. If used at all it is reclaimed from rivers and requires purification. At the same time, the per capita demand for water in urban centers continues to rise,

both for domestic and industrial purposes. Our cities are almost wholly dependent upon water which falls in non-urban territory. Thus we have the phenomenon of a technological culture whose demand for water is steadily rising at the same time that its processes accelerate the return of water to the sea.

But the problem of water involves quality, as well as quantity. In this respect also, a curious picture is presented. No highly developed organism in nature carries massive effluent wastes and influent necessities in the same system of transport. No organized living community in nature is without components that transform waste materials back into harmless and useable form. Yet our streams are utilized as sources for domestic and industrial water supply and concurrently as convenient sewers for domestic and industrial waste, beyond the capacity of their normal process to purify.

To urban wastes is often added the silt from eroded surfaces. The net effect is not only to impair the quality of the water but seriously to affect it as a habitat for aquatic life, both in the stream bed and in the estuary into which it discharges. This has damaged recreation and sport, as well as commercial fishing and shell fishing. Pearl Harbor is no longer hospitable to the molluscs which gave it its original name.

Commerce is affected, also. Computations of the dredging costs due to erosional silt in Cleveland Harbor and at the mouth of the Brandywine show that these costs are equivalent to a tax of several hundred dollars on each ship that enters the two ports each year. Such are the hidden costs of man-made change, patent to the ecologist, yet largely ignored by the industrial and financial leaders of a great technological civilization, in which the art of accounting, or business analysis, has been carried to a high degree of perfection.

Any discussion of water involves not only shortage and quality, but also the question of flood. It is difficult to say to what extent flood itself has been increased by man's activity, for certain catastrophic types of rainfall would almost certainly produce flood in any event. But buildings and other installations within the flood-plain of a great river should be in the same category of calculated risks as vineyards on the sides of an active volcano. Though they are seldom so regarded, nevertheless it is man that is responsible for flood damages, if not for the floods which cause them.

On the other hand, there are at least local floods that can be traced to human disturbance. This applies to northeastern New Jersey, a country of ridges and folds, where clearing, building, and paving of the ridgetops for extensive suburban developments has left rainfall with only one course, that of running down hill and swamping the homes below. Similarly, burning of chaparral or forest clearance of mountain slopes above our western cities has been responsible for flash-floods and mud-flows of a serious character. On general principles one would expect denuded and exploited headwater regions to intensify the destructive character and frequency of floods. While this is assumed as a basic element in national forest policy, far greater funds are expended upon efforts to control flood *after* water has reached the river channels than is devoted to securing proper land use on the tributary uplands to retain the water where it falls. This is an interesting aspect of a technological culture whose emphasis is on engineering rather than biological controls.

The impoundment of water for various reasons is rapidly increasing, due to the substitution of powerful earth-moving machinery for hand labor. In some instances, most notably the Tennessee Valley Authority, there has been an attempt to relate such impoundments to the entire economy of a region, making them serve multiple purposes. Thus flood-control, recreation, power, and water transport have been combined with measures to improve public health and land use in the Tennessee Valley. In numerous instances the approach has been on a narrower basis.

Small farm ponds are being used to compensate for the growing scarcity of suitable ground water. Great public works in arid and semi-arid regions have made

possible the extension of irrigation, generation of power, and augmented urban water supplies. Such irrigation has not been uniformly successful, as witnessed by the inability of the beneficiaries to carry out contract payments on schedule. In some instances the high rate of evaporation has resulted in the accumulation of salts which interfere with plant growth. Problems arise from the necessity, in heavily industrial-residential areas, of excluding recreational activities from public water-supply watersheds in order to protect them from contamination, even though suitable recreation space is at a premium.

The Atmosphere

The atmosphere has become a medium of transport and the scene of experiments to modify the weather. On this latter problem scientific opinion is divided, both as to feasibility and wisdom. Our failure thus far to adjust our economy in marginal climatic areas to what we know about their compulsive and recurrent hazards suggests that, even if we can modify climate, the operation at this stage is somewhat premature. Modern society is not yet organized to control the powers which science already has placed at its disposal.

Of perhaps more immediate concern is the growing volume of volatile and solid wastes which pollute the air of great urban centers across the United States. Hydrocarbons from refineries and automobiles, no less than by-products of chemical works, are particularly serious. Vegetation, not only in the vicinity of smelters, but in places like Pasadena, has been affected, and there have been instances of known damage to human beings. Pittsburgh has been greatly improved, and commissions are at work elsewhere, but the problem of protecting the quality of two basic resources, formerly regarded as free economic goods—water and air—remains urgent.

Mineral Resources

As pointed out earlier, the per capita consumption of minerals has continued to rise steadily with the level of living. Re-use is growing, but not sufficiently to offset the depletion of concentrated reserves. Once taken into the economic process these minerals tend to become dissipated or, in the case of energy sources, altered beyond recovery except through the slow biological and geological changes which made them.

The measurement of reserves is difficult technically and exploration increasingly expensive. Strategic and business considerations may hinder us from finding out where we stand. As an official in the copper industry put it, no figures on reserves are given out, as a matter partially of protection to the American public!

However, a few figures will suffice to emphasize the situation. Department of Commerce figures for March, 1954, show that petroleum consumption within the United States is substantially in excess of domestic production. Again, the United States with less than one-tenth of world population is today consuming more than half of the world's mineral production. The fact that much of the wealth so created is being dispensed among other friendly nations is some compensation, but no guarantee that this condition is either desirable or secure. And finally, more than half of the many kinds of minerals used in the American economy must be imported, not being commercially available within our borders.

CHANGE AND ETHICS—A SUMMARY

Change in the ecosystem of which man is a part is inevitable, since this system is a process, and he is inevitably affected by such changes. On the whole, those changes which are natural—i.e. not due to his interference—take place on a scale and at a rate which is not disastrous to him. While some of his activities may regulate and utilize these changes to his benefit, more of them serve to accelerate the rate and widen the scope of natural changes in ways that lower the potential of the environment to sustain him. For such effects he is responsible, and where responsibility enters, so do ethical problems.

Through science, man now has the means to be aware of change and its effects, and the ways in which his cultural values and behavior should be modified to insure their own preservation. Whether one considers ethics to be enlightened self-interest, the greatest good for the greatest number, ultimate good rather than present benefit, or Schweitzer's reverence for life, man's obligation toward environment is equally clear.

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Primatology in its Relation to Anthropology

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INTRODUCTION

THE tempting invitation to contribute a survey of "the major accomplishments and trends in primatology during the period of 1952 to 1954" for a yearbook of anthropology we accepted somewhat rashly before coming to realize that "major trends," which are new and clearly recognizable as such within only two or three years, are exceedingly rare in any science and particularly in such a young speciality as the zone of overlapping interests between mammalogy and anthropology, which had not even become dignified by a name of its own until very recently. To select the major accomplishments among the current primatological papers was found a difficult task as soon as we tried to decide which are merely minor ones. The size or extent of an investigation would hardly form a fair basis for such distinctions nor would the criterion that a study seems to be reliable and its results convincing. We have found no less personal and arbitrary way to judge "accomplishments" than by the interests they serve and whether or not they contribute something of significance to the solution of problems which happen to appear to us to be worth-while. Simply because a science of man came last in the history of natural history, we have the urgent feeling that priority should be given to the means by which anthropology best can develop out of zoology into the most important of all modern biological specialities. That the logical and lasting connection is a science of primates is a matter of course. Of the voluminous newer primatological literature here disregarded is the large and meritorious part which does not seem to have, as far as one can judge today, any bearing on anthropological problems. Also foregone is a direct and full consideration of the current and exceptionally important literature on the many new fossil finds of higher primates since this is the subject matter of the article, next following, on "Fossil Man and Human Evolution."

Considering these limitations, the primatological literature of the last two or three years cannot boast of many outstanding accomplishments leading us to, and beyond, new horizons, but it does contain much to suggest and to justify some remarks on the benefits which anthropology can and should gain from close cooperation with primatology.

Physical anthropology developed from two main roots, a zoological, comparative-anatomical one and a historical, racial one; the former always was centered on problems of man's evolution, whereas the latter

predominantly considered questions concerning the history of human races and their interrelationships. All other interests of physical anthropology, such as growth, biometrics, constitution, and genetics, historically speaking are branches rather than roots, not only because they appeared later, flourishing with the application of new theories and methods borrowed from other sciences, but also because they retain less contact with the soil of anthropological origin: zoology and human history.

A survey of the literature on physical anthropology of the past hundred years reveals many profound changes chronologically as well as geographically. Papers on human evolution, or, at any rate, of a comparative-anatomical nature, though nearly taboo in some countries, predominated in general and at least qualitatively for a long initial period. In numbers they gradually became surpassed by titles which could be classified under "racial description and attempts at racial analysis." This category of papers, though hardly decreasing in absolute numbers, has become *relatively* less numerous today through the great increase in the physical-anthropological literature devoted to many new interests. Unfortunately the primatological literature between about 1920 and 1950 has formed a steadily decreasing and all too small part of the entire yearly output of anthropological papers. The science of man as a specialized part of zoology cannot afford to neglect its natural biological foundation which consists in the systematic comparison between all facts we have found regarding the nature of man and the corresponding conditions in the other primates. Through comparisons, mere descriptions change into science. The old "anthropography" used to be satisfied with the describing and cataloguing of the varieties of mankind, but modern anthropology wants to understand and explain mankind, and this first of all by comparing not only all living races, but recent ones with those of the past and the human animal with the products of other branches of the primate family tree. The last category of comparisons so far has concerned itself predominantly with the morphology of the adult, and a mere beginning has been made with the vast variety of other problems which offer so many opportunities for advances in our understanding of man through comparisons with non-human primates. How much valuable help anthropology can expect from primatology has been shown in the psychological field by Yerkes and his many coworkers, and in regard to social behavior in a natural environment by Carpenter. Considering the large number and variety of primates we can claim to have gained only mere glimpses of what can be learned from such comparative behavior studies. Our information on basic problems, such as the composition of a natural population according to age and sex and its profound influence on behavior, is tentatively known for only three or four species. The role of sound in social relations, undoubtedly of great and universal importance among primates, is still a practically untouched, though highly promising, field for future comparative investigation. Growth and development have become quite well known for the White race and good progress is being made with the urgent collection of comparative data for other races. The ontogenetic conditions in non-human primates, on the other hand, can only be described in a tantalizingly incomplete manner, but these fragments already prove their significant value for the analysis of human specializations. We can never hope to explain the characteristics of races and the peculiarities of all mankind, as they appear in the adult stage, without an adequate knowledge of all their ontogenetic changes in many more primates than have been investigated up to now. Questions of environmental influences, variability, selection, race formation, sex differentiation, etc., with which physical anthropology is so intensively concerned, all demand the simultaneous investigation of man *and* the apes for comparisons between nature's diverging experiments with one and the same ancestral stock. The following brief review of the current literature will indicate to what extent we are at present using

the many opportunities for primatological research of anthropological significance.

DESCRIPTIVE AND COMPARATIVE STUDIES CHIEFLY ON ADULTS

By far the largest single contribution to primatology of the last few years is the splendid monograph on the prosimian primates (without *Tarsius* and *Tupaia,* the so-called *Strepsirhini)* by Hill (1953a). Though intended primarily for comparative anatomists and taxonomists, this volume of 800 pages contains a wealth of detailed information for which physical anthropologists can be most grateful in connection with many different problems. Not only does this reference work give full systematic descriptions, genus by genus, of the skull, dentition, dermatoglyphics and all those surprisingly varied, localized specializations, but it also can teach the anthropologist how widely these primitive primates can differ in such respects as general body size, body proportions, coloration, etc., and how single species have become differentiated in sometimes a great many geographical races, though in general their evolutionary tempo has been exceedingly slow.

Also concerned exclusively with prosimians are the studies of Schultz (1954a) on the numbers of vertebrae and on the body proportions in these primates. Based on much larger series than ever before had been used for these problems, it could be shown that in no prosimians has the pelvic girdle migrated cranially, as it has in higher primates, but in many forms the opposite trend has been very marked, the number of praesacral segments having increased from the primitive 26 to nearly and fully 30. The fusion of more than three vertebrae into one sacrum, characteristic of all higher primates, has also developed independently in one Asiatic and one African prosimian genus, and an extreme reduction of the caudal part of the spinal column has occurred repeatedly among prosimians, just as it has became changed with apparent ease among various Old World monkeys and all apes and man. The amazingly high vertebral variability of some prosimians emphasizes by contrast the great stability of man in at least this respect. The finding that the length of the lower extremities, relative to the trunk, is greater in several types of prosimians than in man, forces us to drop this proportion from the list of human distinctions.

Also dealing mainly with prosimians are the investigations by Starck (1953) and by Hofer (1953), in which some of the basic factors determining skull formation are analyzed by means of the great variety of cranial constructions which have developed among the lowest primates. Of particular interest for physical anthropology is Starck's demonstration of the ontogenetic changes in the topographic relations of the skull and their close dependency on the development of the brain and of the masticatory musculature. Hofer's similar comparative craniological study contains some especially instructive discussions on sinus formations and their role in cranial architecture and in providing surface area for muscle attachment. In another publication Hofer (1954) shows the remarkably close correlation between the shape of the brain and of the thin-walled skull in the night monkey, *Aotes,* and describes the cranial responses to various structural requirements.

In the generally conservative mammalian order of primates it is the brain which has undergone the outstanding evolutionary specializations. Unfortunately this most important organ has not been investigated in recent years with the intensity it fully deserves. Connolly, who had contributed a very comprehensive and valuable investigation of the external macroscopic morphology of primate brains (1950), indicates in a more recent report (1953) that such comparative studies permit only limited conclusions regarding the more detailed taxonomic and phyletic problems which interest us today, because, for one reason, endocranial casts of fossil finds at best cannot produce more than a part of the information needed for significant comparisons. That the absolute size of the brain is of very little interest except in its relation to total body size, has been recognized for a

long time, yet some anthropologists still seem to be fascinated by the amount of cranial capacity as an isolated value. Thus, Vallois (1954) emphasizes again the arbitrarily chosen limit of 800 cc. as a line of separation, or a "cerebral Rubicon," between apes and the Australopithecines on one side and fossil and recent man on the other side. Some valuable additions to the steadily growing list of thorough and detailed studies on the morphology of the brain in single species of primates have appeared in the period under review, notably the publications by Olszewski (1952) and by Clark and Powell (1954), both dealing with macaques and both of great help for the utilization of monkeys in neurophysiological work, which directly or indirectly is bound to advance our ultimate understanding of man's supreme specialization—his brain.

Among the new reports on single species of non-human primates the anatomical description of a gorilla by Steiner (1954) is of special interest, since it supplies a mass of much needed data for future comparisons, including information on the endocrine system of which we still know all to little. The musculature of a chimpanzee of the rare subspecies *Pan troglodytes paniscus* has been recorded in careful detail by Miller (1952), who found no noteworthy differences between this and the other varieties of chimpanzees. Here also are to be mentioned the sound and welcome contributions to our knowledge of the anatomy of the always interesting tarsier by Hill (1954a,b).

Several new papers have been added recently to the enormous literature on the morphology of primate teeth. Hill (1953b) has contributed a report on dental variations in a series of mandrills, and Ashton (1953) one on the occurrence and frequency of accessory cusps on the permanent lower first molars of the African anthropoids. The comparative study of dental roots and pulp cavities in lower primates by Senyürek (1953) is particularly valuable because these often inaccessible parts have been studied not nearly as extensively as the crowns of the teeth. Among the many detailed findings there are various ones with a significant bearing on primate evolution, and it is to be hoped that they can and will soon be compared with corresponding data on the higher primates.

A considerable series of new comparative studies on localized structures of primates represent attempts to evaluate the same features in the fossil Australopithecines. Thus Le Gros Clark (1952a) has contributed detailed metric and descriptive data on the teeth of the African apes and of the Australopithecines for a new demonstration of the very significant differences between these primates. Based on large series of skulls of man and the great apes, Ashton and Zuckerman (1954) have investigated the articular fossa, reaching the main conclusions that this structure really does not differ basically but only quantitatively in man and the apes and that in the latter respect the Australopithecines hardly can be distinguished from the recent apes. The formation of the mandibular joints also has been studied by Biegert (1955), in the Anthropological Institute at Zürich, with special consideration of the ontogenetic and phylogenetic changes in representatives of all major groups of primates. As in so many other instances, this investigation also shows that quantitative generic differences primarily are due to phylogenetic changes in ontogenetic processes. Ashton and Zuckerman (1952a) furthermore have made a comparison between the size and shape of the mastoid processes in adult gorillas and chimpanzees and in the Australopithecines, concluding that the conditions in the latter stand well within the ranges of variations among the former. To this problem Schultz (1952b) could add the finding that real mastoid processes develop in apes, if at all, very late ontogenetically, whereas very early and regularly in man. It will be interesting to learn, if possible, the age changes of this structure in the Australopithecines. Regarding the latter it has been reported that they possess only a single infraorbital foramen on each side, as in man. Schaefer (1954) subsequently has tried to show that among all recent non-human primates the average number of

infraorbital foramina lies significantly above 1, the gorilla having the lowest average of 1.5. Schultz (1954b), however, found among his more extensive material that a single infraorbital foramen exists more regularly in at least one race of gibbon (average = 1.04) than in man (average = 1.08) and that this feature can apparently change readily, as indicated by its very marked differences according to species or even race in some forms.

Undoubtedly also because of the conditions in the Australopithecines, Kälin (1954) has begun some comparative studies on primate pelves. His preliminary report, dwelling chiefly on some points of technique, cannot claim as yet to have elucidated significantly that key problem of human evolution which is concerned with the questions of when, how, and why the pelvis (especially the ilium) became so profoundly changed with bipedal locomotion. According to another preliminary report the problem of pelvic change in man and in the Australopithecines also is being attacked by Mednick (1954).

Among still other comparative studies on localized characters may be mentioned those on certain topographic relations of the ethmoid bone which Schultz (1952a) could base on extensive series, after these same relations had been misprepresented in the literature on the basis of evidently inadequate observations for rather far-reaching and erroneous phylogenetic conclusions. For instance, it cannot be without some significance that a sutural contact between the ethmoid and lacrimal bones exists without any exception in all monkeys and Asiatic anthropoids, in all of the Australopithecines found so far, and in 97 per cent of men, whereas in only half or less in the cases of the African apes. On the other hand, an endocranial, interfrontal contact behind the ethmoid was found as an exceedingly rare exception in man and orangutan, but as a common or even regular occurrence in all the other primates. The palatine ridges have been used by Klenke (1954) in another attempt to elucidate man's place among the primates, but the results are not specific enough to contribute anything really new, besides confirming the older conclusions of Schultz that in these structures man stands nearest to the African apes.

Two reports by Wiener (1952) and his collaborators (1953) have demonstrated a lack of identity, but nevertheless a very close and significant serological similarity in the blood of chimpanzee and of man. Using blood from 17 chimpanzees, Butts (1953) found four-fifths to belong to group A and one-fifth to group O and that all of his specimens were Rh-positive. The one "pygmy" chimpanzee in this series did not differ from the others in any of the points under investigation. It seems most desirable that the collection of such data on biochemical evolution will increase more rapidly in the future than it has in the past, particularly by being extended to many more species.

TAXONOMY AND PHYLOGENY

The outstanding contribution to primate taxonomy of the period under review is Hill's work (1953a) on prosimians, already referred to, which generally adheres to a sound, modern view in the matter of classification, particularly by lumping rather than splitting species. The opposite trend in the systematics of recent primates is represented by a proposal to elevate the misnamed "pygmy" chimpanzee into a new anthropoid genus, *Bonobo,* on account of some much overrated and variable peculiarities (Tratz and Heck, 1954). According to observations on much more extensive material, however, subspecific or at most specific rank does ample justice to this variety of chimpanzees (Schultz, 1954c). Even more extreme and certainly non-viable changes in the systematics of, and phylogenetic relations between, primates have been proposed by Frechkop (1954a,b), who wants to separate, for example, the recent great apes into two families (!), *Gorillidae* and *Simiidae,* simply by claiming that their many close similarities prove his theory of "adaptive parallelism"!

Of foremost interest to anthropologists are the ceaseless attempts to reconstruct the

phylogeny of the catarrhines and to select those fossil apes which stood nearest to the human branch. This fascinating problem needs constant reconsideration with the addition of new fossil finds and the shift in emphasis on the significance of the bewildering mass of available evidence. In this chapter it merely may be mentioned that, besides all the late Pliocene Australopithecines, the wealth of new East African Miocene primates, described chiefly in such exemplary manner by Le Gros Clark (1952b and, with co-authors, 1951), are of paramount importance. Not only these relatively new discoveries of African fossil primates call for revision of the pedigree of higher primates, but also the newly studied old fossil finds in Europe of the Miocene *Oreopithecus*. The latter is certainly not a lower catarrhine, as had commonly been claimed largely on the basis of very crude casts, and most probably not a pongid, as Heberer (1952a) has concluded, but a primitive hominid, according to the careful examination of all the original specimens by Hürzeler (1954). The last few years can boast of a marked increase in publications concerned with man's position on the primate family tree, with his relation to the Australopithecines, and with the concrete means and abstract ways for attacking these problems. That the conclusions of the experts are still far from being in general agreement, and that this recent literature includes some intensively controversial opinions, promises continued work on, and search for, more evidence in the future. Even though our most recent views on man's evolution are to be presented in the next chapter of this volume, a few examples of the latest, relevant, and sadly scattered literature may be referred to here, especially because these papers are primarily primatological contributions, though of great anthropological significance. As a challenge for thoroughly substantiated conclusions, Zuckerman (1952, 1953) has published several papers in which he dwells on the weaker points among the arguments for a close position of the Australopithecines to man's line of ascent. Particularly to be welcomed is his insistence that no generalizing conclusions from comparisons can be valid without adequate consideration of the factors of variability in all the forms compared. It is one of the major accomplishments of recent years that gradually we have come to realize that man's variability is far from unique and that comparisons with only a few random samples of other higher primates may be very misleading and can even do more harm than good. In spite of the critical doubts and denials, published by Zuckerman and others, the great majority of those dealing with the taxonomy and phylogeny of the higher primates has become convinced that the Australopithecines stand at least much nearer to the contemporary ancestors of man than any other known group of primates.[1] The reviewer cannot resist the temptation to express here his personal conviction that it is the pelvis, rather than skull and dentition, which will eventually cast the decisive vote in these controversies. It is a pity that no casts of the adult Australopithecine pelvic finds are available as yet for much needed, new comparative investigations.

Among the especially noteworthy studies on primate phylogeny the paper by Abbie (1952) has yet to be mentioned. It is concerned, like many others, only with the most difficult part of the problems of primate evolution—that small and last part culminating in man. Of Abbie's conclusions the following may be quoted here, because it is persistently ignored in spite of much evidence, available for some time: "Evolution up to man has not been marked by a progressive reduction of simian features as is usually assumed; it is distinguished simply by failure to attain the simian degree of differentiation in a number of physical characters." It has to be added that by "simian" Abbie evidently means here "anthropoid" or "pongid." That man is not "the highest primate" in many respects, is still far from generally recognized. It is evident also from the prevalent usage of such expressions as "infrahuman" primates

[1] Clark, 1954a,b; Heberer, 1952b; Kälin, 1952; Remane, 1954; Robinson, 1954a,b; Schultz, 1953a; Teilhard de Chardin, 1952; and many others.

in the current writing by even physical anthropologists. Not only are most of our fellow-primates above us in trees, but some are also above us along the pathways of phylogenetic specializations in many localized characters. The fact that we are cerebrally "supra-simian" does not justify calling our poor relations "sub"- or "infra-human." Abbie's final conclusion "that a common ancestry for the primates is to be sought amongst primate embryos, not adults" leads to the studies which attempt to solve the great problem of man's place in nature by means of the phylogenetic specializations in his ontogenetic processes—specializations which can be determined only through the painstaking accumulation of comparative ontogenetic data.

GROWTH AND DEVELOPMENT

In a highly interesting recent paper Le Gros Clark (1953) has emphasized that growth in absolute size of the entire body and in relative size of its parts, as well as some developmental conditions in the dentition are of great significance for the understanding of primate phylogeny and systematics. He has pointed out, for example, that in Miocene apes the limbs did not yet develop the various adaptations for brachiation which have come to characterize the recent anthropoids in the course of their growth. Bolk's well-known fetalization theory effectively had called attention to the important role of ontogenetic retardations in man's evolution. Newer comparative studies could clearly show that accelerations as well as retardations have occurred during evolution, not only in man, but in other primates as well. To the list of such ontogenetic changes of phylogenetic consequence several new examples could be added recently. The fusion of the sternal segments, to name one, has very clearly become accelerated in man, as compared with the apes, and in the latter, in contrast to monkeys. Similarly, the complete and permanent descent of the testes occurs in man at an earlier stage of development than in any other primates (Schultz, 1952a). It has already been mentioned that the mastoid processes appear and grow very much earlier in recent man than in apes, among which real such processes develop, if at all, only after adulthood (Schultz, 1952b).

As has become known for some time, the cranio-vertebral joint shifts its relative position aborally during postnatal growth in all monkeys and apes, but remains far orally throughout life in man. This has been confirmed with detailed data for chimpanzee and gorilla by Ashton and Zuckerman (1952b), who also concluded that in this respect the Australopithecines stand nearer to the apes than to man. Based upon data, assembled during many years, on many different mammals, on representatives of all groups of primates, and on all stages of their post-embryonic development, Schultz (1955) has reinvestigated this basic problem, advantageous for erect posture, to the forward position of the head joint in adult man. Here merely can be mentioned the so-far unexplainable finding that among all mammals only in *Tarsius* and the simian suborder of primates has the head joint shifted orally from its primitive location at the caudal end of the head in late fetal and infantile stages of development. This early ontogenetic position becomes lost again during postnatal growth in varying degrees in all monkeys and apes, but for unknown reasons is retained throughout life with little change in fossil and recent man. These will have to be found among the early ontogenetic conditions, common to all simian primates, and cannot be connected with the relative weight of the head (which is much greater in many monkeys and apes than in man), nor with some necessary preparation for erect posture (many mammals hold the cervical part of the spinal column as erect as in man, but head balance remained extremely unfavorable).

Three excellent contributions to our knowledge of primate ontogeny have appeared recently, which will gain in value especially as corresponding data on other species become available for comparison. These three publications deal in common with postnatal development in animals of

exactly known age. A detailed and carefully documented report by Riesen and Kinder (1952) describes the postural development of chimpanzees during infantile life, giving constant comparisons with the conditions in human infants according to the Gesell behavior examination. Of the many conclusions of great interest to anthropologists the following examples deserve especially to be quoted here: "The data provide ample confirmation of the impression that the chimpanzee is an upright animal, and that he develops toward vertical posture in the first year of life following a course very similar to that of the human infant." "The ages of appearance of the developmental items (in postural behavior) *averaged* one-third earlier for the chimpanzee subjects than for human infants. . . ." "There are a few items for which the human infants have an earlier critical age than the chimpanzee." Gavan's 1953 study of the postnatal growth in chimpanzees of known ages contains much welcome information on rates of increase in body weight and in lengths and breadths of various bodily parts for both sexes, but unfortunately too few data on the actual measurements have been made available for the use of other investigators.

The many new records on the eruption of the milk teeth in macaques of known ages by Hurme and van Wagenen (1953) forms a splendid source of reference for future comparisons, though opportunities for equally well-founded studies on captive-born monkeys of other species are unfortunately very rare. One of the above authors also has contributed a preliminary report on the exact age at menarche in macaques (van Wagenen, 1953) as one more reliable item to be added to the still very incomplete comparative-ontogenetic time-table of primates.

The *order* of eruption of the teeth, i.e., the relative rather than the absolute ages of dental development, has become better known through several recent studies which support Schultz's old theory that with the prolongation of the postnatal life periods among the primates there had to occur an acceleration in the replacement of the deciduous teeth and simultaneously a gradual retardation in the addition of permanent molars. According to Bennejeant (1953), in primitive *Tupaia* and fossil Adapidae all permanent molars erupt while the first dentition is still fully in place or nearly so. Apparently this holds true also for one of the platyrrhines, *Aotes,* according to a dissertation by della Sera (1952, quoted by Bennejeant, but not yet seen by this writer). In the recent African apes, of which large series have been reinvestigated by Clements and Zuckerman (1953), the replacement of the milk teeth begins before the second molars appear and ends before the third molars become added. The latter authors also confirm the findings of previous investigators that in modern Whites this shift in dental eruption has reached its extreme, though it has not yet become stabilized. It seems highly desirable that more adequate information will become available on the absolute and relative ages of dental eruption in all human races.

The already clear, but still incomplete, evidence for a highly consequential phylogenetic trend to lengthen the various life periods in primates has become enriched by the following new and important observation, briefly recorded by Mann (1954): A pair of captive *Tupaia* had offspring three times in one year after gestation periods of only twenty-one days, showing that these small and unspecialized primates still have an extremely short prenatal life and a surprisingly rapid succession of generations, producing according to the best of available information three or four embryos each time, of which only two or three survive to birth.

Among the new comparative primatological studies the following also may be mentioned here since they deal with growth directly, or at least indirectly with the effect of growth, as found in adults. In the search for factors influencing the thickness of bones of primates, Schultz (1953b) could demonstrate that with advancing postnatal age all the long limb bones and the vertebral column become more slender. It could also be shown that at the completion of growth the absolute thickness of the limb

bones is closely dependent upon the load they have to carry, i.e., the body weight, but is generally very little affected by phylogenetic changes in limb length. Among all adult primates man is distinguished by having, relative to his body size, comparatively thick long bones of the lower limbs, and especially slender ones of the upper limbs and, furthermore, exceptionally thick lumbar vertebrae, all as consequences of man's specialized posture.

In a comprehensive and careful allometric analysis of the influence of absolute body size on the relative size of many bodily dimensions, Boné (1953) has obtained some remarkable and surprisingly consistent results which promise to be of significant help in the solution of various basic problems in physical anthropology. To express it very briefly and incompletely: he found that in man as well as in other primates there occurs a progressive decrease in the *relative* length of such measurements, as face height, hand length, foot length, and shoulder breadth, besides head length and breadth, with an increase in trunk height within each series of individuals, representing one species, or race, sex, and age. In other words, the smallest individuals of a population differ from the largest ones in many body proportions to a very significant extent, entirely on account of the law of allometric growth. Changes in general body size, which are known to follow often upon changes in some environmental factors, can be expected to produce automatically changes in many more body proportions than merely those well-known ones connected with the relative size of the brain and the eyes; and this not only in animals, but also in man.

Studies on allometric growth and its bearing on evolution are already permitting many new and highly interesting generalizations in zoology (e.g., Rensch, 1954), but in anthropology they have not yet received as much attention as they deserve. In primatology, too, the relevant literature is still very scanty. In one recent contribution to the latter, Kühlhorn (1954) has attempted to find the relation between body weight and the size of various organs in a series of wild capuchin monkeys, which, however, is too small to yield more than very tentative conclusions.

DIFFERENT BIOLOGICAL STUDIES

The density and composition of a free-ranging monkey population and the social behavior of its members are primatological problems of great and direct significance for anthropology, but little progress has been made in this direction since the exemplary and well-known contributions by Carpenter. His first such study, that on the howling monkeys of Barro Colorado in Panama, has recently, after an interval of eighteen years, been repeated by Collias and Southwick (1952). It was found that the total population in this restricted area had become reduced to only about half its former density and with this the average size of each clan as well as the proportion of young also had become greatly reduced. The detailed report on these surprisingly rapid changes contains also interesting discussions on their probable causes and possible consequences. That an epidemic of yellow fever was responsible for the population decline, as the authors suggest, appears highly probable in view of the findings from numerous recent epidemiological field studies on monkeys in the American tropics (e.g. Siler, 1951; H. C. Clark, 1952). That diseases, parasites, injuries, and malformations probably play more important roles in the growth and composition of wild primate populations than all such factors as food supply, climate, predators, etc., the writer learned from his recent survey of a very extensive and scattered literature bearing upon the occurrence and frequency of pathological and teratological conditions in wild non-human primates (to appear as one chapter in a handbook of primatology by many co-authors, to be published by S. Karger A.G., Basel). Here it merely can be mentioned that a long list of different pathological conditions have been recorded for some population samples of monkeys and apes in their native habitats with degrees of prevalence which can far surpass the frequencies of similar con-

ditions in man. These findings force us to regard the surprisingly frequent and so commonly overlooked abnormal conditions as the chief selective factors in primate evolution, acting directly through elimination or indirectly through selective survival of variations having acquired some tolerance or immunity.

Our knowledge of the behavior of non-human primates also is being advanced significantly by the systematic comparative psychological studies of Hediger, who, in his most recent book (1954), again has contributed some novel interpretations of various actions in monkeys and apes.

An original and stimulating new book by Krumbiegel (1954) must be mentioned too, because it contains a good deal of primatological information on behavior and on such items as locomotion, nutrition, and reproduction. Under the last heading, it also lists much data on sex-cycles, gestation periods, multiple births, and hybrids among non-human primates. Especially noteworthy is the cross between a mangabe father and mandrill mother in the zoological garden of Rome. This now nearly full-grown intergeneric hybrid had been seen recently by the writer, who is convinced of its authenticity and has become willing to admit that all sorts of hybridization *could* have occurred in primate evolution.

CONCLUSIONS

No new science is recognized and becomes full-fledged until it has recorded its history. The historical development of such technical aspects of primatology as the relevant changes in systematics and in our views regarding primate phylogeny and the causes of human specializations, has been published repeatedly and is mentioned in most histories of biology, but all this appertains chiefly to only the last two centuries. A less technical, but much more comprehensive history of man's interest in and views on monkeys and apes has now become available in a scholarly treatise by Janson (1952) on the role of non-human primates in the culture of the Middle Ages and the Renaissance. This fascinating account of the early and wide-spread use of the Old World monkeys as symbols for imitation and sexuality and in the role of mischievous fools ends with a particularly interesting chapter on "the coming of the anthropoids" in which it is rightly claimed that "the discovery of the Great Apes . . . must be counted among the important achievements of the Age of Exploration." Its gradual consequences for the later philosophical views on the nature of man were profound and decisive, but only after a period in which the man-like apes had served chiefly as caricatures of man in countless satirical writings, drawings, and paintings. A *science* of primates evolved but slowly after Tyson's pioneering and classic publication on the anatomy of *Homo sylvestris* at the start of the eighteenth century.

In concluding this undoubtedly quite incomplete enumeration of the most recent primatological literature, it may be pointed out that quantitatively as well as qualitatively this literature compares very favorably with that of any equally short period of the past. Indeed, it appears that active interest in primatology again may be increasing and this especially among physical anthropologists, who have contributed at least as large a share as have mammalogists, comparative anatomists, or paleontologists. In various respects anthropology has developed along paths leading into isolation. It no longer should hesitate to stake clear claims for all of primatology, now that the comforting old gap between the morphology of man and ape has practically disappeared with the latest fossil finds and that comparative psychology threatens our last and feeble definition of separation by which a science of man is supposed to begin only with creatures who can use *and* make implements.

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Fossil Man and Human Evolution

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INTRODUCTION

IN the sixties of the last century, two men examined the course of human prehistory, as it was then known, and proceeded to come to diametrically opposed conclusions. There would be nothing particularly remarkable about this observation except for one thing: both men had discovered the principle of Natural Selection independently and both were confirmed evolutionists. Their names were Charles Darwin and Alfred Russel Wallace—scholars destined to be remembered far beyond their century—yet, on the subject of man, they could not agree. Most people, if they have knowledge of this controversy at all, assume that Charles Darwin won the argument, but it has become ever more apparent in the last few years that, while the basis of discussion may have shifted a little, the truth is that the argument is still before us, if anything more powerfully than ever, and the same contentions are still unresolved.

A little less than one hundred years after the publication of *The Origin of Species,* anthropologists are arrayed on the same battlegrounds. Insignia on their standards may be slightly altered, but they fight the same weary battle, the lines wavering now this way and now that as a new fossil is revealed. Perhaps it is time for a military assessment to be written—time to examine the nature of the struggle and to ask what it is that we are endeavoring to demonstrate. Some have been in the trenches so long that they may well have forgotten, and the suspicion grows that there are others among us who do not know how they came into the redoubts which they defend so valiantly. It will do no harm, therefore, to review a debate which, smoldering since the nineteenth century, has re-emerged once more with renewed vigor in the year just past.

Nearly one hundred years ago, Charles Darwin and a little band of intrepid followers were involved in a dramatic effort to convince their fellow men not alone that evolution had taken place in the animal and plant world about them, but that man himself had arisen by natural processes of the same order, according to gruff old Adam Sedgwick, as those producing the crust on a kettle. Another scholar pondering the change of doctrine sighs wistfully as though loath to give up all hope, "The Creator is there but much farther off than we thought." Each of these remarks epitomizes in its own way the frightening shadow which passed over men's minds after the rise of the evolutionary philosophy. It is only now, after the passage of a century, that modern science is beginning to awaken to the fact that man, toppled unwillingly from his position of simple faith by the

evolutionists, has in truth become one of the most unstudied and important enigmas in the whole realm of biology.

In their understandable eagerness to demonstrate the newly discovered principles governing the development of life, Darwin and his followers unconsciously minimized the distance stretching between man and his lowly cousins, the apes. The whole drama can be pretty well summed up in the clash between Darwin's pugnacious defender, Huxley, and Richard Owen, Britain's leading anatomist and wily defender of the established order. It was a battle that Owen fought unscrupulously and was destined to lose, yet Huxley's very triumph reveals the curious myopia which had descended upon nineteenth century science. It was a myopia which led to greater argumentative emphasis upon whether the brain of man resembled that of an ape physically rather than upon what might be contained in the two dissimilar heads mentally. "You may think," parodied Kingsley in *The Water-Babies*, "that there are other more important differences between you and an ape, such as being able to speak, and make machines and know right from wrong, and say your prayers, and other little matters: but that is just a child's fancy, my dear. Nothing is to be depended upon but the great hippopotamus test."[1]

It was perhaps inevitable, considering the time, place, and circumstances, that the attention of the Darwinists and their horrified audience should have been fixed upon the characters man shares with the animal world about him, or that enthusiastic converts should have striven to minimize and close up, to the extent possible, the gap which appeared to yawn between rational, thinking man and his remote relatives in the forest. The occupants of institutions for the feeble-minded, and even Lombrosian criminals, were being speculatively eyed as atavistic throwbacks to an earlier human stage; there is clear evidence in the writings of Darwin that early man was viewed as something akin to the gorilla.

[1] A play on words involving the hippocamus minor.

Science and theology both had become so immersed in their squabble over what physical resemblances did or did not demonstrate about man's origins, that the wonder and mystery of human achievement began to depart. It is to be said to the everlasting credit of Alfred Russel Wallace, therefore, that he raised a lonely voice of protest which scarcely would be heard until the passage of a hundred years. He has been called inconsistent and a romantic. He was all these things. But his inconsistency was sometimes the product of a formidable insight which could not rest comfortably with half-truths, either his own or those of anyone else. While his colleagues rested content with their laurels, he went on searching, pondering over "some fundamental law of development of which we have as yet no notion" (Marchant, 1916, p. 219). In the midst of giving Darwin sound advice on how to meet his critics, he was capable, in a kindly but direct fashion, of indicating his doubts that a particular argument had been either potent or satisfactory.

It was this restless, never-contented aspect of Wallace's personality which finally led him beyond the reach of his fellows. In his great age he grew opinionated and, for a scientist, some of his follies were conspicuous. Nevertheless, they were the inescapable accompaniment of that restless leaping mind which long ago in Ternate conceived the whole theory of Natural Selection in one lightning flash of feverish insight.

Longer and more intimately than any other of the great biologists Wallace had lived and sailed with savages. He had endured in small boats the sufferings of dangerous passages among the reefs and shoals of the Malay Archipelago. Somewhere out of these experiences had emerged a different conception of the savage brain than that entertained by the average Victorian scholar who was inclined to view natives as mental and moral fossils. By contrast, Wallace came to regard them as possessing minds little if in any degree inferior in natural endowment to civilized Westerners. This point of view marks him as diverging greatly from the orthodox outlook of his period. It also

leads us directly to the contrasting paths taken by himself and Darwin over the question of human evolution. A summary will make the issue clear; furthermore, it is an issue which still confronts the student of human evolution today.

THE DARWIN-WALLACE CONTROVERSY

To analyze the precise attitude held toward fossil man and the existing races, or toward fossil man and the existing great apes, by Darwin and his followers during the decades immediately following the publication of *The Origin of Species* (1859) and *The Descent of Man* (1871) is not an easy task. There are inconsistencies and confusion produced by attempts to equate the creatures of the fossil past with the forms of the living primates, as when Darwin quoted evidence to show that the La Naulette jaw, that of a Neanderthalian, was supposed to have possessed "enormous" projecting canines (Darwin, C., n.d., p. 425); or that some of the skulls of Australian aborigines showed, in the males, traces of a gorilloid sagittal crest (*ibid.*, p. 868). After making statements of this kind, however, Darwin seemed afterwards to have been impressed with certain criticisms by the Duke of Argyll and to have expressed a contradictory speculation (*ibid.*, pp. 443–444) that a formidable and huge primate might not have become social. "Hence it might have been an immense advantage to man to have sprung from some comparatively weak creature" (*ibid.*, p. 444).

Placing as he did so much emphasis on the struggle for existence, Darwin once more found himself embarrassed with the "weak creature" he had been forced to postulate. "These ancestors," he protested defensively, "would not have been exposed to any special danger, even if far more helpless and defenseless than any existing savages, had they inhabited some warm continent or large island, such as Australia, New Guinea or Borneo, which is now the home of the orang." Even here, however, Darwin was forced to invoke the "competition of tribe with tribe" along with the "inherited effects of habit," to bring about man's ascent to a position far above that of his nearest living relatives. Here at last we come suddenly upon the key point which, so far as human evolution was concerned, arrayed Darwin and Wallace upon opposing platforms. In the Darwinian philosophy, natural selection was not a principle of self-growth. It could produce only a relative superiority sufficient to maintain a given species in active competition with its enemies or give it at best some slight advantage in the life-struggle. In a sense, therefore, it was a self-limiting principle. How then, challenged Darwin's colleague, Wallace, did the human brain develop so far beyond what was necessary to secure the bodily safety and primitive needs of its possessor? "Natural Selection," maintained Wallace, "could only have endowed the savage with a brain a little superior to that of an ape, whereas he actually possesses one but very little inferior to that of the average members of our learned societies" (Wallace, 1869, pp. 391–392).

Wallace had reached this position by degrees so that he must have taken his other evolutionary colleagues by surprise. In 1864, in the *Anthropological Review,* he had set forth the idea that with the rise of man, natural selection was ceasing to act upon the body and was coming to act almost solely upon the human intelligence. Man, he contended, was old and had attained the upright posture long before the final changes in the skull and brain which characterize our living species. Other animals had continued to change and modify under evolutionary pressures; in man, by contrast, all but mental evolution had largely ceased. Man, in other words, had transferred to his mechanical devices the *evolution of parts* which characterizes the rest of the world of life. Even racial differences, in Wallace's view, were essentially survivals from the time when man was still a cultureless animal.

Now at the time of this first treatise Wallace was still a firm believer in the part played by natural selection in this process. He saw competition between groups of men as promoting by slow degrees the rise of

better brains and a higher ethic. Darwin had expressed no objection to this, in fact had confessed admiringly "the great leading idea is quite new to me . . . yet I had got as far as to see with you, that the struggle between the races of man depended entirely on intellectual and moral qualities" (Darwin, F., Vol. 3, p. 90). It was only later that the disagreement came. Wallace's estimates of human antiquity did not bother the Darwinists, nor did his study of the rise of the human brain. He had clung carefully to the basic Darwinian precepts: insensible variations, selection through the struggle for existence among competing human groups. Then in 1869 he drastically altered his opinions (Wallace, 1869, pp. 359–394). For the first time in his career the co-discoverer of the principle of Natural Selection abandoned the attempt to explain human evolution by that hypothesis. Man's brain, the "primitive" brain of the living savage, houses abilities for which in his present state he has no need and which therefore, could not possibly have arisen through competition with others of his kind. Even in language, argued Wallace:

"This view is supported by the fact that, among the lowest savages with the least copious vocabularies, the capacity of uttering a variety of distinct articulate sounds, and of applying to them an almost infinite amount of modulation and inflection, is not in any way inferior to that of the higher races. An instrument has been developed in advance of the needs of its possessor" (*ibid.*, p. 393).

Wallace, mincing words very little, intimated that he could only see in the rise of the human brain a directive spiritual force unaccounted for in purely mechanistic terms.

Darwin, with the great and generous tolerance which lighted the long life-pathway of the two men, wrote his kindly disagreement, saying half-humorously—half-wistfully, "I hope you have not murdered too completely your own and my child" (Marchant, 1916, p. 197). Thomas Huxley, by contrast, gave vent to a statement which today sounds strangely arrogant and anthropologically distorted. Wallace asked, said Huxley, "How were all or any of these faculties first developed, when they could have been of no possible use to man in his early stages of barbarism?" "Surely," Huxley responded, "the answer is not far to seek.

. . . The lowest savages are as devoid of any such conceptions as the brutes themselves. What sort of conceptions of space and time, of form and number, can be possessed by a savage who has not got so far as to be able to count beyond five or six, who does not know how to draw a triangle or a circle, and has not the remotest notion of separating the particular quality we call form from the other qualities of bodies? None of these capacities are exhibited by men, unless they form part of a tolerably advanced society."

Warming to the task of demonstrating that artistic talents are the inevitable product of the struggle for existence, Huxley continued:

"The experience of our daily life shows that the conditions of our present social existence exercise the most extraordinarily powerful selective influence in favour of novelists, artists, and strong intellects of all kinds; and it seems unquestionable that all forms of social existence must have had the same tendency . . ." (Huxley, 1871, pp. 471–473).

Coming in a time of ruthless industrial exploitation and grinding poverty among the English masses, these words have a strange ring. Huxley for once had been caught off-balance in a petulant and ill-tempered defense of his master—a defense which, so far as Wallace is concerned, was singularly inept, and lacking in the sort of facts and evidence which Huxley was fond of demanding from other people. Yet one must be fair. Huxley was writing in the same year in which Tylor introduced and defined the word "culture" in English anthropology. It is plain, as one examines the writings of practically all the Darwinian circle, that they often confused genetic endowment with cultural achievement, and that simple cultures constantly were being regarded as signs of inferior biological capacities. It is interesting to observe once more that, although Darwin and Huxley had *encountered* savages in the days of their voyages, Wallace alone had cast his lot and his fortunes for months and years among

remote peoples and had sailed from island to island dependent upon their good will. Wallace had his peculiarities, but the kind of statement of which we have found Huxley guilty would never have been made by the old wanderer of the Malayan seas.

At this point we have arrived at an impasse. Darwin, wavering and uneasy about the true nature of the "struggle for existence" among men seemed hesitant as to whether to describe his fossil men as gorilloid or of some milder-tempered and weaker-bodied variety of primate. In spite of an occasional warning that the early human progenitor is not to be compared in exactitude with the living apes, he postulated that man must have achieved an upright posture from the semi-erect position of a chimpanzee or gorilla. These hesitations are of course perfectly understandable—the living primates are practically all that Darwin had with which to work. In the end, although he had earlier spoken disparagingly of Lamarck, he was forced to fall back upon the inherited effects of habit. His sole explanation for the rise of the human brain to its present exalted position lay in this vaguely Lamarckian statement and in the assumption of constant struggle between one group and another, in which the group with the greatest intelligence survived.

At first this latter interpretation appealed to Wallace. Later, as we have seen, it ceased to satisfy him but, in turning away from Natural Selection, he embraced a mysticism which he was never afterward to escape completely. As a consequence, the very genuine problem that he raised faded from men's minds with the full triumph of the Darwinian hypothesis, and his intimations of the possible great age of the human stock became an acceptable doctrine from which his name slowly disappeared.

Within the last year, however, in part stimulated by the discussions at the 1952 International Symposium on Anthropology supported by the Wenner-Gren Foundation, in part independently arrived at in the curiously expectant atmosphere which has hovered over the new Australopithecine discoveries, there has been a sudden renewal of the century-old question propounded by Wallace. Three times in a year's space the question of how man got his brain had been independently enunciated (Chance and Mead, 1953; Eiseley, 1953; Etkin, 1954). The query may be differently phrased and expressed in the technical jargon of a later and more specialized biology, but essentially it is the old question of 1869. This time it is being asked with a full recognition of the depths of our ignorance and with a realization that Wallace was right when he wrote in 1876 that

> "however great may have been the intellectual triumphs of the nineteenth century, we can hardly think so highly of its achievements as to imagine that, in somewhat less than twenty years, we have passed from complete ignorance to almost perfect knowledge on two such vast and complex subjects as the origin of species and the antiquity of man" (Wallace, 1876, p. 72).

The fact that close on to another century we are only now beginning to bestir ourselves over this question of the curious uniqueness of the human brain shows how long we have been silenced with the idea that the step from an ape to a man is as simple as the first evolutionists imagined or even wished it to be.

THE PILTDOWN SKULL

In a recently published paper (Eiseley, 1954b), we have been at some pains to show that the archeological discoveries in Europe during the late decades of the nineteenth century were a considerable disappointment to the evolutionists. In the first flush of their enthusiasm, the Darwinists plainly had hoped to demonstrate that the human line descended in Ice Age times into some sort of small-brained ancestor of definitely anthropoid affinities. Instead, they had seen the archeologists turn up a succession of Upper Paleolithic big-brained Cro-Magnons or equally big-brained Neanderthals. Those opposed to the Darwinian theory of human development found considerable sources of comfort in this situation. They lost no time in pointing out that most of our upper Pleistocene ancestors

did not appear as morphologically primitive as certain of the existing races. Today, of course, we know that the time scale of the Pleistocene was being underestimated and that, in addition, the significance of Neanderthal man was not fully appreciated: at the time of which we speak only one calvarium had been described; the face, unfortunately, was missing.

There is no doubt that this first failure to find the sort of ancestral remains demanded by the Darwinian theory played its part in Wallace's elaboration of his hypothesis that, amidst constant and omnipresent organic change, man alone had to a marked degree escaped that law by the development of mind. Man, once he had attained a truly human level, might well remain physically the only unchanging creature in the midst of the universal alterations wrought by on-flowing time. "This will enable us to understand," Wallace went on to point out, "how the fossil crania of Denise and Engis agree so closely with existing forms, although they undoubtedly existed in company with large mammalia now extinct" (Wallace, 1895, p. 180).

The discovery of the apparently dissimilar fossils of Pithecanthropus and Piltdown presented the scientific world with two ostensible choices. The Java discovery seemed to bear out Wallace's contention that the attainment of upright bipedal progression had preceded the later skull changes consequent upon a slowly expanding brain. Moreover, Dubois' earlier estimate that Pithecanthropus belonged on a late Tertiary time horizon would not have clashed with Wallace's belief that

> "you must go to an enormous distance of time to bridge over the difference between the crania of the lower animals and of man" (Wallace, 1864, p. clxxxv).

Piltdown, on the other hand, with its *sapiens* brain-box and its anthropoidal lower face, suggested the possibility that the development of the brain had led the rest of the body in the course of evolution (Miller, 1928, p. 419). Pycraft (1917, p. 391) had even suggested that in spite of its well-developed brain, it had not fully attained the upright position. Since in the early years of its history, Piltdown had been given a dating almost as old as the Java discovery, the only way that the disparity between the two forms could be resolved was to assume that they represented two distinct lines of human evolution. This, of course, presented the additional anomaly of practically suggesting two distinctly different evolutionary forces at work. It is no wonder that the aged Wallace, who lived long enough to know of the Piltdown discovery, wrote to a friend: "The Piltdown skull does not prove much, if anything!" (Marchant, 1916, p. 347). Probably he was at least partially activated by a feeling that the skull did not fit his theory of human development, but in any case his doubts were to prove well-founded. In November of 1953 the scientific world was rocked by the news that the long-studied fragments of the Piltdown specimen, as well as the associated artifacts, represented a deliberate and unscrupulous hoax (Weiner, Oakley, and Clark, 1953). Portions of a *sapiens* cranium had been combined with half of the jaw of a recent orang in such a manner that key anatomical points which might have settled the controversy had been carefully destroyed.

The amount of subjective speculation indulged in for years over the Piltdown "fossil," and to which many leading authorities contributed, can now be viewed historically as a remarkable case history in self-deception. It should serve as an everlasting warning to science that it is not theologians alone who may exhibit irrational bias or give allegiance to theories with only the most tenuous basis in fact. That scientists in the early years of a new discipline should have been easily deceived is not nearly so embarrassing as the rapidity with which they embraced the specimen solely because it fell in with pre-conceived wishes and could be used to support all manner of convenient hypotheses. The enormous bibliography in several languages which grew up around the skull is an ample indication, also, of how much breath can be expended fruitlessly upon ambiguous or dubious materials. Remembering the *Mud Fog Papers,*

one cannot but sigh with relief that there was not a Dickens around to immortalize the Piltdown story. Perhaps, on second thought, and for the permanent reduction of the scientific ego, it would have been a good thing had there been.

With the elimination of the Piltdown cranium as a valid fossil, a considerable re-organization of our thinking in regard to the nature of human evolution has become necessary. Nevertheless, it is a reorganization which still involves the two persistent questions raised by Wallace in the eighteen-sixties; namely, *how long did it take to turn an ape into a man?*, and secondly, *by what means were the enormous powers of the human mind evolved?*

Pithecanthropus had long since been elevated to a position in the somewhat ill-defined Middle Pleistocene of Java and all of the later discovered, big-browed, paleanthropic forms of man were apparently not greatly older, and some were much younger, than this. Moreover, in South Africa a constantly increasing array of primitive man-apes, possibly cultureless, and definitely sub-human in appearance, had been discovered stretching through the indefinite reaches of the lower Pleistocene. Were these creatures, or some group among them, the actual ancestors of men? Was true man, then, to be regarded as a very rapid emergent out of a lower Pleistocene array of ground-dwelling, bipedal apes?

Before attempting to review this situation, let us examine two statements of Wallace which will put the nature of the problem succinctly before us. Either, he said, man developing by natural selection into a specialized and unique organism must have arisen very early and "spread in dense waves of population over all suitable portions of the great continent—for this, on Mr. Darwin's hypothesis is essential to rapid developmental progress. . . ." or if, on the contrary, "continued researches in all parts of Europe and Asia fail to bring to light any proof of his presence [during the Tertiary period], it will be at least a presumption that he came into existence, at a much later date and by a more rapid process of development." In that case, Wallace continued, it will be a reasonable argument that man's origin "is due to distinct and higher agencies" (Wallace, 1876, pp. 64–65).

It should now be apparent, through these propositions of Wallace, where the rearrangement of our remaining human fossils is leading us. It is leading us straight toward Wallace's second proposition, though not necessarily to the acceptance of his idea of direct supernatural guidance in the evolution of man. If our briefly sketched confinement of the major rise of the human brain to the Pleistocene is even approximately correct, it would appear to demand some other evolutionary mechanism beyond that of the old Darwinian struggle of man with man or group with group. The movement would appear much too fast. It has something about it of the nature of a quantum step. Lest I seem to be favoring Wallace's point of view unduly, let me quote the words of three practical experimental scientists who find themselves concerned with the same problem. M. R. Chance and A. P. Mead say, "No adequate explanation has been put forward . . . to account for the development of so large a cerebrum as that found in man" (Chance and Mead, 1953, p. 395). Professor Etkin, although propounding a theory of his own about the early beginnings of man's mental faculties, admits with sincere humility that in his view "the origin of abstract thought, for example, mathematical reasoning, and of truly ethical behavior . . . are not explicable in the biological terms developed . . ." (Etkin, 1954, p. 140).

THE AUSTRALOPITHECINES

Considering these modernly expressed doubts of the experimental biologists, our re-examination of the human phylogeny in the light of the modern fossil evidence seems amply justified. Certainly the time appears past when simplistic assumptions about the competitive use of tools can be used to account for all aspects of the human mind. There is a sense of grinding inadequacy in this materialistic doctrine, particularly when, viewing the higher realms of man's endeavor in 1893, Robert Munro (1893,

p. 505) in an opening address before the British Association for the Advancement of Science remarked sententiously, ". . . imagination, conception, idealisation, the moral faculties . . . may be compared to parasites which live at the expense of their neighbours." It is no wonder, surveying this uninspired remark, that Whitehead once observed that the last twenty years of the nineteenth century represented one of the dullest periods in human thought since the close of the First Crusade.

The idea that all of the qualities which make man such a unique and remarkable creature could have been dismissed as a mere "rattle in the machinery" of a creature evolved solely by the dextrous use of a flint ax is appalling, not because it was enunciated sixty years ago, but because it reappears in anthropological discussions even today. The archeologist, in particular, must be on guard, for there is an understandable temptation to see in the development and multiplication of tools from their crude Pleistocene beginnings up to the present some kind of simulacrum or objectified representation of the state of the mind itself: simple brain, simple tools. The cumulative aspects of culture may be forgotten and the argument persuasively launched that a "tool" enables us to determine without any fancy metaphysical deduction the point at which a monkey has become a man.

Within limits this notion may have a certain degree of purely archeological validity, but it does not tell us very much about how the ancestral primate got into this tool-using activity, nor why, if he was so largely concentrated upon this aspect of life alone, he should not have gone merrily and independently along his own path to the present day, devoting his attention to the bashing out of his neighbors' brains instead of engaging in all that tremendous assortment of institutional activities which occupies most of his waking hours. Robert Munro, in dismissing the higher moral faculties of man as pretty but unimportant, was unwittingly disavowing the very nature of the human psyche: the creature lives on dreams and is in that sense unique. It is not the ax in the hand but the symbols flowing through the time tracts in the head that are the real tools of this creature.

Before pursuing this aspect of the mind further, however, we must descend the time ladder and, in the skulls which are the cast-off containers of the dream, strive to make out when, from the standpoint of Wallace's theory, the dream began. The evidence is not conclusive, but it may suffice to aid us in the resolution of a hundred-year-old controversy.

In the warm regions, theorized Wallace, "we may trace back the gradually decreasing brain of former races, till we come to a time when the body also begins materially to differ. There we should reach the starting point of the human family. Before that period he had not enough mind to preserve his body from change, and would, therefore, have been subject to the same comparatively rapid modifications of form as other mammals" (Wallace, 1864, p. xvii). Interestingly enough, this statement, written long before there was any fossil evidence to substantiate it, now appears for the first time to be corroborated at least in some degree by the increasingly disparate array of Australopithecine man-apes being turned up by the South African workers.

The later forms of paleanthropic man—now that *Eoanthropus* has been eliminated—vary little save in the degree of cranial advance throughout the latter half of Pleistocene times. They thoroughly justify Wallace's belief in the transformation of the skull as the enlarging brain promoted the last changes that man's body, according to the belief of the great evolutionist, was destined to undergo before it assumed its timeless aspect in the midst of universal change.

The newest cranium from the South African beaches is essentially merely another paleanthropic form on approximately the same level with *Homo rhodesiensis* or Solo Man (Drennan, 1954, pp. 879–884). *Atlanthropus mauritanicus* for the first time reported with Abbevillian cultural remains appears on the basis of preliminary reports to be probably another earlier big-brow ridged form of man (Hillaby, 1954). Only among the Australopithecines is a curious

difference in size and appearance prevalent. We say this with full recognition of differences among authorities; differences even as to whether these creatures walked erect (Zuckerman, 1954), or whether (which is unlikely) they should be given so many generic appellations as have been applied to them. Still, when the number of species is reduced, when the likelihood that some at least are not human, even though perhaps bipedal, is duly considered, two things remain apparent: *they seem closer than any living apes to man even if relatives rather than on the direct line of ascent, and they show a surprising variety of physical form.* There are indications that some, at least, belong structurally at the Plio-Pleistocene border; one cannot escape the feeling that here at last we are approaching a confusing variety of ground apes who are disconcerting to our taxonomists for the very reason long ago intimated by Wallace. We have, in other words, stumbled into the world of essentially cultureless or almost cultureless proto-human types which are diverse in form because they represent evolution still at work *upon the parts of the body,* rather than upon the selection of mental patterns leading toward essential uniformity of other bodily characters.

We need not conclude, since most of these creatures appear to be Pleistocene (Peabody, 1954, p. 703), that we have reached the very bottom of the human ladder. Such forms as Heidelberg and *perhaps* the newly discovered *Atlanthropus* strongly suggest that more advanced and truly human forms were in existence in lower Ice Age times. Nevertheless, this in no way abrogates the significance of our main point; namely, that if living ground apes of a human cast were alive in the early and middle Pleistocene, it is unlikely that the rise of the true human stock can be assumed to be a great deal earlier. If such had been the case, one might assume that the competition on the world's open grasslands would have resulted in the earlier and more rapid extinction of the man-apes. It would thus appear that Wallace was right in his suggestion of 1876 that if man could not be shown to have dominated the Old World land mass in large numbers during the Tertiary, some other more rapid process of evolution than that envisaged in the Darwinian philosophy must have been at work in the production of man. This would appear to be equally true whether we assume modern man emerged directly from Neanderthaloid ancestors or whether, taking the mysterious and faceless crania of Swanscombe and Charente for evidence, we assume that the development of the *sapiens* brain lies somewhat farther back in time.

Having briefly examined the juxtaposition of the known human fossils, there is only one fact about human evolution which need deeply concern us, or draw our attention away from the spectacle of universal organic change, in order to trouble ourselves over the destiny of one solitary life form. It is the still-remaining puzzle posed by Wallace, as to what has brought the existing human races out synchronously upon so similar a mental platform, even though many have never competed with each other tool-wise. The nineteenth century, equating level of technology with level of biological ability, was never troubled by this question. It was sufficient for our grandfathers to say that we

> have got
> The Maxim gun
> and they have not.

We of this generation have witnessed vast social changes, seen such forgotten marginal people as the Eskimo fly airplanes, and the sons of forest peoples attend Cambridge or Oxford. Darwin, thinking of survival by natural selection, could speak of "Esquimaux, with whom the art of fishing and managing canoes is said to be hereditary" (Darwin, F., Vol. 3, p. 90); C. Carter Blake could say in 1864, "Psychical endowments of a lower grade than those characterizing the Andamaners cannot be conceived to exist; they stand next to brute benightedness" (Blake, p. cxlviii). The world of the last century seemed fixed, the native was dying of the white man's diseases, and the Darwinists spoke assuredly of the time when he would be gone as surely as the Tasmanians or the vanishing orang.

Today, by a curious twist, there are times

when it appears that it is the White world that is contracting. How is it, then, that men, remote from where the scientific revolution arose, practice its arts in remote jungles and obscure wastes where its whisper never came and where there can have been no competitive biological differences based on such a struggle? How is it that Wallace's dictum has held true that man in these remote districts had latent capacities very similar to, if not the equal of those possessed in the civilized centers of the world? This Negro, in other words, who paddled a dugout canoe along dark and tree-hung water-ways, this Indian who gestured naked on a lonely pinnacle at ships bound through the freezing waters of the Horn, possessed somewhere beneath the tangle of his unkempt hair the same pulsing electric patterns that in other lands have measured stars, or weighed evidence in seats of judgment, or twinkled like fireflies as the lines of a great poem woke its strange sad memories in the brain of man. All over the world before the fundamental verities men feel, bleed, die in not very dissimilar ways. It is not surprising that Wallace stood abashed before this mystery; the surprising thing is how few Victorians understood it; perhaps, ironically, their conscious superiority made their feats of colonization possible.

THE BIOLOGICAL HYPOTHESES

Biologists in general have avoided grappling with the question that troubled Wallace. Or, if they have done so, it has often been ineffectively in terms of generalities, or marred by the surviving confusion over biological potentialities, as contrasted with social heredity. As Etkin has pointed out (1954, p. 130), most writers start with at least a crude level of symbolic communication as *assumed*. The pre-adaptation or other explanation of the shift over from the purely *signal* communication of the animal to the linguistic activities of men is left unexplained for the simple reason that no one adequately has come to grips with the problem. It is the recognition of this fact that has led to renewed speculation in the year just past.

Chance and Mead (1953) have contended that the immature primate male, often forced to inhibit his sexual desires in a society like that of the baboons, for example, where a dominant old male is overlord, would be selected in terms of his ability to control his impulses and thus protect himself. As a consequence, the role of the brain cortex involved in such conscious control of his instinctive functions would be enhanced, and the consequent pre-adaptation perhaps lead on to other intellectual advantages than those allowing survival in a ferocious pack of primates ridden with intense male competition for dominance. The young male, in other words, learned to inhibit his sexual drives and bide his time against stronger opponents. I am inclined, however, to share Etkin's view that, interesting and provocative though this speculation is, and certainly not without applicability in some primate societies, as an explanation it seems scarcely adequate to account for the first steps in the development of the human brain. One might almost observe that if similar behavior patterns involved in the familial activities of various modern primates were the sole forces at work in the creation of the human psyche, the experiment would have been launched more frequently by nature.

As it stands, baboons are still baboons and macaques, macaques. If we do not try to extract a single cause from its matrix and let it carry the whole burden of explanation, it may be, of course, that we will someday be able to postulate from these comparative studies of living primates just what additional factor in the case of man may, among several accessory causes, have turned the trick. But we are far from that point today. The genuine and forthright willingness of Chance and Mead, and Etkin to grapple specifically with the problem, as well as to face the limitations of their data, is a healthy sign for the future.

Etkin draws a picture rather different from that of Chance and Mead and, so far as man is concerned, develops it further. He accepts the cortical control of sexual

behavior emphasized by Chance and Mead as contributing to the socialization of the primates, but points out that intense male competition for dominance in polygamous groups "is not universal among primates" (Etkin, 1954, p. 131). He further observes critically that

> "Perhaps a more fundamental defect of the theory is that it is nonadaptational, making the various aspects of human intelligence incidental to selection in respect to other characteristics which, it should be pointed out, operate in the male sex only" (*ibid.*).

In the case of very early man, using the Australopithecines as a possible example, he contends that the absence of heavy canines in the males suggests less internal sexual competitiveness among males and, in addition, greater solicitude for the family. "The development of a hunting economy can occur, in an anthropoid," Etkin affirms (p. 136), "only if the male cooperates in feeding and caring for the young. The presupposition of monogamy for pre-cultural man which is here made is based on the impracticability of a single male operating successfully as protector and provider for many females." Etkin observes, therefore, that the "central feature of the social behavior of the 'hunter' anthropoid must be an integration of the male into the monogamous family unit in which he is the primary hunter." The anthropoid baby could no longer be cared for by the mother alone as in the old frugivorous arboreal world. Once given this new environment promoting male cooperation in the family and among other males, a whole new series of selective forces conducive to the improvement of the brain would have come into play. Ideational behavior would have promoted the emergence of language under the new difficult hunting conditions and the desirability of permanent familial relationships between the sexes would, Etkin believes, not alone have promoted the growth of language but the loss of a distinct oestrus phase in favor of a diffuse and extended sexual interest which may have further reduced the typical male primate patterns of aggression and dominance. With the emergence of even rudimentary speech, the social bond would be further strengthened. Relaxation of selection pressure for rapid maturation would follow upon a greater degree of familial permanency and, in its turn, tend to reduce male jealousy. Increased opportunities for learning among the young would follow.

Etkin is frank to admit that his approach is in some degree speculative, but no more so than many of the inferences we are forced to draw from comparative anatomy. His treatment has, it appears to the present writer, one great advantage over many of the anthropological theories brought forth to date: it is complex, not simplistic. It does not seize upon a single factor such as tools and attempt to make that factor carry the full weight of human development. Etkin, instead, emphasizes a design of interwoven and related processes all operating at once.

Nevertheless, being something in the nature of a pioneering attempt, it may be said to falter somewhat in the elucidation of just what pre-adaptations may have promoted the survival of the ancestral primate when he first reached the ground, what brought him there, and what aspects of his mind at that stage may have promoted the rise of symbolic communication. Most of these are still very difficult questions, and Etkin is not to be blamed if he stumbles slightly on this transitional threshold which he has duly and correctly noted that the anthropologist tends to avoid. It is plain, however, even in Etkin's excellent paper that he himself prefers to begin with a proto-human family which has already successfully divided its labor and responsibilities and has pretty thoroughly mastered its ground environment. In our next and concluding section we shall examine some of these points and try, as well, to suggest an answer to Wallace's final question; namely, if men, with all their cultural diversity are, throughout the world, so intellectually similar, how did they attain this status and how, moreover, did they attain it so much more rapidly than Darwin's theory would explain? With what, in his solitary environment, is the primitive contending that

makes it possible for his descendants a generation or two later to take their places satisfactorily in the great universities of the world? If natural selection is indeed at the root of this process, it is a natural selection that Darwin never visualized and that drove Wallace to have recourse to divine guidance. The gap between man and ape is not as the early Darwinians saw it—a slight step between a gorilla and a Papuan, or a chimpanzee and a gibbering Hottentot. Instead, it stretches broad and deep as time itself.

CONCLUSION

It is a fact long noted by philosophers that time, as discussed among men, is always treated in the language of space. Time is "behind" us and "before" us; it is a river and it "flows," or one remembers an episode "far off" in the past. Without wishing to make too much of the figurative expressions of modern tongues, it is not without interest that the arboreal world presents space to the primate, and particularly to the brachiating, upright primate, in a more dangerous multi-dimensional way than is true of any other creature. Leaving aside the question of language for the moment, the world of the tree-dweller demands a constant assessment of space in a way unknown to the pronograde creature on the ground. The steady following of the sense impressions from the nose becomes impossible, and must be replaced by reliance on sight—and sight of the keenest stereoscopic variety. Moreover, this space is presenting constantly, to the animal in the act of swinging through it, a panorama of dangers and opportunities which are less the steady succession of things observed by a moving ground animal than they are the ups and downs and sideways and befores of the multi-dimensional tree world. Objects demand, in terms of mental imagery, much more accurate visual reporting and an ability of the mind to twist its attention at will and hold in clear perspective things which are not necessarily directly ahead but which may be important above or below in the next flying second.

A friend of mine once saw a newly-released gibbon hurl itself at a glass window through which it obviously expected to pass. In the very instant of contact with the glass, against which an ordinary animal traveling at such speed would have shattered itself, the gibbon, sensing its error, recovered. With the merest featherdown touch of feet and hands it caromed its flying body off the glass in a new direction and escaped disaster. The episode was a beautiful example of bodily coordination, but, in addition, it spoke volumes on the nature of the primate brain and eye. The vision was not all for what lay ahead. In the instant of unexpected contact with a solid, the brain, carrying some side image, knew where to divert the generated energy that was hurling it to destruction.

These acts have in them some of the insight, the flexibility of attention, the almost instantaneous internal reconstruction of external conditions which is involved in the manipulation of symbolic thought, that is, language in the other space world of time. We do not mean to imply incipient speech in the existing primates. We do, however, make bold to suggest that the arboreal environment and its demands may well have played a part in the creation of that ideational insight which is known to exist in our living relatives and which may lie close to the root of language as one of the preadaptations of our fathers of the forest world.[2] There is, at any rate, a remarkable analogy between the anthropoid comprehension of that world and what Chauncey Wright wrote long ago of language which "essentially consists in the power of turning

[2] Sillman (1953, p. 150) says something of great pertinence in this connection:

". . . The establishment of language is essentially the transference of image evaluation of all modes of experience into the auditory vocal sphere. An anatomical basis for the domination by the auditory sphere is suggested by Meyer's loop of the visual radiation to the temporal lobe.

"A further pre-human step in the direction of language has been revealed by the experiments of Cluver and Bucy. They found that monkeys whose temporal lobes were removed lost their sense of visual discrimination so that they did not know how to respond to previously familiar objects and would mouth them as infants do. In other words, even in lower primates, temporal lobe auditory reactions acquire dominance or act as an interpretive screen between consciousness and the various forms of sense perception."

back the attention from a suggested fact or idea to the suggesting ones . . . in place of the naturally passive following subserviency of the mind to the orders of first impressions or associations" (Wright, 1870, p. 296). In other words, the time tracts which, in the speechless anthropoid, can be but dimly peopled with visual memories grow rich under the flow of symbolic thought. The time world comes into its own and assumes the importance and reality of the world of space.

But of that momentous crossing from the trees to the ground which is often assumed to be, as well, the passage into the world of symbolic thought and speech, we know, as yet, nothing at all. We are unsure as to what induced it, whether climatic circumstance, or the expansive powers of life itself as represented in the restless experimental habits of the primate brain. Professor Etkin is forced to take the "hunter" anthropoid for granted; and his system begins at this point. But *was* man a hunter, in any elaborate sense, when he descended upon the grass? It seems unlikely, and this may affect to some degree the validity of Etkin's comparison of the male ancestor's behavior to that of such a carnivore as the male wolf in the role of food provider. It is conceivable, since man is really an abnormal carnivore, that his first ventures upon the grass were descents into open parkland in search of seeds, grasshoppers, possibly even wild sorghums, and other items of this sort which could be harvested upon the ground. As yet, we do not have clear proof that even the Australopithecines were big game hunters, because the bones found in the sites from which their remains have been recovered may have been dragged in by hyenas. Our theories are to this extent assumptions which may or may not be true. In any case, the South African man-apes cannot be equated with the first primates who left the trees somewhere within Tertiary time. All of the existing great apes are essentially vegetarians, and indeed the arboreal brachiators have no other consistent source of food. Even the enormously powerful gorilla who has descended to the ground is a vegetarian forager and not a carnivore. It is at least worth some consideration that man is not likely to have been a meat-eater when he first came down from the trees but rather a somewhat omnivorous creature who only by degrees, as his numbers grew and his wit increased, turned to meat-eating in any extensive sense. Man's stomach is not that of a true meat eater. He does not possess the powerful digestive acids of the genuine carnivore, and this is why it was only with the discovery of fire that he can be said to have successfully unlocked the protein-rich food source represented by the swarming herds of the grasslands.

Man's interest in marrow and his known penchant for soft parts such as brains suggest that though he undoubtedly made some use of raw flesh in his bipedal adventure on the ground, he badly needed something that would serve as a substitute for the sort of stomach which was not his evolutionary birthright. Eventually he found it in fire. Man is thus to be seen once more as a strange anomaly among beasts, for he has been able to enhance his numbers and promote his rapid spread by literally stealing and transforming the energy of the grassland herds through the medium of fire. It is still of the utmost importance to know at what point this instrument came into man's hands, for it has undoubtedly done much to transform his habits and increase the rapidity of his diffusion (Eiseley, 1954). Although not in the beginning a true carnivore, his lack of purely instinctive controls and tremendous adaptability have enabled him to effect a transition in food habits which is unique on the planet.

The psychiatrist, Leonard Sillman (1953, p. 146), pointed out not long ago that "no other species [than man] comes into the world with so few fixed reactions for survival, knows less inherently how to maintain itself." It is for this reason that I remarked earlier in this paper that those who would disregard the higher mental characters of man, as side products of some kind of competitive struggle involving tools, have missed the real nature of the human transformation. It is this "new" brain, denuded of precise instinctive responses, growing in

a curious mighty spurt during the first few months after birth that has created man and set him off from his nearest relatives. Evolution by infinitesimal competitive degrees which brings everyone out on the same potential intellectual level cannot be attributed to mechanical tool-using competition. Instead, it implies: (1) Either a true orthogenetic trend in all men, or (2) some aspect of the environment which is selective and yet common to all men everywhere.

This latter factor, if it is indeed the true explanation of the genetic mental equality of people all over the world, can only rest in the nature of man himself. In other words, the factor missed by Darwin and Wallace both, is the societal nature of human beings. The nineteenth-century biologists were confused by man because they were so taken up with the struggle for existence in the animal world that they rarely glimpsed the fact that in the case of man there was a second invisible environmental world in which he existed and which replaced for him his lost instinctive adjustments. For the first time a creature had appeared in nature who created his own world in his head, but by communication and mutual similarity of mind made of many heads a little universe in which man existed apart from exterior nature. It was this societal universe, with its institutions supplanting his lost instincts, which directed his activities. Invisible universe of dreams, it was this environment for which he was being selected in each society since the first glimmerings of that enormous change began. The naked, frail, denuded creature of which Sillman speaks could not have survived alone. In all those first societies of the years of transitional passage from the ape to the human world, the protective buffering of society for that frightened dawning consciousness must have been tremendously important. Moreover, those intellectually most able to adjust to, as well as to create, this secret universe in the mind of man, would have had the greatest opportunities for survival. Thus, the elaboration of the primary tool of *all* societies—language—went forward unceasingly. Whatever powers controlled the process, whatever institutions might arise in a given group, in the end there was only one society—the human creation in which man moved and had his being and which nurtured, in no matter what diverse ways, the essential nature of the societal creature. As Dobzhansky and Montagu (1947, p. 587) have very ably remarked:

> "An animal becomes adapted to its environment by evolving certain genetically determined physical and behavioral traits; the adaptation of man consists chiefly in developing his inventiveness, a quality to which his physical heredity predisposes him and which his social heredity provides him with all the means of realizing."

Rather than seeing a succession of societies graded in a series of stages leading up to Western civilization with its elaborate technology (based even among ourselves largely on the invention and use of the scientific method within the last three centuries), rather than judging the capabilities of different races on this basis, it should now be plain that the great basic innovation among all varieties of mankind was the production of the socio-cultural world itself. For this, man everywhere, whether in the far Arctic or the jungles of the Amazon, has been adapted unceasingly. It is the cultural beliefs and excrescences which vary, flux, and flow unceasingly, without, so far as we can judge, affecting man's native ability to learn the use of any tool from the hydrogen bomb to the spear thrower. The close equality of intellect seems to center around the ability of all men to use the one great socializing instrument; namely, language. Perhaps it is not surprising that Wright's remark of 1870 (pp. 295–296) that

> "a psychological analysis of the faculty of language shows that even the smallest proficiency in it might require more brain power than the greatest proficiency in any other direction, . . ."

received so little attention, even though it was once referred to by Darwin.

It would thus appear, even though we are far from understanding the details, that the omnipresent selective force overlooked

by Wallace, and which led him aside upon a somewhat mystical path, was the unseen environmental pressure implicit in the nature of society itself, rather than its individual cultural manifestations. All surviving races of mankind have, therefore, apparently been subjected to this selection to an approximately equal degree.

In answering Wallace's objection to what he regarded as a fatal defect in Darwin's treatment of man, it must be recognized that there are several aspects of man's mental life which both Etkin and Eiseley regard as somewhat mysterious but which there is not space to discuss here. Since, however, they are rather equally distributed (allowing for cultural differences) among all peoples, they do not affect the general conclusions expressed. We must, however, take note that the precise length of time involved in the production of the living species of man is still somewhat problematical. There has been a recent assumption that he is surprisingly young—a supposition that gained strength after the elimination of the Piltdown skull. There still remain, however, the faceless skulls from Swanscombe and Fontechevade which hint strongly of *sapiens* affinities and whose datings have so far withstood all challenge. If Swanscombe, of second interglacial age, should prove to be an ancestral *Homo sapiens,* we must repeat that it will be impossible to regard the Pleistocene Australopithecines as any more than a side branch, and perhaps not even of assured human status, in spite of some human anatomical traits. In that case, we shall expect eventually to turn up creatures of possibly clear human affinities in the Pliocene. The scales at the moment are trembling but have not dipped conclusively toward either point of view. Discoveries either technical, in terms of refined measurements of time, or in the shape of new fossils should clarify this situation before long. In either case, it would appear that the evolution of the human brain has taken a shorter length of time than Wallace supposed in the older evolutionary terms of 1864. Much, in terms of time, depends upon the way in which the modern form of man was drawn out of the elder stock. Man's curious larval nakedness and extended infantile helplessness hint at pedomorphic changes whose mechanisms are ill-understood.

In the introduction to this paper, we spoke of the necessity of an assessment of our position. Perhaps it lies partly in the firm recognition of the depths of our ignorance. Even now we know practically nothing of the early dietary of the grassland primates—on what, for example, *Paranthropus crassidens* may have been chewing with those enormous molars, and with temporal muscles so massive that they demanded a sagittal crest. It is just possible that these characters are not an adjustment to flesh eating at all.

Certainly the subject is open to analysis. We should know a great many things about the East African savanna that we do not know—possible foods; how much fire may have altered vegetation in post-glacial times—all these things are imperfectly understood. Finally, what must have been the frightening withdrawal of instinct in man and its replacement by the culture-building brain is a passage that the Darwinian world failed to grasp or appreciate clearly. Yet Sillman was right when he called it one of the cruelest and withal most generous endowments ever visited upon a living creature by a mysterious providence. It has surrounded him with an invisible sustaining world of pity and dignity and peace which, however much man may still struggle in the toils of his animal nature, was never built by the grossly personal selection of the stone ax and the spear. In that judgment, Wallace was correct; the world of man is a flowing world of dreams and symbols which he created long ago and which will last as long as man is man. In no other world can he now live. But the key to the secret doorway by which he came into this world is still unknown. The fortunate thing in terms of modern anthropology is that we know the disparity between man and ape is great, not small. And in that disparity of mind is locked a mystery which will not be yielded up except by serious and profound analysis. Of this also the modern anthropologist is increasingly aware.

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Old World Archeology and Prehistory

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THERE has been a very marked increase in archeological activity throughout the Old World during the past three years. In fact there is so much to report, in such a vast territory, that any really comprehensive survey within the compass of a few pages is obviously out of the question. The best that can be done is to select for comment some of the more important work, in the way of excavation, research, meetings, and publication, with the hope that this may give a representative over-all picture of the advances made by archeology, along a very broad front, in an area that comprises more than half the world.

GENERAL ACTIVITIES

In any appraisal of archeological activity during the years 1952, 1953, and 1954, the most outstanding fact to be noted is probably the persistent, though happily diminishing, effect of the last war and, perhaps even more, the influence of the present state of "cold war." This has remained essentially a period of recovery. The physical plant of archeology, in many countries, was badly damaged during the Second World War. The work of digging in the ruins of bombed museums and the salvaging of collections is now almost over. Rebuilding has proceeded at a slower pace. However, the increasing availability of funds for archeological work has resulted in the reopening of many museums and schools and the revival of long-standing projects in certain areas. For example, the German Schools at Athens and Rome have reopened their headquarters and the French have resumed operations in Syria, the Germans in Turkey, the British in Jordan, and the Italians in Crete.

A still more encouraging sign is the revival of important periodicals that were suspended during the war and the inauguration of many new journals and learned society serial publications. As examples of the former should be mentioned the resumption of the *Fasti Archeologici,* the *Archaeologisches Jahrbuch, Archaeologischer Anzeiger, Germania,* and the *Archiv für Orientforschung.* Among the new periodicals are such valuable additions as *Eiszeitalter und Gegenwart* in Germany; *Orientalia Suecana* in Sweden; *Palaeohistoria* and *Annual Egyptological Bibliography* in Holland; *Quaternaria* and *Sibrium* in Italy; *Archaeologia Austriaca* and *Veröffentlichungen der Urgeschictlichen Arbeitsgemeinschaft in der Anthropologischen Gesellschaft in Wien* in Austria; *Archeologické Rozhledy* and *Anthropozoikum* in Czechoslovakia; *Fontes Praehistorici* in

Poland; *Libyca* in Algeria; *Bulletin of the South African Archaeological Society; Anatolian Studies* in Turkey; *Les Annales Archéologiques de Syrie; Israel Exploration Journal; Palaeologia* in Japan; *K'o-hsüeh T'oung-pao* (Science Correspondence) in China; and the *Bulletin of the Department of Archaeology and Anthropology of National Taiwan University* in Formosa.

In addition to these and others, special attention should be called to a major undertaking, the *Inventaria Archaeologica,* directed by M-E. Mariën under the auspices of the International Congress of Prehistoric and Protohistoric Sciences, the purpose of which is the publication and illustration of well-documented artifacts characteristic of various prehistoric and historic cultures. This will be issued in sections, in different countries (somewhat on the model of the *Corpus Vasorum Antiquorum*). The first section was published in Antwerp in 1953.

All this news is definitely encouraging. On the other side of the picture, however, it must be stated that international tensions due to the last war have not altogether disappeared, in spite of the fact that German scholars, for example, are now beginning to work shoulder to shoulder with their colleagues in what were once enemy countries and that the next session of the International Congress of Prehistoric and Protohistoric Sciences, in 1958, will be held in Germany. Furthermore, and much more serious, the learned world, like the political, is fundamentally divided into two camps, between which there is little or no communication. The archeologists of the Soviet Union and the satellite countries are operating independently of the West. Correspondence between former friends on both sides of the Iron Curtain is largely impossible. Publications are exchanged with difficulty, cooperation is nearly nil, and it is seldom that delegates from countries in the Russian orbit attend conventions held in Western Europe. A striking exception was the appearance of a Russian delegation at the meeting of the International Congress of Orientalists in Cambridge, England, in the Summer of 1954, and it may be hoped that this indicates a possible change of policy. However, the fact remains that archeological research suffers badly from the lack of that personal contact and interchange of ideas that is so essential for the solution of the problems of prehistory.

Notwithstanding this handicap, the years 1952 to 1954 were noteworthy for a number of meetings of Congresses and other bodies which contributed materially to the successful progress of archeology. Among these a leading place should be assigned to the International Symposium on Anthropology, organized by the Wenner-Gren Foundation for Anthropological Research, under the chairmanship of A. L. Kroeber. Although this did not take place in the Old World—it was held in New York, June 7 to June 20, 1952—the participants came from many countries and the program itself was worldwide in its scope, consisting of a very thorough and detailed appraisal of the existing state of all branches of anthropology, including of course archeology. This gathering, unique in its conception and highly successful in its carrying out, resulted in two important publications, *Anthropology Today, an Encyclopedic Inventory,* containing all the papers presented at the Symposium, and *An Appraisal of Anthropology Today* which presents a transcript of the discussion and criticism of the papers by the participants (Kroeber and others, 1953; Tax *et al.,* 1953).

Other events of interest to archeologists in the year 1952 were the meetings of the International Congress of Anthropological and Ethnological Sciences, in September at Vienna, the next session of which will be held in Philadelphia in September 1956; the 19th International Geological Congress at Algiers; and the Second Pan-African Prehistoric Congress, which also took place at Algiers, September 29 to October 4. The latter meeting was a worthy successor to the First Pan-African Prehistoric Congress, which was held at Nairobi in 1947 and the results of which were published in 1952 (Leakey (ed.), 1952). Ninety papers were presented, covering all phases of African prehistory, and their publication, an-

nounced for early 1955, will whet still further the interest in the third session of the Congress, to be held in Livingstone, Northern Rhodesia, in July 1955.

Further light was shed on the prehistoric past by papers read at the Fourteenth Prehistoric Congress of France, held at Strasbourg in July 1953, and the Fourth Congress of the International Association for the Study of the Quaternary (INQUA), which met at Rome and Pisa, in August and September 1953. Another important gathering in the same year was the Fourth Far-Eastern Prehistory Congress, which took place in Manila in November 1953, as a division of the Eighth Pacific Science Congress (Anonymous, 1953d). This was significant not only for the area of its interest but also because it saw the birth of a new archeological organization, the Far-Eastern Prehistory Association, devoted to furthering archeological study and field work in Eastern and Southeastern Asia and Oceania. The Council of this body consists of leading representatives from the many countries in the area; the Chairman of the Executive Committee is Bernard P. Groslier of Saigon, the Secretary is Roger Duff of Christchurch, New Zealand, and the Honorary Chairman, H. Otley Beyer of Manila.

The year 1954 was marked by the meeting of the Fourth International Congress of Prehistoric and Protohistoric Sciences, in April at Madrid. This occasion drew together some two hundred and fifty representatives from thirty countries and did more to advance archeological work and to cement friendly relations and cooperation between archeologists than any other event in the past few years. Many new discoveries were announced and old problems reconsidered in the 157 papers presented at the session. The Spanish hosts of the Congress provided a very comprehensive program, including several excursions to sites which it would be difficult to visit in any other way, notably the rock pictures of the Spanish Levante and most of the famous Paleolithic caves in the Cantabrian region of Northern Spain. In August of the same year the International Congress of Orientalists met in Cambridge, England, and the International Federation of Associations for Classical Studies met in Copenhagen (Thompson, 1954).

In most of the countries of the Old World, government plays a larger part in the initiation and control of archeological work than it does in the United States. This has been increasingly evident in the period now under consideration. Without calling the roll by countries, it suffices to say that almost everyhere there has been great activity on the part of governmental bodies, in the way of preservation and restoration of monuments, of grants for research and education, and of stimulation of excavation. One particular feature of these operations calls for special attention. That is the growing practice of conducting intensive archeological reconnaissance and test digging in areas where sites are about to be destroyed by construction projects. Here the Soviet Union has led the way. It is standard procedure in Russian territory to include archeologists in the advance guard of engineers who survey the ground before commencing a major hydroelectric or irrigation project, and in this way during the past few years much valuable information has been obtained and published. In some cases, the work has even been delayed or the plans have been altered to prevent the loss of irreplaceable sites. This is particularly true in Russian Turkestan.

Another phase of archeological work on a national scale is the growing tendency to coordinate all the archeological activities of a country through the creation of some institution or institutions not directly under governmental control. Here one example must suffice. The Council for British Archaeology (C.B.A.) was organized in 1944 as part of a scheme for the planning of post-war archeology in Britain. Since then it has grown rapidly and now performs a truly surprising number of functions. Reference to the last annual report (Anonymous, 1954) shows that its membership includes 16 national societies, 148 county and local societies, 13 national museums and federations, 31 county and local museums, and 13 universities. Its funds come from

subscriptions and a grant-in-aid by the British Government. During the year ending June 30, 1954, the C.B.A., either directly or through the agency of its member institutions, engaged in the prosecution of archeological and scientific research, the stimulation of excavations, the support of the government's efforts for the preservation of ancient monuments and historical buildings, the promotion of archeological publication, the organization of summer schools and field training schools, and the general education of the public in archeological matters. Above all, with a minimum of financial resources and also with a minimum of outright authority, the C.B.A. has succeeded in coordinating all the work of archeologists in Great Britain and adding greatly to the progress of that work. This is certainly a splendid showing.

A recent factor of considerable importance in archeological affairs is the United Nations Educational, Scientific, and Cultural Organization (UNESCO). This international body engages in many activities, some of which have a very direct bearing on archeology. In particular, the International Committee on Monuments, Artistic and Historical Sites, and Archaeological Excavations (which operates within the Museums and Historic Monuments Divisions of UNESCO) has been very busy during the past three years. The Committee wrote the draft of the International Convention for the Protection of Cultural Property in the Event of Armed Conflict, which was accepted in final form by a meeting of governmental representatives at the Hague in May 1954 and has since been ratified by many of the member nations. The Committee is now working on a revision and modernization of the Final Act of the International Conference on Excavations (the so-called Cairo Agreement). The main purpose of the revision is to encourage archeological excavations by foreign scientists, particularly in nations where competent local men are not yet available, by simplification and liberalization of regulations, which in some countries are prohibitive or nearly so.

During 1953 and 1954 and on the request of the countries concerned, the Committee has sent special missions to Syria, to conduct a survey of historical and archeological sites and to make general recommendations for the preservation and restoration of monuments; to Lebanon, to study the monuments in the town of Tripoli and to recommend general measures, taking into account their historical and artistic values and the needs of an expanding modern town, also to recommend specific immediate work, especially at the Acropolis of Baalbek; to Iraq, to advise the Government on the problems concerning the preservation of the monuments of Hatra; to Israel, to advise the Israeli authorities on the preparation of plans for the layout of the ancient towns and on the restoration of mosaics; and to Egypt, to draw up detailed plans for the organization of a center of documentation on the art of Ancient Egypt.

In addition to the foregoing, the Museums and Historic Monuments Division of UNESCO has aided archeologists by the publication of a magazine, *Museum,* and by the organization of International Seminars for Museum Staff and Educators, the last of which was held in Athens, September 12 to October 10, 1954. These seminars include sessions on archeology and ethnology. Finally UNESCO has been instrumental in the creation of various organizations, whose work is also important for archeology. The Commission Internationale pour une Histoire du Développement Scientifique et Culturel de l'Humanité, for example, has undertaken the task of writing a world history, the various sections of which (including prehistory) are being prepared by leading scholars from all parts of the world and are now being published in the *Journal of World History.* The International Council for Philosophy and Humanistic Studies, to give another instance, has assisted by subventions the publication of such works as the *Fasti Archaeologici* and the *Corpus Vasorum Antiquorum.*

With a few marked exceptions, there is nothing very striking to record in the development and use of archeological techniques in the Old World beyond the progress reported in the papers of the

Wenner-Gren Symposium of 1952, previously referred to. It is true, however, that during the past three years there has been an observable trend toward greater precision in dating, by the employment of every available method, ranging all the way from fluorine tests to glottochronology. The greatest progress in this direction has been of course along the line of carbon 14 dating. The preliminary demonstration of the value of this technique, which was first developed in America, has so impressed foreign archeologists that during the past few years radiocarbon laboratories have been established in Copenhagen, London, Groningen, Rome, and Warsaw, with the likelihood that these shortly will be followed by similar installations in France, Germany, and other countries.

As yet few actual runs of Old World material have been made, and these mostly in America, as the European laboratories only are just coming into operation. Such radiocarbon dates as are available tend on the whole to confirm archeologists' estimates that were based on other methods and evidence. A few glaring exceptions may be due to error or contamination, but there is always the possibility that some accepted chronological schemes may have to be considerably revised and those who are interested in Old World prehistory are eagerly awaiting the outcome of this new and independent check on dates derived from varve counts and pollen analysis as well as a further testing of the accuracy of the carbon 14 technique by applying it to many more cases of historically datable material than hitherto has been possible in America. Especially interesting results are expected when the method is used to bring order into the prehistoric chronology of some parts of Africa and Asia, where written history begins very late.

Refinements in archeological field methods have proceeded apace. Aerial reconnaissance and aerial photography are increasingly demonstrating their usefulness. To cite one instance, Malleret and Groslier in this way recently discovered the hitherto unknown site of the ancient city state of Funan, in Viet Nam. The successful results of underwater archeology, in the "excavation" of sunken Greco-Roman cargo ships by divers off the coast of Provence (Casson, 1953), as well as the investigation of the ancient harbor defenses at the site of Sidon in Lebanon (Poidebard and Lauffrey, 1951), have stimulated efforts elsewhere. It was reported in 1954 that a society for free underwater swimming has been formed in Cyprus and that some of the members have been fishing up old amphorae off Famagusta. Mention also should be made of the way in which Donald F. Brown discovered what is probably the site of the important and "lost" Greek colony of Sybaris in Southern Italy, first by deciding that it must be below recent alluvium and a modern higher water table and then by designing a series of borers and bringing up samples of soil and datable pottery fragments to confirm his opinion (Johnson, 1954c). Another example of ingenious field methods was in the case of a reconnaissance in 1953 by Thorkild Jacobsen of the Oriental Institute, in which, by mapping the location of ancient Sumerian sites in Southern Mesopotamia and dating the period of their last occupancy by the surface potsherds, he was able to determine the former course of the rivers and the main irrigation canals in the third millenium B. C. (Jacobsen, 1954).

SURVEY BY PERIODS

Interesting as these matters are, the most important things to report in a survey of this sort are the concrete additions to our knowledge of the past through excavation and research, particularly through excavation. It is obviously impossible to report everything in the space of a few pages, so the rest of this review will be devoted largely to an account of some of the more outstanding pieces of field work, which may serve as examples of the direction which archeological investigation has taken in the past few years. Furthermore, to give this account some coherence, it is proposed to divide it into three sections. The first will deal with certain fairly important work which throws new light on the various

periods of prehistory and early history; the second will be in the nature of a survey of other work by areas and countries; and the last will consist of a brief review of the extent to which America has contributed to Old World archeology during the period in question. In this connection Oceania will be considered, as well as Europe, Africa, and Asia, largely because our foreign colleagues usually argue that technically it forms part of the New World, while American archeologists are apt to consider the New World to consist only of the two American continents, thus leaving Oceania, bat-like, to be omitted by both camps in any survey such as the present one.

Beginning with the Paleolithic period, the most dramatic recent addition to our knowledge is a negative one, namely the demonstration that the famous Piltdown skull cap and jawbone do not represent a very early hominid type, "Piltdown Man," but that they belong respectively to a relatively modern man and a contemporary ape and, what is more, that they are the result of a very clever and deliberate piece of forgery. The detective work, announced in 1953, was performed by Weiner, Oakley, and Clark, largely with aid of improved fluorine tests. "Piltdown Man" had long been a puzzle to physical anthropologists and an object of some suspicion, although no one suspected an actual hoax. Its elimination from consideration clears the way for a more satisfactory study of the evolution of the sapiens type (Weiner and others, 1953; Straus, 1954a).

Further important light on the Paleolithic period has resulted from three excavations in North Africa: at the site of Aïn Hanech in Algeria, Camille Arambourg (1953) found very primitive artifacts made on pebbles—choppers, chopping tools, and "boules"—in association with a Villafranchian-type fauna of the Lower Pleistocene, some of the earliest human implements yet discovered; at Ternifine (also known as Palikao), in Algeria, Arambourg unearthed flake tools, cleavers, and hand-axes of primitive Acheulean type, with a Middle Pleistocene fauna, and two fossil human mandibles, presented as a new genus, *Atlanthropus mauretanicus,* said to be related to Heidelberg Man, on the one hand, and Peking Man (*Sinanthropus*), on the other; at Haua Fteah, in Cyrenaica, Charles McBurney found a remarkably long stratigraphic sequence of Paleolithic cultural remains in a cave, the basal stratum of which (Levalloiso-Mousterian) produced a human mandible of Neanderthaloid type.

South Africa has been the scene of great activity, marked especially by further investigation and discussion of the *Australopithecinae.* These "poor relations" of man, with their erect posture, are generally considered to be hominid, in spite of their small brains and the fact that there is no clear evidence as yet that they knew the use of tools or fire (Cooke, 1952; Howells, 1954; Oakley, 1954; and Straus, 1954b). Recent finds at the Lusaka site, in Northern Rhodesia, may indicate that there were artifact-using hominids contemporary with the Australopithecines, who themselves were probably descendants of an early primitive human type rather than an original ancestral form. Other excavations help greatly to clarify the picture of man's development during the Pleistocene in this part of the African continent. In March 1953, C. Van Riet Lowe, P. Teilhard de Chardin, Kenneth P. Oakley and J. Desmond Clark found Kafuan pebble tools *in situ* in the surface limestone that forms a crust over the underlying highly cemented Basal Older Gravels. These are thus the oldest human artifacts with a sound geological documentation that have yet been discovered in South Africa and they lead to the conclusion that here, as in East and Central Africa, the beginning of the development of the Chelleo-Acheulean handaxe complex must date from the Kamasian pluvial period (Lowe, 1953). At Kalambo Falls in Northern Rhodesia, Late Acheulean living floors were noted (Clark, 1953), while at the Hopefield site, "Saldanha Man" (closely related to "Rhodesian Man" but somewhat older) was located in association with an extinct fauna and a Late Stellenbosch industry, although the stratigraphy here does not fit the Vaal sequence (Goodwin, 1953).

In France, Dorothy Garrod dug a Magdalenian rock shelter near Angles-sur-l'Anglin (Vienne), which contained a splendid series of life-sized relief sculptures of horses, ibexes, and human figures (Garrod and de Mathurin, 1952). Farther south, at Les Eyzies, in the heart of the Dordogne country, Hallam L. Movius, Jr. of the Peabody Museum, Harvard University, dug test trenches at the rock shelter of Abri Pataud and found rich artifact-bearing strata of Perigordian 4 and 5 affinities overlying an Aurignacian horizon, with indications that further excavation and study would go far to unravel the complexities of the Aurignacian and Perigordian sequences of artifacts and date the various stages in terms of contemporary geological events (Movius, 1954).

Italy has not lagged behind in recent Paleolithic investigation. In 1953, A. C. Blanc discovered a cave at Doura, near Palermo (Blanc, 1953). On the walls were many finely executed engravings of animals and of men, with masks, engaged in ritual scenes. Near Toirano in Liguria, Blanc found another cave in which were footprints of a man, together with footprints and bones of a cave bear. As the cave bear has been found elsewhere in Italy in association with remains of Neanderthal Man, it is thought that the footprints here may be those of a Neanderthal (Blanc, 1952).

In Central Europe traces of Paleolithic culture in Serbia, together with rich faunal remains, were reported in 1952 from the cave of Jerinimo Brdo, while important new Paleolithic discoveries were later made in Czechoslovakia at the site of Dolni Vestonice (Klima, 1954).

Extensive additions to our knowledge of the Paleolithic period have been made in the Soviet Union. In 1954 the cranium of a Mousterian child was reported from the Starosel's cave in Crimea (Formozov, 1954). Much work has also been done in the Ukraine (Boriskovskii, 1953). In 1953 A. P. Okladnikov reported on twenty-nine Siberian Paleolithic sites in the Lena river valley, thus greatly extending the area of known human occupation during the period.

Elsewhere in Asia other important Paleolithic finds have been made. Ralph S. Solecki, of the Smithsonian Institution, in cooperation with the Directorate General of Antiquities of Iraq dug in Shanidar Cave, ten miles northwest of Rowanduz. He demonstrated that the site had been occupied almost continuously from Levalloiso-Mousterian times to the present and that it contained a new Upper Paleolithic industry. The value of this stratigraphy was enhanced by the find, at a depth of twenty-six feet, of the teeth, skull fragments, and parts of the arm and leg bones of a child, in a deposit containing stone implements of Mousterian age (Solecki, 1952, 1953a, 1953b). Far to the east, in West China, a fossilized human skull was reported from Tzeyang, in Szechwan province. This was found twenty-three feet underground in a gravel stratum of the late Quaternary period and constitutes the first remains of Paleolithic man yet known in Southwestern China (Borob'ev, 1953; Chia, 1954). Hope of similar discoveries in the Philippines was aroused by the work of G. H. R. von Koenigswald, immediately following the Fourth Far-Eastern Prehistory Congress at Manila late in 1953, when he reported the presence of Pleistocene mammal remains, thus definitely confirming the theory that the Philippine Islands were connected with the mainland at a time when Paleolithic man was known to be in Eastern Asia (Anonymous, 1953e).

All in all, this is an impressive showing for Paleolithic investigation during the years 1952 to 1954. Much less can be said for the following period, the Mesolithic. Probably the most important item within this time range is the very informative excavation of the Maglemosean site of Star Carr in Yorkshire, England, which was concluded by Grahame Clark in 1952. Worthy of mention also is the recent report of the French on the geology of Indo-China, which demonstrates that, as had long been suspected, the famous Hoabinhian sites in that area are mostly, if not wholly, post-Pleistocene in date (Saurin, 1953). Still more important was the discovery in Japan of several allegedly pre-ceramic sites, with

chipped stone industries: the Iwajuku site in Gumma Prefecture, the Washuzan site in Okayama Prefecture, and several others. Further investigation of these sites should do much to increase our knowledge of the early prehistory of Japan.

When we come to problems of Neolithic culture, there is much more to record. One of the greatest of these problems is the question of where, when, and how men first discovered agriculture and made the momentous change from a food-collecting to a food-producing economy. Just before the beginning of the three years now under discussion, Robert J. Braidwood of the Oriental Institute, with the assistance of Bruce Howe and backed by the American Schools of Oriental Research, did much to close the gap between Mesolithic and Neolithic, in the Kurdistan foothills of Iraq, by excavation of the site of Jarmo, with preceramic lower levels, and the nearby site of Karim Shahir, which seems to be on the borderline between the two cultures. At the moment of writing (December, 1954) these two archeologists, with other colleagues, are once more in the field in Kurdistan, searching for evidence of the first farming communities. Meanwhile in Jordan, in the seasons of 1952 to 1954, Kathleen Kenyon, on a joint British-American expedition, greatly enlarged our knowledge of early Neolithic culture by her excavations at Jericho, where she unearthed the remains of a large, seven-thousand year old pre-ceramic Neolithic settlement, with town walls and many buildings. A singular find in this horizon was the earliest portrait sculpture yet known, in the shape of seven human skulls, with the features beautifully modelled in plaster and the eyes inlaid with shells (Kenyon and Tushingham, 1953; Anonymous, 1953b).

On the other hand recent work in Europe has pointed to the necessity of reducing somewhat the estimated dates of some of the Neolithic remains in the western part of that continent. It now seems that all the Megalithic structures in Spain and France must be assigned to the second millenium B. C., while the excavations of Salvatore Puglisi show that the painted pottery of the Apulian "Neolithic" is in part contemporary with the Mycenaean period of Greece and the eastern Mediterranean. In northern Russia also there is a similar tendency to reduce the dates of the so-called Neolithic culture of the forest zone (Gimbutas, 1953). Further east, in Siberia, the latest work of A. P. Okladnikov (1950) has put on a fairly firm foundation the chronological development of Neolithic culture in the Baikal-Angara region of Siberia and all the way down the Lena river to the Arctic Ocean.

The most striking event in Bronze Age archeology has been the decipherment of the Minoan Linear B script and the revolutionary discovery that not only the records in the script that were found at Pylos and Mycenae in the Peloponnesus but also those at Knossos in Crete were kept in an early form of the Greek language (Ventris, 1954; Johnson, 1954a; Dow, 1954). We owe this new knowledge to an English architect, Michael Ventris, who, in collaboration with John Chadwick, succeeded in showing that the Pylos tablets contained many Greek words, often in archaic forms, as well as the names of Greek divinities, such as Athena, Hera and Poseidon, and those of well-known places. Two conclusions are to be drawn from this discovery: first, that the Achaeans were evidently in Crete at an earlier date than was hitherto supposed, namely in the Late Minoan II period; and second, that the Linear B syllabary was not well adapted to represent Greek sounds and thus its predecessor (Linear A script), which contains many of the same characters, may have first been used for writing a non-Greek language and may now perhaps itself be deciphered with the help of phonetic values found for the characters of the Linear B.

Other important European excavations on post-Neolithic sites include the work of the American School of Classical Studies at Athens in the rich new site of Lerna, where remains of the largest Early Helladic building yet known have been revealed (Caskey, 1953, 1954; Johnson, 1954e), and other work by Bernabò Brea in the Lipari Islands, which has brought to light strati-

fied remains dating from Neolithic and Mycenaean to historic Greek times. Mention also should be made of the excavation by Giorgio Buchner of what may be the earliest colonial Greek cemetery in the west, on the island of Ischia near Naples, and the investigation by Jotham Johnson of the walled forts of the Roman republican period in Latium which has led him to the conclusion that polygonal architecture is not a safe criterion for dating and that many of these towns are younger than was once supposed (Johnson, 1954b). Finally, at the Heuneberg in Germany the finding of black-figured vases in a Hallstatt context seems to demonstrate that the Late Hallstatt period of the Early Iron Age must have begun later than it has been the custom to estimate (Dehn and others, 1954).

In India great progress has been made in establishing the chronological framework of the prehistory of the major part of the sub-continent. Following the reported stratigraphy of several important sites in southern India, which were excavated in the years immediately preceding 1952 and which established a complete sequence of cultures from Mesolithic to Roman times, H. D. Sankalia has more recently performed the same task for part of the Deccan (Sankalia and others, 1953). Lastly, a government survey of sites in the Indus region and the excavation of Hastināpura in the Meerut district, near Delhi, has gone far to solve one of the most troublesome problems that have perplexed Indian archeologists, namely what was the culture of northwestern India during the fifteen hundred years or so that elapsed between the end of the Harappa culture and the beginning of the historic period about 500 B. C. (Lal, 1952).

SURVEY BY AREAS

As might be expected, the tempo of archeological activity has been increased somewhat during the past three years in most of the countries of the Old World. Up to this point in our survey we have selected for comment excavations which have a bearing on major problems of periods and dating. It is of course impossible to summarize here the remaining body of field work, most of it excellent, which in total adds so much to our detailed knowledge of Old World prehistory and early history. Yet this cannot be wholly ignored and so the next few pages will be devoted to a brief regional review.

Western Europe of course, as always, has been a particular center of activity and it is especially difficult to select individual excavations as more outstanding than others. In Great Britain much attention has been devoted to remains of the Roman period. Further progress was also reported at the site of Jarlshof, in the Shetland Islands, where important remains of the Picts and the Vikings were found, as well as earlier cultures (Hamilton, 1953). At Stonehenge, carvings apparently representing Mycenaean daggers were discovered on some of the large uprights. These and a carbon 14 date of 1848 B. C. $\pm$275 years for Stonehenge, announced in 1952, does much to end speculation about the age of this monument (Piggott, 1951; Atkinson, 1953). In Ireland, the most noteworthy items to record are the excavation of a Late Neolithic settlement at Lough Gara and the long awaited beginning of work, by Séan Ó Ríordáin, at Tara, the famous seat of Irish kings. In Northern Ireland a Late Neolithic site was dug at Lyle's Hill in Antrim (Evans, E. E., 1953).

The Scandinavians and Germans continued their admirable work at many sites of various periods. In 1953 the French excavated a singularly rich Celtic chariot burial at Vix, on the Côte d'Or, and found there many Greek and Etruscan metal vases and other imported objects which were important for dating purposes. In a paper read at the Madrid Congress, E. Vogt advanced proof that the celebrated Swiss lake-dwellings were not actually built in the lakes but upon their shores.

Highlights in Spain were the discovery of two new Paleolithic caves, Las Monedas and Las Chimeneas (Carballo, 1953a, b), and continuation of work in the Iberian, Roman, and Paleo-Christian cemeteries of Ampurias and the Visigothic cemetery of Segovia (Molinero Perez, 1954). Italian

efforts were largely concentrated on Roman remains at Pompeii (Anonymous, 1952a), Baiae (Anonymous, 1953c), and a newly discovered Roman villa near Piazza Armerina in Sicily. Of more general interest than archeological value was the report that in 1952 skeletons of some of Hannibal's elephants were found at Cannae, where the Carthaginian general defeated the Romans in 216 B. C. The puzzling chronology of the monuments on the island of Malta, their relative dating, and connections with the rest of the Mediterranean were clarified by John D. Evans (1954), in an article that appeared in the *Proceedings of the Prehistoric Society.*

In Greece, excavations were conducted at Argos by the French School, at Olympia by the German Institute, at Knossos by the British School, and at Phaistos by the Italian School. The most important finds were made at Mycenae, where Wace recovered some fine Mycenaean ivory carvings and thirty-nine tablets in the Linear B script and where an expedition of the Greek Archeological Society, assisted by George E. Mylonas, excavated a new circle of royal graves of Middle Helladic age containing very rich material. In Cyprus new work was begun or old work continued at Enkomi, Paphos, Pighardes, and Kourion.[1]

Egypt was much in the news in 1954, through the discovery, near Cheops' pyramid, of the funerary "solar ship" of that monarch, which for nearly five thousand years had lain undisturbed in a concealed limestone chamber (Bothmer, 1954). Other recent excavations in Egypt include that of a new royal tomb of the First Dynasty at Sakkara, believed to be that of King Uadji and dated at about 3100 B. C. This was the work of W. B. Emery (1953) for the Egyptian Exploration Society. Also at Sakkara another step pyramid of the Third Dynasty, similar to the famous one of Zoser, was discovered and partly cleared by Zakaria Goneim (Anonymous, 1952b); and there was continuation of work in the Dahsur pyramid area. At Tanqazi, near Meroe in the Sudan, Peter L. Shinnie excavated some large burial mounds, dating to about the fourth century A. D. and in Tripolitania, J. B. Ward-Perkins, of the British School in Rome, continued his work at the site of Sabratha, an ancient city once occupied by the Phoenicians, Romans, and Byzantines.

The Near East was a hotbed of archeological activity during the three years which we are now considering. In Israel excavations were conducted at Kebarah (Paleolithic), Yarmuk (Neolithic), Khirbet Kerak (largely Byzantine), Afula (Chalcolithic), Naan (Hyksos cemetery), and Caesarea (Greco-Roman). The search for more of the so-called "Dead Sea scrolls" in the Jordan area continued, resulting in the finding of about seventy manuscripts representing at least nineteen different books of the Bible, thought to date before the year 70 A. D., as well as valuable accounts of the sect of the Essenes. The manuscripts were written on papyrus and leather and were in the Hebrew, Aramaic, and Greek languages. Another group of recovered scrolls included two which were written in Hebrew characters on thin sheets of bronze, and also some fragments of the text of Euripides' *Andromache* (Anonymous, 1953b).

In Syria and Lebanon, work was continued at Mari (Parrot, 1953) and Ras Shamra (Schaeffer, 1954). At the latter site Claude F. A. Schaeffer discovered official archives of the city of Ugarit, including diplomatic correspondence with the Hittites in the second millenium B. C. Turkish archeologists also were excavating at Sultan Tepe, Old Smyrna, and Kara Tepe, while the Germans continued their investigation of the Hittite capital, Boghaz Keui, and Seton Lloyd dug at Beycesultan. The outstanding excavations in Iraq included the work of M. E. L. Mallowan at Nimrud (Mallowan, 1952a, b; 1953a, b) and that of the Iraq Directorate of Antiquities at the Parthian fortress-city of Hattra (Safar, 1952). Farther east, in Iran, the French Mission, under R. Ghirshman, uncovered more levels at Susa and cleared a thirteenth century B. C. ziggurat at the nearby site of Choga-Zambil (personal communication).

[1] Schaeffer, 1952a, b; Bryant, 1953; Mitford, 1952; Anonymous, 1953a; Taylor, 1952; and McFadden, 1954.

In Central Europe and the Balkans, there was much valuable excavation in Austria, including soundings in the Paleolithic cave, Salzoffenhöhle, in western Styria, and also in Yugoslavia. Archeological work in the satellite countries of Czechoslovakia, Poland, Hungary, Rumania, and Bulgaria, however, went forward at a much slower pace, in marked contrast to the situation in the Soviet Union itself.

The ambitious program of archeological field work in the Soviet Union, which began about thirty years ago as a matter of deliberate government policy, has been accelerated even more in the past few years. The number of separate expeditions at work at any one time is almost fantastic. Three recent developments are especially noteworthy. First, there has been a change in archeological theory; diffusion is recognized within reasonable limits; and the results of excavation are now seldom distorted to bring them into harmony with political ideology. Second, many of the blank spaces on the archeological map are now filled in—especially in Russian Turkestan and Siberia, where the most serious ones existed. Indeed for such sub-areas as Kirgizia and Tazhikistan, the middle Ob valley, the lower Ob valley, the Altai, the Yenisei valley, the Baikal-Angara region and the whole course of the Lena river, we have now such a series of excavated sites that it has been possible for the Russian archeologists to draw up chronological tables of named cultures for each of these sub-areas. The third development, which is a marked feature of the past few years, is the publication at last of comprehensive final reports of the more important excavations and surveys, instead of meager preliminary reports, which were all that were usually available until very recently. Excellent examples of these are: S. N. Bibikov's report (1953) on the Tripolye-culture site of Luka-Vrublevatskaia; S. P. Tolstov's account of the work of the Khorezm Expedition (Tolstov and Zhdanko, 1952; A. N. Bernshtam's report (1952) of the expedition to the Central Tian-Shan and Pamir-Alai; A. P. Okladnikov's reconstruction (1950) of the Neolithic and Bronze Age of the Baikal region; S. V. Kiselev's impressive work (1951) on the ancient history of Southern Siberia; and S. I. Rudenko's account (1953) of the culture of the Mountain Altai sites in Scythian times.

For Russian field work itself the greatest activity of late perhaps has been in the Tripolye area of the Ukraine, the East Ukraine, East Russia, and Russian Turkestan. Work on the classical sites of Crimea has been pushed with vigor. The cis-Ural region has been explored extensively, by archeological reconnaissance and excavation; the gap between the Chalcolithic and the Early Iron Age has been largely closed; and in Kazakhstan the investigation of pre-Andronovo sites has increased the knowledge of this important area, which provided a major route for culture movements from Eastern Asia to Eastern Europe and vice versa (Formozov, 1951). Special attention should also be called to years of excavation by S. P. Tolstov in the Khorezm region of the lower Oxus valley (Tolstov and Zhdanko, 1952). It is regrettable that the rest of the world remains so largely in ignorance of these results, through the reluctance of western scholars to learn Russian and through the refusal of Russian archeologists to publish summaries in other languages.

The Chinese archeologists have been very active during the new Communist regime. It is difficult to obtain detailed information of their work but, from such news as is available in popular publications and from Russian and Japanese sources and such occasional copies of Chinese scholarly journals as reach the west, it is evident that results of great importance are being obtained by the new Archeological Institute, of which Chêng Chên-tuo is president and Liang Ssu-yung (recently deceased) and Hsia Nai are vice-presidents. Work has been renewed at Chou-k'ou-tien and Anyang. An attack has been made on the problem of Neolithic culture in China. Excavations of prehistoric sites in Hui-hsien, Ch'êng-kao-hsien, and new work at Yang-shao—all in the province of Honan—as well as twelve localities in the Fêng river valley of Shansi, are stated to show that black pottery is found everywhere in the

same levels as painted pottery, thus indicating that earlier views about two separate Neolithic cultures in the North China plain, the Yang-shao or Red Pottery culture and the Lung-shan or Black Pottery culture, may have to be seriously modified and that it will be difficult to maintain that the Yang-shao culture everywhere preceded the Lung-shan culture in time. A flood of new light on the high civilization that must have prevailed in Central and Southern China in the first millenium B. C. is cast by the excavation of tombs in the city of Ch'ang-sha, south of the Yangtze river in Hunan. Bronze weapons, lacquer, silk, and bamboo documents were recovered here, and it is now safe to assert that China had two distinct civilizations in pre-Han times, that of the south being essentially different from that of the north, but no less advanced. Royal tombs of the historic period were also dug, including two of the Nan-T'ang dynasty (tenth century A. D.) near Nanking and two of the Ming dynasty in a suburb of Peking.[2]

The most outstanding work of the Japanese archeologists during the period in question, other than that already referred to, was the Far-Eastern Archeological Society's investigation of the island of Iki in the Korean Strait, which, amplifying the results of the previous survey of Tsushima Island (recently published), provided new details of the Jomon and Yayoi cultures and the early relations between Japan and Korea (Mizuno *et al.*, 1953). In Korea itself work was brought to a standstill by the hostilities. The Seoul National Museum was badly damaged in the war and as yet has not been reopened. Fortunately, most of the collections were successfully removed and are still in Pusan. It should be added that archeological work has not been abandoned completely, for Jong Hak Kim, Keeper of the Namsan Branch of the National Museum of Korea, is now in America, at Harvard University, where he is writing the first authoritative account of Korean prehistory and protohistory.

In Formosa the National University of Taiwan has sponsored the digging of several prehistoric shell-mounds and at the site of Feng-pi-t'ou, in southern Formosa, discovered some painted pottery and black pottery, which may indicate early connections with the Chinese mainland.

[2] Sekino, 1951, 1953; Nai, 1952; Rubin, 1952; Its, 1952, 1953.

AMERICA'S CONTRIBUTION

At this point is seems appropriate to consider the part that scholars and institutions of the United States have played in the recent development of the archeology of the Old World. This is a subject that has been much neglected and, because the efforts of Americans are generally supposed to be so heavily directed to the archeology of the Americas, it may come as a surprise to many to learn what an appreciable contribution has been made by archeologists here toward solving the problems of the other hemisphere.

If one were to call the roll of all the American universities whose departments of classics, departments of anthropology, and departments of fine arts have to a greater or less degree turned their attention to the archeology of parts of Europe, Africa, Asia, and Oceania, the list would be an impressive one. The same is true to some extent with the museums of this country, though, while a limited number of them are outstanding in this respect, it might be unfair to others to single them out by name. Lastly, there are certain societies and institutions which are specifically devoted to one or another aspect of Old World archeology, notably the Archaeological Institute of America, the American Schools of Oriental Research, the American School of Prehistoric Research, and the Oriental Institute of the University of Chicago, to name but a few. All these bodies have been active during the three-year period that we are currently considering.

In this connection the Wenner-Gren Foundation for Anthropological Research occupies a special position. While its efforts are not limited to any one branch of anthropology or to any one area of the world, it has played a great part in stimulating Old World archeological research. Mention

has already been made of the International Symposium held under its auspices in 1952. Its many grants-in-aid for the support of field work overseas have been of inestimable value. In one case, in 1952 and 1953, the Foundation appointed an advisory committee of specialists to recommend a constructive program of research in the archeology of Africa south of the Sahara, with the result that financial aid was given to projects having a high priority and likely to yield the most important results. Also the Foundation's grants for publication have made available to scholars much needed information that might otherwise never have been printed.

The *International Directory of Anthropological Institutions,* published by the Wenner-Gren Foundation in 1953, contains much valuable data about archeological institutions and archeologists abroad as well as in this country (Thomas and Pikelis, 1953). Two other publications that represent major American contributions to Old World archeology during the period in question are *Relative Chronologies in Old World Archeology* (Ehrich, 1954) and Nos. 5, 6 and 7 of the *Old World Bibliography,* compiled by Hallam L. Movius, Jr. and issued by the American School of Prehistoric Research (Movius, compiler, 1952 and 1953; Movius and Field, 1954). The former consists of papers originally presented at a Symposium at the Fifty-first Annual Meeting of the American Anthropological Association in Philadelphia on December 30, 1952, and published in 1954. The purpose of the Symposium (which was co-sponsored by the Archaeological Institute of America) was to arrive at some agreement on the chronological correlation of sites and levels of sites in Egypt, Palestine, Syria, Mesopotamia, Iran, southeastern Anatolia, the Aegean, southeastern and central Europe, and China, and thus to construct a framework of relative chronology for the prehistory and early history of those areas. The latter consists of a continuation of the series of very comprehensive biblographies of recent publications mainly in Old World Paleolithic archeology and paleoanthropology.

A new organization, the purpose of which is to advance the study in America of the archeology of Europe, Africa, Asia and Oceania, was created in 1953. This is the Council for Old World Archaeology, a non-profit corporation, the control of which is vested in representatives officially appointed by nine other American organizations: the Archaeological Institute of America, the American Anthropological Association, Section H (Anthropology) of the American Association for the Advancement of Science, the American Oriental Society, the American School of Prehistoric Research, the American Schools of Oriental Research, the Society for American Archaeology, the American Association of Physical Anthropologists, and the American Numismatic Society. It is the expressed hope of the Council to bring various groups of specialists into closer contact with one another by enabling them to share information of value to all. The immediate program of the Council is the publication of annual or biennial surveys of the more important archeological field work and research in every area of the Old World, with accompanying bibliographies, selected and annotated. This project has received wide support in America and also abroad, where the International Congress of Prehistoric and Protohistoric Sciences, at its Madrid meeting in April, 1954, passed a resolution endorsing the aims of the Council for Old World Archaeology and inviting the members of the Congress to cooperate. Thanks to a financial grant by the Wenner-Gren Foundation for Anthropological Research and some contributions by individuals, the Council is now in a position to organize its editorial staff, and it is expected that publication will begin sometime in 1955. The officers of the Council consist of Lauriston Ward, president; Noel Morss, clerk and treasurer; and ten other trustees, including the charter members designated by the nine organizations referred to above. Headquarters for the present are at 11 Divinity Avenue, Cambridge, Massachusetts.

The record of American excavation in the Old World during the last three or

four years is a long and creditable one. With a few scattered exceptions the work has been concentrated in three regions: the classical lands of the Mediterranean, the Near East, and Indonesia and Oceania.

Principal roles in the Mediterranean area have been played by the Classical School of the American Academy in Rome and by the American School of Classical Studies in Athens. The major work of the former was at Cosa (modern Ansidonia), near Orbitello, on the coast of Tuscany. Here the excavations by L. Richardson, Jr., revealed much new information about the life of a Roman community in the days of the Republic (Van Buren, 1953, 1954). In Greece, Homer A. Thompson continued the important work of the American School in the Athenian Agora (Thompson, 1952, 1953). Striking discoveries were made by Carl W. Blegen at the Mycenaean site of Pylos (Blegen, 1952, 1953; Johnson, 1954d) and by J. L. Caskey at Lerna (already mentioned). Other American work was undertaken at Eleusis, Corinth, and on the island of Samothrace.

Elsewhere in Europe there was Hallam Movius' excavation at the Abri Pataud in Les Eyzies, France, already mentioned. For Africa, the expedition to Oued Akarit in Tunisia (Howe, 1952) by the American School of Prehistoric Research (in conjunction with the Direction des Antiquités de Tunisie) formed part of a program of field work by the School, extending over several years and ranging from Tangier to Algeria and Tunisia, with the purpose of providing a clearer picture of the succession of Paleolithic cultures in northwest Africa. Farther east, the American Research Center in Egypt continued its work of assisting American and foreign scholars in that country.

American archeologists were active also in the Near East. The expedition of the University Museum of the University of Pennsylvania, under Rodney Young, dug the great site of Gordion in Turkey, and the Oriental Institute (for part of the time in cooperation with the University Museum), under Donald McCown, conducted very rewarding excavations at Nippur in Iraq (McCown, 1952). Other field work of the University Museum was undertaken in 1954 by the expedition to Afghanistan, where Rodney Young dug at Balkh, Schuyler Cammann uncovered a Buddhist shrine, and Carleton S. Coon excavated a prehistoric rock shelter, Kara Kamar, on the northern slopes of the Hindu Kush. To this list should be added the work of Frank Albright at Mârib in southern Arabia (Albright, 1952), Nelson Glueck's dig at Ain Murifiq, a Chalcolithic site in Israel, as well as Solecki's excavation of Shanidar Cave in Iraq, and Braidwood's and Howe's continuing work in that same general region, to which previous reference has been made.

Still farther to the east, in the Pacific area, we have to record Wilhelm G. Solheim's excavation of the Batungan caves in the Philippines (Solheim, 1953), Edward W. Gifford's work in Fiji and New Caledonia, that of Douglas Osborne in Guam and Palau, of Alexander Spoehr in Saipan and Tinian, and of Kenneth P. Emory in Hawaii, all of which deserve more than this brief mention. At the moment of writing (December, 1954), plans are being matured for an ambitious Tri-institutional Program of Archeological Research in the Pacific Islands, sponsored by Yale University, the University of Hawaii, and the Bishop Museum.

In concluding this very condensed review of recent activities in Old World archeology, the author would like to point out once more that, in addition to any possible sins of commission, he has, due to limitations of space, inevitably laid himself open to almost infinite sins of omission. The task of preparing this summary has been much like that of a man who is asked to construct a full-scale model of the S. S. Queen Elizabeth and then try to get it into a bottle. Of course, if the operation is not altogether successful, one can always blame the bottle.

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New World Culture History

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THE primary purpose of this brief essay is to supply a guide to the recent literature dealing with New World culture history. It is intended to be of assistance to those who wish to look into any one aspect of this extensive field and to enable them to go directly to those writings which are most recent and most pertinent to their special interests. We shall also comment variously on current research activities and interests, but the field to be covered is so immense and diverse that our comments can only be suggestive of what is happening and can explore no one aspect in any detail.

The attached bibliography is considered the most important part of our effort. It is limited to those works published within the years 1952–1954, except in some cases where an earlier work continues to be the best coverage of a particular subject. The list is selective, including only those items which in our opinion are (1) in the nature of syntheses of materials on an area or a subject, (2) illustrate new trends in research or thought, or (3) are somewhat sizeable contributions of new data. Furthermore, the time available has not permitted a full search of all the current literature and the omission of important titles undoubtedly will be discovered.

By New World culture history we mean, of course, the history of the American Indian cultures throughout the period extending from man's first entry into the Western Hemisphere up to when the native cultures were disrupted by the European invasion that began in the 15th century. The primary method of investigating this cultural history is by archeology with which we shall be concerned primarily. The limited written information on pre-Conquest history that exists for certain areas of course is of great value, as are the early records concerning the nature and distribution of native cultures at contact times. Ethnographic and other kinds of anthropological studies are of varying value as concerns cultural history, many of them being directed toward purely anthropological ends. These latter largely will be excluded from consideration here as will the more specialized subjects of physical anthropology and linguistics.

So largely dependent on archeology as it is, the investigation of New World culture history has been a slow process. Only for a portion of Maya history do we have recorded dates equal to those which for all of the high civilizations of the Old World have afforded time scales on which to build. This lack has forced much of the effort of the American archeologist to be directed toward supplying the chronological framework which must be available to a certain extent before other more interpretative analyses can be made. We have been going through a long period of fact-gathering and of devising techniques for the ordering of cultures in their proper time and space relationships. There seemingly has been an

inordinate concentration on the detailed study of potsherds, as well as an unusual specialization by most workers on local areas and local problems.

Within the last few years, though, there is apparent a rapidly growing interest in the broader synthesis of archeological data into more intelligible wholes. This reflects a trend present in culture-historical studies generally, perhaps, but it also stems from the fact that enough is now known about many portions of the New World to make it feasible. It is all to the good, of course, because it is only through such attempts to view our field in broad perspective that significant problems can be identified and research can be directed along the most profitable lines.

This growing interest in synthesis has not resulted yet in our being able to formulate, even in speculative terms, the gross outline of the entire subject of New World culture history with any degree of reliability. Summaries of certain major areas are appearing, however, that give us a considerable perspective and will eventually result in something like a consistent picture of man's cultural history in the Americas.

In commenting on the present status of culture-historical research in the New World, we will divide the subject into the three major areas of North America, Mesoamerica, and South America in the usual manner. First, however, we will refer to matters that concern the New World as a whole.

GENERAL CONSIDERATIONS

Bibliographic and informational sources that concern any one of our major New World areas will be mentioned later, but there are some of broader scope we must note here. The volumes of the *Programa de Historia de America* series (Comas, coordinator, 1953–1954), now in process of publication, are not all of equal utility, perhaps, but they contain extensive and organized bibliographies and extremely valuable summaries for some areas (see also Comas, 1953). The annual *Handbook of Latin American Studies* is a valuable compendium of information and bibliography in several fields, although its usefulness is somewhat impaired by its delay in publication. The volume just published (Aguilera, 1954) covers the year 1951. For current news of field activities, publication lists, and reviews, the generally most useful publications are: *Boletin Bibliografico de Antropologia Americano, American Antiquity,* and *Journal de la Société des Americanistes.*

The subject of early man and the origin of the American Indian could be treated separately for the entire New World, but we have chosen to include comments on it in the areal sections. The only recent publications treating of early man in the New World as a whole are by Sellards (1952) and Martinez del Rio (1953b).

Another area of interest that applies to the entire New World, rather than just one of our areas, is that of the relationship of the American Indian cultures to those of the Old World. There are many ramifications of this subject that we cannot enter into here, but we must note the considerable increase in interest in such problems in recent years—part of the trend, perhaps, toward broad interpretations. A number of workers in North American archeology have begun looking toward Asia for the origins of certain basic elements in their area, and distribution studies involving both continents have been made (Daifuku, 1952; Tolstoy, 1953). Others have been searching anew for significant similarities between America and Asiatic art forms,[1] while the distribution of cultivated plant species as evidence of trans-Pacific contacts has been discussed widely (Carter, 1953; Sauer, 1952). Heyerdahl's theories of major cultural transfers from the Americas to Polynesia have been found generally unacceptable to most students, but they have stimulated interest in the possibilities of Pacific crossings (Heyerdahl, 1952).

The tendency in the past to compartmentalize American archeological studies into areas has resulted in leaving untouched many important problems concerning the interrelationships of one area to another.

[1] Ekholm, 1953; Covarrubias, 1954; Heine-Geldern, 1954; Rands, 1953.

Of most interest is the question of relationships between the two nuclear American areas of the Andes and Mesoamerica, which has been touched upon recently (d'Harcourt, 1953; Porter, 1953), but is worthy of much more attention. Some attempt has been made to explore the varying processes of diffusion that apply to our interpretations of New World culture history (Willey, 1953c), and it is our belief that further discussions of this topic would be extremely helpful.

The dating of ancient materials by the radioactive carbon 14 method (Libby, 1952b) is playing an extremely important role in American archeology. From time to time new dates are announced (Libby, 1952a, 1954a,b) and analyses of their significance are made (Wauchope, 1954). The method appears to be generally reliable and promises an accurate time scale that will solve the greatest handicap there has been to establishing a real history of the New World cultures.

NORTH AMERICA

The number of institutions and individuals actively engaged in archeological research in the United States and Canada is very great and we could not begin to cover all aspects of work in the area. Excellent summaries exist for portions of North America, but few have attempted the overall synthesis of the masses of data that are available and are continually being augmented. Krieger's summary (1953) is the most recent and comprehensive.

The relation of the earliest cultures to climatological and geological phenomena of the Pleistocene–post-Pleistocene period is discussed for the entire North American area by Hurt (1953) and by Quimby (1954). Other works applying to all of North America are Swanton's encyclopedic treatment (1952) of all of the Indian tribes as they are known historically and ethnographically, and Murdock's comprehensive ethnographic bibliography (1953). A survey of North American Indian art forms by Covarrubias (1954) is also very worthy of note.

Arctic Area

The peoples of the American Arctic, the Eskimo and their Athapaskan and Algonquin neighbors, have been of particular interest to anthropologists because of their cultural adaptation to one of the most extreme climates encountered anywhere in the world. The western portion of the area they occupy is also a critical one as concerns the inhabiting of the New World from Asia.

Collins (1954) recently has summarized in considerable detail the present status of archeological and ethnographic research in this area. One of the most important recent developments in the archeological picture has been the identification at a number of widely separated sites of a stone complex of lameller flakes and polyhedral cores[2] seemingly related to the Mesolithic industries of the Old World. It is suggested that this flake blade industry goes into the making of the Dorset culture of Greenland and surrounding areas.

A noteworthy contribution is Giddings' archeologic and ethnographic study (1952) of the cultures of the Kobuk River region of Alaska.

Eastern United States and Canada

Systematic and cooperative effort by many archeologists has brought our knowledge of the Indian history of this area from a state of confusion and speculation to one of considerable refinement in a relatively short time. Quantities of data are available from many surveys and excavations and provide a basic framework for the history of the cultures of this area which is reasonably clear and reliable.

The most important attempt at an overall synthesis, and what will be the prime guide to the area for some years to come, is *Archeology of Eastern United States* (Griffin, ed., 1952). We can only refer the interested reader to this volume—especially for the summary article by Griffin in which he outlines the major developments in the

[2] Laughlin and Marsh, 1954; Meldgaard, 1952; MacNeish, 1954b; Knuth, 1954.

area according to the generally accepted scheme of culture periods. The earliest of these, the Paleo-Indian, is just beginning to be defined, while the second, the Archaic, is the now relatively well-known stage preceding the appearance of pottery. Following those are the Woodland and Mississippi periods, divided further into various substages. The book includes an extensive bibliography and a comprehensive series of illustrations of artifacts.[3]

Clear evidence of cultures of the Paleo-Indian horizon is just beginning to appear in the eastern United States. This includes several sites containing fluted points along with other artifacts more or less comparable in content and in age with the Folsom horizon of the west (Byers, 1954; Ritchie, 1953; Witthoft, 1952).

Western United States and Canada

This region is usually thought of in terms of several separate geographic and cultural areas, but considering the few comments we have to make on some portions, we will not list these under separate headings.

The area is notable, of course, for the many finds representing the earliest cultures of the New World that it has produced. A recent find of a mammoth, with associated artifacts, has been reported by Haury, Antevs, and Lance (1953), and the excavations at Danger Cave in Utah, where a long period of occupation chronicled by rich remains in stratified deposits is discussed in a preliminary report by Jennings (1953).

Due to government sponsorship of a salvage program directed toward the study of archeological sites to be flooded by dam construction, there has been an unusual amount of archeological activity in the Plains area during the last eight years. A recent withdrawal of funds, however, will cause an irretrievable loss of sites in many areas. Much of the material gathered as yet has not been published, but recent papers (Roberts, dir., 1953), and those appearing previously give promise of a fairly detailed picture of many phases of the history of the area. The ethnology of the plains has been summarized in very usable form by Lowie (1954).

The so-called American Southwest continues to receive a great deal of attention by those anthropologists occupied with theoretical problems as well as those interested primarily in history. Actually these two interests blend and complement one another in many ways, as is evident in the recent "Southwest Issue" of the *American Anthropologist* (Haury, ed., 1954) where papers representing the various approaches to the study of the Southwestern peoples are gathered together. Of special interest to culture historians, however, is an article by Kirchhoff on the classification of the cultures of the "Greater Southwest,"—expanding the concept of the Southwest to a much larger area than that usually meant by the term, and for which he suggests the name of "Arid North America." In other papers in the volume, Taylor succinctly reviews the history and theory of Southwestern archeology, and Wheat discusses the interrelationships of the different cultural types existent in the Southwest and the question of whether or not the concept of the area co-tradition as defined by Bennett is applicable there. This issue of the *Anthropologist* provides the best recent summary of the status of Southwestern studies. It also reveals very clearly that the trend toward thinking in terms of whole areas and broader problems is well advanced among those concerned with this field.

The importance of the Southwest as a research area is further attested by the number of archeological studies resulting from recent and older field operations that have appeared during the period under review.[4]

For the Far West we can only note that

[3] There are further, more recent publications on the Southeast (Goggin, 1952; Ford, 1952; Sears, 1953; Solecki, 1953; Webb, 1952), on the midwest portion of the area (Deuel (ed.), 1952), and on the northeast section (Ritchie, 1952, 1954; Ritchie, Lenig, and Miller, 1953; MacNeish, 1952).

[4] Martin, Rinaldo, and Bluhm, 1954; Martin *et al.*, 1952; Morris and Burgh, 1954; Morss, 1954; Smith, Watson, 1952; Stubbs and Stallings, 1953; Wendorf, 1953, 1954; Wendorf (ed.), 1953; Woodbury, 1954.

the systematic surveys that have characterized the work of the California archeologists for a number of years have been continued, and important publications have appeared.[5] In the Northwest, including British Columbia, various archeological and ethnological projects are under way, but we have come across no major recent publications.

MESOAMERICA

Caso's recent brief summary of Mesoamerican culture history (1953b) probably still is acceptable to most students in the field, although the number and terminology of culture horizons would be subject to dispute. The concept of Mesoamerica as a culture area with a time depth of at least 1500 years has been well established by use, although as there should be, there has been no attempt to define it in any detail. There is an obvious over-all unity to the area but there are, nevertheless, two major sub-divisions within it, the Mayan and Mexican areas, and each has its own complex problems and its group of specialists who usually do not concern themselves with the whole of Mesoamerica.

Early Man

The combined archeological and geological research essential to advances in this field nowhere in Latin America have received the attention given them in North America. Promise of greatly increased activity in Mexico, however, came with the founding in 1952 of a separate Dirección de Prehistoria in the Instituto Nacional de Antropologia e Historia directed by Pablo Martinez del Rio. One of the first activities of this group was the excavation of a mammoth skeleton, with stone artifacts in association, at Santa Izabel Iztapan (Aveleyra Arroyo de Anda and Maldonado-Koerdell, 1952, 1953), and very recently another similar discovery was made near the well-known Tepexpan Man site. These well-documented finds definitely establish the association of man with large mammals in the Valley of Mexico and accent the importance of this locale for the study of early man.

Another activity of the Dirección de Prehistoria, but not precisely in the field of early man, has been the excavation of several caves in the State of Coahuila in northern Mexico, where a remarkably full inventory of otherwise perishable artifacts belonging to a nomadic, non-pottery-making people was found (Martinez del Rio, 1953a). Further to the east, in Tamaulipas, earlier cave sites containing abundant remains of plants and promising to be of extraordinary interest in regard to the earliest stages of agricultural activity in Mexico very recently have been under excavation by Richard MacNeish of the National Museum of Canada.

When proper surveys are carried out, the area of Central America south of Mexico eventually must provide good evidence of early occupations. As yet the only known site is that of the buried human footprints near Managua, Nicaragua (Williams, 1952), unfortunately not associated with any cultural materials.

Maya Area

One of the major research operations of recent years has been the concerted attack by the staff of the Department of Archaeology of the Carnegie Institution of Washington on the historically-known late site of Mayapan in northern Yucatan (Anonymous, 1952– ; Roys, 1952). This site has been the focal point of their attempt to work out in some detail the archeological picture of Yucatan during the last several centuries before the Spanish conquest. The period is a confused one in our knowledge of the Maya, especially as regards the correlation of the archeological findings with the historical accounts for the area. One of the important aspects of the work is, of course, the light it might throw on the question of the correlation of the Mayan and Christian calendars. Results so far indicate that the major occupation of Mayapan came after the Mexican Toltec occupation of Chichen Itza; a markedly degenerate

[5] Beardsley, 1954; Heizer (ed.), 1953; Meighan, 1953; Meighan and Eberhart, 1953.

form of Maya art and culture is exhibited.

Other locations in Yucatan—Chichen Itza, Uxmal, and several Pauk sites—are being worked by Mexican archeologists, and many of the previously undescribed buildings at Chichen Itza fortunately have been covered by Ruppert (1952). Lothrop has provided an extensive report (1952) on the metal objects from the Cenote of Sacrifice of Chichen Itza, adding tremendously to our knowledge of the culture of the Mexican Period in Yucatan and its relationship to the Classic Maya, to Mexico, and other areas. The report also provides a much needed survey of metal working throughout Mesoamerica.

For other portions of the Lowland Maya area, the outstanding event of recent years has been the discovery of a sealed chamber and a large stone sarcophagus underneath the Temple of the Inscriptions at Palenque (Ruz, 1952a,b, 1954). The discovery is a spectacular one, not only for the unusual, but not unique, feature of having a temple pyramid built over a tomb, but also for the many fine examples of stone and stucco reliefs, jade, and mosaic objects that were included. This and other recent finds add greatly to the corpus of Palenque art which is certainly among the most sophisticated of the New World.

The westernmost portion of the Maya area in Campeche, Tabasco, and Chiapas is relatively unknown, but lately has been receiving special attention in the form of surface surveys and test excavations (Berlin, 1953; Drucker, 1952). The problems are those of understanding the relationships of the Maya and Olmec cultures and of tracing the origin or passage of the Toltec complex which played such an important role in post-Classic times in Mesoamerica.

Although some important publications have appeared (Longyear, 1952; Strömsvik, 1952), the only new work that has been attempted in the central and southeastern lowland Maya areas has been in British Honduras. The site of Caracol, with a series of unusual monuments, has been explored by Satterthwaite (1954b), and Willey has begun a project at the Barton River site near Baking Pot. The intention of the latter is to explore the long-neglected problem of the settlement pattern of a Classic Maya community. By mapping and working in a number of the many small mounds surrounding a modest ceremonial center on the site, it is hoped that some knowledge will be gained of the functional relationship of the living and agricultural areas to the religious center.

The archeology of the Highland Guatemala region is becoming relatively well known as the publication of the results of previous field operations is completed.[6] Shook and others of the Carnegie Institution of Washington have other publications in preparation, but it is to be regretted that this institution has terminated its program of active field work in this important area. In Highland Guatemala, remains of the Classic Period are rich and abundant with especially strong ties with Mexico, but more interesting perhaps is the long sequence of pre-Classic cultures (Shook and Kidder, 1952) that give hints of the area being a critical one as regards the origin of Mesoamerican civilization.

Finally we must note the appearance of Thompson's popular book (1954) on Maya history and culture and Brainerd's survey (1954) of Maya art.

Mexico

The complex culture-historical problems of that portion of Mesoamerica we might call Mexico proper—excluding the Maya area, that is—largely are in the hands of the staff of the Instituto Nacional de Antropologia e Historia. The archeologists of that institution have been occupied primarily with certain long-range programs of excavation at major sites, such as Monte Alban, Teotihuacan, Tula, and Tajín. The work is published from time to time in small articles, but one of much greater scope, resulting from the work at Monte Alban, is Caso and Bernal's extensive analysis (1952) of the Oaxaca urns. Much more than the documentation of many

[6] Berlin, 1952; Shook, 1952; Shook and Kidder, 1952; Smith, Robert E., 1952; Woodbury and Trik, 1953.

hundreds of examples of this class of object, the work is also a profound analysis of the religion of the successive peoples that occupied the cultural nucleus of Oaxaca. Another publication, resulting from earlier work by the Instituto on one of the major sites of Mexico, is Noguera's study (1954) of the pottery of Cholula.

At the 5th Round Table Conference of the Sociedad Mexicana de Antropologia, held at Jalapa in 1951, progress was made in analyzing the chronological alignment and the relationships of the diverse cultures of the Gulf Coast region of Mexico (Bernal and Davalos, eds., 1953). Since then the results of several site excavations have become available (Drucker, 1952; Medellin Zenil, 1952; MacNeish, 1954a), as well as an analysis of the Classic Vera Cruz art style (Totonac or Tajín) which is an outstanding feature of the remains in this area (Proskouriakoff, 1954).

At the above-mentioned conference it became clear that one of the major problems of Mesoamerican archeology is that of the relative importance of the cultures of the lowlands and the highlands—or of these two contrasting ecological zones as environments in which the high cultures may have originated. In the local situation, the chronological position of the Olmec culture is of critical importance. Drucker (1952) believes that its full development came during the Classic Period, but, for others, it is older and constitutes the earliest full flowering of a Classic type in Mesoamerica. This is an archeological problem that can only be solved by further work, but its significance is very great because it involves our knowledge of the principles concerned in the origin of civilizations everywhere.

Various kinds of work by Mexican and foreign archeologists have been in progress recently in Central Mexico, of which preliminary reports were presented at the 6th Round Table Conference held in Mexico City in 1954. At Teotihuacan, the most exciting finds of recent years have been the numerous mural paintings (Villagra, 1952). These are more fully expressive of the ritual aspects of Teotihuacan culture than any other kinds of archeological objects, being counterparts of the codices of the post-Classic period. They indicate, among other things, that certain gods and ceremonial features of later times had their origin at least as early as Teotihuacan.

The all important native and Spanish literary sources relating to the central Mexican area continue to receive attention.[7] Aztec religion has been summarized again by Caso (1953a).

SOUTH AMERICA

Our comments on the progress of culture-historical research in South America can add little to the several recently published surveys that have made that area more accessible to the student than either of the major areas we have considered already. The basic compilation is, of course, the comprehensive *Handbook of South American Indians* (Steward, ed., 1946–1950). For a brief general survey of South American cultural history as a whole, but with emphasis on the high culture area of the Andes, we have the smaller handbook by Bennett and Bird (1949) and a similar review, but directed toward the art of the Andes, in Bennett's handsomely illustrated catalogue of the Museum of Modern Art's Andean Show of early 1954 (Bennett, 1954). Willey provides yet another brief but excellent survey (1953b) of South American archeology as a whole, along with a selected bibliographic coverage up to 1953, and Bennett (1953b) analyzes very concisely the approaches and methods that have characterized culture-historical research in the area.

All of these surveys are much more than compilations of our knowledge of the archeology and ethnography of South America. They include new culture-area classifications and attempts at historical reconstructions which, although certain to change, provide sound theoretical bases on which to build. It is interesting that South America should have received much fuller survey treatment of this kind than have

[7] Mengin, 1952; Caso, 1954; Anderson and Dibble, 1950–1954; Garcia Granados, 1952.

other areas of the New World. In part this is undoubtedly due to the clear-cut contrasts in culture types and their seeming correlation with ecological zones exhibited by the area as a whole (Meggers, 1954).

Andean Area

Compared to previous years, when some of the larger coordinated research programs were active in Peru, little field archeology has been done in the Central Andean area during the last three years. We must note, however, W. D. Strong's Columbia University investigation (1954) in the Nazca and Ica Valleys which is the first major attempt to establish a stratigraphic sequence for the south Peruvian coast. Peruvian archeologists as well as those representing North American and European institutions have been occupied in various other projects.

Some notable publications have appeared which are the detailed reports of earlier excavations and whose principal results already have been incorporated in some of the summaries previously mentioned (Bennett, 1953a; Kroeber, 1953; Strong and Evans, 1952; Willey and Corbett, 1954). A particularly significant contribution is Willey's *Prehistoric Settlement Patterns in the Virú Valley, Perú* (1953a). This major work contains a mass of factual data on the nature of the archeological sites in the Virú Valley, arranged chronologically on the basis of Ford's ceramic analysis and providing a history of the social organization of the successive peoples of the area as this is reflected in the grouping of sites and buildings.

The northern Andes, comprising Ecuador and Colombia, were apparently not subject to the same kind of over-all cultural changes such as were in operation in Peru and Bolivia, so its archeological picture has remained relatively confused. Because of the importance of the area as a route of contact between the major areas of Mesoamerica and the central Andes, attention is continually being directed to it, but the recent publications only begin to elucidate the many problems centered there (Reichel-Dolmatoff, 1953, 1954a, b; Haury and Cubillos, 1953; Lehmann, 1953).

The art of the Andean area recently has been displayed in large exhibitions in the United States and Europe, and a book of excellent illustrations of Peruvian architecture and objects has been published by Doering (1952). Very welcome detailed studies of the graphic art on Mochica pottery (Kutscher, 1954) and of an important collection of Paracas textiles (Bird, 1954) have appeared in handsome volumes.

Lowland South America

The cultures of northernmost South America, the Antilles, and Central America exhibit many features in common and are now usually thought of as comprising the Circum-Caribbean area. The several portions mentioned are unequally well-known archeologically, the most obscure being the mainland portions of South America. Here, however, the current work of Cruxiant in Venezuela and the recent archeologic and ethnographic studies of Evans and Meggers in British Guiana give promise of remedying the situation (see also, Acosta Saignes, 1954).

A recent paper by Rouse (1952) and another by Bullbrook (1953) add to the relatively complete archeological picture of the Antilles that has emerged from continued stratigraphic excavations and surveys during the last two decades.

Central America is one of the great unknowns of American archeology, and there is need for more knowledge of it before the historically important interrelationships of Mesoamerica and the Andes can be visualized clearly. The cultures of the area were fairly elaborate ones in late periods, but they seem to have had little time depth. This is only an impression, however, for a recent paper is the first detailed stratigraphic analysis for any portion of the area that has appeared (Willey and Stoddard, 1954).

One notes a greatly increased activity and interest in ethnographic studies in the Amazon Basin region in recent years (Nim-

uendajú, 1952), but little archeological work is in progress. Evans and Meggers' study of the Marajo and related cultures at the mouth of the Amazon are yet unpublished in detail, but eventually will do much to fill a gaping hole in our knowledge of South American archeology. Marajo culture is seen as a late phenomenon resulting from influences coming out of western South America (see also Barata, 1953).

Canals Frau (1953) has provided a summary volume on the cultures of Argentina.

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Archeological Theories and Interpretations

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Dr. Haury, since 1937, has been Head of the Department of Anthropology, University of Arizona, and, since 1938, Director of the Arizona State Museum. Best known for his archeological activities in the southwestern United States, he has also conducted field research in Colombia on the Chibcha. A Guggenheim Fellow, 1949–1950, and the 1950 Viking Fund Medalist in Archeology, Dr. Haury is President-elect (for 1956) of the American Anthropological Association. His principal publications are The Mogollon Culture of Southwestern New Mexico, 1936; with others, Excavation at Snaketown, Material Culture, 1937; and, with others, The Stratigraphy and Archaeology of Ventana Cave, Arizona, 1950.

ARCHEOLOGY, like the past cultures which are the target of the archeologist's endeavors, has undergone changes in its philosophies, precepts, and methods with each passing year. The rate of this change, its direction and effectiveness are factors which often do not become apparent until, in larger retrospect, they may be gauged against still other accomplishments. To seek, therefore, the meaningful theories and interpretations of the past two years, is to look at them literally by being on top of them and without the benefit of the perspective that future time alone can provide. Yet, out of the swelling tide of archeological literature one sees the emergence of trends, changing and newly contrived concepts, and shifts in emphasis. The reviewer, charged with the task of distilling the content of recent writings into a few pages, will quite naturally be swayed by what interests him both topically and regionally. The emphases in this paper, as well as the omissions, are to be judged therefore in these terms.

Most of the archeologist's labors have been devoted to a routine recording of his findings, often colorless and lacking in a sense of history. This is not so because of design or ineptness but arises from the limitations imposed by the subject matter itself. The lamented confusing array of descriptive facts must inevitably constitute the point of departure for excursions into other fields. With the infusion of chronology, the pattern of history emerges and the framework is erected for sound assessment of a functional and processual nature of culture growth and change.

Improved techniques and broadened concepts have, in recent years, brought a self assurance and maturity to the profession. This is reflected in an increasing number of problem-conscious projects, drawing often upon the aid from disciplines other than archeology, and in a shift from the purely historical to functional interpretations. That this swing of the pendulum is a slow one can be illustrated by an analysis along broad topical lines of archeological titles in a few of the leading professional journals of the United States during two 2-year periods, 1943–44 and 1953–54. Two of these, the *Southwestern Journal of Anthropology* and the *American Anthropologist,* give broad coverage to anthropological subjects while the third, *American Antiquity,* restricts itself to archeological reporting.

In the accompanying Table 1 it is evi-

TABLE 1

TOPICAL ANALYSIS OF ARCHEOLOGICAL ARTICLES IN UNITED STATES PROFESSIONAL ANTHROPOLOGICAL JOURNALS

Types of Major Articles	*Southwestern Journal of Anthropology*		*American Anthropologist*		*American Antiquity*	
	1945–46[1]	1953–54	1943–44	1953–54	1943–44	1953–54
Descriptive	3	2	3	0	41	20
Technology and Methodology	1	3	0	2	4	6
Comparative and Interpretive	8	7	3	10	16	12
Theoretical	0	2	2	5	2	1

[1] First two-year period of *Journal.*

dent that the general journals favor the comparative-interpretive and theoretical articles over those of a more descriptive and analytic nature. The broad readership of these journals understandably helps in setting the editorial policy along these lines. One may suppose that more theoretical papers would have been accepted and published if available. A somewhat better barometer of archeological reporting is to be found in the pages of *American Antiquity.* Since this journal is devoted to archeology only, a high frequency of descriptive articles is to be expected. Comparative-interpretive works fared quite well but in the theoretical area few papers were printed, and the ten-year comparison reveals no upward trend. It is only fair to note that the narrow limits of article length in journals prevent the inclusion of the larger works in which the functional and theoretical interpretations are found after an extended consideration of the data. A somewhat higher ratio of the latter to the descriptive and methodological reports will be found outside the professional journals.

THEORY AND METHODS

The expanded horizons of archeological studies in the Americas are reflected in a series of significant papers covering a variety of aspects of theory and method. It is in this area of thought that the present is most sharply set apart from the old antiquarianism and from the more recent period when the dominant point of view was order and system. The period of introspection and the assessment of objectives began a decade or more ago, well before the two-year period covered by this review, and the number of works devoted to these ends is increasing. Among those of recent date which stand out are Phillips' and Willey's formulation of principles which they advocate as a guide to New World studies. In their own words (1953, p. 631) these are:

"(1) That the primary emphasis continue to be placed on the organization of components and phases (or their equivalents) in local and regional sequences under stratigraphic control; (2) that phases be studied intensively as the effective context of archeological culture; (3) that their internal spatial and temporal dimensions be kept within manageable limits of magnitude; and (4) that their external spatial, temporal and formal relationships be studied and expressed in terms of traditions and horizons without recourse to any taxonomic formulations of a higher order than themselves."

The full meaning of these statements must be obtained by studying the closely reasoned supporting text. It may be said without prejudice toward other efforts to examine the conceptual bases of archeology, that Phillips and Willey have presented us with an exceptionally sound philosophical and operational method. Rouse's "The Strategy of Culture History" (1953) and Willey's review (1953b) of methodological structures are further examples of the current trend to inquire into what archeology is all about and how its objectives can best be met. Hawkes (1954) has some pertinent com-

ments about theory and method, too, from the point of view of the Old World.

Cultural reconstructions, whether slanted historically or functionally, depend upon the concept of types as a working tool. Ford (1954a) and Steward (1954) have clarified the several meanings which the word "type" possesses, designated as "morphological," "historical-index," "functional," and "cultural." All of these conceivably can be employed in the classification of the same cultural phenomenon, each having relevancy to a particular problem. The significance of these types, briefly stated, is form, chronological position, cultural use or role, and the last, the ". . . classification of whole cultures in terms of functionally most important features" (Steward, 1954, p. 57). Ordinarily the progression in the application of these different meanings follows closely the order of reference. The first two are the means of ascertaining the time-space dimensions of cultural objects. Not infrequently the archeologist's endeavors end there because knowledge of function is not to be had. But it is understandable that if cultural reconstruction and the classification of cultures is to be accomplished the other meanings of type also must be introduced.

All of this is well and good. Differences of opinion arise, however, the moment these concepts are put to a test on such basic questions as to whether or not types exist in culture and are discoverable by the use of skilful methodologies (Spaulding, 1953a; Ford, 1954a), and as to the value of and interpretations put upon typological studies (Ford, 1952, 1954b; Spaulding, 1953b). In time some degree of unanimity may be reached; but if one remembers that change is as inherent in concepts—or at least it should be—as in cultures, there need be no insistence on complete agreement.

Once accurate chronologies for cultural events have been established, the way is open for inferences of other kinds as, for example, classifications based on process, and the extraction of information about social, political, and religious activities of people. Willey's (1953b) discernment of diffusion-acculturation patterns in central Georgia, northern Yucatan, and north coastal Peru resulting from "cultural colonization" is an example of the former; his analysis of Virú Valley settlement patterns (1953c) is a classic example of the latter. It should be noted in this connection that the Virú Valley program was organized around the central problem of shedding light on all facets of the culture history of a single coastal valley in northern Peru. This required the kind of coordinated effort of both workers and institutions not seen heretofore in the American field, and even now, before all reports have been published, the endeavor may be judged eminently successful.

On a higher level of abstraction have been the efforts to present regional cultural activity in terms of the co-tradition, a concept first proposed for Peru by Bennett (1948). In theory the co-tradition is a mechanism for expressing relationships, the degree of "historical intimacy," of locally identifiable groups within a larger area as Peru or the Southwest. The advantage of this concept in theory is that it prepares the base from which analyses can be made of such questions as the effects of diffusion and cultural evolution in producing a certain widespread cultural uniformity. The application of the co-tradition concept immediately evokes debate over the definition of the concept itself and the degree of fluidity that should be maintained in arranging the cultural elements. This is well illustrated for the Southwest by the succession of works by Martin and Rinaldo (1951), Daifuku (1952), and Wheat (1954). Wheat may well have averted extensive wrangling by advocating that this framework ". . . must be more flexible in conception and application than any of the schemes yet proposed" (Wheat, 1954, p. 585).

Among methodological advances in fields other than archeology, but which are nevertheless destined to aid it, one in particular should be singled out. This is lexico-statistic dating (Swadesh, 1952). Studies in comparative linguistics have led to a theoretical

principle that language changes at a relatively constant rate, and that elapsed time for language divergences is calculable. For example, where two languages are the end products of separation from a common base in prehistory, the time of this separation may be measured by finding the percentage of words retained in common in a test vocabulary and by applying a suitable formula. Eskimo and Aleut languages, mutually unintelligible now, are regarded as divergent forms of an older single language. Lexico-statistic calculations provide for about 2,900 years since these languages were one and the same (Swadesh, 1952, p. 453). The archeological implications of this are not difficult to see.

To test the method for American linguistic groupings a series of entities were compared, and archeologists were invited to test the consistency of the indicated time depths in the light of their own findings (Swadesh *et al.,* 1954). Remarkably close agreement was noted in most cases and this includes certain areas, such as the Arctic, where dendrochronology and radiocarbon dating controls are available (Hirsch, 1954). Lexico-statistic dating must, of course, be submitted to more severe critical examination than it has yet received but the initial results are promising. Its acceptance will allow, for the first time, the archeologist to speak with confidence about the linguistic affiliation of the people whose pots and pans he has studied.

The past two years have witnessed substantial advances in the highly technical field of carbon 14 analysis marked by the establishment of new laboratories, by refined technology, and by the release of numerous dates. New laboratories will relieve, to some extent, the pressure in existing laboratories and should result in further and concerted research on the highly important problem of contamination and the determination of the kinds of materials which have the highest degree of reliability. The relationship of our knowledge in these matters to synthesis and interpretation is obvious. It seems likely that some of the troublesome discrepancies, not only between radiocarbon dates from the same complex, but also between these assays and dates inferred by other lines of inquiry, are rooted in the question of the impurity of the sample. Development of the highly promising gas method of measurement will reduce counting time, thereby increasing the number of sample counts, make assays on samples of smaller volume of original specimens possible, and, of more importance, will about double the time range of the solid-carbon method.

An increasing number of dates is being made available for geological phenomena in both the Old and New Worlds, which ultimately will bear on the dating of early man. This is especially true for northern North America where the correlation of available dates will clarify late glacial history. That all data will not be accepted at face value is made abundantly clear by Antevs' serious questioning (1953, pp. 219–223) of the Two Creeks forest bed (Wisconsin) age of about 11,400 years (Libby, 1952, p. 88). By extension, this date would apply to the Valders-Mankato glacial maximum, about 8,000 years later than has been calculated from varves and other studies. These differences will have to be settled by the geologists before the archeologist confidently can use the results. Perhaps it is not going too far afield to suggest that, paradoxically, archeology ultimately may help to resolve some of these disagreements.

On the positive side, radiocarbon dating has gone a long way toward settling an old and bitter controversy relating to the correlation of the Maya chronology and the Christian calendar. The issue has revolved around the inclusion or the deletion of a 260-year cycle in establishing a synchronism between the two calendrical systems. The Spinden correlation includes this cycle; the Goodman-Thompson correlation does not. This means that a Maya date, according to Spinden, would be 260 years earlier than the latter system allows. Kulp, Feely, and Tryon (1951, p. 566) released a radiocarbon date of 481 A. D. $\pm$ 120 for a wooden lintel from Tikal, Guatemala, bearing the Maya date of 9.15.10.0.0. According to the Goodman-Thompson correlation this date would be 741 A. D. and by the Spinden correla-

tion the date would be 481 A. D. Considering the experimental errors in making various calculations, this matching of results was truly phenomenal. Libby (1954, pp. 35–37), in testing the limits of sensitivity of the carbon 14 method, analyzed two additional, but separate, wood samples from Tikal, each from lintels bearing the 9.15. 10.0.0. Maya date. The weighted average for the two samples was 1503 ± 110 years or 451 A. D. ± 110, providing convincing corroboration for the earlier date and the correctness of the Spinden correlation.

Selecting a few more sample dates from Libby's latest list (1954) will suffice to show the range and bearing on problems of historical reconstruction: Miraflores Phase (Pre-Classic) Kaminaljuyu, Guatemala, 3142 ± 240, roughly coeval with the early or middle Archaic Period of Tlatilco, Valley of Mexico at 3407 ± 250 (Libby, 1952, p. 90); dates of 2377 ± 150 and 2780 ± 410 (Libby, 1954, p. 21) from the Toepfner Mound, Ohio, returning the Adena culture to an earlier chronological position than Hopewell as is borne out by stratigraphy but inexplicably reversed by the radiocarbon results published in 1952 (Libby, 1952, p. 78). Charcoal associated directly with ochre used in executing Bushman Cave paintings in Southwest Africa has yielded a date of 3368 ± 200 (Libby, 1954, p. 41). This is regarded by Professor H. Breuil as the first direct indication of the age of the frescoes in Phillip Cave, near Ameib, an important step in the chronological ordering of Bushman art styles. In the Near East, radiocarbon measurements are bringing into focus one of man's historic achievements, the founding of villages based on a food-producing economy. Jarmo, in Iraq, the earliest trace of such a village, has produced materials from the same spot recording two somewhat divergent but nevertheless revealing dates of 5266 ± 450 (Libby, 1954, p. 4) and 6707 ± 320 (Libby, 1952, p. 71).

As a final entry in this hurried sampling of radiocarbon results, note is made of the remarkably early dates for the Old Copper Culture of Wisconsin. Heretofore, the Old Copper industry lacked clearcut cultural affiliations, but it was suspected sometime ago by McKern (1942) of being of the Archaic horizon in the upper Great Lakes area and of pre-dating the Woodland cultures. Recent excavations (Ritzenthaler, 1954) the Milwaukee Public Museum in Oconto, Wisconsin, have added knowledge of burial practices, of a chipped stone industry, and of work in antler, bone, and shell as associates of the copper tools to give substance to the complex. Charcoal associated with burials of the Oconto cemetery has given dates of 5600 ± 400 and 7510 ± 340 (Libby, 1954, pp. 33–34). Once again a dating discrepancy points up the need for studies directed toward determining why these differences in counts occur in samples from the same source. Ritzenthaler believes that if the differential of nearly 2,000 years is due to contamination, the older date is the more reliable. Yet, it was made clear at the Radiocarbon Conference in Andover, Massachusetts (October, 1954), that contamination may be by dead carbon as well as by new carbon, and that the oldest date in a series is not *ipso facto* necessarily the more correct. However this may eventually be resolved, the evidence does suggest that the non-pottery Old Copper Culture was indeed old, and that the dates are the earliest we now have for man in northeastern America. Beyond this is the fact that the bearers of this culture were among the oldest metal users in the world, based on the fabrication of virgin copper rather than on smelting and ore reduction.

ECOLOGY AND ECONOMY

We have seen renewed attention given recently to the fundamental relationship between man and his physical environment. Along with cultural diffusion and evolution, knowledge of the ecological dimension, including climate, physiography, resources, food supply, and disease (Bates, 1953, p. 704) is vital in explaining the different patternings of cultures through time. This has come about naturally as a product of the swelling reservoir of archeological and other anthropological data, improved chronological controls, and from

the greatly increased knowledge of past climates.

A provocative attempt at a cultural-environmental analysis on the regional level for the Indian populations of the Central Plains has been made by Wedel (1953). He sees indications that climatic fluctuations, ranging from rainfall conditions favorable to agriculture to droughts detrimental to agriculture, have been influential in determining spread of populations with different economies. He states, "It is abundantly clear that the climatic variations which characterize the region spatially from east to west also have their counterparts in fluctuations through time. In the perspective of archeology it appears that the native subsistence economies also were confronted with the need for readjustment from time to time" (Wedel, 1953, p. 499).

A work of broader scope but still holding to the ecological viewpoint is Clark's *Prehistoric Europe: The Economic Basis* (1952). Professor Clark believes that culture, to survive, must maintain some semblance of equilibrium with its environment. Knowledge of ecological stages and zones through time is therefore essential to an understanding of cultural phenomena, of the rise and fall of economies, settlement types, trade, and transportation. It is worth echoing Birket-Smith's query (1953, p. 433): "Is it too much to hope that before long, our knowledge of pre-Columbian North America may be sufficiently advanced for a treatment along similar lines. . . ?"

The environmental factor is seen again in two significant works dealing with agricultural origins in the Old and New Worlds. Braidwood (1952, p. 11), for example, proposes that the earliest food-producing villages of the Near East were established in the grassy uplands flanking the Fertile Crescent rather than along the streams within it. This is based on an impressive correlation of the rainfall patterns and the distribution of the major sites of the terminal food-gathering and of the oldest food-producing economies. Albright (1954) contests this point of view, however, arguing that early cultivation would more naturally be associated with streams and springs where domestic and irrigation water was constantly available.

The second work which merits attention presents a set of hypotheses on the origin and diffusion of cultivated plants and domesticated animals. Sauer (1952) believes that two patterns of agriculture are discernible for both the Old and the New Worlds. The earliest form, originating possibly in the wooded areas of southeastern Asia, was based on root and tuber crops. He recognizes a similar early pattern for the New World, centered in Colombia and Venezuela. Both of these widely dispersed centers he regards as "environmentally divergent developments" of a single cultivating system. Seed agriculture was historically later. For the Old World, its centers were North China, from the eastern Mediterranean to western India, and Ethiopia. The New World center was most likely the Mexican-Central American frontier-area, and in both hemispheres the initial plantings were in wooded areas. The contrasting points of view given by Braidwood, Albright, and Sauer as to the natural environment which encouraged agricultural beginnings might be more disturbing if it were clearly demonstrated that this momentous step could only have been made in one type of natural setting.

Climate, as a determinant in the peopling of the New World, has also come in for review and analysis (Mather, 1954), an approach which is not without interest to the archeologist. Mather has considered such factors as climate of the Alaskan-Siberian region today, its role in the reconstruction of past climates, the effects of climatic stress on the culture of primitive peoples, and physiological problems related to heat loss, due to temperature and wind, from the human body with different amounts of clothing. The conclusions are still somewhat indecisive, but it is suggested that in migrations since the last glacial age, the people either had adequate clothing, or that they survived the winter cold by staying in warm shelters save for short excursions to gather food. The Fuegians are cited as a primitive group who either entered this hemisphere better equipped as to clothing

and housing than they are today, or arrived during a period of mild climate ". . . since or perhaps before the last great glacial advance" (p. 321). Perhaps the most interesting outgrowth of Mather's study is the suggestion that the initial migrations had a greater antiquity than the archeological evidence now indicates.

Studies in southwestern Asia have been bringing us ever closer to the points of where and when village communities first emerged in the world. This step, with all of its social and political implications and presaging modern city life, is linked with man's economic shift from food-gathering to food-producing. A recent synthesis (Braidwood and Braidwood, 1953) of the primary archeological data of the Middle East examines the problem in terms of three eras: (a) the terminal era of the food gathering stage, (b) the era of incipient agriculture and animal domestication, and (c) the era of village-farming efficiency. The authors admit that data in the first two eras, except for Palestine, southern Syria, and Lebanon, are lacking, but they find this taxonomic approach far more satisfactory for organizing the information than by means of less definitive terms such as "Mesolithic" and "Neolithic." Era endings are difficult to establish because there is no proof that similar economies in all parts of southwestern Asia were chronologically equivalent.

The terminal era begins hazily with the appearance of microliths in blade tool industries, selected in default of better technological or geochronological events. The second era is the most difficult to characterize due mainly to the lack of well-excavated and thoroughly analyzed materials. Evidences of incipient food production but without village settlements constitute the basis for the stage. Geographically, it is the least well represented of the three, and it is pointed out (p. 287) that the delineation of the beginnings of agriculture and animal domestication is one of the major challenges in Middle Eastern archeology. The last of the three eras, village-farming, is the clearest of all, the evidence derived chiefly from the great mounds. The established village, or the appearance of stable architecture, marks the beginning of the era, and it closes with the Halafian phase. The well-publicized site of Jarmo in the Tigris drainage, with radiocarbon dates of B. C. 4758 ± 320, 4654 ± 330, and 4743 ± 360 (Braidwood and Braidwood, 1953, p. 308), stands out as the type station. The Braidwoods are convinced, though they readily admit (p. 310) the case is not yet proven, that ". . . answers to questions as to how and why food production came about, are to be found within the time range and within the subareas . . ." lying between Palestine and the Zagros uplands. This they call the "nuclear" Middle East.

Two other significant contributions to Old World prehistory must be included here though there are doubtless numerous others which have escaped the writer's attention. The first of these, *Relative Chronologies in Old World Archeology* (Ehrich, 1954), is a compendium of papers, historically oriented to specific regional levels and problems. The valuable service this work renders is the integration of dating systems ranging from Central Europe eastward to China, proceeding through more or less contiguous areas. The interlocking of sequences is done on a relative basis because too many disagreements as to fixed dates exist to permit absolute chronological ranking. The effort emerges therefore as a working hypothesis, to be corrected and amplified as new data appear, and as a base for examining problems of cultural dynamics.

The second work, Childe's *New Light on the Most Ancient East* (1953) is a restatement of his earlier synthesis of the rise of civilization between the Nile and the Indus. Through a combined historical-functional approach, Childe sees the civilized societies developing from their primitive precursors in two stages, termed the "neolithic" and "urban" revolutions, each with varying technological and social effects. This concept, first stated nearly two decades ago, is now widely known and needs no further mention here. But the fact that the restatement of it remains essentially the same—chiefly an incorporation of new findings—after eighteen years indicates a soundness in the original formulation.

Beyond the basic question of agricultural origins there arise such queries as to when, how, and to what areas the new economy diffused, and how it was adapted in regions adverse and inhospitable to farming. To what extent were climate changes or cultural factors instrumental in determining its spread? Excavations in Sostelid, Norway, by Hagen (1953) are used as the point of departure for a comprehensive survey of Iron Age farming in northern Europe and Scandinavia. Generally, it has been held that climatic deterioration from sub-boreal to sub-atlantic conditions favored increased farming activity as an end product of a series of consequences, beginning with the necessity of sheltering the cattle during the winter, hence leading to more permanent villages. Hagen does not subscribe to this thesis, but believes that cultural influences from the south were the cause of intensified farming. Such differences of opinion stimulate the search for the subtle evidences left for us and are certain to lead to a more systematic approach to understanding the related technical and social changes associated with the "neolithic revolution." To a distant observer, it appears that the question of the transition from food gathering to food producing has been attacked far more vigorously and with more direction by Old World scholars than by those in the New World.

While on the subject of food-producing communities, this appears to be a suitable place to refer to some of the newest findings related to maize, or corn, the food plant that built American civilizations. A succession of discoveries has gone far to erase some of the earlier disputed points concerning both the origin and the age of this plant, and the botanic and archeologic evidence have combined to say something about its domestication by American Indians. These points are reviewed briefly in order: (1) Fossil corn pollen, recovered in 1953 at a depth of 200 feet in the lake clays in the Valley of Mexico, is believed to antedate the earliest evidence of agriculture and of man himself in this hemisphere. On the basis of the presently accepted glacial chronology, these pollen grains are in the order of 60,000 years old. Their age is regarded by botanists as proof of corn's American origin and that it has undergone less extreme evolutionary development than has been thought heretofore. (2) Teosinte, a Mexican grass, clearly has been ruled out as the plant from which corn descended, although teosinte was an important contributor to its recent evolution. Laboratory experiments by Dr. Paul C. Mangelsdorf of Harvard University have demonstrated that hybridization of corn and teosinte increases the mutation rate of the former, leading to greater variability and making it more susceptible to human selection. Furthermore, these laboratory experiments produced synthetic types which closely resemble in the cob some primitive archeological specimens of teosinte-contaminated corn. The discovery of "pure" corn in deposits rated as older than those producing the contaminated variety, as at Bat Cave in New Mexico dated by radiocarbon at from 3000 to 3900 B. C., has prompted Dr. Mangelsdorf to say, "This . . . proves beyond a reasonable doubt the ancestor of corn was corn. . . ." (3) The primitive Bat Cave corn and the cobs from La Perra Cave, Tamaulipas, Mexico, possibly nearest to the transition of the plant from a wild to a domesticated status, differ in several botanical characteristics. This, the botanists believe, means that the two types were separately domesticated from regionally distinct races of wild corn. Archeologists may find this idea of multiple domestication of different races of wild corn difficult to accept; yet, if such was the case, some of the dating discrepancies in the present evidence and the varietal proliferation would be explained. (The foregoing data was taken from a formal release of the Harvard University News Service, February 28, 1954.)

One needs only to read a book like Weatherwax's *Indian Corn in Old America* (1954) to realize that many debatable topics, beginning with the botanical ancestry of the corn plant, still exist. This book, while it may not fall strictly within the scope of the present review, should nevertheless be included in the archeologist's reading agenda.

THE ARCTIC AND EARLY MAN

The student of prehistory knows well that new finds are continually demanding revised frames of reference and that these shifts affect not only our ideas about regions, but that they may be continental in scope. Notable in this connection is the Arctic evidence of a chain of sites, roughly distributed around the Arctic Circle, exhibiting a lithic complex with a Paleolithic-Mesolithic stamp. The Cape Denbigh site (Giddings, 1951) on the northern shore of Bering Sea may be regarded as the type station. Giddings (1954) sees the evidence as pointing to the existence of a hunting culture widely spread latitudinally in the Polar regions near the northern limits of the tree-line, before man moved southward in America. He regards the sites of these people as more closely related to each other culturally than to the sites distributed longitudinally along the presumed migration routes followed by the original migrants to the New World. This leads Giddings (1954, p. 88) to voice extreme skepticism of the long-standing view of migratory hordes and to suggest that Early Americans filtered southward from the well-established Arctic populations, ". . . drawing at first for their changing culture on circumpolar ideas."

Relationships of the Cape Denbigh Flint Complex with the late Eskimo on the one hand, and Folsom and Yuma on the other, have been noted. If correct, this interpretation demands the view that Eskimo and Early Man origins are parts of a single problem (Collins, 1953, p. 202). It restricts, furthermore, our initial efforts at establishing relationships, say of Folsom-Yuma, to a New World phenomenon, rather than to the harder-to-prove Asiatic connections.

As noted above, a wide lateral spread and certain uniformity of implement characterizes the early Arctic stone industry. The hypothesis that southerly filterings from this base accounted for early cultures in the middle and southern parts of the American continent might well include, as one of its parts, that a similar lateral uniformity to the south should exist. A test of this idea can be made by examining the Clovis complex, or Llano Man, following Sellard's 1952 designation.

The lithic materials designated as the Clovis complex were originally discovered in New Mexico in the 1930's. Both geographic extent, including Colorado, Nebraska, and Texas, and an early chronologic position which is anterior to Folsom were ultimately established. New findings of the past few years have extended the areal distribution to Naco (Haury, Antevs, and Lance, 1953) in southern Arizona and as far east as New England at Ipswich (Byers, 1954). In the Plains and the Southwest at least, it is clear that one of the prime targets of Llano Man's characteristically fluted projectile points was the mammoth. Distributionally, Clovis materials or Clovis-like materials extended in a wide band from the western states to the eastern seaboard, not all of course, anchored chronologically. By type, about the same degree of uniformity for Clovis appears to exist, as has been pointed out for the widely spread Arctic sites.

In a broad sense, two interpretations are possible to account for the wide similarity in the Clovis pattern: first, a predominantly east-west spread from some intermediate center, following the stylistic stabilization of the key element in the complex, the Clovis fluted point; and second, that filtering moved southward over a broad front from an equally wide-spread base in the Arctic. Sufficient specific data of regional complexes, of time differences or equivalences, do not yet exist to test this idea, but it holds tantalizing possibilities.

In spite of the links which have been suggested between the Denbigh Flint Complex and Folsom-Yuma, and the finding of Folsom and Yuma projectile points in interior Alaska (Collins, 1953, p. 199), the Arctic has not yet produced any dated remains comparable in age to those of the western United States. The Denbigh microlithic assemblage does not impress one as being the kind that would logically go with a big-game hunting activity, and it may well be that the complex is a survival from an earlier period which ought to show even

more pronounced resemblances to the weapons of the big-game hunters to the south.

Apart from all these considerations, the Denbigh industry is important in another sense. This is the presence of burins (Giddings, 1951, p. 201), one of the three main categories of tools making up the assemblage. Burins heretofore have been known only from Old World cultures of upper Paleolithic and Mesolithic horizons. This extension of an Old World specialized stone-working technique into an early American culture is of interest in itself, but in the New World the tool ceases to have the specific dating value it has in western Europe. Collins (1953, p. 201) notes this survival in eastern Eurasian Neolithic and among the Dorset Eskimo of the Arctic ". . . probably within the past two thousand years."

On a late time level, the circumpolar distribution of Stone Age elements has been noted by Gjessing (1953, pp. 131–136) as indicative of a ". . . continuously flowing stream of influences from Asia to America . . . (and) a second stream from Asia penetrating westward to the Norwegian Atlantic Coast, and partly even to the British Isles." One is tempted to look upon this as *prima facie* evidence supporting Giddings' theory of early latitudinal diffusion, governed basically by ecological factors.

The foregoing discussion has already introduced the topic of Early Man in America which must command additional attention in this resumé. The cooperation of an increasing number of geologists, refinements in analysis of recent geological deposits, new discoveries, and the influence of radiocarbon dating have stimulated this aspect of Americanist studies. At the same time, however, the progress in the past two years toward clarifying questions pertaining to the time and manner of peopling of the New World, and to the conditions in both Asia and Alaska during the late Pleistocene has been negligible. Some new stations, mostly well in the interior, have been reported[2] which by themselves extend our knowledge of traits or complex distributions.

It is certain that the newest findings of radiocarbon dating will effect changes in the thinking about the time factor of terminal Pleistocene events (e.g. 11,000 ± years ago date for the Mankato). Other than the publication of specimen dates, no real reappraisal has yet been made available drawing out the significance of these, but it appears that a shortening of recent glacial chronology will be in order. To what extent such a revision will alter changes in concepts related to early man remains to be seen.

For those who seek a quick view of early man, at least two useful summaries recently have been published (Sellards, 1952; Wormington, 1953). This much is becoming increasingly apparent: Before broad generalizations can be made about early American populations, the record will become infinitely more complicated due to taxonomic proliferation as more and more regional variations in early lithic complexes are recognized. The relationships of these complexes, cultural and temporal, will remain the focal point of interest for some time to come. Nonetheless, the fact that diversity exists in the early remains should raise questions anew regarding the nature of the sources of migrations, of the effects of regional environments and changing climate on societies, of disparate rates of cultural change, and, indeed, of the time of the initial peopling. Does the present weight of the radiocarbon and geological dating of less than a score of millenia really allow sufficient time for all the variations we see?

Sellards (1952) has designated two levels of hunting societies in the Plains: Llano Man (after Llano Estacado, or Staked Plains of Texas and New Mexico), who hunted the elephant, and Folsom Man, the bison hunter. These appear to stand in an A-B temporal and cultural relationship in the

[2] Byers, D. S., 1954; Haury, E. W., Antevs, E., and Lance, J. F., 1953; Martinez del Rio, P., 1952; Aveleyra Arroyo de Anda, L., and Maldonado-Koerdell, M., 1953.

order stated. At the moment it seems that these complexes, marked by some readily recognized traits, may be taken as the platform from which the historical and functional framework can be erected, both before and after the 9,000 to 12,000 year age now assigned to them.

The recovery of the skeletal remains of early man in the Western Hemisphere has been disappointing, not only in the number of discoveries, but also in their reliability. Disputes, focused chiefly on problems of antiquity, surround each one. The most recent find at Midland, Texas (Anonymous, 1954), of an incomplete human calvarium and a few miscellaneous bones, is looked upon hopefully as an exception. The human bones, as well as a number of fossil animal bones, were taken from a stratum below and different in character from the immediately overlying one in which artifacts of the Folsom horizon occurred. Geological estimates place the age at 12,000 to 20,000 years and fluorine examination proves both human and animal bones to be of the same age. "Midland Man" and Llano Man, the latter inferred from lithic and bone artifacts, will doubtless prove to be one and the same. The Midland bones in no way change the prevailing opinion that the early occupants of the New World were *Homo sapiens.*

The consensus, based on all the methods of dating now available to us, holds that the oldest evidences of man in the Western Hemisphere do not go much beyond 20,000 years, and that early migrations from Asia entered the North American continent via the Bering Strait route. It is also held that the history of the migrations is closely linked with glacial history. At best it appears that the earliest crossing of the strait was made just before or during the onset of the Mankato substage of the Wisconsin ice period. Interglacial and post-glacial penetrations would not have met the obstacle presented by great ice fields. An extreme view of the time of man's arrival in America has been given by Carter (1952; 1954) who believes he has evidence in California in support of man of third interglacial age. The data Carter uses are based on studies of four stations in the San Diego area in which stones believed to be artifacts occur in terrace- and valley-fill formations of decipherable geologic antiquity. The presumed tools consist of bifaced cores, anvil cores, plano-convex stones and flakes, some of which show trimming. Percussion flaking only is indicated. Most archeologists have viewed these stones with considerable skepticism, believing that they do not prove clearly the purposeful work of man in shaping tools. Criticism also has centered on the scarcity of the objects and the lack of other evidences of man's presence. In 1954 new evidence was adduced from the Texas Street station in San Diego which bears on the latter point in particular. Tool frequencies (140 from the above locale) appear to be adequate, but are still low when judged by European Paleolithic and New World "mesolithic" standards. In interbedded fanglomerates, Carter (1954, p. 167) reports ". . . hearths with flecks of charcoal, a high percentage of fire-broken rock, numerous artifacts, and bone and shell representing food refuse." In the valley fill, fire-cracked stones are noted in extensive accumulations up to 100 feet in diameter and several feet thick. Clearly, these present important and perhaps decisive aspects of the problem. Selectivity in materials is also noted: most of the tools are of quartzite, while ninety per cent of the heat-fractured stone is porphyry.

Needless to say, Carter's work has tossed a challenging problem into the archeological hopper. It will be admitted readily that there is no valid theoretical reason why man could not have been present in the Western Hemisphere as early as the third interglacial; but coupled with claims of high antiquity, there is a feeling among the students that the burden of proof is directly proportional to the magnitude of the age. Carter's approach (1954, p. 167) to dating is through climatology, pedology, geomorphology, glaciology, and eustatic sea-level changes. As the first major step, the interpretation of the geological record needs to be corroborated by neutral observers. Next will be the evaluation of the presumed human evidence. The nature of

the reported artifacts, as well as the other evidence, will assuredly produce a re-examination of what constitutes man's or nature's handiwork, and verbal skirmishes may be expected. If Carter's claims are ultimately accepted, extensive changes in the concepts of New World prehistory must follow.

A SAMPLING OF OTHER ADVANCES

The culture historian is in an enviable spot when existing populations are demonstrably connected with the archeological remains under study. Investigators have been conscious of this for many decades, but recent works, especially in North America, display revived attention to the values of ethnography and written documents, not only as a means of establishing continuities, but also in assessing cultural processes, such as diffusion and acculturation. Hawkes (1954) has drawn useful distinctions in the connection between "text-free" archeology—the dependence on experimental classification, and the "text-aided" archeology—that dependent on documentary help. What is said below about the Southwest as a test area might be said too in varying degrees about other parts of the Americas.

Reed, in a series of papers over the past dozen years (summarized in 1954), has shown how the modern Pueblo Indians, in the face of enemy attacks, Spanish domination, missionary efforts, and the impact of modern technology, have kept the essentials of their old social system, community organization, and religion. Along more specific processual lines is Spicer's "Spanish-Indian Acculturation in the Southwest (1954)." Although without reference as such to archeology, this paper holds useful leads for the excavator who works in ruins of post-Spanish times in which the traces of adjustment and reorientation may appear.

Most advances in erecting the archeo-historical bridge will come through intensive local studies. Smith's monumental analysis (1952) of kiva murals in the old Hopi towns of Awatovi and Kawaika-a is one of these. The detailed analysis of art styles and component elements through time, as seen in a phenomenal collection of mural paintings, establishes a new foundation for the comprehension of modern pueblo art and religion.

The compact nature of pueblo settlement favors the study of the Spanish contact period infinitely more than do the architecturally dispersed villages of the desert tribes. Yet, substantial progress has been made here, too, in spanning what has long been a troublesome blind spot between 1400 and 1700. Di Peso (1953) has brought into full play a blend of ethnographic, documentary, and archeologic data arising from the excavation of historic Quiburi in the San Pedro valley, Arizona, which presents an exceptionally detailed picture of a little known tribe, the Sobaipuri.

The process of diffusion on an interhemispherical basis has undergone recurrent examination. The present cycle has been stimulated in part perhaps by Heyerdahl's crossing of the Pacific from Peru to Polynesia on a balsa raft and the books (1950, 1952) resulting from this venture. Early attempts at establishing Asiatic-American cultural relationships were mostly in the nature of matching traits without being overly critical of geographic locality, the clustering of elements, and chronological problems. The result is that many Americanists have avoided involvement in the question. Paradoxically, most students will agree on the Asiatic source for *Homo* in America, but the accordance ceases on what cultural equipment was brought in or was subsequently transmitted in either direction.

An attack on this general question is represented by a series of papers (Smith, 1953) which start farther down—at the "grass root" level—than have most efforts. The topics range through problems of prehistory within Asia itself, the cultural subdivisions of that continent, considerations of Aleutian and Alaskan archeology, questions of ethnographic and social import, botanical evidence, and a cultural complex analysis. It seems worthwhile noting especially the credible and sought-for link that the Norton ceramic complex of

the western border of Alaska erects between the pottery of eastern Asia and eastern North America (Griffin, 1953); the reassertion of the value of botanical evidence as an indicator of trans-Pacific diffusion by man (Carter, 1953); and finally, Ekholm's hypothesis (1953) of a focus of Asiatic influences on the western borders of the Maya area. An impressive array of analogies, called Complex A, has been brought together, including the trefoil arch, sanctuary within a temple, sacred tree or cross, tiger thrones, lotus staff, lotus thrones, lotus panels, conch shell with plant, court scenes, colonnette decoration, gallery structure, Atlantean figures, phallic cult, monster doorway, Chac mool, serpent columns, seated lions or tigers, diving god, serpent deities, sun disc, copper bells, and Vishnu figure. Ekholm clearly points out that these elements are not localized in a single Asiatic center, but on the American side there is some geographic as well as chronologic cohesiveness. As is always the case with comparisons of this kind, more queries and theoretical points are raised than answered. Convincing solutions to most of these may never be known, but advances in techniques, in specialized data, in linguistics, and physical anthropology, will dispel in time some of the haze surrounding this venerable anthropological problem.

Submarine archeology has brought a new meaining to the word "dig." The increasingly successful efforts to reclaim the human record from the sea are the direct result of the mastery of technical problems related to working in an environment strange to all but a handful of archeologists. It is a fantastic world indeed when the archeologist may direct the work of divers on the sea bed from the deck of a ship via the television camera and a submerged loudspeaker.

Doilé (1952) reviews much of the ancient evidence recovered from the sea in the Mediterranean area during the past forty years, ranging from the old wreck of a cargo ship off Mahdia, Tunisia, to harbor installations in the loading ports of Greco-Roman times. Brushing aside the glamour associated with these undersea activities, the contributions they make to ancient commerce and, through this, to economic and navigational history cannot be denied. On a more specific level, the vast quantities of contemporary materials recovered, such such as amphorae and Campanian ware, from the 2200-year old Greek ship near Marseille (Costeau, 1954), has led to a new understanding of early developments in mass-production techniques and, through this, to new concepts of ancient society in a way that has not been possible by the study of the scattered remains of broken dishes buried in the earth. So far, most undersea archeology spans little more than the last 2000 years and has been quite limited geographically. It will be interesting to observe extensions in both of these dimensions.

An outstanding archeological achievement of 1953, the "Everest of Greek archeology," was the decipherment of the Minoan Script known as Linear B (Barnett, 1953; Ventris, 1954). Inscribed clay tablets, first found by Sir Arthur Evans in 1896 in the ruins of the palace of Knossus have, until now, defied all attempts at translation. The application of modern cryptanalytic methods by Michael Ventris, an architect, led to this brilliant accomplishment. To everyone's surprise, the language appears to be not Minoan but an early dialect of Greek ". . . at a stage seven hundred years older than the earliest classical Greek . . ." which dates from about 750 B. C. (Ventris, 1954, p. 17). Barnett (1953) notes that these tablets, if Greek, constitute the earliest contemporary record of any Indo-European language. Some Linear B tablets are not decipherable, and it is suggested that these are in the Minoan language which itself may now be decoded by working back from Linear B "Greek" as the starting point.

The far-reaching effects of this triumph of epigraphy is the re-interpretation of Greek history at about the time of the sack of Knossus in 1400 B. C. The mainland, instead of having been dominated by Cretan influence until 1400 B. C., must already have been independent, with Knossus under Achaean rule before its destruction. In the words of Barnett (1953) ". . .

the most gratifying fact is that Ventris has at last rung up the iron curtain which for long cut Greek archeology into two apparently disconnected halves—a Bronze Age Mycenean, but virtually pre-Greek, and a Greek Iron Age. They are now seen to be all one." An incidental, though not irrelevant, observation is the fact that the decipherment of this old script by an architect underscores the importance of the contributions the non-professionals can make and have made to archeology.

A few books should be singled out as landmarks of the 1952–54 period. Though several of these are largely descriptive, they nonetheless mark the step that precedes theoretical and interpretive considerations. Schmidt's monumental *Persepolis* (1953), for example, illustrates again the splendor of ancient Iran and the wide gulf that separates the general level of societal achievement from Jarmo to the time of Darius in the Near East. That little more than 4000 years of time separates these two manifestations, dramatically points out the explosive nature of cultural evolution following the establishment of village life.

Another volume of note (Griffin, 1952) presents, by means of a series of papers, summaries and interpretations of the early cultures east of the Rocky Mountains. All but one of the twenty-eight chapters were prepared by former students and in honor of Professor Fay-Cooper Cole, Chairman Emeritus of the Department of Anthropology, The University of Chicago. Their orientation is areal, and they include highly useful illustrations of the more important cultural traits of anthropological units at different times. The result is a pictorial inventory, which, along with the text, comprises a compact source for information on archeology of the eastern United States available heretofore only in scattered form. But actually, the book contains much more than this, and is spearheaded by Eggan's contribution (1952, pp. 35–45), "The Ethnological Cultures and Their Archeological Background." The lesson in this is that archeological interpretations can be carried well beyond the narrow limits of the customary historically slanted studies by drawing from and basing inferences upon the findings of ethnology and social anthropology.

Finally, recognition must be made of two related volumes, *Anthropology Today* (Kroeber and others, 1953) and *An Appraisal of Anthropology Today* (Tax *et al.*, 1953), in which a substantial percentage of the more than 1300 pages bear directly or indirectly on archeology. As a stock-taking endeavor, the contributed papers may have fallen short in some respects, e.g., no archeologists participated in the larger sections on process and application (Taylor, 1954). Nevertheless, a reading of these pages cannot fail to provide one with the kind of information—on theory, methods, and interpretations—that would be gained otherwise only by exhaustive and exhausting bibliographic work.

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Chronology and Dating Processes

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CHRONOLOGY is of basic importance to any study of man's past, for the temporal framework of cultural events must be provided in order to assess adequately or interpret cultural change or stability. Because of the importance of chronology, one of the first efforts by archeologists in any area is to provide a reliable framework in which the past cultural events of that area can be placed.

An admirable survey of methods of obtaining chronology, by R. F. Heizer, was published in 1953 in *Anthropology Today* and offers a significant coverage of the literature up to 1952, when it was written. The third edition of Zeuner's *Dating the Past* appeared in 1953 and provides an excellent single-volume treatment of geochronology. With such aids as these, another statement after only two years may seem unnecessary, but perhaps attention may be drawn to a sufficient number of new papers to make the effort worth while. This will be particularly true in radiocarbon dating where considerable progress has been made in the establishment of additional laboratories and the improvement and variety of dating techniques.

The present paper will supply bibliographical references on some of the fields and areas included in Heizer's survey. His outline of time-reckoning methods is an excellent guide, which can be employed effectively in class presentations. Another approach to the organization of data on temporal placement was Oakley's grouping of types of dating into four levels each of relative and absolute dating (Oakley, 1953, pp. 43–56). Such concepts are of definite value in clearly indicating just what is being dated. Subsequent discussion of this paper indicated some disagreement as to the methods which provided absolute dates and those which provide relative dates (Tax *et al.*, eds., 1953, pp. 13–15). Absolute dates in most archeological areas are rather difficult to obtain and in one view would be equated with calendrical dates such as were expressed in the Maya calendar; or as are obtained by dated coins, by judicious interpretation of tree rings, or by a truly annual varve sequence connected at the upper end with an historic date. Radiocarbon dates in this view would be *estimated calendrical dates,* while relative dating would apply to most of the geophysical and chemical weathering changes recording the passage of time. Zeuner (1953, p. 110) has defined relative chronology for the Pleistocene as dating "by the succession of glacial and interglacial phases, and it relies mainly on alternating geological processes of deposition and destruction of deposits." The same authority refers to abso-

lute chronology as "reliance on some kind of astronomical rhythm, namely the year in the late Glacial and Postglacial chronology and the perturbations of the earth's orbit in Pleistocene chronology." The definitions employed by Heizer (1953, p. 4) are somewhat different in that he seems to require for absolute chronology a degree of precision in years not required by Zeuner.

The explanation of the fluctuations in the climate of the Pleistocene and other glacial periods based on the work of Milankovitch and supported by Zeuner, has not been accepted by students of the cause of climatic change (Willett, 1953) and is regarded critically by some students of European prehistory (Tax *et al.*, eds., 1953, pp. 6–14).

RADIOCARBON DATING

At the moment all other dating processes are of somewhat lesser interest than radiocarbon dating. This method has been of extraordinary importance because it can be used for organic materials from all over the world, because it can reach well back into human and geological history some 50,000 years, and because results are not dependent on comparative assay on different items from a common source as in chemical dating. It has served as a cross-check for varves, tree-ring dates, historical documents, and the Maya calendar. It has provided a time-scale for areas which formerly had only a relative chronology. In many cases the dating results have been such that they seem internally consistent and also can be integrated into a broader context with complete satisfaction. In other cases radiocarbon dates have not been in accord with structural position, have been otherwise inconsistent, or have not been accepted because of the slowness with which previous professional opinion can change.

The pioneer laboratory of Dr. W. F. Libby at The University of Chicago, which was initially supported by the Wenner-Gren Foundation, is now, we hope only temporarily, out of the radiocarbon dating field. There are, however, in both hemispheres, other laboratories under university or other auspices, which have been contributing not only to the imposing body of dated materials but also to improvements in the methods and techniques of radiocarbon dating.

At the University of Chicago, Dr. James R. Arnold is working on his development of the liquid scintillation method with which he expects to achieve measurements back to 55,000 years. A functioning liquid scintillator is in operation at the University of Winnipeg in Manitoba, Canada, where it was developed by Dr. R. W. Pringle and his associates under sponsorship from the Wenner-Gren Foundation. These methods have the advantage that they will be able to detect almost 100 per cent of the radiocarbon radiation and, by the considerable elimination of the background radiation, will increase the accuracy of the date—for average samples within ten years of the actual age. A third scintillation counter is at Los Alamos, New Mexico.

The University of Michigan Memorial Phoenix Project Radiocarbon Laboratory, at Ann Arbor under the direction of Dr. H. R. Crane, has shifted from using solid carbon to a CO_2 Geiger counter which is the only one of its type now operating. Dr. J. L. Kulp and his associates at Columbia University's Lamont Geological Observatory at Alpine, New Jersey, with four screen-wall Geiger counters modelled closely after Libby's initial development, have been the second most active group in producing dates for a wide variety of materials and purposes (Kulp *et al.*, 1952). Other institutions also adopted the screen-wall counter. Yale University (New Haven, Connecticut) has published initial results, indicating clearly their difficulties (Blau *et al.*, 1953). This group and the Lamont Observatory are now in the process of changing to an acetylene proportional counter of the type developed at the U. S. Geological Survey. The University of Pennsylvania's University Museum in Philadelphia is now actively dating materials, and a report on their activities has recently appeared (Ralph, 1955). The University of Copenhagen, Denmark, with a solid carbon counter has published a series of dates with

a remarkable consistency (Anderson *et al.*, 1953).

The acetylene proportional counter developed by Dr. Hans Suess of the U. S. Geological Survey has produced a significant series of published dates (Suess, 1954b) with heavy emphasis on those of geological importance, including the oldest date yet announced by the radiocarbon method—34,000±2,800 (or possibly older). This, of course, is measured in terms of years ago. The significance of this date for a North African Mousterian level and the accompanying cultural material will be discussed by the excavator, Dr. C. B. M. McBurney of Cambridge University, in his publication on the site. Another center which is building an acetylene proportional counter is Cambridge University, England. The University of Arizona (Tucson) is abandoning its effort to start a carbon black counter and will shift to one of the newer methods. The University of Colorado (Boulder), partly because of its geographical location, found operation of the screen-wall Geiger counter a difficult enterprise and probably will abandon it.

The carbon dioxide proportional counter which also produces results of greater sensitivity is in operation at the University of Groningen in Holland and at the Dominion Physical Laboratory, New Zealand. The work at this latter institution is under the direction of Dr. G. J. Fergusson (1955). He expects to date materials up to 45,000 years of age and has been in successful operation since July 1954, though he has not yet dated carbon materials in association with human occupation in New Zealand (Fergusson, 1953; Fergusson and Rafter, 1953). The Humble Oil Company has a laboratory with the carbon dioxide proportional counter, while the Magnolia Oil Company has developed a methane proportional counter, both for commercial research activities.

One of the initial reasons for the development of the various gas counters was to avoid contamination from airborne radioactivity from the atomic bomb tests. They have proved so superior that the eight-year-old solid carbon method is now outmoded. Dr. H. R. Crane, who has materially aided in the data for this section, has prepared Table 1, listing current techniques, institutions, and the advantages and disadvantages of various types of radiocarbon counters as they are now seen. He believes that much more experience will have to be gained before it will be possible to single out one of these methods as being the best. On the basis of the record for the past year or so, the palm for precision and consistency seems to lie with the acetylene proportional counter.

In September 1954, the Carbon-14 Dating Laboratory of Copenhagen called a meeting of the active or potential radiocarbon centers in Europe to discuss mutual problems. The meeting was attended by representatives from Groningen, Heidelberg, Rome, British Museum (Natural History), Royal Institution of London, Cambridge, Göteborg, Stockholm, and Trondheim. The necessary support for the conference was provided by the Danish Rask-Ørsted Foundation. Dr. Hilde Levi of the University of Copenhagen Carbon-14 Dating Laboratory furnished us with mimeographed notes on the conference and a bibliography. The following is taken from a record of the conference by Professor H. Godwin as published in *Nature* (Vol. 174, No. 4436, November 6, 1954):

> The first day's discussion opened with consideration of technical matters associated with solid-carbon counting by methods essentially those of W. F. Libby, as now being used in Copenhagen and in Rome, and in preparation at Trondheim and Stockholm. This was followed by accounts of the processes being worked out for the use of gas-counters with the carbon in the form of carbon dioxide (Groningen and Heidelberg), acetylene (Royal Institution, British Museum and Harwell jointly, and Cambridge), and methane (Göteborg). Many interesting aspects of the counting gases were considered, more particularly the hydro-carbons.
>
> It became perfectly clear that gas-counting both by carbon dioxide and by acetylene is more expeditious and somewhat more sensitive than screen-wall counting of elemental carbon, and may be expected to displace the older method, which nevertheless is now producing a large part of the published datings. Only brief reference was made to scintillation counting.

Discussion on the third day concerned sources of error inherent in the samples and the techniques, and precautions which they involve, and some brief consideration of datings secured by European projects. It was apparent that, while cross-checking of samples could usefully be considered in this way, the implications of several unpublished datings were far too wide for the limited personnel and time of the meeting.

Some consideration was given to the standardization of form of publishing results, and to dating projects requiring international organization. It was agreed that a second symposium ought to be held, at least to deal with technical advances, within the next year or so and that *rapprochement* should be sought with American colleagues.

The National Science Foundation, the National Research Council, and the R. S. Peabody Foundation sponsored a conference on radiocarbon dating at Andover, Massachusetts, October 21–23, 1954. According to Kulp (1955) about forty physicists, chemists, biologists, geologists, arche-

TABLE 1

ADVANTAGES AND DISADVANTAGES OF VARIOUS METHODS OF RADIOCARBON DATING

Method	Laboratories [1]	Advantages	Disadvantages
Solid carbon (Libby method)	University of Chicago [2] Columbia University [3] University of Pennsylvania University of Arizona University of Colorado Yale University [3] University of Trondheim University of Copenhagen University of Rome University of Stockholm		Wasteful of sample material. Low count rate. Susceptible to airborne contaminants.
Scintillation	University of Chicago Los Alamos University of Manitoba	High count rate	Chemical preparation costly. Good for large samples only.
CO_2 Geiger Counter	University of Michigan	Easy chemical preparation. Efficient use of sample material. Not critical as to purity. Good for smaller samples.	Count rate low to medium. Electronics somewhat complicated.
CO_2 Proportional Counter	Humble Oil Company University of Groningen University of Heidelberg New Zealand Dominion Physical Laboratory	High count rate. Efficient use of sample material.	Hypersensitive to chemical impurities in gas; chemical preparations therefore require much care.
Acetylene Proportional Counter	U. S. Geological Survey Yale University Columbia University University of Cambridge British Museum (Natural History) Royal Institution (England)	Moderately high count rate. Excellent reproducibility. Efficient use of sample material.	Chemical preparation moderately difficult.
Methane Proportional Counter	Magnolia Petroleum University of Göteborg	High count rate. Efficient use of sample material.	Chemical preparation moderately difficult.

[1] Ward reports (p. 83) the establishment also of a radiocarbon laboratory in Warsaw.

[2] Has discontinued work.

[3] Has or is in process of changing from solid carbon to a gas sample method.

ologists, and anthropologists traded ideas, techniques, and problems.

A field technique of considerable future importance is being developed by Dr. F. R. Matson of Pennsylvania State College. This is a careful segregation by flotation on water and fine-mesh sieves of charcoal from ancient hearths or occupation levels where there are very little organic remains. Three other collection methods were tried for comparative purposes. These have been applied successfully in shelter deposits in southern Illinois (Libby, 1954b). Matson is now, 1954–1955, recovering carbon samples from many of the well-known Mesopotamian sites. The flotation method also was used to collect carbon from a shell midden in California (Suess, 1954b, p. 468, Sample W–27).

Another example of a special technique for the recovery of datable carbon material was used in securing an organic extract from mud which was obtained by extraction with acetone, evaporation to a thick syrup, and the precipitation of the resinous material by the addition of water (Libby, 1954b, p. 739, C–894–89). Concentration of organic material from a soil zone was also important in obtaining a date for terraces in Nebraska. Small amounts of carbon were extracted from the profile. From this, barium carbonate was prepared, and this was then processed for the Chicago counter (Libby, 1952a, p. 676, C–645). Investigation of these techniques should be made by archeologists who do not have sites with large amounts of charcoal and other readily available organic material.

Antevs (1953a, 1954b) has prepared what is probably the strongest disagreement with radiocarbon dating results. His opinions of the passage of time in North America in the late Pleistocene are based on his varve chronology and his revision of his estimates of the gaps in the varve data. There is a clear discrepancy between Antevs' interpretation of post-glacial chronology in New England, the Great Lakes-Hudson Bay area, and the sequence in the Utah lake basins, and that provided by the radiocarbon dates. Antevs has properly emphasized certain possibilities of error in the radiocarbon dating besides the statistical one and comments on radiocarbon dates which are self-contradictory. We also, alas, have been forced to express disagreement with certain radiocarbon dates for eastern United States prehistory. In spite of, then, a certain sympathetic community of spirit with Antevs, the continued trend of radiocarbon dates of 11,000 B. P. (Before Present) for the Two Creeks interval and relatively correct temporal alignment of earlier and later glacial events, suggests that perhaps Antevs has slipped a correlation somewhere, perhaps at the beginning of his sequence. On the whole, Antevs believes that the radiocarbon dates are too low. The interesting idea is presented (Antevs, 1953a, p. 221): "Of the numerous radiocarbon dates of wood and peat in the eastern half of the United States, several are so obviously too low that they should not have been published." This view we do not share, since, if more of the doubtful radiocarbon runs had been published, there might not have been the uncritical acceptance of dates as issued in some cases because it was felt that radiocarbon dates were "scientific."

A geological report which furnished Quimby (1954) with a considerable amount of his data is that of Hough (1953a) whose report on *Pleistocene Chronology of the Great Lakes Region* made extensive use of core samples and other phases of submarine geology in order to complete a chronology of the closing phases of the Great Lakes Pleistocene. This work plus radiocarbon dates has indicated significant changes in the interpretation of the history of the Great Lakes. The most important of these is the recognition of the low water level in the Huron-Michigan basin following Lake Algonquin.

Hough has also presented his interpretation of a Pacific Ocean core sample taken off the west coast of South America. The variations in core calcareousness is interpreted as a result of cold or warm climate. "Age determinations made by W. D. Urry, using the 'percentage of equilibrium method' for uranium, ionium, and radium give dates for the various layers covering

a period of several hundred thousand years. The detailed interpretation of this core gives dates for the end of the Kansan glacial stage (about 700,000 years ago), for three substages of the Illinoian glacial stage (330,000; 310,000; and 274,000 years ago), for six substages of the Wisconsin glacial stage (64,000; 51,000; 37,000; 26,000; 15,000; and 11,000 years ago), and for a post-glacial thermal maximum centering at 6,000 years ago." (Hough, 1953b, p. 252.)

In papers to be published in 1955, James H. Zumberge of the University of Michigan, Department of Geology, and J. E. Potzger of Butler University will present data of a correlation of the post-glacial floral succession in southwestern Michigan with the Lake Michigan basin water level changes. These events have been dated by the radiocarbon laboratories at The University of Chicago, the University of Michigan, and the U. S. Geological Survey. The early floral dominance is that of the spruce-fir and is correlated with a radiocarbon date of 11,000 years ago and the Bowmanville low water stage of Lake Chicago. A minimum date for Lake Algonquin, an ice-free North Bay outlet, and a waning spruce-fir forest is set at 8,000 years ago. The lowest level of the newly identified Lake Chippewa in the Lake Michigan basin and the oak-pine period in the South Haven area is 5,100 years ago. The Lake Nipissing maximum and the Xerothermic for this latitude is roughly 4,000 years ago according to their interpretation of the evidence.

From the standpoint of archeology and the natural sciences, these advances in radiocarbon dating are of importance for two reasons. The first is the considerable increase in time depth, back 40,000 to 50,000 years, which can be utilized effectively by students of late Pleistocene events and of Upper Paleolithic developments. The second is the increase in precision of the dates, for in many areas human cultural phenomena were not sufficiently pinpointed because of the margin of error inherent in the original counting technique. Within the next five or ten years it is probable that the sources of disagreement will be fewer on the interpretation of dated materials and events. This turn of events has come at an apt time, so that if what appears to be the development of a number of acrimonious publication debates can be postponed, we should have more accurate reckonings. Apparently, radiocarbon dates, even when "right," will not be able to satisfy all the interpreters of past events. This is simply an unreasonable demand on radiocarbon dating.

GEOLOGICAL AND POLLEN DATING

Present prospects for significant temporal results for archeologists in the study of trace metals in the soils, as represented by the work of V. P. Sokoloff (Sokoloff and Carter, 1952) in Georgia and Florida, or in the Lower Mississippi Valley (Sokoloff, 1953), are not too good. Such studies may be of value in differentiating origins of soils which would be of value in areas such as the Lower Mississippi Valley where different drainages supply distinctive materials to the alluvial flood plain. Studies of fossil and buried soils, soil profiles, and other soil weathering observations are represented by such papers as Simonson (1954), Ruhe and Gould (1954), MacClintock (1954), and in a specific archeological context by Cornwall (1954) at Stonehenge. The type of weathering of rock surface called "desert varnish" is effectively correlated with culture change by Hunt (1954) and is relied upon as an indicator of antiquity in Death Valley by Thomas and Lydia Clements (1953). A survey of geological aids to the interpretation of the passage of time has been made by Péwé (1954b). His paper, however, makes it appear as though geologists were "dating" sites whereas they may be said to provide an interpretation of the relative age. Other techniques, such as the radiocarbon method, provide the dates. No amount of geological interpretation is of much value in dating human material when the recovery of the specimens is not carefully controlled as was the case of Minnesota "Man" and Tepexpan Man. Archeologists can be impressed by these aids from geology, but also should be aware of their difficulties and uncertainties. This was

pointed out by Quimby (1954, p. 319) in his assay of North American post-Mankato glacial history as it applied to archeological problems. "What it [Quimby's paper] may not show, but should, is that geologists are just as confused and confusing as archeologists."

There is then a slow increment of information on post-glacial climatic change in North America, and thus of the passage of time, from pollen studies and other analyses of changes of organisms in the post-glacial environment. There is recognized a general amelioration of climate reaching a period of maximum warmth, followed by a period of a slightly colder climate. These studies are taking place throughout most of the North American area. An excellent study of lake environments and their organic make-up during the Pleistocene with an excellent bibliography is given in a recent study by Deevey (1953). Among recent additions to the literature is the interpretation of the Wisconsin glacial and post-glacial period in central Iowa by Ruhe and Scholtes (1955). They present data to support the contention that during the Iowan advance of somewhat more than 17,000 years ago, the Iowan-Tazewell interval, and the Cary glaciation of about 12,400 years ago, central Iowa had a climate similar to that of northern Minnesota at the present time. They believe that during the Brady interval between the Tazewell and Cary advances, which lasted some 4,000 years, the climate was not unlike the present one in Iowa.

The absence of tundra vegetation except in Maine in the eastern United States area has been somewhat surprising. However, a spruce-fir domination in the lower level of lakes in the Great Lakes region is a consistent feature of pollen studies, with the gradual change of forest type to a period of pine dominance, then a mixed hardwood, and a tendency for the re-emphasis of pine. The significance and the date of northern forest species in Texas (Potzger and Tharp, 1954) and North Carolina (Frey, 1953) is still the subject of some debate. The movement of boreal genera and species to the south was, of course, not limited to plants, but animals such as the musk ox and the hairy mammoth have been found as far south as Texas and Florida. It is not certain when in the Pleistocene this shift took place. By the time of adequate information of Indian occupation in the eastern United States during the Archaic stage, such beasts as the musk ox, reindeer, and moose had retreated to their present range, if the absence of their skeletal remains in sites in the Ohio Valley and lower Great Lakes is a mark of their absence in these areas at that time.

Pollen work in the Northwest Coast and southeastern Alaska has been pursued by Heusser (1952, 1953, 1954), who presents evidence for the glacier minimum and thermal maximum in southeastern Alaska at some 5,000 to 2,000 years ago. Other papers on pollen studies include those of Potzger (1953) from southern Quebec; Iversen (1954) on the origin of flora in western Greenland; Sears (1952) and Mangelsdorf (1954) on materials from Mexico. Szafer (1953) has a review of both micro- and macro-flora in Poland during the Pleistocene; Lüdi (1953) has a survey of interglacial deposits in the northern Swiss Alps from the standpoint of floral composition and succession; Nakamura (1952) has a comparative study of Japanese pollen records; and Conway (1954) describes the succession in the southern Pennines in England.

CHEMICAL METHODS OF DATING

Certainly the most publicized application of chemical methods of dating was the elimination of Piltdown Man and his "associated" artifacts and animals and their puzzling inconsistencies from consideration in the story of the development of man (Weiner, Oakley, and Clark, 1953). In this case, it should be mentioned that a wide variety of scientific techniques were brought to bear which indicated that the materials were not old and contemporary, but of mixed origin and date. Such techniques can be used both to certify and refute claims of antiquity. The fluorine tests indicated that the Piltdown human skull fragments

were late recent and that the jaw bone was that of a modern form, shown by anatomical studies to be that of an orang-utan. Other tests indicated that the miscellaneous animal skeletal fragments and artifacts all had been altered to give an appearance of antiquity.

Other examples of successful employment of the fluorine tests for relative antiquity can be found in the application to the Saldanha skull (Drennan, 1953) in South Africa, to the Keilor skull in Australia (Gill, 1953a, b), and to the human skeleton excavated by Wendorf and Krieger from the sand-blow near Midland, Texas. Wendorf reported at the American Anthropological Association's 1954 annual meeting in Detroit that fluorine tests had been made indicating contemporaneity of the human bone and the extinct fauna in nearby deposits. It should be possible to apply the fluorine test to the Tepexpan skeleton and to a number of the nearby Pleistocene faunal skeletal remains for a chemical determination of the age of the human skeleton.

Considerable progress has been made in the chemical analysis of bone in order to determine its relative antiquity. Studies made earlier have been on the fat content, citric acid content, calcium and nitrogen content, and measured loss of these materials during burial in the soil. The major active research on this approach to relative dating is by Cook and Heizer of the University of California. They have been able to demonstrate significant differences in the organic and inorganic constituents of buried skeletal material with relation to the length of time it has been buried. These studies furnish a complementary age technique to establish rough contemporaneity and a general idea of antiquity of such skeletal material from a localized area. Many of their papers are listed in Heizer (1953). For their latest papers see Cook and Heizer (1953a, b).

The Piltdown specimens were also subjected to another test, that of radiometric assay of the uranium content of the fossil (Oakley, 1954b). By and large, with increasing geological age of a fossil there is an increase in the measurable radioactivity. Contemporaneous materials from a specific bed or horizon have very similar radioactive measurements, but contemporaneous fossils from different geological beds which have widely differing proportions of uranium available for absorption will, of course, vary significantly. This principle is thus similar to that of the fluorine and other chemical tests.

The presence of coins in certain early historic sites is a definite aid to precise chronological reckoning. Caley and Deebel (1955) have been able to identify coin blanks from ancient Athens to within a fifty-year time span just before the birth of Christ by the chemical composition of the bronze. They indicate that this method could be employed to identify worn coins. Some such technique would undoubtedly be of value in separating the spurious from the genuine Chinese and southern European bronzes.

DENDROCHRONOLOGY

A number of important papers on dendrochronology have appeared recently. The first of these by Smiley (1951) is a summary of the chronological record for the Southwest derived from the resources of the Laboratory of Tree-Ring Research at the University of Arizona. Over 5,600 tree-ring specimens obtained from 365 sites were used to provide a final table listing 116 sites or areas which range from the earliest dated ring of 11 A. D. to well within the historic period. The earliest dated sites are of Basketmaker II cultural level from near Durango, Colorado. This paper is important not only because it summarizes the dating results of the foremost dendrochronology laboratory, but also because of Smiley's admonitions to archeologists in which he emphasizes that ". . . the meaning of the tree ring dates found in the various sites must remain a problem for the archeologists. The dendrochronologist dates the wood. What that date means in prehistoric studies can be told only by its association with facts and artifacts in the individual site from which it was obtained." A somewhat similar summary is provided for a

more restricted locale in the Rio Grande area of New Mexico by Smiley, Stubbs, and Bannister (1953). The same reasoning, of course, is applicable to radiocarbon dating where an organic sample is assigned a probable time range. The significance of this date, however, is interpreted by the archeologist who must be certain of the association of the organic material with a particular historic unit or strata.

Outside of the southwestern United States, dendrochronology has been successful in one area in the Mississippi Valley, and in Alaska. Various individuals are preparing master charts in Finland, Sweden, Norway, Germany, and England (Zeuner, 1953, pp. 400–402). As yet, no prehistoric dates have come to my attention from Europe, although cross-dating of floating series within the Bronze Age has been successful.

PALEOGRAPHY

Paleography, the identification of manuscript material according to the style of writing, was a dating method employed in interpreting the age of the Dead Sea Scrolls by Trever (1953). The jars with which the scrolls were associated were dated typologically to the first century B. C. or to the early part of the first century A. D. A radiocarbon date for linen cloth associated with the scrolls was A. D. 33 ± 200 years (Libby, 1952b, C. 576). Estimates of the age according to forms of grammar, spelling, and historical allusions varied from the second century B. C. to the Crusades! The paleographical interpretation first suggested was for a date of some 2,000 years ago. Trever believes ". . . they could not possibly be as old as the third century B. C. papyri. But the lower limit is not so easy, in view of the paucity of our materials from the first and second centuries A. D."

GLOTTOCHRONOLOGY

While glottochronology is not obtained by excavation, identification of artifacts, or radiation, it is a recently developed technique for interpreting the passage of time (Swadesh, 1953; Lees, 1953; Hockett, 1953; Hirsch, 1954; and Swadesh *et al.*, 1954). Based on linguistic analysis, it provides a valuable aid to the archeologist and in the last cited work has been checked against the data which prehistorians and ethnologists feel they control. We are not as sanguine about the results as some of our colleagues who have expressed the opinion that it is as accurate as radiocarbon dating.

SUMMARY

The technical advances during the past few years in obtaining chronology are of unusual importance to the prehistorian. These advances have come from the physical and natural sciences, and their effective utilization calls for greater familiarity on the part of the archeologist with the techniques and principles of these fields of knowledge. It is true that methods of obtaining chronology by typology, seriation, or other such techniques will necessarily be practiced and are of value. The trend, however, is clearly evident as to the proportional value for dating of the archeologist's judgment based on experience, and the more precise aids which are now at his disposal. It is to be hoped that training centers for archeologists, particularly in the United States, will be able in the future to emphasize these vital fields in their instructional programs.

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Culture History and Cultural Development

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THE most significant trend in the anthropological approach to culture history during the years 1952–1954 has been the increasing dependence of ethnologists on the findings of prehistoric archeology. This trend is most marked in the American field where the continuity of cultural development from prehistoric to contemporary or historic indigenous civilizations offers unparalleled scope for the coordination and mutual stimulation of archeological and ethnographic research. A common interest in culture-sequences and the possibility of tracing existing civilizations directly to prehistoric antecedents favors here the integration of the excavator's and the field anthropologist's data, but even in the Old World, where such immediate continuity is confined to relatively few areas, ethnologists concerned with culture historical problems are leaning more and more on archeological evidence.

The nature of the cooperation between anthropologists and prehistorians, however, has of late undergone a noticeable change. Whereas previously it was largely on the level of world-wide generalizations, the present emphasis is on cooperation in the interpretation of material from circumscribed areas. The possibility of elucidating archeological finds with the help of general ethnographic analogies is not explicitly discounted, but in the period under review there have been no significant attempts at inter-continental parallelizations in the manner, for instance, of O. Menghin's *Weltgeschichte der Steinzeit* (Vienna, 1931).

With the development of relatively exact methods of dating, as instanced by dendrochronology and, above all, by the radiocarbon technique, archeologists have been able to arrange an increasing number of archeological assemblages in reliably established sequences, and hence they can look forward with some confidence to a time when it will be possible to trace the development of man's material equipment throughout the inhabited world, if not in every detail, at least in broad outline.

Anthropologists, on the other hand, have become more cautious in professing their ability to fill the inevitable gaps in the archeologists' canvas of prehistoric civilizations, particularly in so far as the earliest phases of human life are concerned. The idea, so confidently held during the first decades of the century, that the study of present-day primitive populations can yield an accurate picture of the social and spiritual attainments of Paleolithic man, no

longer finds support among the majority of anthropologists.

Archeologists, meanwhile, have set out to reconstruct patterns of cultural life in the Stone Age without explicit recourse to ethnographic analogies. One of the most systematic and ambitious of these attempts is R. Pittioni's book *Vom geistigen Menschenbild der Urzeit* (1952), whose author emphasizes the autonomy of prehistoric archeology and proposes to demonstrate what prehistory can tell us of the "intellectual (*geistige*) content of primeval cultures." Following a method based "on the fact that primeval (*urzeitliche*) cultures constitute a totality in which every part stands in a definite position to the whole" (p. 3), he deduces from the lithic material certain basic sociological situations. He argues that the possibility of dividing the early and the middle phases of the Old Stone Age into the European-Mediterranean "world" of blade-tools, the East Asian "world" of chopper tools, and the African "world" of hand-axe tools, shows "the similarity of cultural intent throughout wide spaces and associated with it a basic community of cultural knowledge" (p. 48). Such a basic community of purpose is only possible, however, if the primary cells of a social order, the individual families, share in an inner intellectual nexus, if they are oriented toward a definite essential order. "Hence the common cultural will must have been conscious" (p. 49). In the local variations recognizable in the later and latest lithicum, Pittioni sees the archeological reflection of comparatively small social units, but he emphasizes that archeological data do not, at this stage, point to any achievements of individuals. These become manifest only with the creations of the Aurignacian artists.

Pittioni (p. 130) concludes "that lithic man by his imperishable cultural monuments has given proof of the identity of his intellectual essence with that of modern humanity. The multiplicity of the cultural modifications created by man during the total course of history is irrefutable evidence of his ability of free choice in any situation, and thereby humanity has pronounced itself against any cultural schematization and the hypothesis of intellectual repetition."

Ethnographic analogies are ignored on the ground that they belong to the present day or to the recent past and cannot be transposed to primeval conditions. This point of view implies a total abandonment of the detailed equations of prehistoric and contemporary cultures previously put forward by O. Menghin and a number of anthropologists and historians (e.g., F. Kern, 1953) influenced by him and his school. That the belief in the possibility of such equations is by no means dead, however, though now it mainly affects studies marginal to anthropology, is demonstrated by such books as *De Godsdienst der Praehistorie* by J. Maringer (1952).

Equations between prehistoric and present-day cultures have been attacked from quite a different angle by Claude Lévi-Strauss (1952a). His skepticism arises not so much from the absence of observable continuity but from the interior evidence of primitive societies, and particularly of those of South America.

"Une véritable société primitive devrait être une société harmonieuse, puisqu'elle serait, en quelque sorte, une société en tête-à-tête avec soi. Nous avons vu, au contraire, que dans une vaste région du monde, à bien des égards privilégée pour notre étude, celles qui pourraient sembler le plus authentiquement archaïques sont toutes grimaçantes de discordances où se découvre la marque, impossible á meconnaître, de *l'événement*. D'innombrables fêlures, survivant seules aux destructions du temps, ne donneront jamais l'illusion d'un timbre originel, là ou, jadis, résonnèrent des harmonies perdues" (p. 25).

Lévi-Strauss holds that inner discordances are typical of what he calls pseudo-archaic societies, for according to him (p. 24) these are "condemned societies, as one may see from their precarious position in the environment in which they try to maintain themselves as well as in their relations to neighbors who subject them to their pressure."

In a brief study on *Race and History*, Lévi-Strauss (1952b) elaborates his views on

the limited possibility of interpreting archeological data with the aid of ethnographic parallels. While he admits that "there may well be one resemblance between paleolithic societies and certain contemporary societies"—namely the use of chipped-stone tools—he believes (p. 17) that even in the technological sphere one group can teach us very little about the other. Criticizing the parallelizations of whole cultures, he writes (pp. 16–17): "We can know only certain aspects of a vanished civilization; and the older the civilization, the fewer are these aspects since we can only have knowledge of things which have survived the assault of time. There is therefore a tendency to take the part for the whole and to conclude that, since *certain* aspects of true correlations (one contemporary and the other lost in the past) shows similarities, there must be resemblances in *all* aspects. Not only is this reasoning logically indefensible but, in many cases, it is actually refuted by the facts."

Lévi-Strauss ascribes the development of civilization principally to the interaction and combination of diverse cultures and their respective achievements. The more "cumulative" a culture, the greater is the probability of complex combinations leading to progress. "Cumulative history has never been produced by isolated cultures, but by cultures which, voluntarily or involuntarily, have combined their play and, by a wide variety of means (migrations, borrowing, trade, and welfare), have formed . . . coalitions . . ." (p. 41).

"A culture's chance of uniting the complex body of inventions of all sorts which we describe as civilization depends on the number and diversity of the other cultures with which it is working out, generally involuntarily, a common strategy." (p. 42).

From the whole argument it is obvious that Lévi-Strauss, while skeptical regarding a narrow equation between prehistoric and primitive cultures, relies for an interpretation of the great cultural currents in world history on a combination of archeological and ethnological findings.

A more positive view vis-à-vis the equation of prehistoric and contemporary cultures is taken by Robert Redfield in his recent book *The Primitive World and Its Transformations* (1953). Though not specifically concerned with individual parallels, Redfield proceeds throughout the book on the implicit assumption that our knowledge of present-day primitive societies does to some extent permit us to reconstruct even those aspects of ancient societies about which archeological data *per se* are silent. While admitting that "the antiquity of the moral order is not fully attested by archeology," he expresses (p. 17) the opinion that "fifty thousand years ago mankind had developed a variety of moral orders, each expressed in some local tradition, and comparable to what we find among the aborigines to-day." Like Pittioni, though on somewhat different grounds, Redfield invokes the artists of the Aurignacian to demonstrate that the sensibilities of Paleolithic man were basically similar to those of contemporary man.

Analyzing the interaction of the technical and the moral order, Redfield comes to the conclusion (p. 24) that "the great transformations of humanity are only in part reported in terms of the revolutions in technology with resulting increases in the number of people living together." He assumes that there have also occurred changes in man's modes of thought and value systems which may also be called "radical and indeed revolutionary innovations," but that these changes "do not reveal themselves in events as visible and particular as do material inventions, or even always as increasing complexity in the systems of social relationships" (p. 25).

Redfield does not offer a precise formula as to the method of identifying change in intellectual and moral habits, but he thinks a beginning might be made "by examining the manner of life of the most primitive people we know today, and perhaps also something that is told us about ancient peoples, for evidence of the appearance of forms of thought, belief, or action which a little knowledge of the history of some civilization shows us became influential in changing human life" (p. 25).

Redfield traces the transformation of

folk-societies into urban civilization, illustrating an overall trend with examples taken from the ancient civilizations of the Near East, from China, as well as from America. In this overall trend he finds certain regularities, and he introduces the term "style of life" to describe "what is most fundamental and enduring about the ways of a group persisting in history." He suggests (p. 52) that two peoples with "cultures" as different as those of the Lapp and the Bedouin, may yet in certain general ways of looking at the world, and in the emphasis on certain virtues and ideals, prove to have the same "style of life."

Underlying Redfield's argument is the idea that a comparison of past and present Central and South American civilizations with the ancient civilizations of Europe and the Near East may reveal significant regularities of process in the development of the moral order.

This idea of the comparability of civilizationary processes must not be confused, however, with the assumption of a basic identity or repetitivity of such processes in different parts of the world. This is emphasized by Wolfram Eberhard, who, in *Conquerors and Rulers* (1952), discusses and dismisses the theory that "Oriental civilizations," such as those of China, India, Mesopotamia, and Egypt, have an essentially identical social structure. In his opinion (p. 125), "any understanding of each of these civilizations, and especially of Chinese civilization, is possible only on the basis of the concept that each civilization is the product of unique, historical developments, and—an individual case."

The increased interest in historical change and its causation has motivated a number of minor studies on the development of certain aspects of culture. Of these, Betty J. Meggers' "Environmental Limitation on the Development of Culture" (1954) may be quoted as a closely argued attempt to establish verifiable correlations in the sphere of culture history. Operating with four levels of culture development traceable in South America and Europe, she arrives at the conclusion (p. 822) that "the level to which a culture can develop is dependent upon the agricultural potentiality of the environment it occupies." This concept of differential cultural potentialities is applied to the Maya problem, and seems to provide an explanation of certain aspects of the development and decline of Maya civilization consistent with the archeological evidence.

Correlations between an efficient primary control over food supply on the one hand and social, political, and intellectual potentialities on the other, are traced also in a recent publication by R. J. Braidwood entitled *The Near East and the Foundations for Civilization* (1952). According to Braidwood, the first traces of food production appear around 6,000 B. C., when in the Near East an established food-producing settled-village type of economy seems to have come into being "with relative (or even revolutionary) suddenness" (p. 5). He believes that the food-producing revolution was dominated by the technologico-economic factor, but that civilization would not have appeared on the basis of the new food-producing efficiency alone; ". . . it was the further development of social, political, moral, and religious forces which made possible the integration of the growing populations into a functioning civilization" (p. 6). The burden of providing evidence for an understanding of the *how* and *why* of civilization's appearance rests mainly on the prehistoric archeologist. In the interpretation of his artifactual materials he may be aided by "the method of extrapolation backwards from understandings gained through the written records of later times in the same area," or even by "observations made in the ethnological present." (p. 7).

Braidwood does not subscribe to Childe's view that the change from pre-civilizational food production to civilization was again a change in kind on the technologico-economic level, but concurs with Redfield's thesis that the great change came in the realms of social institutions, forms of thought, and moral ideas, a point of view which has recently also been stressed by Peter Bensch (1952) in his article "Die

Entstehung der primären Hochkulturen als ethnologisches Problem."

With regard to the problem of one or several independent beginnings of civilization in the Old World, Braidwood tends to the thesis that both Egypt and Harappa draw their inspiration from Mesopotamia. The case for an independent genesis of civilization in the Far East, where in the Yellow River basin the civilizational level was reached by at least 1500 B. C., is considered highly speculative, but he assumes that around 500 B. C. there may have been either one or two separate experiments in civilization in the New World, and he points (p. 2) to the possibility of using them as a "comparative yardstick against which to test our understanding of the civilizational process of the Old World."

While it is obvious that the separate and, in so many respects, different lines on which civilization developed in the Old and the New World offer exceptionally valuable material for comparative studies, the theory of the complete independence of the growth of civilization in Middle America and the Andes, so long an article of faith among Americanists, can no longer go unchallenged. Evidence is accumulating that besides the trans-Pacific diffusion of such isolated elements as tobacco, sweet potatoes, and certain types of cotton, there have been, at definite and roughly datable times, movements from Asia to the west coast of America.

The most recent contribution to this problem so relevant to the interpretation of American culture history is Robert von Heine-Geldern's 1954 study "Die Asiatische Herkunft der südamerikanischen Metalltechnik." Supporting his argument with a wealth of striking archeological parallels from both sides of the Pacific Ocean, Heine-Geldern puts forward the thesis that contacts between the coastal areas of China and Peru, which began toward the end of the eighth century B. C., were responsible for the introduction of gold-working in South America. Most of the later trans-Pacific parallels point to the Dongson culture of Tonkin, and Heine-Geldern believes that in Colombia and in Panama metals became known only through contacts with the Dongson complex. These contacts are likely to have taken place in the fourth century B. C., a date which coincides with the radiocarbon dating of the Mochica culture, and they may have lasted until the first century B. C. or even the first century A. D. The range, variety, and distribution of Dongson influences in South America, from Costa Rica to northern Argentina, speak for fairly intensive connections over a long period of time.

It is difficult to see how the parallels and analogies discovered by Heine-Geldern could be explained in a way excluding historical connections, and while he himself emphasizes the hypothetical character of some of his conclusions, there can be little doubt that much of his basic thesis will stand the test of further work on both sides of the Pacific. The question as to the one time existence of an independent center of civilization in America raised by Braidwood cannot be divorced from the problem of trans-Pacific migrations. Their occurrence, even in the form outlined by Heine-Geldern, does not necessarily exclude the possibility of an independent concentration of civilizationary forces in the Andean region and Central America, a concentration which may have needed only the stimulus of some advanced techniques to blossom into full-fledged high civilizations. The fact that similar stimuli undoubtedly reached Oceania without producing such results, and cultural radiation from the civilizations of the Near East and Europe have never given rise to a comparable development in Africa south of the Sahara, would seem to speak for such a possibility.

Heine-Geldern's argument is based almost exclusively on archeological evidence, and it perhaps is significant that the final word in the controversy over trans-Pacific culture contacts is likely to be spoken by prehistoric archeologists and not by ethnologists. It is in the evaluation and interpretation of archeological data that T. Heyerdahl's voluminous work, *American Indians in the Pacific* (1952), as indeed his whole theory of the peopling of Polynesia

from America, reveals its most serious weaknesses.

The discovery of new archeological facts and the consequent reinterpretation of known data has led to a complete reversal also in another sphere of ethnological research, namely that concerned with the origin and early stages of animal domestication. For the past fifty years continental ethnologists have given a great deal of thought to this problem. The independent development of pastoralism from the primitive food-gathering and hunting cultures, and the subsequent role of the nomadic pastoralists in the formation of ancient Asiatic civilizations, was one of the basic theories of the late Wilhelm Schmidt. Departing from Eduard Hahn's theory of the development of cattle domestication among settled agricultural populations, Schmidt and his school laid great stress on the antiquity and independence of reindeer and horse breeding by Central Asian nomads, and believed that the domestication of cattle was a later achievement resulting from the impact of nomadic horse-breeders on settled farmers. Archeological discoveries in the Near East, a useful summary of which has recently been provided by Dyson (1953), have proved this thesis untenable, and the past three years have seen the publication of a number of studies containing a reassessment of the whole problem (e.g., Hančar, 1952; Jettmar, 1952, 1953, 1954; Zeuner, 1954).

Karl Jettmar (1952), for instance, has surveyed the data which have a bearing on the early history of reindeer domestication, and comes to the conclusion that reindeer breeding on an economic scale is a comparatively late development, certainly later than the domestication of cattle, which may have provided the model for the domestication of the reindeer. Archeological finds in the area of the reindeer's natural habitat (e.g., in the Minussinsk and the Altai regions) have shown that up to the middle of the third millennium B. C. there were in this region no domestic animals at all, and that in the Baikal area the first bones of domestic animals appear about 3000 B. C. However, they are not those of reindeer but of cattle and sheep, and all sites which yield such animal bones have significant connections with southern cultures.

The evidence leaves little doubt that the domestication of cattle, sheep, and horse did *not* originate on the steppe-belt lying immediately to the south of the reindeer area, but that developed forms of pastoral economy spread into that area from regions further to the south. Hence reindeer domestication cannot have influenced the development of the breeding of other herd animals, a circumstance which rules out the earlier theories of Schmidt and F. Flor, and seems also to militate against the recent hypothesis by Henn Polhausen (1954), who tries to trace the early domestication of reindeer and other domestic animals to a phase at the end of the Paleolithic age, when nomadic hunters began to "accompany" herds of wild reindeer, until the animals became tame enough to submit to domestication.

Jettmar and more recently F. E. Zeuner (1954) have pointed out, however, that Coon's excavations in Iran, and particularly the evidence from the Belt cave on the coast of the Caspian Sea, suggest the domestication of such "nomadic" animals as goat and sheep by hunting people in late Mesolithic times. Zeuner (1954, pp. 351, 352) seems to be in sympathy with a hypothesis which puts the domestication of nomadic animals, such as goat and sheep, before that of cattle, but whether the domestication of goat and sheep prior to the rise of an agricultural economy ultimately will be proved or not, the theory of a pastoral nomadism based on the early domestication of the horse by the peoples of the Asian steppes as held by W. Schmidt must be considered dead. And with it died the idea that pastoral warriors were the organizing and politically dominant element within the first advanced civilizations based on a combination of farming and animal husbandry.

The abandonment of the *Hirtenkulturkreis,* however, is not the only reassessment of culture historical theories postulated by the members of the Vienna School. Judging from recent publications, one can hardly doubt that the very concept of *Kulturkreis*

in the sense developed by Graebner and Schmidt has largely been discarded. Josef Haekel (1952–1953) expresses this very clearly in an article on the cultural stratification of Brazil when he questions, "whether the *Kulturkreise* as hitherto defined, have ever really existed." He argues that the "span of life" of cultural elements can show great variation, and that "some cultures are very conservative, in regard to certain elements, while others are not." While the original concept of the *Kulturkreis* is based on the assumption of "a prolonged persistence of cultural elements and an enduring, basically stable and so-to-say organic association (*Vergesellschaftung*) of elements and phenomena, which embrace all essential parts of cultural life" (p. 969), Haekel suggests that superficially similar culture-complexes in different parts of the world may have come into being at distinct times and through an incidental accumulation of the constituent culture-elements, and that such apparently analagous culture-complexes never may have belonged to an originally homogeneous *Kreis*. To obviate a future error of lumping together basically different, though outwardly somewhat similar, cultural phenomena, Haekel insists that "historically orientated" ethnologists should pay special attention to the study of local cultural processes and changes, which are just as much historical events as migrations and transmissions of culture-elements. "The historical method of ethnology," he continues (p. 970), "is in need of a far-reaching extension, of a sharpening and a deepening of its criteria. Particular emphasis must be laid on research into local factors, into the inner life of a culture, in which judiciously planned investigations into structural and functional problems, as well as the recognition of overt and covert patterns can be valuable aids."

Haekel sets out to apply these principles to an investigation of the cultural stratification of Brazil, the results of which he himself considers in the nature of a preliminary working hypothesis. Taking one group of tribes after the other, he attempts to isolate the various strata, and arrives at a pattern, infinitely more complex and detailed than any of the earlier historical reconstructions. He does not subscribe, however, to Lévi-Strauss's theory of degeneration and cultural impoverishment, and when he finds that in the region now inhabited by the North-western Ge, who lack pottery, there existed a prehistoric culture with a comparatively developed ceramic, he concludes that the Ge, coming from the savannas of Eastern Brazil, must have pushed out or exterminated the prehistoric, more advanced, pottery-makers. (Cf. also Baldus, 1954).

After a detailed analysis of a large number of "culture phases," Haekel (1953, p. 156) comes to the conclusion that the *Kulturkreise* postulated by Schmidt on the basis of apparent similarities with Oceanic cultures, must be abandoned even as a working hypothesis. "The possibility of an old world origin of specific cultural elements and institutions must always be kept in mind . . . 'mass immigrations' of old world populations across the Pacific, however, must be excluded. Thus I see great difficulties in the way of the assumption that whole 'Kulturkreise' should have entered South America by way of the Pacific."

The doubts of many members of the Vienna School in the absolute primitivity and archaism of many contemporary hunting and collecting peoples—the *Altvölker* of Schmidt's terminology—has been voiced also by Paul Schebesta. In his book *Die Negrito Asiens* (1952a) he states explicitly: "We must abandon the idea that the Negritos are untouched peoples. But the people with whom the Andamanese, the Semangs and the Negritos came in contact, were of a different type. In regard to the Andamanese the position is not yet clear; among the Semangs the influence of the Veddid Senoi is predominant, while the impact of the Austronesian quadrangular-axe culture and also the Mon-Khmer wave must be taken into account. The Aeta have been subjected to several cultural waves. . . ." In another and later context (1954, p. 691), however, Schebesta takes a more positive view of the archaism of the culture of present-day food-gatherers: "The degree of the lack of differentiation in a culture

(*Kulturundifferenziertheit*) taken as a whole is everywhere the best criterium for the relative antiquity (*entwicklungsgeschichtliche Alter*) of a culture. That on the basis of this criterium the Altvölker reflect primordial conditions (*die Urzeit*) better than others, seems to be beyond all doubt."

This view is shared by W. Nippold (1954, p. 87), whose recent study of the early forms of private property rests on the assumption that undifferentiated cultures of hunters and collectors have retained a number of extremely ancient traits, and that from these one may draw conclusions regarding the beginnings of human cultural life.

The shifting of interest and emphasis among the members of the Vienna School is noticeable in the recent writings of even so close an associate of the late Father Schmidt as Wilhelm Koppers. In a paper read on August 27, 1954, at the Congress of Americanists in São Paulo, for instance, Koppers declares himself in favor of an approach to problems of historical connections which starts from the more recent and tangible materials, and then, going backwards and, so-to-say, lifting layer after layer, tries to penetrate to the older and finally the oldest common features. This approach is, as he emphasizes, diametrically opposed to the method which he himself followed in his early attempt to establish a cultural connection between Southeast Australia and the extreme south of South America.

In the same paper, Koppers points out that the primitive North American food-gatherers, whom Schmidt regarded as representative of an *Urkultur,* can be linked with Neolithic hunting-cultures, and that hence they cannot be equated with a true *Urkultur.* Though in North America the Neolithic hunters were preceded by late- or post-Pleistocene food-gatherers, there is no evidence of a "genetic" continuity between the respective prehistoric cultures, and it must be considered doubtful, therefore, whether the religious complex delineated by Schmidt can be attributed to the late Paleolithic hunters or whether it was brought to America by immigrants of Neolithic culture. Koppers believes that this complicated problem cannot be solved on the basis of American data alone, but elsewhere (Koppers, 1953) he has expressed himself in favor of the general validity of Schmidt's thesis regarding the religions typical of the most primitive and "ancient" peoples.

From the late P. Wilhelm Schmidt's pen, the period under review includes, in addition to a number of articles, a contribution to *Historia Mundi* (Schmidt, 1952a), and two more volumes of his monumental work, *Der Ursprung der Gottesidee* (1952c, 1954). These two volumes do not deal with the religions of primitive tribes, but contain an analysis based on historic as well as ethnographic sources of the ritual and the religious beliefs of such advanced peoples as the Mongols, the Buriats, the Yakuts, and the Yukagirs.

Among the more recent anthropological publications there is nothing to match in scope and volume the material presented in this great encyclopedia of primitive and pre-literate religions. For the work of most modern anthropologists, whether historically or sociologically inclined, is weighted in favor of a description or analysis of individual societies or cultures rather than of inquiries into general problems in a world-wide frame of reference.

One of the few anthropological works aiming at a synthesis of culture history is Kunz Dittmer's *Allgemeine Völkerkunde* (1954), a book modest in volume but ambitious in concept, which sets out to give a general outline of the cultural developments from the "beginnings" up to the rise of high civilizations. There is the implicit assumption that ethnographic data from contemporary primitive people permit a reconstruction of the growth of culture in general terms, but when he deals with such specific problems as the early domestication of animals and plants, Dittmer relies largely on archeological evidence. In contradistinction to the concept of culture as an entity independent of individual societies, first developed by Frobenius and recently revived by Leslie A. White, Dittmer regards culture as "tied to a specific

ethnic unit." Cultural elements are likely to be borrowed from other ethnic units only if they can be fitted into the structure of a people's own culture. Often this can be achieved only by a certain transformation or even a change in function. "For a culture will always try to assimilate borrowings as well as new creations to its own pattern and thereby invest them with the expression of its own 'spirit'." (pp. 30-31).

Despite the explicit recognition of the fundamental link between a culture and a specific ethnic unit the emphasis throughout the book is on "culture" rather than on "society" or "population." Dittmer retains the term *Kulturkreis,* but mentions (p. 35) the difficulty of delineating *Kulturkreise* on the basis of the geographic distribution of cultural elements, "since their essential functional coordination within an organic structure is often not easily ascertainable." In continuing to speak, for instance, of *"a* megalithic *Kulturkreis,"* he shows himself more conservative than the present members of the Vienna School, but in his assessment of the so-called *Urkultur* or *Kultur der Altvölker,* he departs from the position taken by Schmidt and Koppers. Using the same argument as Lévi-Strauss, he points out (p. 138) that even the most primitive peoples of today have an ancestry of "as many thousands of generations of forebearers as the peoples of the high civilizations," and that in the course of human evolution they too have undergone an internal development and have been subject to external influences. The evolution of the different races of *Homo sapiens* presupposes long periods of isolation in distinct environments, and the cultural development of these races in the process of formation must also have taken place in isolation. Cultural variation, Dittmer argues (p. 139), stands at the very beginning of human development, and hence no uniform *Urkultur* can be deduced from the contemporary races and peoples.

In its approach and frame of references Dittmer's *Allgemeine Völkerkunde* (1954) appears nevertheless as a direct sequel to *Völker und Kulturen* by Schmidt and Koppers (1924), and *Kulturens Veje* by Birket-Smith (1948). This continuity of emphasis and interest is a characteristic feature of much of the ethnological writing in Continental Europe, and there can be no doubt that nowhere outside America—where the close link between prehistoric archeology and ethnology favors culture historical studies of a somewhat different type—are problems of culture history so much the focal point of anthropological research as in Germany, Switzerland, Austria and Scandinavia. Gudmund Hatt's contribution to *Plough and Pasture,* of which he and E. Cecil Curwen (1953) are joint authors, is a good example of this attitude, which he summarizes (p. 152) in the following passage: "Ethnographers study living forms which are continuously changing. Waves of culture have passed over the lands from people to people, even long before Western civilization overflowed the earth. It is the purpose of ethnology to elucidate these movements. Ethnology and archeology have the same goal and must co-operate."

Birket-Smith emphasizes the same attitude. Discussing trends in Danish ethnology, he stated (1952, p. 122): "The historical approach is considered of paramount importance. Needless to say, the function of culture must also be studied, but function is only understood against the background of cultural development: if the study of function is further limited mainly to kinship relations, as some modern ethnologists seem to wish, who then is to explore the vast field of the history of human civilizations?"

The solid achievements of Scandinavian and particularly Danish historical ethnology lie, above all, in the field of Eskimo research (e.g., Birket-Smith, 1953), in which a combination of archeological and ethnographic studies has led to the accumulation of a most impressive body of knowledge on cultural stratification and early migrations.

But the interests of Scandinavian ethnologists are not confined to the ethnography of the Arctic, to which they have made so great a contribution. The wide range of their studies recently has been exemplified by G. Gjessing's *Mennesket og Kulturen* (1953), a textbook of cultural

anthropology in two volumes, which aims at an overall picture of cultural developments supported by studies of individual peoples representative of various economic levels and adaptations to environment.

Though Evans-Pritchard has recently professed his belief in the necessity of a historical approach in anthropological studies, departures from a strictly synchronic treatment of ethnographic data among British anthropologists relate mainly to specific sequences of events within the more or less recent past. The value of diachronic studies is admitted, and the potentialities offered by a time depth of even one or two centuries is being increasingly utilized. Surveying the ethnic compositions of the Tswana Tribes of South Africa, I. Schapera writes (1952) for instance: "To understand how and why these variations [in the relations between chief and retainers, for instance] have developed, and indeed why the three class structure itself came into being, we obviously need to know a good deal about tribal history. It is only after we have analyzed the ethnic composition of each tribe, and learned how and when the different peoples it contains become incorporated, that we can proceed to compare adequately the resulting forms of social relationships." The historical background Schapera has in mind is one provided by oral tribal tradition, official records and the writings of early travelers and missionaries. Though mainly concerned with fairly recent history, he nevertheless ventures (p. 5) some suggestions regarding remoter periods such as that the Bushmen coming from the north were the first people to enter South Africa.

H. Baumann (1954) also stresses the importance of local culture historical research as part of anthropological field work. He points (p. 162) to the value of etiological tales and myths as source-material for the history of a people, and opposes the tendency to dismiss all such etiologies *a priori* as late products of a hypertrophied urge to rationalize and explain the origin of institutions or cultural achievements. Discussing a number of African examples, he also emphasizes (p. 163) the fact, "that among many populations the tribal and clan-structure still bear the traces of their heterogeneous ethnic composition. Unfortunately in many cases no attempt has been made to discover whether the clans and clan-groups constituting an ethnic group (*Volkstum*) appear only as exogamous, and possibly totemistic units, or whether they have preserved also significant cultural traits, which may point to [connections with] a neighboring people. The incorporation of compact residential units of neighboring tribes into an expanding ethnic group is a frequent phenomenon, even though usually only the subsequent assimilation (*Homogenisierung*) can be ascertained. All the more carefully should one investigate all signs of ethnic differentiation and their associations with sub-tribes and clans."

An attempt to reveal through a comparative analysis of ethnographic data the cultural stratification of a larger region is exemplified by A. E. Jensen's study of dual-systems in North-east Africa (1953). In this he isolates three cultural strata, i.e., a pre-Nilotic culture without dual-systems; an archaic, Nilotic stratum associated with cattle-breeding, the cultivation of grain-crops, and dualistic forms of social organization; and a Cushitic stratum which overlaid the older strata in the East and North of the region and is characterized by a dual-system without exogamous implications. Distinct from such regional studies, both in method and scope, is Diedrich Westermann's *Geschichte Afrikas* (1952), which provides, for the first time, the concrete data required by those who want to see African civilizations as a whole against the background of recorded and traditional history. Though principally an account of political events connected with the formation of African states south of the Sahara, Westermann's book has the great merit of integrating ethnological data into an overall picture of African culture history.

A far more detailed historical account of an individual African people is Eva Meyerowitz's *Akan Traditions of Origin* (1952), which together with her earlier

work, *The Sacred State of the Akan* (1951), represents an integrated picture of the Akan State of the Gold Coast over nearly a thousand years, and proves how much can be achieved by a painstaking, and at the same time imaginative, study of oral traditions supported by historical research of the more orthodox type. Eva Meyerowitz (1951, p. 208) distinguishes in Akan history four different cultural phases, beginning with one in which the queen is the sole life-giver and ruler, and—after two phases during which the queen's status and power declines—ending with the establishment of the king as ruler of a state based on a territorial and military confederation. The main interest of this work lies in the closely documented and convincing demonstration of a sequence of cultural phases such as—in more general works—have often been regarded as "conjectural" history. From the safely established evidence regarding the internal developments in Akan State, Meyerowitz traces the history of the various populations back into the more distant past, and, there too, comes to significant conclusions, such as (1952, p. 124) that "the Akan people . . . came originally from the region between Djenne and Timbuktu, and some . . . from places further north in the Sahara desert. One can safely deduce therefore—and the descent in the matrilineal line is further proof of this contention—that the ancestors of the present Akan aristocracy were Saharan Libyan Berbers."

It is sometimes suggested that whether an anthropologist regards his discipline as belonging to the humanities or to science he is likely to organize his fieldwork on roughly similar lines. But if we compare Meyerowitz's work with the recent study of Timbuktu by H. Miner (1953) it is quite clear that in the field too different theoretical trends are likely to lead to a concentration on different problems and to an inevitable neglect of others.

Miner was mainly interested in the day-to-day relations of the individual ethnic, economic, and status groups, and he acknowledges (p. 268) the difficulty of combining sociological and ethnological research: "Compared to western cities, the heterogeneity of Timbuctoo appears to the writer to be more a product of diverse cultural origin and less a result of elaborate division of labor. Those two kinds of heterogeneity are theoretically comparable, but with our present limited tools, we cannot analyze the significance of the differences. This is particularly significant in that anthropologists tend to think of heterogeneity in terms of different cultural origins, while sociologists are more inclined to concern themselves with heterogeneity stemming from elaborations of the division of labor."

A novel approach to the problem of heterogeneity and cultural diversity among population groups making up a social system is contained in E. R. Leach's *Political Systems of Highland Burma* (1954). The main theme of this study of Kachin social structure is the oscillation of Kachin communities between conflicting social and political ideologies, and Leach (p. 4) sets out to demonstrate that "while conceptual models of society are necessarily models of equilibrium systems, real societies can never be in equilibrium." The fluctuations and compromises between two distinct and fundamentally incompatible social systems can be represented only by a diachronic method and, although Leach is not primarily interested in history, he relies on a great deal of historical material to exemplify the process involved. "It is not possible," he maintains (p. 285), "to describe . . . a process of change directly from the observation of first-hand ethnographic data. What one must do is first analyze out the ethnographic facts by reference to whole systems conceived of as existing in unstable equilibrium, and then postulate that the confusion of reality arises from the interpenetration of these unstable ideal systems." The events of recent history, stretching over some 150 years, provide the raw material for this analysis, and with their help Leach is able to show what happens when individuals and groups change their ethnic identity, and Kachins "become" Shans. The description of such a process and its implication is of great relevance to general

problems of cultural change and ethnic interpenetration, two of the main factors in any theory of culture-history. Leach points out that, to the actors, such a change from Kachin to Shan hardly may be noticeable, and he holds (p. 287) that only the ethnocentric anthropologist may tend to suppose "that shifts in the culture and structural organization of a group must be of shattering significance." He depreciates the habit of anthropologists to operate with model systems—whether expressed in cultural or structural terms—conceived as stable and fixed systems, and believes that the equilibrium theory in social anthropology needs drastic modification.

Delineating in considerable detail the change of cultural pattern and even ethnic identity of specific groups, Leach provides material of a type called for by A. Lesser in his 1952 article "Evolution in Social Anthropology." Lesser advocates the study of sequential relations in which "the later condition immediately supersedes the earlier," and stresses that "the consideration of such conditions is basic to the problem of social or cultural process of change." He considers (p. 146) that the recognition of these types of problems of cultural development has been delayed too long: "The criticism of evolutionists tended to end in a complete nihilism as regards problems of cultural sequence and development. The result has been an undue timidity, even a taboo, as regards such problems."

This taboo has now been set aside, and problems of change and process play an increasingly important role in modern anthropological studies, particularly where historical records provide some measure of time depth. In the case of advanced civilizations such as those of India and Southeast Asia the time-depth may extend over several centuries, and even sociologically oriented anthropologists have been drawn to the historical approach. An example of this trend is provided by E. Kathleen Gough's article "Changing Kinship Usages in the Setting of Political and Economic Change among the Nayars of Malabar" (1952), which leads to a conclusion greatly at variance with the results of those acculturation studies which, in Leach's words (1954, p. 284), confined themselves to an "analysis of the swapping of particular traits between particular isolate cultures over a particular historical period of time." Summing up her argument Gough states (p. 86) that "analysis of the process of change in a kinship system over a period of time fails to reveal discontinuity. The Nayar system has, over a period of two hundred years, changed from a very extreme form of matriliny into a 'bilateral' system with only a weak tendency to matriliny; but the later system developed imperceptibly out of the earlier. This kinship change has been part of a process of growth taking place in the total social structure and not merely the direct adoption, by a 'contracted' from a 'contracting' group, of a set of behavior patterns and a pattern of kinship terms."

A study of kinship organization in India by Irawati Karve (1953) extends over an infinitely greater period. Utilizing material contained in Vedic and epic Sanskrit literature, Karve describes the development of Indian kinship behavior throughout a period of more than two thousand years, i.e., from epic times to the present day. A peculiar feature of this study are the genealogies and tables of kinship terms derived from the Mahabharata, an epic supposed to date from about 800 B. C. They provide evidence for a basic continuity in kinship systems over a period of time immensely longer than that usually covered by diachronic studies.

India provides yet another example for the way in which both ethnographic data and documentary historical material can be utilized in building up the culture historical framework for the study of a contemporary society. M. N. Srinivas' book *Religion and Society among the Coorgs of South India* (1952) is basically an anthropological study of the dominant caste-group in the small state of Coorg, but the customs and ritual practices current today are set against the background of traditional Hinduism of both the All-India and the provincial type. The clarification of concepts which results is remarkable, and Srinivas is able to explain general tend-

encies observable throughout India, which hitherto have not been analyzed by anthropological methods. Of the historical function of caste, for instance, he writes (p. 3): "Caste guarantees autonomy to a community, and at the same time brings that community into relation with numerous other communities all going to form a hierarchy. The importance of such an institution is obvious in a vast country like India which has been the meeting place of many different cultures in the past and which has always had considerable regional diversity. While the autonomy of a subcaste was preserved it was also brought into relations with others, and the hierarchy was also a scale of generally agreed values. Every caste tended to imitate the customs and ritual of the topmost caste, and this was responsible for the spread of Sanskritization. When this process is viewed on a continental scale and over a period of at least 2,500 years, it is easy to see how Sanskritic ideas and beliefs penetrated the remotest hill-tribes in such a manner as not to do violence to their traditional beliefs. Caste enabled Hinduism to proselytize without the aid of a church."

Whereas Srinivas has demonstrated the spread of Sanskritic ideas among the lower castes and aboriginal tribes, von Fürer-Haimendorf (1953b) has analyzed certain aspects of the interaction between Hindu and tribal ideologies which suggest a flow of concepts in the reverse direction. The concept of a separable soul, for instance, and the idea of transmigration and reincarnation, which were foreign to the Vedic Aryans, but are prominent in post-Vedic thought, are traced to eschatological beliefs characteristic of autochthonous, non-Aryan tribes, and, in this connection, it is pointed out (p. 47) that "to approach conflicting customs and ideas in popular Hinduism solely through the classical literature or the Brahmanical tradition is not likely to lead us to a full understanding of their basic nature. For the discrepancies are obviously due to a super-imposition of traditions stemming from different cultural horizons."

An attempt to isolate by a combination of archeological, ethnological, and historical studies such different cultural horizons within a limited area, namely the island of Bali, has been made in a volume produced by Goris and Dronker (1952?) in cooperation with the archeologist Th. van der Hoop. From their analysis, supported by extensive illustrative material, emerges a culture history of Bali in which elements of indigenous pre-Hindu culture (e.g., megalithic sanctuaries, animal sacrifices, ritual cock-fighting, etc.) can be distinguished clearly from the Hindu culture introduced, not from nearby Java, but direct from India in the eighth century A. D.

The influence of Indian culture on the civilizations of Southeast Asia, and particularly on the development of social systems and legal concepts, is stressed also in Robert Lingat's comparative study *Les Régimes Matrimoniaux du Sud-Est de l'Asie* (1952). The manner in which this influence was exercised was quite different from the impact of Chinese custom and law on such countries as Viet Nam. For there was no Indian "colonization" in the narrow sense of the term, but only a "colonisation spirituelle, due, non à la conquête, mais au prestige qu'exerce naturellement une civilisation supérieure sur des populations de moeurs encore primitives." Basic to Lingat's argument is the idea that the present marriage-systems and family laws can be understood and explained only as a result of a fusion of indigenous, Chinese, and Indian ideas, a fusion in which, however, indigenous concepts have largely prevailed.

A growing interest in the social and cultural problems of higher civilizations is an unmistakable trend in present-day anthropology, but the concrete application of anthropological field-techniques to the study of such civilization, so far has been confined to certain areas. Outstanding in volume and quality are the studies of Central and South American civilizations. In India, Southeast Asia, China, and Japan, there have been promising beginnings, but the Arabic-speaking Near East remains largely an untilled field.

The desirability of extending the anthro-

pologist's frame of reference to the higher civilizations is widely recognized, however, and the following statement of D. Mandelbaum (1953, pp. 177–178) reflects a general trend: "The advantages for anthropology in working with national cultures and literate peoples are major. Documentary historical materials are available to provide the time perspective necessary for generalizations concerning cultural processes."

Interest in advanced, literate populations has brought anthropologists face to face with historical problems, and the question has been asked whether they have adequate tools to tackle such problems of long-term process. Robert Redfield and his associates are of the opinion that anthropologists can contribute to the understanding of the cultural processes peculiar to the great historic civilizations, and they operate freely with historical concepts. Leach, on the other hand, voicing the difficulties social anthropologists experience when dealing with historical problems, states (1954, p. 282) more cautiously: "We functional anthropologists are not 'anti-historical' by principle; it is simply that we do not know how to fit historical materials into our framework of concepts."

A most penetrating and illuminating review of the conceptual approaches of various leading anthropologists to the basic problems of culture history is contained in David Bidney's *Theoretical Anthropology* (1953, pp. 250–285). His own position becomes apparent when he declares himself in sympathy with Evans-Pritchard's humanistic philosophy of culture, but denies that the so-called historical method as such leads necessarily either to a humanistic or to a naturalistic and deterministic approach to the data of culture history. According to Bidney the nature of approach depends solely "upon one's metahistorical presuppositions, or philosophy of history and science." He does not agree, however, that anthropology is no more than a kind of historiography, but suggests that one may maintain the inseparability of pattern and process in culture history. The historian "should be interested in analyzing objective historical processes, as well as in evaluating significant patterns, without subscribing to the uncritical assumption that there are natural laws of culture history."

Having taken this position Bidney obviously finds little common ground with Leslie White, who regards culture as a reality *sui generis,* subject to its autonomous processes and laws. He comes "to the conclusion (p. 271) that White's divorce of history from evolution renders history unintelligible and evolutionary processes of no pragmatic value to the ethnologist." A major contradiction in White's theory is, according to Bidney, the assumption that the evolutionary laws may not be regarded as re-exemplified in the historical process. "For a non-repetitive law is . . . a contradiction in terms."

At the end of his review of current trends, Bidney states (p. 280) his own position and defines history as "our human description and interpretation of any natural process or sequence in the context of space and time." This definition implies that "culture history in particular comprises a study of both patterns, or forms, and processes and that it is fallacious to limit the study of history to forms without processes." Process and form cannot be separated and it is entirely arbitrary to assign form to history and process to science. But the historian and the natural scientist look at process and forms from different angles. The historian is interested "in understanding the origin and development of a series of forms and social institutions leading to a contemporary situation, while the natural scientist is interested primarily in the repetitive character of natural processes and in the universal principles which govern the relations between natural phenomena. This does not mean that the historian may not arrive at certain generalizations concerning the basic factors which determine the course of social and cultural history, and he may even be convinced that in certain respects history, too, repeats itself. But the historian grants that in the sphere of human history there are many more variables than constants, while for the natural scientist it is the constants

that matter and the regularities are the objects of research" (pp. 282–283).

Cultural history is to Bidney (pp. 283–284) "the study of the cultural selection and of the cultural evolution of mankind. There is no predetermined immanent necessity or teleology in the evolution of human culture, taken phylogenetically or autogenetically, since culture is not a natural organism, subject to predetermined stages of growth. . . . Culture may be viewed as an expression of human freedom of creativity while subject to the limitations of nature." He sums up his position by stating (pp. 283–284): "The ethnological study of history, to be scientific, must be empirical and without restraining preconceptions derived from positivistic philosophies of science, as to the nature of the order and processes to be found therein. . . . While these may be a reason for every detail the historian may discover in the course of his researches, he would be foolhardy to assume that everything that happens is in accord with predetermined reason and law. It is not the business of a scientist to discover 'laws' where none exist."

The problem of the existence or nonexistence of social "laws" is obviously of relevance to the student of culture history and cultural causation. For the time being anthropologists are still divided on this issue, but the controversy loses some of its edge when the protagonists of the existence of "social laws" define them as Meyer Fortes has done in his Inaugural Lecture (*Social Anthropology at Cambridge since 1900,* Cambridge University Press, 1952), where he stated: "Social laws refer to ideally isolated features of social life and can be stated only in terms of probabilities. The combination of factors that make up a particular occasion in the life of any society are not predictable and never will be, though each factor by itself may work in ways that can be foreseen within known limits of error." This seems to distinguish "social laws" clearly from the laws of physics, for modern physics obviously could never have been developed if not even complicated "combinations of factors" were reasonably predictable.

In an even wider sense is the concept of "law" employed by Louis Marin, when he writes (1952, p. 61): "Rappelons que découvrir un type est l'équivalent de découvrir une loi: dans l'un et l'autre cas on aboutit à une généralité, la première étant une généralité par similitude, la second étant une généralité causale entre des causes et effets."

A representative of ethnobiology, on the other hand, has recently raised her voice against the possibility of establishing laws or detailed regularities in the long-term development of populations. In her book *Das Problem des Völkertodes. Eine Studie zur historischen Bevölkerungsbiologie,* Ilse Schwidetzky (1954) points out that apart from a certain link between the decline of a people and qualitative or quantitative changes in the dominant population stratum, no laws or rules can be deduced from the available ethnohistorical facts—and this despite the multitude of sociological theories which seek to attribute the downfall or decline of different peoples to one and the same cause. "In effect every nation has perished or declined in its own manner, even though a number of ethnobiological mechanisms have come into action in several cases." And she concludes with the statement (p. 157) that there is no possibility "to deduce from the fates of historic nations predictions for the future of living populations."

Inseparable from the problem of predictability is the question whether social anthropology is a science or a branch of history. This question, which for years has been debated *ad nauseam* is described as "meaningless" by Fortes (1953, p. 36), and as "rather unimportant" by Robert F. Spencer (1954), who suggests (p. 130) that "the task of analyzing, comprehending, and depicting cultures as growth and wholes creates a dependence on the findings of the natural sciences as well as those of history and the humanities."

A historical approach, in Kroeber's sense (1952, pp. 160–161), "preserves not only the time and place of its phenomena but also their qualitative reality. It 'interprets' by putting data into an ever-widening con-

text. Such context includes time as an implicit potential, but is not primarily characterized by being temporal. In the absence of chronological evidence a historical interpretation can still develop a context of space, quality, and meaning, and can be descriptively or 'synchronically historical'. . . . The 'scientific' approach on the contrary, aiming at process, can hope better to determine cause, which may be attainable only contingently or implicitly by historical method."

The discussions at the Wenner-Gren Foundation's 1952 Symposium, which are presumed familiar to the readers of this article and are therefore not quoted in detail, have made it plain that interest in problems of culture history persists on both sides of the Atlantic, even though the emphasis on a historical—in contradistinction to a "scientific"—approach, shows considerable local variations. That even in a country among whose anthropologists a decade ago the prestige of diachronic studies was at its lowest ebb, archeologists and anthropologists, such as V. Gordon Childe, H. S. Harrison, F. E. Zeuner, Daryll Forde, and E. R. Leach, were inclined to cooperate in the writing of *A History of Technology* (edited by C. Singer, E. J. Holmyard and A. R. Hall, 1954) perhaps can be taken as symptomatic of a revival of concern for historical problems, and, implicit in this joint effort, is also the recognition of the significance of present-day primitive cultures, no less than of prehistoric cultures, as representative types of early forms of cultural life.

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Diffusion: Transmission and Acceptance

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THE HISTORICAL CHARACTER OF ETHNOLOGY

DIFFUSION is one of the fundamental phenomena of cultural life, a phenomenon concerning the history of culture. This implies that the present investigation will deal with the historical aspect only of what in Anglo-Saxon countries is termed "cultural anthropology."

History has been defined as "the knowledge of the socially important developments in the world of man and their evolution."[1] It is hardly necessary to say that evolution, thus understood, is very different from the organic evolution of natural history and that it means evolution due to human action and to the unfolding of all that the spirit of man has devised and the power of man has created. Evolution, thus defined, belongs to the realm of history. Are historically minded ethnologists justified in claiming the same principle for their own field? In other words: are the primitive tribes, the special subject of ethnology, comparable to civilized peoples to the extent that historical ethnology may be linked to history as usually understood?

It is interesting to learn what a historian, like E. Bernheim, who specialized in the methods of history, thought about the matter. According to him (1908, pp. 45 ff.) primitive peoples, too, should be a subject of history. There are no peoples without history.

"Die Identität der Menschennatur ist das Grundaxiom jeder historischen Erkenntnis. Denn in der Tat, gäbe es oder hätte es je gegeben ein Volk oder ein Individuum, das in anderer Logik dächte als wir, dem Hass nicht Hass und Liebe nicht Liebe wäre, so würde uns die Geschichte desselben noch unzugänglicher sein als die Begebenheiten in einem Bienenstock." [2]

These remarks, made half a century ago, have been fully confirmed by ethnological research. Today, the role of the individual personality in primitive societies is generally recognized.[3] This applies even to the most primitive hunters and food-gatherers, though among them the effectiveness of personal initiative is necessarily restricted by the small size of their bands. It is significant that Levy-Bruhl, who in 1910 pronounced his theory of "pre-logic thinking" among primitives, thirty years later felt bound to recant.[4] Mühlmann's recent attempt (1954, p. 165) to save "primitivity" (das Primitive) as a distinctive attribute of the older stages of human development will hardly meet with approval.

The intentional use of fire and the presence of stone tools indicate clearly that even the most ancient men known to us were

[1] Feder, A. L., 1943, p. 9.

[2] Bernheim, E., 1908, p. 192.

[3] Koppers, W., 1928, pp. 249–265.

[4] Leenhardt, M., 1949.

fully human. It is impossible to assume that the makers of those tools were creatures without the power of speech, without family, and without any trace of spiritual culture. Obviously, like the primitives of today, they were fully in possession of the human mental equipment. Therefore they belong, in principle at least, to the subject of history.[5] This is being more and more recognized, as was shown on the occasion of the Wenner-Gren Foundation's International Symposium on Anthropology held in New York in 1952.

It is in the same sense that K. J. Narr (1953, pp. 341–355), concludes his important study, "Menschwerdung und älteste Kultur" with the words (p. 355):

"Als Plattform für alle weiterführenden Hypothesen werden wir also die ältesten sicheren Zeugnisse der Werkzeugherstellung, des Feuergebrauches und der Grosswildjagd ansehen dürfen. Sie mögen auf den ersten Blick als Quellen psychologischer Erkenntnisse nur allzu dürftig erscheinen, sprechen aber doch deutlich von kausalem Denkvermögen, bewusster Zielsetzung, konstruktiver Einbildungskraft, Setzung spezifischer Beziehungen, Abstraktionsfähigkeit, Weltgeöffnetheit, Gemeinschaftsleben und Sprache. Ihre gegenseitigen Beziehungen und Verknüpfungen lassen uns auch den 'Homo sapiens' (in wörtlicher, nicht zoologisch-systematischer Bedeutung des Wortes) (und den 'Homo faber'), das 'Zóon politikón' und den 'Homo loquens' als Aspekte der spezifisch menschlichen Geistigkeit erscheinen, die nicht ohneweiteres von dieser wesensmässigen Ganzheit einzeln losgelöst werden können. Von einer Entstehung der geistigen Grundlagen des Menschen im Sinne langsamer, schrittweiser Entwicklung kann die Urgeschichtsforschung mit ihren Mitteln nichts feststellen. Damit ist eine solche evolutionistisch-materialistische Theorie natürlich nicht widerlegt; aber wer sie vertritt, muss sich darüber klar sein, dass auch er damit eine metaphysische Stellungnahme vollzieht, eine geistige Entscheidung, deren Last und Verantwortung archäologische Forschungen ihm nicht abnehmen können."

The fundamental principle was clearly expressed by a prominent historian, Fr. Kern, who wrote (1952, p. 13):

"Man kann die volle menschliche Natur aus der Geschichte nicht erkennen, wenn man die Naturvölker auslässt. Sobald man diese breite Basis aller menschlichen Geschichte berücksichtigt, stösst man auf eine Historia perennis der menschlichen Substanz."

In fact, there is no reason for not linking ethnology and prehistory to history proper. This has not always been recognized. Ideological and practical reasons stood in the way. The difficulties came from both sides. Historians, as for instance E. Meyer, rejected the inclusion of primitive peoples in history by reason of their "not having become historically effective."[6] On the other hand, ethnology had drifted into a kind of evolutionism borrowed from the natural sciences and got itself ipso facto into contrast to history. It was the historian F. Graebner who helped ethnology to overcome this dilemma by applying to it the principles and methods of history.[7]

The difference between history proper and ethnology is merely due to the different character of their sources, history being based mainly on written sources, while ethnology has to rely almost entirely on the study of cultures and culture traits. To the general public, "history" means political history, wars, treaties, and other individual events, and the actions of known personalities. In view of the lack of written evidence, ethnology and prehistoric archeology have to renounce all this, save in a few exceptional instances. They are concerned almost exclusively with culture. With regard to culture, they differ from history proper not in essence, but only in lacking written sources.

Ethnology deals in general with contemporary cultures. However, it is obvious that the various cultures and culture traits differ in age. Are we able to determine their relative chronology, the regions where they originated, and their causal interrelations? It is here that the study of diffusion will have to play its decisive role.

PARALLELS AND CRITERIA OF RELATION

Historically directed ethnology will have to rely on cultural parallels for a starting

[5] Kraft, G., 1942; see also Koppers, W., 1952a.

[6] For a similar view, see Muhlmann, W. E., 1954, pp. 165–177.

[7] Koppers, W., 1952b, pp. 11–65.

point. We speak of such parallels if we meet identical or similar cultural phenomena in different parts of the world. In any given case, the question whether or not we are faced with true relation will depend on the degree of conformity and the number of "parallel" traits, i.e., on the "criteria of form and of quantity." Whenever this question is to be answered in the affirmative, this will have to be considered as a proof of diffusion. It will provide a means of determining the presence of relation, be it direct or indirect, and eventually may also yield a clue for the chronology of the cultures concerned.

The matter will best be clarified by presenting a special case, that of Australia. In this we shall rely largely on Frederic D. McCarthy's article (1953) on "The Oceanic and Indonesian Affiliations of Australian Aboriginal Culture."

FIFTY YEARS OF RESEARCH ON DIFFUSION IN AUSTRALIA

McCarthy's investigations have shown that all theories concerning Australia, as far as they were based on the old evolutionist idea of the psychic unity of mankind, will have to be abandoned.

"One of the earliest interpretations of the status of Aboriginal culture was that of Sir W. Baldwin Spencer, an independent evolutionist, who from 1899 onwards, supported by other Melbourne writers, claimed that the Aborigines had developed everything necessary to their well being, considering their wants and the materials available, unaided from other source. This group also believed that all local cultures in Australia are due to local causes, and that any attempt to compare the Aboriginal culture with those of the Old World, with races subjected to periodic invasions of different cultures or in contact with higher or lower civilizations, will lead to error. The explanation of the composition of Aboriginal culture, in all its aspects, is here wrongly attributed to the principle of local causation and independent evolution, as the discussion below will reveal. Professor Porteous, in 1931, claimed that the interior of Australia is the cultural centre but this claim is untenable in the light of present-day knowledge." [8]

[8] McCarthy, 1953, p. 245.

This also implies the rejection of E. Durkheim's well-known theory concerning the original and primordial character of Central-Australian Totemism.

In contrast to the representatives of the old evolutionist school, McCarthy cites the "diffusionists," beginning with F. Graebner. Of course, neither Graebner nor any one else has been able to solve all the problems concerning the Australian aborigines, but at least a good start has been made.

"On the other hand, an important group of diffusionists have accumulated convincing evidence of the importance of external influences on Aboriginal culture. Dr. Graebner, in 1905, pointed out that there are several related strata or levels of culture in Australia and Melanesia, and that traits from western Papua form an ancient diffusion into Australia where they were pushed into the extreme west by those from eastern Papua." [9]

McCarthy then lists Rivers, Thorpe, Davidson, and others who continued research along the lines inaugurated by Graebner. It is rather surprising that he omitted to mention Wilhelm Schmidt. After all, none other contributed more to elucidate the linguistic, sociological, and religious situation of the Australian aborigines.

"In my own papers on the subject, from 1939 onwards, I have stressed the importance of diffusion, local variation and trade in the development of Aboriginal culture as we know it today." [10]

Development of research in this direction was furthered by the inclusion of prehistoric archeology. Here, too, McCarthy's point of view is definitely historical.

"The Melbourne group led by Spencer, followed by Kenyon, Mahony, Mann and Mitchell, from 1899 to date, accept implicitly the hypotheses that (1), the nature of a stone implement, whether it be ground, chipped or flaked, depends primarily on the nature of the stone available in any particular district, and (2), that there is no such thing in Australia as distinct stages of culture or time periods corresponding to the Eolithic, Palaeolithic or Neolithic. I have criticized this attempted explanation in other

[9] *Ibid.*, p. 245.
[10] *Ibid.*, p. 246.

papers, suffice it to say that such an approach cannot solve the problems of Australian prehistory because current research has demonstrated that many relationships exist between Australian, Indonesian and Oceanic lithic cultures, and the materialistic interpretation, or local causation, must now give way to a broader cultural interpretation in which techniques and diffusion are important factors. The history of Australian axe-types, for instance, is not a local problem, but is an integral part of the history of such implements in the Oceanic region generally just as are those of New Guinea and New Zealand. Australian axes advanced as far as the round and lenticular transverse sections, but in Oceania they developed more fully with the quadrangular and hog-back types, among others. This latter approach is borne out by the establishment of twelve prehistoric cultures, by the study of their geological locale and the excavation of cave floors, in South Australia, New South Wales and Arnhem Land, but their relationships in point of age and time are not yet determined. These cultures represent two main groups of inland and coastal sequences." [11]

"It is now believed that the Eloueran culture of the coast (Eloueran = one of the coastal groups of south-eastern Australia) and tableland region, the Murundian of the Interior, the Oenpellian and Milingimbian (an axe culture) of Arnhem Land, are contemporaneous cultures which existed at the time of European occupation, and that the others extend back into the Mesolithic and possibly late Palaeolithic periods. It has not been possible to associate many of the economic, social, religious and other traits in Aboriginal life with the stone, bone and shell implements, rock paintings and engravings, and a few other items, of which the prehistoric cultures consist." [12]

The last sentence confirms a principle which we (Koppers, 1953/54, p. 56; also 1931, p. 231) stated more than twenty years ago, i.e. that material culture, social systems, and religious beliefs need not spread as one complex.

Turning to the question of the origin of Australian cultures, McCarthy states (p. 248):

"It is becoming more and more apparent that the sources from which Aboriginal culture has been developed lie ultimately in Asia. Professor Elkin has linked some of the psychic practices with those of Tibet. Hindu culture, which penetrated Indonesia so deeply, appears to have reached Australia in the music of Arnhem Land and in other minor ways."

Recently E. Drobec (1952, p. 305) pointed out that the medical notions and practices of Australian aborigines show definite connections with those of aboriginal tribes in India.

"We have no early or middle Pleistocene cultures, and the typological resemblances between certain biface hand-axes in the Gamberian culture of South Australia and the middle Pleistocene Patjitanian culture of Java (which forms part of Movius's chopping chopper-tool culture of south-east Asia) cannot be accepted as evidence of relationships between the two cultures." [13]

Since in this case typology is not unequivocally convincing, McCarthy rightly refrains from expressing a definite opinion. He does not deny the possibility of connection, but leaves the question open. Future research may possibly change the aspect of the problem. In any case McCarthy does not allow himself to be trapped into the premature conclusion, so often met with, that since connection cannot yet be proved, independent invention must be assumed.[14]

"The most archaic traces of culture in Australia comprise a few Palaeolithic stone-working techniques and types in our prehistoric cultures, such as the faceted and plain-butt knapping techniques, better known as the Clactonian and Levalloisian, and the stone points and flake-fabricators in our short-blade industries, but we do not know when they came to Australia. Another early relationship is that of pebble-choppers chipped on one side, with cores and hammerstones, which are found in Australia as the Kartan culture and south-east Asia and Indonesia as the Hoabinhien I culture. They belong to the late Pleistocene and Mesolithic periods between five and over ten thousand years ago." [15]

Following Graebner's line of thought, McCarthy says (p. 252) with regard to the culture of the first Australians:

"Although we cannot define the original culture as that occurring in either south-western or

[11] *Ibid.*, p. 246.
[12] *Ibid.*, pp. 247 ff.
[13] McCarthy, 1953, p. 248.
[14] Koppers, W., 1952b, p. 24.
[15] McCarthy, 1953, p. 249.

south-eastern Australia because diffusion has affected both regions to a limited degree, it is apparent that the relatively primitive culture of the south-western tribes is not far removed from a culture representing an admixture of Tasmanian and early Aboriginal elements. Many factors enter into an analysis of a problem of this kind, including the origin and diffusion of various customs, migrations of people, invention and local variation, and external affiliations, all of which cannot be discussed in detail here."

Here again McCarthy confirms that Graebner, Schmidt, and others have been fundamentally right in assuming that, apart from Tasmania and the little known Southwest, the relatively oldest culture is to be found in the southeastern part of the Australian continent. Moreover, McCarthy realizes that prehistoric data alone do not suffice to solve this problem, and that it is essential to co-ordinate the ethnologic, linguistic, and anthropological facts. J. Haekel's recently published article (1954) on ethnologic and prehistoric problems of Australia would seem to meet this request as far as possible under present conditions.

It is interesting to follow the trend of McCarthy's reasoning, based on years of intensive study of the Australian "Avenues of Diffusion."

"Earlier writers have laid stress upon separate migrations of Aboriginal people to explain the differentiations of culture that exist in Australia, but I do not believe this factor to be as important as the injections or streams of culture traits which passed through a limited number of entry points in Cape York, Arnhem Land and the Kimberleys. In other words, the Aborigines' is not an isolated culture which developed independently as is commonly supposed; it is one that has thrived, in a limited manner, on the continuous progress of Oceanic cultures with their roots in Asia. Thus we can distinguish a very large number of customs among all aspects of Aboriginal culture which have an unbroken distribution from Australia into New Guinea and Melanesia, and some further afield. They include customs which are ancient in Australia's cultural terms, and many others of more recent origin which have a limited distribution in the north and east, and which leave no doubt that they were introduced via Cape York whence they spread over the continent. The avenues of these cultures are obvious." [16]

[16] McCarthy, 1953, pp. 252 ff.

"The contact between the Torres Strait islanders and Cape York Aborigines has been long and intimate, as has that between the former and the Daudai-Fly river district Papuans. Physical anthropologists have shown conclusively that Melanesoid physical characters are present in northeastern Queensland and Cape York, and social anthropologists have revealed how deeply initiation and hero-cults, together with carving in the round, from New Guinea and Torres Strait, have penetrated the aboriginal culture in Cape York where the bow and arrow, skin-drum, and other un-Australian paraphernalia are used. The areas of local variation, in the material culture coincide only to a limited extent with the known distributions of languages, forms of social organisation, and physical variations." [17]

Here are the main facts resulting from McCarthy's study of Australian cultural history:

1. A more or less common basis characterized by a hunters' and food-gatherers' economy.

2. Recurrent participation in the development of cultural traits in Melanesia, etc., though the original appropriative economy was not discarded.

3. The cultural aspect as indicated by ethnology and prehistory agrees to a considerable extent with the results of linguistic and somatological research. However, the distribution of elements of material culture does not always coincide with that of languages and social systems.

The cultural relations between Australia and Melanesia are so numerous that McCarthy (pp. 253 ff.) was unable to list them all and refers readers to the special literature on the subject. The following passage is of particular interest.

"There is a small group of half a dozen traits introduced from Torres Strait into Cape York, and another small group—fish and game nets and netted bags—is present in both Australia and New Guinea but not in Torres Strait. This example of discontinuous distribution does not, in my opinion, negative the probability of a relationship between the Australian and New Guinea occurrences." [18]

McCarthy recognizes that, in this case, the criteria of form and number will not

[17] *Ibid.*, p. 253.
[18] *Ibid.*, p. 254.

allow of any doubt concerning the relations between the cultural complexes in question, despite the absence of continuity in distribution. In any case he refuses the easy solution of assuming independent origin. How thoroughly convinced he is of the importance of diffusion in Australian cultural history shows in his own words:

"The process of diffusion is an element of Aboriginal culture that has always been active from the earliest times to the present day." [19]

However, McCarthy realizes that diffusion is not all.

"Apart from diffusion, another very important factor in cultural development is that of local variation caused by the nature and scattered occurrences of raw materials used for making various articles." [20]

"These areas of local variation in the material culture coincide only to a limited extent with the known distribution of languages, forms of social organisation, and physical variations." [21]

As pointed out elsewhere (Koppers, 1952b, p. 33), it is only natural that, given the continuance of a hunters' and food-gatherers' economy, local developments will affect material culture, rather than the respective social systems or religious and mythological notions, although there is no fixed rule in this respect.

McCarthy (1953, p. 257) makes the following significant statement: "Invention, as such, is not a feature of Aboriginal culture." McCarthy attributes this to the Australians' appropriative economy:

"The stabilisation of their economic and ritual life, the limitation of transport, and the satisfactory efficiency of their material culture, have given the Aborigines little impetus to change their artifacts in any radical fashion." [22]

In the introduction of his article (p.244), McCarthy touches upon the same idea, and though he uses Australia as a typical example, he permits himself to glance toward the general history of mankind.

"Thus the historical background, conservatism, isolation and environment are among the principal factors which have led the Aborigines to perpetuate their traditionally established semi-nomadic economy. This mode of living is not altogether undesirable, even though it was followed by man for a million years or so before pastoralism and agriculture were developed. It is adaptable to varying environments, and it forces the inhabitants to integrate themselves both economically and ritually more intensively than do both pastoralism and agriculture."

We mention our expression of similar views thirty years ago (Koppers, 1924, pp. 426 ff.).

The final section of McCarthy's paper (p. 258) deals with "Barter and Exchange." Here too, there are no fixed rules or laws.

". . . some (traits spread) more quickly than others, but generally speaking, the older traits more extensively."

This was also stressed by Birket-Smith (1953), who emphasizes the non-existence of laws in this respect and the necessity to judge any given case according to its special circumstances.

Concerning the chronological problem, McCarthy says (p. 258):

"The time-factor in diffusion is an extremely interesting one about which little is known in Australia. The rapid diffusion of the tobacco and smoking complex in Oceania during the past three centuries illustrates how a trait can be absorbed so completely into a culture that it appears on the surface to be a basic or integral custom. It is paralleled in Australia by the rapid spread of major rituals in the Northern Territory, Arnhem Land, the Kimberleys, and Cape York. Herein, too, is exemplified the manner in which introduced customs either supplant those already practised or are adopted as complementary to the latter. Diffusion is also revealed by the names of objects. There are many tribes in eastern New South Wales which denoted the spear-thrower by *wommara* or a variation of this name indicating the line of diffusion of both the implement and its name. Many other examples of this type of diffusion may be found in Aboriginal culture."

Concluding (p. 258), McCarthy stresses the fundamental and decisive importance of research on diffusion for the solution of the problems of Australian culture.

[19] *Ibid.*, p. 255.
[20] *Ibid.*, p. 256.
[21] *Ibid.*, pp. 256 ff.
[22] *Ibid.*, p. 257.

"It is obvious from the above discussion that the cultural history and affiliations of aboriginal Australia constitute a problem of some complexity. The evidence for believing that culture infusion has been considerable is so overwhelming that the point can no longer be disputed."

Of course McCarthy (pp. 258–259) realizes that we are not yet able to solve all the relevant problems.

"We can up to a point distinguish the groups of traits, or the culture of the various movements of people which entered or made contact with Australia, including the Tasmanians, one or more waves of Australians, the Melanesians and Indonesians—but the antiquity of these movements is unknown. It has not yet been proved that it followed the classical chronology of Tasmanians, Australians, Melanesians, Polynesians and Indonesians into the Oceanic region, but it is apparent that the Australian problem is an integral part of the Oceanic one."

DIFFUSION IN A HIGH CIVILIZATION

Obviously, research on diffusion will yield the best results when written historical sources are available. It was a happy inspiration that prompted Margaret T. Hodgen (1950, 1952), to study the role of diffusion and acculturation in the history of English civilization. She deals with the whole period from about 2500 B. C. to the beginning of the twentieth century A. D. The results are of genuine interest and should be given full attention by ethnologists and prehistorians.

It is surprising to see how many innovations were introduced into England by diffusion from abroad and were eventually fused into local culture. Lack of space here forbids citation of details, tempting though it is. Separate chapters deal with innovations as known by historical documents and their integration into the social surroundings; with the process of diffusion; and finally with the role which historical events, particularly the immigration of new ethnic groups, played in the introduction of new techniques. Miss Hodgen rejects all attempts "to discover and describe the natural laws of change" by applying the methods of the natural sciences to the study of culture.

"Hence, when students of man adopt the procedure of natural science, when they elect with natural science to discover or describe the natural laws of change, and when, like natural scientists they abstract from the historical and the dated, they at one and the same time ignore that which is most characteristic of man, as a human and historical being." [23]

However, we can hardly agree with Miss Hodgen's notion that the lack of written sources does not permit definite conclusions about diffusion and acculturation in prehistoric times. In this respect we rather side with the opinions of Kroeber (1948, p. 702) and of Childe (1951, p. 13 ff.). We may also refer to the case of Australia as discussed above. True, Herskovits considers the dynamics of diffusion to be the sole legitimate subject of ethnologic research on this matter. This is no doubt too one-sided. Of course, whenever it is possible, we must attempt to establish, not only the fact of diffusion, but also the reason why it took place and the way in which it was effected. In this, Herskovits is right. Diffusion never consists of the mere mechanical introduction of new traits. There is always selection and integration into the existing cultural tradition. However, where there are no written sources and the process cannot actually be observed, the knowledge of the fact itself will still retain its value.

Miss Hodgen (1952, pp. 118 ff.) does not do full justice to Graebner in simply linking him to Elliot Smith and accusing him of having adhered to *a priori* assumptions. She obviously knows his theories only from second hand sources and probably would judge him differently had she read some of his work in the original. Nevertheless, this shall not impair the pleasure we took in reading her book. Miss Hodgen herself is well aware of the service she rendered to ethnology and prehistory.

". . . and undated distribution of primitive traits, now attributed by anthropologists to diffusion on slender or undated evidence, would receive some measure of dated corroboration. Its

[23] Hodgen, Margaret T., 1952, p. 29.

confirmation in even one inquiry, that has dated distributions as a problem and other dated resources for eliciting the steps and conditions of a process of distribution, would be added testimony for its adequacy in fields of humanistic study where dated evidence is unobtainable." [24]

THE DIFFUSION PROBLEM AS TREATED BY HERSKOVITS, KROEBER, LOWIE, CHILDE, AND WHITE

In his book, *Man and His Works* (1948), Herskovits repeatedly touches upon the question of diffusion. In this connection he also refers to the Vienna School of Ethnology. He reproaches us for not giving sufficient attention to the psychological aspects of diffusion, acceptance, and rejection. He admits that our methods suffice to establish the facts of diffusion, but thinks that it fails in answering the "Why." He objects that we do not take into account the psychological background of acceptance or rejection of cultural traits and therefore have nothing to say about cultural dynamics. According to him, our method is but a first step toward the study of culture change. The hypothetical character of the culture historical methods is said (p. 509) to prevent their being accepted as the basis for the analysis of causes, which, after all, should be the ultimate goal of scientific research in this field. Moreover, we are charged (p. 510) with "a mystical approach to the nature of life and human experience." It is difficult to see of what this "mystical approach" consists. All we can do is to say: "Quod gratis asseritur, gratis negatur." Herskovits' reproach that we consider the fact, rather than the "Why" of diffusion would seem to imply, not mysticism, but an excess of sobriety on our part.

Despite all this, we actually agree on numerous and essential points. This applies particularly to the appreciation of the importance of diffusion and the rejection of evolutionism.[25] Herskovits is perfectly right in pointing out (p. 474) that the selective process which always occurs in diffusion furnishes a decisive argument against evolutionist assumptions and constructions. He also rejects functionalism, of whose antihistoric tendencies he does not approve.

Herskovits' special concerns are the problems of acculturation, culture change, and cultural dynamics in general. This may, in part at least, be due to inspirations he received during this study of American Negroes. It is obvious that in this field it will not prove too difficult to discern the reasons why cultural changes are taking place. However, it would be unwarranted were we to remain satisfied with such relatively easy cases. The historically minded ethnologist wishes to probe into the greater depths of time, into realms where the determination of the fact of diffusion is still feasible, but the reason why it happened is no longer accessible. Herskovits himself cites, as such an instance, Hallowell's study of bear ceremonialism.

"Yet *how* all this happened, *when* it occurred, *where* it originated, and *by whom* the change was brought about, in such studies remain only for conjecture." [26]

We may well ask whether the proof of the mere fact of diffusion is not in itself of considerable import. Graebner devotes a whole chapter of his *Methode der Ethnologie* to the question of causality in which, after all, every historical investigation should culminate. However, if there is no, or only insufficient, indication of the causes, the fact itself still will retain its value.

As for the reproach of neglecting "cultural reality," we quote Graebner's words, "Ich suche tastend nach Spuren."

It is inevitable that in such a search for traces, cultural reality cannot always be taken into consideration in its full scope. But, as Graebner said, better no house at all, than a house of cards.

Herskovits correctly recognized (p. 509) the background of the historical character of ethnology in Central Europe.

"In consonance with the intellectual traditions of Central Europe, the insistence on ultimate ends and values of research marks this school off from the more pragmatic approaches of the other groups."

[24] *Ibid.*, p. 126.

[25] Herskovits, M., 1948, pp. 525, 539, 637.

[26] *Ibid.*, p. 526.

We need only to add that this is the natural result of the close relations between ethnology and history proper in Central Europe. Herskovits' inclination towards "pragmatic approaches" is obviously connected with his views concerning "the laws" of history. Although realizing the difficulties in this respect, he wishes (pp. 608 ff.) to save of those laws as much as possible, more than most European historians would be prepared to concede. Might that not be a residue of the former thinking along the lines of the natural sciences? This might explain Herskovits' doubts concerning the capability of the culture historical school.

". . . (the culture-historical school) can scarcely be said to have laid the ground for that analysis of cultural causation which must ultimately be the objective of the scientific study of the nature of culture or of culture change." [27]

On the occasion of the Wenner-Gren Foundation's 1952 International Symposium on Anthropology in New York, A. L. Kroeber laid such excessive emphasis on the unity of what in the United States is termed "anthropology" that we could not but raise objections against his statements. In stressing the autonomous character of cultural history we referred to Kroeber's own views as expressed in his *Anthropology* (1948). In this book he makes an unequivocal distinction between biological and cultural anthropology. With regard to the problems of diffusion he takes the same view (pp. 411 ff.) as the culture historians of Europe. This applies also to his not admitting (pp. 415 ff.) the existence of any "laws" in the process of diffusion. From the fact that diffusion of culture traits can be proved to have taken place in historic times he concludes (p. 702) that the same must necessarily apply to prehistoric periods. He admits of course that not everything can be explained by diffusion alone. However, while the study of diffusion offers fairly reliable results "the parallelistic opinion leaves the facts both unexplained and unrelated."

Kroeber does not seem to agree with the objection that Herskovits raised against certain points of the culture historical methods. According to him (p. 578), it is for the psychologist to study the mechanism of learning and imitation implied in diffusion. The anthropologist (i.e., the ethnologist), however, deals with *what* is being learned (or not learned), that is, the culture, its structure, its patterns, the interrelations between cultures, and of course cultural history. Kroeber does not admit any difference between culture history and cultural evolution. He is right in this: in the humanities history and evolution are indeed identical.

In his *History of Ethnological Theory* (1937), Lowie refers repeatedly to the problem of diffusion. In appraising Lowie's criticism of the culture historical school we must not forget that his book was published eighteen years ago and that much has changed since then. Since Lowie's views have been widely adopted it may not be out of place to rectify some points. He thinks (p. 178) that "Independent origins, while abstractly conceivable are therefore almost always ignored, though Schmidt and Koppers explicitly except the conical roof of Asiatic nomads and of higher hunters."

Hereto, we can only remark that the "Kulturkreis" theory has been abandoned for quite some time and that considerable progress has been made in the application of the criteria of intercultural relations. The same applies to Lowie's remark that the German diffusionists ". . . mistake analogies for homologous features," a remark which he exemplifies by pointing out (p. 184) the various possible ways in which duel systems may have originated in Australia and in America. It is obvious and has long since been recognized by culture historians that such pitfalls and possible sources of error must be avoided.

Lowie's opinion, according to which there is an evolutionist undertone in W. Schmidt's system, is hardly justified. He seems to have been impressed unduly by a purely superficial similarity with the old evolutionist ideas. Schmidt was deeply convinced of the historical character of his theories. It is really not possible to charge

[27] *Ibid.*, p. 514.

him with having adhered to evolutionism in its true sense.

Among the contemporary prehistorians V. Gordon Childe is more or less a protagonist of historical materialism. However, there can be no doubt but that he ranks among the most outstanding scholars of his field. Therefore it is of particular interest to learn of his attitude with regard to the problems of diffusion.

According to Childe (1951, pp. 12 ff.), diffusionists believe that "savages" are without initiative and ascribe all cultural development to a "chosen people." Obviously, this can only refer to the School of Elliot Smith and Perry. He considers that there need be no conflict between evolution and diffusion. Evolution has nothing to do with the question *why* cultures change—this being a concern of history—, but *how* they change. Here, Childe gets into conflict with Herskovits, but also with almost all historians as well. The latter aspire to both the "how" and the "why." Nevertheless, we note that Childe acknowledges the role of history together with that of evolution. Although much of his own work is definitely of a historical character, he does not renounce the tenets of evolutionism. This causes certain contradictions in his ideas. In this respect he shows a certain affinity to Leslie A. White.

Of course, we agree with Childe when he says (pp. 13–14) that diffusion is a fact, that it can be proved for material culture ever since the Early Paleolithic, and that diffusion of ideas also occurs. We no less agree with him on the difference between social and organic evolution and with his conclusion (p. 179) that cultural evolution is a rational and intelligible process.

Leslie A. White hardly touches upon the problem of diffusion. As does Childe, he attempts (1949, pp. 229 ff.) to separate history and evolution. White, who negates the free will of man, contests Schmidt, as well as Childe—the latter because he still believes (pp. 230 ff.) that cultural change can be intentionally initiated, controlled, or eventually rejected. White's system, which he calls "Culturology," definitely is oriented toward the natural sciences. He simply calls the driving forces of culture "energy." His "culturology" has not incorrectly been called a kind of "deification" of culture.

CONCLUSIONS

Summarizing our results, we may venture to make the following statements.

1. We have seen that man was from the very beginning fully human, possessing and creating culture. Therefore history in its wider meaning comprises the entire period from the appearance of the human race to the present day.

2. No serious scholar will deny the reality of diffusion, transmission, and acceptance. Childe even traces them as far back as the beginning of the Paleolithic.

3. The principle diffusion is particularly important in ethnology and prehistory. This, of couse, is due to the fact that they lack written sources and therefore are forced to rely on the comparative study of culture traits for the purpose of establishing the areal, chronological, and causal factors.

4. Comprehension and explanation of diffusional phenomena will have to use the well-known criteria of culture relations, the criteria of form, of quantity, etc. It certainly would not meet the facts should we speak of indications only as Mühlmann does (1954, p. 173) and not of history in the proper sense of the word. The cultural elements in question represent evidence on their own, as well as on grounds of their established interconnections; they cannot be discarded as mere indications, but actually represent some part at least of history.

5. Diffusion will not suffice to explain every historical development. Culture traits alone will never be able fully to substitute for reliable written evidence, but they will always furnish a valuable supplement. Should no written sources be available, it would be unreasonable were we to refrain from considering and interpreting archeological or ethnological facts. This the more so since the earliest periods of mankind, in some respects the most important in human history, lacked any written records.

Better incomplete knowledge than none at all.

6. Diffusional research will have to be based primarily on cultural parallels. Whenever these do not yet fully suffice to prove the existence of genuine relation, premature conclusions as to independent origin are nevertheless inadmissible. In general, we simply have to leave the question undecided.

7. The cases of Australia and England have given us a convincing demonstration of the vital part diffusion plays in the life of peoples and the spread of culture. We have seen that in this respect there is no essential difference between primitive cultures and high civilizations. At the same time, Margaret Hodgen's study of England has shown us how much can be learned from written sources for the deeper understanding of the diffusional process.

8. It is of fundamental importance that there are no fixed laws in diffusion, either in transmission, or in acceptance or rejection. Diffusion is always accompanied by some kind of selection and modification, and the apparently arbitrary ways in which these occur frequently have puzzled ethnologists.

9. Since there are no laws governing diffusion, there is no easy and infallible means to discover whether or not it took place. Mere theoretical deductions will be of no help. Every case will have to be judged on its own merit. Full command of ethnological methods, a thorough knowledge of the relevant facts, and, above all, the capacity of coordination will be indispensible.

10. This concerns also the much discussed problem of cultural relations between the Old World and America. The best method in this case will be to start on the younger and more differentiated culture complexes since they are less disintegrated than the older and more primitive and, moreover, offer more convincing evidence for comparison. This was already realized by Graebner (1911, pp. 144 ff.). It is the approach used by Heine-Geldern and Ekholm. Above all, I wish to refer to Heine-Geldern's recent paper on the Asiatic origin of South American metallurgy[28] which, in my opinion, will prove a landmark in research on Old and New World cultural relations and on the problem of diffusion in general.

11. As mentioned above, we have to reckon with the eventual stability of culture no less than with diffusion. In this respect too there is no fixed law and every case will have to be considered individually.

12. Even though Graebner's and Schmidt's "Kulturkreise" have rightly been abandoned for quite some time, wholesale rejection of all of their deductions particularly as far as they concern Australia would certainly be going too far. As we have seen, their methods yielded results which still can stand up in face of more recent research. It is significant that Birket-Smith (1953, p. 80) still recommends Graebner's and Schmidt's books on ethnological method.

13. Progress made in recent years is largely due to the systematic combination of ethnologic and prehistoric methods.[29] This also emphasizes the oneness of human history and human culture.

[28] Heine-Geldern, Robert, 1954a, pp. 347–423; see also Heine-Geldern, Robert, 1954b; Carter, George F., 1953; Ekholm, Gordon F., 1953.

[29] Koppers, W., 1953, pp. 1–16.

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Introductory

THERE are many questions of theory and method in anthropology that are of importance no matter which emphasis, historical or processual, is given to a problem. In Part Three, we touch upon only some of those that warrant review.

DOZIER is symbolic of a coming-of-age by anthropology, not only in the United States but elsewhere. Professional training (Ph.D.) and academic employment (Instructor) has been afforded a scholar of Hopi-Tewa ancestry, who now expresses his views on the anthropological concepts of "primitive" and "native." The historical development of the study of nonliterate societies is reviewed, and a brief account included on field techniques and methods, since the approach to field work is to a large extent influenced by the view of nonliterate societies. Then considered is the impact of the study of anthropology on the lay public and on the members of societies which have been the subject of anthropological study. The problem of selecting terminology for purposes of description and classification is both ethical and practical.

MANDELBAUM reports on the notable growth in recent years of studies by anthropologists of peoples of complex civilizations, and of the qualities of that kind of culture termed civilization. Discussion is principally of four main research enterprises: Kroeber's works on a large view of civilization, Benedict's and Mead's studies "at a distance," Warner's American community studies, and Lowie's national culture study of Germany. Brief mention is made of other recent publications on civilizations of Japan, China, India, Egypt, Israel, Europe, and Latin America. The prospects of civilizational studies, based upon a promising beginning, are considered fair and worthy. Sharper positive comparisons and a clarification of the anthropologists' comparative method are called for.

HOWELLS calls attention to the problems of studying the scale of human variation—the differences within likeness among men in their specifically human traits. He foresees increasing convergence of biological and cultural studies—such as students of culture and personality needing to know more about the biological basis of personality, its precise modes and range of variations—with genetics appearing to be a key factor. There are historic similarities between the early approaches of physical anthropologists and ethnologists—the one searching for racial types, the other for cultural types. The study of the type has been supplemented and supplanted by attention to individuals and the idea of variation. One trend is in the study of components of physical variation; the other is in human genetics. Latest developments in blood characteristics emphasize adaptation as a cause of racial differentiation. Though the genetic explanation of variability upsets the idea of group homogeneity and emphasizes human universality, group and individual differences nevertheless are real.

FIRTH considers the theoretical status of the concept of *function* and the recent substantial contributions made through its use. "Functional" concepts have been so absorbed in British thinking as to become commonplace, and surprisingly little attention is paid now by British social anthropologists to methodological consideration of function. This essay discusses the general sense of the term; the recent anthropological history of the concept, beginning with Malinowski and giving emphasis to the contributions of Radcliffe-Brown; and the general sociological contributions. The second half of the paper inquires into the general treatment of functional concepts in recent anthropology, followed by a review of

institutional studies that have been formulated with the aid of the concept of function. There seems to be a readiness to utilize the concept, either with or without specific use of the term.

LEWIS, as if in response to Mandelbaum's plea for clarification of the comparative method, holds that there is no distinctive "comparative method" in anthropology. He discusses comparisons rather than the comparative method—the method of a comparison being only one aspect of a comparison. Other aspects are aims or objectives, the content, and the location in space of the entities compared. From the anthropological literature of the last five years, 248 writings are analyzed and classified—28 dealing with theory and method in comparative anthropology, 220 reporting on comparative research. An outline for the classification and analysis of comparative studies is presented (Fig. 1, p. 264). The categories by which the studies are discussed include: global or random comparisons, comparisons between continents or nations, comparisons within one continent, comparisons within a single culture area or region, and comparisons within a single local group or culture.

KROEBER devotes special attention to those aspects of anthropology that have reached a new stage of development. He includes for mention: (1) a rapprochement of biological and cultural study; (2) novel items in linguistic and culture history; (3) general theory and methods; (4) values; and (5) fringe subjects invading anthropology. Attention is called to Huxley's position (as expressed in our Guest Editorial, pp. 3-26) as spear-heading the biologists' recognition of culture. Reciprocating efforts are exemplified by LaBarre's *The Human Animal,* which views culture as something unique developed *in* an animal. The problem of human nature is being reopened; and progress in culture studied for content and development. In linguistics, further use is urged of Swadesh's glottochronological method; and Greenberg's morphology of languages is termed a milestone. In culture history, the work of Redfield on the concept of peasant is reviewed, and the recent volumes by Redfield and by Coon cited as the first indications of challenge to Childe's interpretations of Old World pre-history as history. Slotkin's *Social Anthropology* is interpreted as symptomatic of a trend toward an overtly "social science" orientation for anthropology as contrasted to the older anthropology part natural history, part humanities in character.

TAX inquires into the integration of anthropology as a discipline. The question is not whether sets of data or techniques of different aspects of anthropology are or are not usefully related, but whether anthropology as a historical organic continuum, with a traditional organization related to a broad interest in man, has been and remains generally useful. The pieces of anthropology are now and always have been joined together in a unique and functioning whole. The basis of the integrity of anthropology was established with the first anthropological society, formed in Paris in 1839. The existence of anthropology as a discipline is predicated on the willingness of many varieties of specialists to participate in a system of intercommunication among themselves on problems directed toward the whole study of man.

BENNETT and WOLFF provide some answers to both Kroeber and Tax. They review some aspects of the histories of sociology and anthropology; they point up certain differences between the two fields; they note the emergence of an area of rapprochement in structural-functional research and theory. Bennett concludes with an exploration of the professional relations between sociologists and anthropologists in "joint" departments. The traits common to all of anthropology—perennial curiosity, the sense of the exotic, the universal image of man, and the method of "depictive integration"—can survive regardless of particular concerns or methods. Anthropology's humanistic orientation is the bridge between the "historical" and the "scientific" components of anthropology, and among the social sciences.

The Concepts of "Primitive" and "Native" in Anthropology

EDWARD P. DOZIER

Since 1953, Dr. Dozier has been Instructor in Anthropology at Northwestern University, Evanston, Illinois. Previously, in successive years, he was Social Science Research Council Fellow, John Hay Whitney Research Fellow, Instructor in Anthropology at the University of Oregon, and Wenner-Gren Foundation Post-Doctoral Fellow. He is author of The Hopi-Tewa of Arizona, 1954

INTRODUCTION

THIS paper considers the views of anthropologists toward the societies they have traditionally studied—"primitive" and "native" peoples. These views are considered in terms of the main currents of anthropological theory, because such views and the development of theory bear important relations to one another. A sketch on field methods and techniques has also been included, again because the approach to field work appears largely to be the result of the specific concepts and attitudes that anthropologists have toward nonliterate societies. Finally, the terms "primitive," "native," and the like, are analyzed for their validity as descriptive and taxonomic designations and with reference to their reception by the public-at-large and the peoples so designated.

The problem of terminological designations for nonliterate societies is an especially serious one. The fact that "primitive," "native," and similar terms are often placed within quotation marks indicates the shaky and unsure ground upon which they rest as designations for the societies which anthropologists study. That these terms are not used in a definitive and precise fashion reflects the growing and changing science of anthropology and also a changing world situation. As a science grows and matures it revises and regulates its terminology. More appropriate terms, both in a descriptive and taxonomic sense, replace the older and less appropriate designations. Among anthropologists there is an increasing awareness that these terms are unsatisfactory and inadequate.

Appropriate taxonomic and descriptive designations are more difficult in anthropology than in most other sciences. Students of the physical and biological sciences logically can be concerned only with proper descriptive and classificatory designations, but anthropologists, because they deal with human phenomena, must take into consideration the reception of these terms by the peoples they purport to identify. Anthropologists are thus in the precarious position of having to select terms which are adequate taxonomic and descriptive designations as well as terms which do not evoke a clamor of negative reaction from the public-at-large. This is felt more keenly today because the societies which anthropologists traditionally have studied are themselves in a ferment of change. The impact of industrialized civilization is penetrating into the most marginal and isolated areas of the world. In the process, large numbers of "nonliterates" are becoming literate and participants in "non-primitive" cultures. Anthropologists, therefore, have the task of selecting designations which

satisfy the requirements of their science and which do not offend the sensibilities of large numbers of people.

THE ANTHROPOLOGISTS' "LABORATORY"

Anthropology, or more specifically ethnology, has now and in the past depended for much of its basic data on descriptive studies of nonliterate societies. These societies, as generally agreed among anthropologists, have the following characteristics: (1) absence of a written language, (2) a relatively simple technology, (3) social institutions which are cast in a simpler mold, (4) smaller numbers, (5) relative isolation, and (6) societies whose cultures are in general characterized by a slower rate of change. The contrast is made, of course, to social entities with large populations, a written tradition, a complex technology and varied social institutions, and whose cultures are rapidly changing. Benedict's characterization (1934, p. 17) of nonliterate societies and her justification of them as an anthropological "laboratory" is worth quoting here:

> ". . . the most illuminating material for discussion of cultural forms and processes is that of societies historically as little related as possible to our own and to one another. With the vast network of historical contact which has spread the great civilizations over tremendous areas, primitive cultures are now the one source to which we can turn. They are a laboratory in which we may study the diversity of human institutions. With their comparative isolation, many primitive regions have had centuries in which to elaborate the cultural themes they have made their own. They provide ready to our hand the necessary information concerning the possible great variations in human adjustments, and a critical examination of them is essential for an understanding of cultural processes. It is the only laboratory of social forms that we have or shall have. . . ."

As a "laboratory," nonliterate societies provide other advantages as well. The investigator, who is most often an alien, can approach his work with detachment and objectivity—a difficult and often impossible task in the study of his own society and culture. The very complexity of literate societies also prevents comprehensive studies. Rapid communication systems such as telephones, radio, and television have complicated the situation further. The factor of size makes for divergent sub-groups with their own special kinds of values, social goals, and ethics, where the interrelation is so complicated that proper analysis presents in itself a methodological problem of considerable magnitude. In nonliterate societies, on the other hand, the cultures tend to be more homogeneous. There are fewer individuals involved, the patterns in the culture are comparatively regular, so that fewer variables must be dealt with. Moreover, the study of non-European, nonliterate societies helps us to understand the more complex ones. As Linton (1945, p. 12) writes:

> ". . . It is a general rule of science that research should proceed, when possible, from the simple to the complex and the ethnologist has been doing just this in his social and cultural investigations. . . ."

Benedict's statement as to the importance of nonliterate societies as a laboratory, however, is quite inadequate, since they are by no means the only social laboratory we have or shall have. Even when she wrote, those in the fields of personality-and-culture and community studies were exploiting other areas of research. Acculturation and "culture-contact" studies have long concentrated on essentially different kinds of situations, especially where industrialized literate societies have interacted with nonliterate ones. The contemporary tendency of certain anthropologists to drift away from their traditional "laboratory" will be discussed later in more detail; first we review briefly the historical development of the study of nonliterate societies.

HISTORICAL SURVEY

The early pioneers of anthropology, Morgan and Tylor, were among the first to use data from nonliterate societies in a systematic fashion. These writers secured their information about societies different from their own wherever they could get it: from the accounts of travelers and mission-

aries for the most part. In the vogue of the day, when "unilinear evolutionistic" hypotheses dominated investigation, nonliterate societies were considered "survivals," or degenerated societies. Such societies were most often and most consistently thought to represent "stages" in the cultural growth of mankind that culminated in the so-called "advanced" traditions of Europe. "Psychic unity" also characterized the thinking of the day so that the work of the early anthropologists was done largely in the belief that primitives represented the back-waters in the historical stream. The specific attitudes toward nonliterate societies as held by Morgan and Tylor are germane to report. Morgan writes in his *Ancient Society* (1877, p. 41):

"The inferiority of savage man in the mental and moral scale, undeveloped, inexperienced, and held down by his low animal appetites and passions, though reluctantly recognized, is, nevertheless, substantially demonstrated by the remains of ancient art in flint, stone and bone implements, by his cave life in certain areas, and by his osteological remains. It is still further illustrated by the present condition of tribes of savages in a low state of development, left in isolated sections of the earth's monuments of the past. . . ."

The attitudes of Tylor toward nonliterate societies are almost identical with those of Morgan. Indeed, in the quotation below (Tylor, 1891, p. 31), something akin to Morgan's three-fold classification of the world's societies into savagery, barbarism, and civilization is evident:

". . . We may, I think, apply the often-repeated comparison of savages to children as fairly as to their moral as to their intellectual condition. The better savage social life seems in but unstable equilibrium, liable to be easily upset by a touch of distress, temptation, or violence, and then it becomes the worse savage life, which we know by so many dismal and hideous examples. Altogether, it may be admitted that some rude tribes lead a life to be envied by some barbarous races, and even by the outcasts of higher nations . . . while the general tenour of the evidence goes far to justify the view that on the whole the civilized man is not only wiser and more capable than the savage, but also better and happier, and that the barbarian stands between. . . ."

The well-known fact that Tylor and Morgan examined a wide range of available literature on nonliterate cultures in their day must be re-emphasized, for they were scholars in every sense of the term. This is evident from their writing, rich in documentation. And while both of these men have been accused of being "armchair anthropologists," they had high regard for empirical data and each had had field experience. Tylor had traveled in Mexico, while Morgan is considered the first comprehensive field worker. His studies on the Iroquois of New York must be regarded as setting new standards for the investigation of nonliterate cultures.[1] Morgan also made several brief trips to the western United States at considerable expense and sacrifice to collect data at first hand (White, 1942, pp. 1–26). In addition, Morgan was in correspondence with large numbers of people throughout the world to obtain information about other nonliterate peoples (Lowie, 1937, p. 62).

Tylor, too, valued field work. As Lowie (1937, p. 71) put it:

"Tylor was not technically a field worker, yet he was the very opposite of an armchair anthropologist. That he saw Mexican natives in his early manhood and later (1884) paid a brief visit to Pueblo villages counts for something, but more important is his unremitting tendency to study culture in the very heart of a metropolis. He receives a Tasmanian skin-scraper and forthwith has it tested by his butcher; he peers into shop windows for a parallel of the Oceanian pump-drill; in Somersetshire he watches a weaver throw her shuttle from hand to hand; and discerning a problem in aboriginal gesture languages, he learns hundreds of signs in the Berlin Deaf and Dumb Institution."

We no longer hold with Tylor's view that human societies can be placed in a series of strata substantially uniform throughout the world. Nor do we go along with Morgan's axiom that all social institutions can be classified into neat stages of savagery, barbarism, and civilization. The writings

[1] Lowie, R. H., 1937, pp. 54–67; White, Leslie, 1951, pp. 11–17.

of Morgan and Tylor are significant, however, in the development and use of an important methodological approach in anthropology—the comparative method which both applied assiduously to their data. In their efforts to fit nonliterate societies into the evolutionary ladder they posited, they carefully combed the literature. They erred by forcing data into categories established on the bases of single criteria (social, political or whatever) or, in other cases, criteria heavily overweighted.

It is important to keep constantly before us the fact that anthropological studies were in their infancy when Morgan and Tylor wrote. The intellectual climate of their day made imperative the classification of phenomena into uniform, orderly sequences. Most important was the fact that studies of nonliterate societies were lacking for large areas of the world, and those that existed were of questionable validity. In view of these limitations, their impressions of "primitives" and their essentially untenable scientific and speculative assumptions become less grievous.

Morgan and Tylor have exerted considerable influence on several contemporary anthropologists, as is seen in the recent re-examination of their theories and assumptions by such students as White (1949) and Steward (1949). Though proof has not as yet been given, the evolutionary framework, through the use of more refined and controlled methods and in combination with historical and functional points of view, may give us more acceptable results.

After the turn of the century, anti-evolutionistic views emerged in both Europe and America. The most radical of these stressed the uninventiveness of man and tried to explain cultural content as ultimately derived from a single source. This extreme position was maintained by the British anthropologists, Smith (1929) and Perry (1923). These two writers, whose views were never accepted by the majority of anthropologists, attempted to explain the derivation of almost all cultural elements from one source—Egypt. Their postulations were based almost wholly on philosophical and speculative thinking. Their views of nonliterate peoples, therefore, were vague and undefined.

W. H. R. Rivers, the psychologist, whose anthropological interests dominated his later life, eventually affiliated himself with Smith and Perry as an extreme diffusionist (Smith, 1924, p. v–vii). Rivers did ethnographic research of a high caliber. The publications of his investigations among the Todas and to a lesser extent among the Melanesians constitute genuine contributions to descriptive studies of nonliterate societies. Heralding a view later made more explicit by Boas was Rivers' concept (1924, pp. 52–53) of "primitive" thought:

> "There can be no greater hindrance to progress in our attempts to understand the mind of man of lowly culture than the belief so widely held, that his actions are determined by motives having that vague and lawless character ascribed by many to the thought of savage man. There are even those who hold that such peoples as the Papuan and Melanesian have not yet reached the logical stage of thought. I believe there is no single department of social life in which it cannot be shown that this view is false . . . I hope the facts brought forward here are sufficient to show that, in the department of his activity in which he endeavors to cope with disease, savage man is no illogical or prelogical creature, but that his actions are guided by reasoning as definite as that which we can claim for our own medical practices."

More significant for the purposes of this paper are the contributions of the so-called Kulturkreis school of Fritz Graebner, Father Wilhelm Schmidt, and others. These anthropologists consider the peoples of the world as products of several core cultures which spread over the entire world after attaining essential characteristics in the Old World, especially in Asia. As these basic cultures spread, new elements were added and others lost, but in every case enough of the original complex remained so that each could be identified (Schmidt, 1939).

The views of the Kulturkreis school regarding the peoples they study, however, appear to be substantially the same as those of their predecessors and contemporaries, and representative of an older stratum.

Their attitudes thus differ from the present view toward nonliterate peoples held by American anthropologists, which was established by Boas and is discussed in detail below.

It is now important to consider the views of Boas and his students who are responsible for much of the present attitude toward nonliterate peoples and a novel approach to field investigations. The so-called American historical school emphasized the study of nonliterate cultures and rigorous field techniques. Boas insisted that all aspects of these societies be studied, and that cultural groups be described from within, from the viewpoint of the members of the society rather than from that of the ethnographer. He promoted the learning and use of native languages; where this was impossible he suggested recording of native terms, the collection of texts, and the teaching of natives to write their own language so that they themselves could record significant aspects of their culture.

For Boas and many of his students, nonliterate societies provided the only data for anthropological research. So much were such societies considered the legitimate laboratory of the anthropologists that the acculturation and extinction of nonliterate societies as such were viewed with alarm. Thus, for example, Linton (1945, p. 10) remarks:

". . . Until very recent times, ethnologists have limited their fact-finding activities to the so-called "primitive" peoples, those living outside the scope of the few rich and complex cultures which we call civilizations. The more isolated such groups and the more widely their cultures differed from our own, the greater has been the interest in them. The old line ethnologist is in the seventh heaven if he can find a group which has never seen a white man before and he views the current opening up of the far corners of the earth with all the alarm of any craftsman whose livelihood is threatened. . . ."

The conception of the nonliterate as mentally inferior and as an individual incapable of surmounting his "lowly level" of culture was specifically challenged by Boas in *The Mind of Primitive Man*. In this collection of essays Boas showed conclusively that the mentality of "primitive" man was not substantially different from that of "civilized" man. Boas demonstrated that the lowly station and inferior position in which a member of a nonliterate society is placed is merely the result of an ethnocentric comparison on the basis of one standard—the yardstick of the anthropologist's own culture. He insisted that investigations be made without such preconceived notions.

In terms of theory, Boas severely criticized the comparative method as it was employed by the classical evolutionists. In a paper condemning the comparative method, Boas (1940, pp. 276–280, 633–634) formulated two imperatives for anthropologists: (1) detailed studies of specific tribes in their cultural and regional context as a means to the reconstruction of the histories of tribal cultures and regions, and (2) the comparison of these tribal histories, with the ultimate objective of formulating general laws of cultural growth.

As is well known, Boas' first imperative was carried out in an admirable fashion by Boas himself and his students. The second task, the application of the comparative method, was largely ignored in the intense preoccupation of describing indigenous societies (Ackerknecht, 1954; Eggan, 1954).

Although the use of the comparative method was minimized by Boas and his students, they produced excellent descriptions of nonliterate societies. That so-called primitive societies were the "laboratory" of the cultural anthropologists was not doubted during this period. Most important in terms of this paper are the attitudes toward nonliterates and the efforts of the investigators to describe cultures in terms of the societies studied. This was true of all aspects of culture—the forms and categories were not to be imposed from without; they were to be "discovered." Bidney (1953, pp. 688–689) ascribes the attitude toward "primitives" and the reluctance to evaluate cultures of Boas and his students as an expression of the liberal and democratic climate of their culture:

". . . As liberals and democrats, they merely accentuated tendencies inherent in their culture

but professed to have derived their "higher tolerance" from a comparative study of primitive cultures. The idea of an "ethics of violence" . . . and of perpetual crises brought about through the conflict of social classes and national interests, which Marx and Sorel taught, did not enter into their peaceful scientific perspective at all. Had they thought in terms of the possible incompatibility and conflict of ideologies and of the doctrine of social revolution rather than of social evolution, they would not have labored under the naive optimism of cultural laissez-faire. It has taken the impact of the second World War to shake this romantic cultural optimism and to awaken anthropologists to the reality of cultural crises and to the need for cultural integration on a world scale."

In criticizing Boas and his students for their reluctance to evaluate cultures, Bidney also appears to reject the anthropological approach to the analysis of nonliterate cultures. This approach in itself does not condone cultural relativism; it advocates, rather, the need for discovering or ascertaining the unique cultural systems of nonliterate societies. It specifically emphasizes that one cultural model cannot be used in the study of another; for the standards and categories vary tremendously among diverse cultural groups. It is true that cultural relativism arose as a byproduct of this approach but it is not inherent in the approach itself.

Whether the scientific attitude of Boas and his students was derived from the study of nonliterate societies or from the values inherent in their own culture is unimportant within the limits and purposes of this paper. The approach of Boas and his students is significant, however, in establishing the fact that cultures of nonliterate societies are adequate and consistent systems. And most important, the approach has destroyed a former view of "primitives" as inferior, child-like beings or men incapable of rising above their assigned cultural level.

The contemporary British social anthropologists tend to regard their discipline as completely concerned with the study of nonliterate societies. This point was made by Evans-Pritchard (1951, pp. 10–11) when he reported: "Social Anthropology . . . can be regarded as a branch of sociological studies, that branch which devotes itself to primitive societies." The views of British anthropologists regarding the methods of studying these societies appear to be similar to those already sketched for contemporary American anthropologists, since they share with Americans an emphasis on field studies and, at least with Boas, the desirability for learning native languages (Firth, 1951, p. 474; Evans-Pritchard, 1951, pp. 76–77).

British social anthropologists differ, however, from their American colleagues in other significant ways. The most important difference, perhaps, is that they restrict themselves to a narrow range of cultural phenomena and, though they no longer reject history, they rarely engage in historical analyses. As Murdock (1951, p. 471) points out, "They are interested primarily in social groups and the structuring of interpersonal relationships rather than in culture, and in synchronic rather than diachronic correlations." Murdock concludes (1951, p. 472) that "British social anthropology [is actually] a specialized school of sociologists." With these statements Firth (1951, p. 477) is in substantial agreement.

Returning again to America, there is today—at least among many anthropologists—a trend away from the study of nonliterate societies to a study of modern communities and communities in transition. This is due, as one group of anthropologists sees it, to the disappearance of nonliterate peoples and therefore to the need to find a new "laboratory." Another group of anthropologists feels that the methods and techniques perfected on nonliterate societies can be applied with effectiveness to other types of communities. The former view is espoused by Kroeber (1953, p. 360) in commenting on community studies:

". . . It is plain that the present-day community study of a more or less isolated group within a larger society, and its particularities of culture, is merely a substitute for the old-fashioned holistic tribal study on which ethnography cut its teeth. Primitive persistencies just got to be fewer and fewer and became so remote that where formerly for a few hundred dollars one

could study a tribe for a summer, now one has to go off for most of a couple of years and it is a matter of thousands of dollars to do field work —and many native cultures are wholly gone, even as memories. So anthropologists faced with a shrinking material . . . have turned to the modern type of community study, which you can sometimes make by paying a dime and taking the subway somewhere downtown. In these community studies one can still use the traditional face-to-face methods, the familiar personal-relation-with-informants methods, which have been distinctive of anthropologists as compared with most sociologists and all economists."

Ralph Linton (1945, p. 10) emphasizes the utility of the traditional techniques and methods of ethnologists on modern communities and he reports:

". . . Ethnologists of the younger generation are less worried by the march of events [than old line ethnologists about disappearance of nonliterate societies]. The study of cultures widely different from our own has led to the development of techniques for fact finding and, above all, of attitudes of detachment, which lose none of their value when they are applied to civilized societies and cultures in transition. It is more romantic to study the natives of a South Sea island than a community of Iowa farmers, but the same scientific methods can be used with both and both can yield significant results. As long as human beings continue to live in communities and to develop special ways of life to meet special conditions the ethnologist will not be threatened with technological unemployment. . . ."

Kroeber, in his concluding review of *Anthropology Today* (1953, pp. 366–367), is frankly concerned about the survival of ethnology as a discipline devoted to the study of nonliterate societies: "I am about ready to abandon this baby [ethnology] to the wolves—to a premature fate or to a senescent death as one may see it." He then indicates why he believes ethnology appears to be vanishing: the decrease in primitives, the failure to make classifications and comparisons, and the tendencies to leap directly into large-scale speculations.

In answer to Kroeber's statements, Eggan (1954, p. 756) calls attention to cultures as yet untouched in the interior of New Guinea. He also points to untapped resources of peoples in Africa, India, Southeast Asia, Indonesia, and Melanesia. These last are cultures under change, a challenging "laboratory."

Beals' remarks (1953b, p. 65) in the introduction of a paper describing a community under the impact of industrialized civilization are also pertinent:

". . . Statistics are poor or nonexistent for many parts of the world, but by the most conservative estimate more than two-thirds of the world's people live in villages; the figure may well be seventy-five or eighty per cent or more. Moreover, the village is a conveniently small unit for the study of many problems of theoretical importance.

"Numbers and convenience are not the only reasons to study the village. Today the village world is in a ferment of change under the mounting impact of industrial civilization, and gives rise to some of the most critical problems of our times. The varied conditions of change likewise provide as near an approach to laboratory conditions as the student of man is likely to find. Both the needs of science and urgent practical affairs call for study of the village. . . ."

As for Kroeber's second point, the failure to make classifications and comparisons, Eggan points to the need of borrowing the methods and techniques of the British social anthropologists and for following the lead of Murdock as exemplified in his *Social Structure* (1949). Eggan suggests that we return to the basic problems American ethnologists were tackling in the 1920's and 1930's with new methods and points of view and greater range of concepts. He feels that the tendency to leap directly into large-scale speculations is diminishing. Eggan points to such investigations by Kluckhohn, Opler, Hoijer, Goodwin, and others among Southern Athapascan-speaking peoples as fruitful kinds of research. As other examples of effective utilization of the comparative method, he mentions Spoehr's researches in the Southeast and Redfield's studies in Yucatan.

Eggan (1954, p. 759) concludes his answer to Kroeber:

"I have suggested there may be some virtues in combining the social anthropological concepts of structure and function with the ethnological concepts of process and history. If we can do

this in a satisfactory manner we can save the 'ethnological baby' from the fate to which Kroeber has consigned it. . . ."

The interest in nonliterate peoples still is very much alive. The cultural anthropologist or ethnologist is vitally concerned with these societies although it may be difficult in some cases to tell the modern versions—the changed and acculturated communities. Yet the "laboratory" is rife with problems of theoretical importance, whether it involves a community in the traditional sense or the modern, changed variety.

FIELD TECHNIQUES AND METHODS

The inclusion of the following brief account on field techniques and methods is deemed appropriate because the approach to field work is to a large extent influenced by the view of nonliterate societies, especially as established by Boas.

The most recent and full accounts are those of Lounsbury on linguistics; Henry and Spiro on psychological techniques; Paul on interview techniques and field relationships; and Lewis on controls and experiments in field work.

What characterizes the work of anthropologists among nonliterate groups from investigations carried out by other disciplines is that of observation and interview. While working in a nonliterate society the anthropologist participates to a greater or lesser extent in the lifeway of the people. Among some groups this is essentially impossible, of course. White, for example, was unable to take part in Keres life, though he visited the various pueblos and observed public ceremonies when circumstances permitted him to do so. This was because of the intense reticence of the Rio Grande Pueblo Indians toward being studied. White (1935, p. 7) reported the peculiarities of field work among these peoples:

". . . To the reader unfamiliar with the pueblos of New Mexico it should be said that in most of them it is utterly impossible to do ethnological work in the open. The ideal of going out and "living the life of the people" is utterly impossible among the pueblos along the Rio Grande. On the contrary, these pueblos are very strongly opposed to telling outsiders anything pertaining to their customs and beliefs. Children are taught from infancy to tell outsiders nothing. Strict watch is kept over all that none may betray the pueblo's secrets."

Complete participation of an alien in a society unlike his own where physical characteristics set him apart from others in the community is probably impossible. The nearest approach to complete participation may have been achieved by Florence Kluckhohn. The varied kinds of participation and their advantages are fully discussed by Kluckhohn (1940) in her excellent paper.

"Going native," granting the possibility, has serious difficulties of emotional involvement and identity. Paul indicates that in such cases the investigator often ceases to be an observer and can no longer be counted within the fold of anthropologists. He cites (1953, p. 435) the instance of Frank Cushing at Zuñi who became so emotionally identified with the people that he refused to continue publishing his Zuñi data.

Another desideratum of the field worker among nonliterate societies is learning the language. In the earlier days this was almost a necessity when communities were wholly or largely monolingual. In more recent years the language problem has been circumvented by the use of bilinguals as informants or as interpreters. Kluckhohn (1945, pp. 111–114) indicates that some knowledge of the language is indispensable even if natives are bilingual or interpreters abundant.

The collection of texts in the native idiom was stressed by Boas and was essentially characteristic of his monographs and those written by his students. Texts are always helpful but perhaps more to the linguist and for the specialized interests of the student in culture and personality. Mechanical aids such as wire and tape records may be used in a variety of useful ways and are becoming standard equipment in the field. This statement also applies to photographs, either black and white or color. Motion pictures of various aspects of native life are extremely desirable, but the high cost of film and cameras and the

equally important consideration of their possible rejection by the people to be studied, tend to restrict their use.

Rigorous sampling procedures are usually not utilized by anthropologists interested in the general cultural patterns of nonliterate societies. As Mead (1953a, pp. 654–655) points out, sampling in anthropology is of a different kind, viz.: ". . . in which the validity of the sample depends not so much upon the number of cases as upon the proper specification of the informant, so that he or she can be accurately placed, in terms of a very large number of variables—age, sex, order of birth, family background . . . etc." This statement is based on the view of culture as an integrated system (especially relevant in a small, fairly homogenous group), and a few informants, as long as they are full participants in the culture, should be able to give you the general cultural patterns of the society. Essentially this is what Herskovits means when he reports (1954, p. 16) that an informant cannot invent a culture, any more than he can invent a language. However, Mandelbaum (1953, p. 185) has pointed out significantly that, when one is interested in the variations of cultural patterns, more careful sampling methods are essential.

THE NON-PROFESSIONAL PUBLIC AND THE "NATIVE"

But what of the readers of anthropological literature outside of our professional, select circle, for we cannot escape the impact of the study of anthropology on the lay public. Not only do we consider this a valuable and natural course of a science devoted to the understanding of behavior, of man understanding man, but in recent years a number of "popular" books and articles have been aimed directly at the non-professional public. Furthermore, we must realize that this literature reaches not only large numbers of literate peoples of industrialized societies, but also members of societies which have been the subject of anthropological study. Indeed, many of these people are themselves in professional positions, such as teachers, lawyers, medical doctors—even anthropologists. In other words, it is important to recognize the fact that large numbers of "natives" are now full participants in literate, industrialized cultures and contributors to a way of life which has been considered alien to them. They are strongly affected by the work of anthropologists, especially with the literature devoted to them and most particularly with the terminology used.

Any anthropologist who has addressed a large audience composed of persons of mixed backgrounds has realized that he has had to choose his words with extreme care when he talked of his "laboratory." Even the professional anthropologist most inclined to use such terms as "primitive," "backward," "savage," and the like has had to grope for substitute words. The problem of choosing proper and unoffending terminology has become increasingly difficult in professional publications, in the classroom, and in public lectures.

The lay public of non-"native" origin accepts for the most part the negative connotative values of anthropological terminology with respect to nonliterate societies. Since "racial," "mental," and cultural attributes of a people are ordinarily conceived as a *gestalt* by the public-at-large, the anthropologist's terms are accepted as characterizations of nonliterates in all three categories. Thus, when the term "primitive" is used to designate a particular nonliterate society, the popular assumption is that such people are racially, mentally, and culturally retarded. This concept of nonliterates appears crucial in the unfavorable reception often accorded anthropologists in their attempts to study modern communities. The objection to being studied by an anthropologist is apparently because the members of modern communities feel that they are being relegated to the category of "primitives" with all of the unpleasant attributes associated with this term and similar designations. The reaction of Hollywood to Powdermaker's study (1950) is evidence on this point. Hollywood raised a hue and cry about being classed as "savages"—this reaction was expressed profusely

and with great emotion in newspaper and magazine articles. Hollywood's response is thus a good index of what the lay public thinks about anthropology and the societies anthropologists study. Those anthropologists interested in modern communities are of course aware of this problem. The anticipated difficulties of entree and rapport have led to the assumption of more familiar and more "respectable" roles, such as those of teacher (Powdermaker, 1939), or "historian" (Paul, 1953, pp. 432–433).

To the public-at-large, it seems, then, anthropologists are those who study backward, crude, uncivilized, or savage people. It also should be emphasized that the terms used by anthropologists are interpreted by the lay public generally to apply to the physical, mental, and cultural characteristics of nonliterates. Anthropologists may present the case of these societies clearly and emphasize the contemporary point of view that there is no evidence to demonstrate the physical and mental inferiority of any people; but so long as they use terminology which has a popular etymology that belies scientific usage, just so long will the non-professional public consider and think of "primitives" and "savages" as such.

It is remarkable how term-conscious social scientists can be when they study literate communities. It is obvious that in the study of modern communities the positive or negative reaction of such communities is anticipated. Observe, for example, the fictitious place-names used in the published reports of: *Middle Town, Yankee City, Plainville, U. S. A.* In the last of these publications the writer even found it expedient to use a pseudonym. Sociologists, because they deal wholly with literate societies, consistently have been aware of terminology and have refrained from using emotionally or negatively charged terms in setting up classificatory or taxonomic systems. Thus dichotomies like "gemeinschaft-gesellschaft" and "urban-rural," do not carry the negative connotations that characterize anthropological designations. This is true of the essentially sociological studies of Redfield in Yucatan. His "tribe," "folk," "urban" designations do not connote negative meanings.

Except for a few notable exceptions, anthropologists have not taken the trouble to hide the identity of the nonliterate societies they have studied.[2] It should be emphasized, however, that many anthropologists have gone to considerable trouble in their published reports to safeguard informants, but for the most part these precautions have not been extended to whole societies. Even more rarely have anthropologists attempted to choose less offensive terms for the characterizations of nonliterates generally. Yet it is encouraging that even this censure must allow for exceptions. A few anthropologists, for example, have circumvented the more derogatory terms or those which have ambiguous designations. Thus, for instance, the recent introductory textbook on anthropology by Beals and Hoijer (1953) avoids the use of the term "primitive," yet lucidly documents achievements and developments in selected societies. Others use the more offensive terms in quotes or preface them with "so-called," indicating dissatisfaction and disapproval of such designations. Herskovits in *Man and His Works* (in which the use of "primitive" was first specifically rejected) makes a strong case (1948, pp. 74–75) for *nonliterate* as the appropriate term:

> ". . . Several terms to replace 'primitive' have been suggested. 'Non-historic' which is one of these, has not found much acceptance. It implies that absence of written history is the equivalent of having no history at all, which, of course, cannot be said of any people who exist in time. 'Preliterate' has found more favor, but the objection to be raised here is that the prefix *pre-* carries a meaning of time that infers prediction. It is, in essence, a carry-over of the 'contemporary ancestor' concept since it implies that peoples without written languages are at a stage antecedent to the one in which, presumably, they will devise, or at least acquire, writing. The third form, nonliterate, simply describes the fact that these people do not have written languages. It is sometimes confused with 'illiterate,' but the use of this latter word should be guarded against, since it carries a distinct

[2] For exceptions see Kluckhohn, Clyde, 1951; Mead, Margaret, 1932.

connotation of inferiority in ability or opportunity, or both. Nonliterate, because it is colorless, conveys its meaning unambiguously and is readily applicable to the data it seeks to delimit, is thus to be preferred to all the other terms we have considered. . . . It is to be recognized that commonly certain other characteristics go with an absence of writing. Nonliterate peoples are found on observation to be relatively more isolated, to have smaller numbers, and to be less addicted to rapid change in their sanctioned modes of behavior than those that have writing. In recent generations, moreover, Euro-American culture has had to be set off not only from nonliterate cultures, but from the literate cultures outside of Europe and America as well, because of the presence in European and American culture of a technology based on power machinery and the scientific tradition. But it must be recognized that none of these differences, except perhaps this last, is as clearly manifest as is the presence or absence of writing."

Agreement on an adequate term or terms, appropriate both as a classificatory designation and one free of unpleasant connotations is admittedly difficult. Although the term "nonliterate" has been used in this paper it is not a completely satisfactory term. Its possible confusion with "illiterate" makes it an unfortunate term to use. Moreover it is no better than the more negatively charged terms as a classificatory designation. Anthropologists however can seek better terms and in the meantime guard against using the more offensive terms like "primitive," "savage," and other similar designations. Terms like "tribe" or "tribal," "simple" or "simpler," "complex" or "less complex," and others carry less derogatory connotations. Such terms could be used interchangeably. It is true, of course, that any one of these terms under local or special cases might carry or acquire negative meanings; in such instances other more neutral terms should be substituted. In specific cases the term "folk" might be used although this has been given specialized meaning in the writings of Redfield and others[3] and may not be appropriate under all circumstances.

[3] Redfield, Robert, 1947. For criticism of the "folk" concept see Foster, George M., 1953, pp. 159–173; Steward, Julian H., 1950, p. 113.

The reasons for selecting terms which do not offend and degrade nonliterates are essentially ethical, but in view of the world situation, can be practical as well. It is appropriate to quote again from Herskovits, who is keenly aware of the problem. In the preface of his revised edition of *The Economic Life of Primitive Peoples,* recently reissued under the title of *Economic Anthropology,* Herskovits (1952, pp. v–vi) remarks:

". . . The change in title represents a reorientation in point of view that goes far beyond the question of mere terminology. Ten years ago, the word 'primitive' came easily to lips. It is only with the rapid development of communications of the past decade, and the growing integration of peoples of the most diverse cultures into the world scene, that the essentially pejorative and tendentious character of this designation, like others such as 'savage,' 'backward,' or 'early' when applied to any functioning way of life, became apparent. This is not the place to analyze the cultural or psychological problems of the emergent nationalisms found in expanding and newly literate communities of Africa and Asia and of other non-machine societies. Yet when their story is told, the role played by reaction of their leaders against designations of this order will be found to be a major factor in the latent or explicit hostilities of which these movements are in many cases the expression. . . ."

A similar objection was voiced by Mead (1953b, p. 351) in the discussion of the papers in *Anthropology Today:*

". . . [we must avoid value-laden terms] like 'native,' 'vernacular,' and 'primitive,' [which antagonize non-Europeans]. We have to watch at every turn that we do not compromise our capacity to work in the international scene in which each people makes a contribution to the science of anthropology, and recognize that only after each major culture area of the world has made its contribution can we have man commenting on man in terms of man's whole history of thought."

Professor Lips in *The Savage Hits Back* presents a well-documented account of the rise of nonliterate peoples throughout the world and paints a frightening picture of the awakening of millions of "primitives" to white exploitation and injustices. A brief

quotation (1937, pp. 25–26) from his book is important:

"The predominance of the white race is still an existing fact, but it has long since been undermined. It consists chiefly in the strength of the British Empire and the solidarity of Europe. We cannot in the future reckon with absolute certainty upon either of these factors. It is impossible to foretell here what the consequences of a new European war [World War II] would be. But one fact is certain: after such a war the white race will have lost the upper hand. Coloured nations will be employed in far greater measure than in the last world war to combat white enemies, and their racial feeling is being cultivated to a pitch whence it is turning against their own white masters. The white man has long ago ceased to be a God, especially since war strips the last shreds of mystery from the technical secret of his superiority. And Gods without secrets, especially Gods whose internal dissension supports them on feet of clay, are rapidly dethroned."

Much of Professor Lips' prophecy has been borne out. There is certainly greater race tension in the world at present than before the war. Asia and Africa are rife with "native" problems and white supremacy specifically is being challenged.

It is clear that the anthropologist no longer can hold out in his academic shell and be immune to the reactions of large numbers of nonliterates who deeply resent negatively charged terminology by which they often are characterized. Especially is this significant when the terms as used by the anthropologist often have no relevance to the connotative value given them by popular usage. Moreover the negative terms used for nonliterate societies do not have a precise descriptive or classificatory value. When the term "primitive" may apply equally to the native of Tierra del Fuego and the Inca of the Andean highlands; to the Bushman of South Africa and to the Yoruba of West Africa, what scientific justification is there for using it?

Anthropologists are aware of the inadequate descriptive and taxonomic designations used in their discipline. Steward, among others, discusses these problems significantly and extensively in his monograph on Area Research (1950, pp. 106–114). The remarks of White (1949, p. 21) are also germane; in arguing for more precise scientific terminology, he reports:

". . . The maturity of science in any field can be rather accurately gauged by its vocabulary: as 'a science' matures it develops its own terminology. This has taken place extensively in the physical and the biological sciences. And such words as *instinct, intelligence, race, society,* are now being found so difficult to use that it is likely they will give way soon to a more effective terminology."

To the list White might have added "primitive," "backward," and the like. We need a more appropriate taxonomic terminology, it is clear; but we must be careful to select terms which do not insult the status and sensibilities of the large numbers of people they purport to identify.

This plea for a more appropriate classificatory and a less derogatory-tainted terminology is not intended to suggest that anthropologists should not seek order, development, and even former conditions of society among nonliterate societies. There is no reason why we cannot have an adequate developmental classificatory scheme and still avoid terms which assign large numbers of the world's population into inferior, degraded statuses.[4]

[4] Grateful acknowledgment is made to the Graduate School, Northwestern University, for the aid provided in the preparation of this article. The author also wishes to express his thanks for helpful comments and suggestions by Dr. Fred Eggan, University of Chicago; Dr. William Bascom, Mr. Warren d'Azevedo, and Dr. M. J. Herskovits, Northwestern University. None of them, however, is to be considered as having endorsed or agreed, necessarily, with the organization, contents, or views expressed in the paper; for the latter, the author alone is responsible.

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The Study of Complex Civilizations

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THE term "civilization" generally means a culture which includes the use of writing, the presence of cities, and the development of occupational specialization. Such cultures are usually more complex, have more discernible parts, than are cultures without these criteria, but the term is a relative one. Some non-literate societies have maintained cultures undoubtedly complex, with cities and occupational specialization as well as many another special adaptation. And some societies in which literacy was present still have had little in the way of towns or occupational refinements.

Hence the term "complex civilization" carries the connotation of those cultures which have bulked large in time and space, and which have had many interlocking parts. The civilizations of China, of Japan, of India, of the Arab world, of Western Europe, come to mind as examples of such complex civilizations; each of them has a number of variant forms according to country or region or period.

In recent years there has been a notable growth in the study by anthropologists of peoples within the orbit of one or another of these civilizations. There has also been increased interest in the qualities of that kind of culture which is called civilization. Civilized peoples and cultures have never been excluded by anthropologists from their scholarly scope, but the main field efforts and the preponderance of analytical studies dealt with simpler societies and cultures.

A variety of reasons has impelled anthropologists to turn increasingly to the study of civilizations. One reason, perhaps not a major one, is the fact that there are fewer simple, autonomous societies than there were even a few decades ago. Another reason is that some anthropologists, having developed certain concepts and methods with data from primitives, have sought another set of cultures on which their concepts could be tested and in which there was more elbow room in documented history than was available for the unlettered cultures.

Not the least of these reasons lies in the general temper of the times in Western civilization, particularly in the more westerly parts thereof. Two world wars have left, among other things, a widespread concern for a better understanding of human behavior and some sentiment that the anthropologist's approach may be helpful. The experience of a good many anthropologists during World War II in dealing with practicalities in various civilizations may well have hastened the trend toward observing cultural forces among the numerically predominant and historically documented peoples. Thus, in the preface to his book *Amazon Town* (1953, pp. vii-viii), Charles Wagley tells how his first field work in Brazil was in 1939 among an isolated Indian tribe which still followed the ab-

original way of life. Two years later he returned to study a less isolated tribe, one that was being drawn into the national culture. Then during the war years, "I learned about Brazil both as an anthropologist and as a practical administrator. My anthropological perspective was of tremendous help in the work of administration and planning, and in return my growing familiarity with practical problems helped to sharpen the focus of my scientific interest in Brazil. . . . I became aware of rural problems as viewed both by the people themselves and by the planners and executives from the city."

The present writer had similar experience in India in 1937. In preparing himself for field work in India, Mandelbaum studied Sanskrit, read Indian history, acquainted himself with the classic literature. But such was the anthropological climate then that he chose as subjects for field study certain isolated tribesmen in the Travancore High Range, peoples more remote culturally from the main tradition of Indic civilization than are most on the sub-continent. After a brief period among them, he moved on to work with a group closer to the main civilization. The inclination to study villagers and to examine the main tradition was apparent before the war, but it was encouraged, in India also, by the experience of anthropologists in their wartime duties. Now only a minority of anthropologists arriving from abroad to do ethnological field work in India choose to work among tribesmen.

The following review of the anthropological literature dealing with complex civilizations, published during 1952–1954, selects for discussion four main research enterprises. Two of them, Kroeber's and Warner's, were begun considerably before World War II. The third, which was initiated by Ruth Benedict and later led by Margaret Mead, developed out of wartime assignments. A wartime teaching task gave rise to the fourth piece of research, by Lowie, which is considered in some detail. Only brief mention can be made of other relevant writings, some of them of major caliber.

Because many a writer in the social sciences and humanities deals with complex civilizations, an arbitrary limitation of the scope of this survey had to be made. It is confined to writings by anthropologists and reviews of their writings, with only a very few exceptions. Many a meritorious work by sociologists, historians, philosophers, and others could not be included. The bibliography, which was completed with the help of Pertti Pelto and Kathryn Huggins (to whom our thanks are due), does not claim to be complete, since anthropologists habitually publish in such a wide variety of expected and unexpected sources that any attempt at exhaustive coverage was not feasible. Studies dealing with only a narrow segment of culture, or with a particular set of social relations, or with a single institution—albeit within a civilization—generally have not been included in the bibliography. The titles listed are of papers which devote some consideration to a complex range of patterns within or among complex civilizations.

A LARGE VIEW OF CIVILIZATION

A. L. Kroeber's interest in the study of civilizations is of long standing and has yielded some of the most significant writings in the field. In an article of 1953, "The Delineation of Civilizations," Kroeber discusses certain fundamental problems which are entailed in the comparative study of complex, literate, and historically documented cultures. Foremost among these problems is that of defining the entity which is to be described and compared.

This paper was addressed to historians and it makes special note of those few among historians, such as Danilevsky, Spengler, and Toynbee, who have tried to make systematic comparisons between whole civilizations. Among them, Toynbee especially has recognized the importance of formulating criteria by which a culture-whole can be defined.

Kroeber notes that anthropologists have long been accustomed to describing whole cultures, but mainly tribal cultures. They have been reluctant to deal comparatively

with civilizations, partly because of inexperience with the documentary record, partly because of the size of the subject. Studies of communities within one of the great civilizations have been concerned with a cell or an organ rather than with an autonomous whole, this article notes, and anthropological works of larger scope—as of national character and ethos—are not likely to face the problem of what delimits a major civilization.

Six criteria are proposed by which such delimitation can be made; discontinuity in space or time, language, religion, political and military development, economy and technology, style. "To the student of culture, civilizations are segregated or delimited from one another by no single criterion: partly by geography, partly by period, partly by speech, religion, government, less by technology; most of all, probably, by those activities of civilization that are especially concerned with values and the manifest qualities of style." (Kroeber, 1953, p. 275).

With his usual perspicacity, Kroeber has directed us to a fundamental problem which, when satisfactorily resolved, can open the way to further analyses of civilizational wholes. He has given us a grip on the problem, a hold which is fairly secure until we meet the crucial concepts of value and style. Here our grasp of the matter becomes less sure and we may turn to some of Kroeber's other papers for additional discussion of the study of civilizations.

These papers appear in the final section of "The Nature of Culture" (1952), a volume of selected papers; this part is subtitled "History and Process in Civilization." In the introduction to the section, the author gives an overview, as of 1952, of the studies there reproduced. The earliest of them, "Order in Changes of Fashion," was published in 1919, an outgrowth of an interest that was even then of twenty years' standing. This analysis was continued in the 1940 monograph *Three Centuries of Women's Dress Fashion: A Quantitative Analysis.*[1]

"The purpose of both studies," Kroeber writes (p. 329) in his introduction of 1952, "is to find pattern in so fluidly capricious a thing as dress fashion, and to express quantitatively and objectively something of the qualitative behavior of change in pattern. In 1919 . . . demonstration of the mere fact of pattern in culture seemed a triumph. However, it is plain that even then I was not seeking to establish recurrent uniformities between different cultures. The regularities announced exist within one small domain of a single civilization: they are a piece of a history." Yet we may note that while the dress fashions studied are all within European-American civilization, the study did entail regularities among the wealthier classes of several different national cultures—mainly British, French, Austrian, and American. The basic pattern of evening dress was the same in these cultures, and there were similar variation rates in the several cultures within the limits of the basic pattern.

A bold fresh view of civilization—in the singular—is presented in another paper of the section, "The Ancient Oikumenê as a Historic Culture Aggregate." The focus of this view, in the words (p. 331) of the 1952 introduction, is ". . . the history of all civilization seen as an intricately interconnected single whole, gradually coming to cover the main land mass of our planet. How far, in short, can the history of higher civilization be seen as a unitary process, as a single, large-scale, long-term *event?*"

The opening passages of this paper set the scene for the analytic exposition. A culture or a part thereof, Kroeber writes, must be studied in relation to the totality of known culture. By placing a particular complex against the grid of the known range of variation, its individuality or its genericness may be understood. The ultimate natural unit of study for ethnologists is the whole grid, all of culture. And we build up our knowledge of the parameters of culture by systematic comparisons, one

[1] All the papers in the section, except for the one of 1919, appeared originally between 1939 and 1951, ". . . the period in which I was either working on *Configurations of Culture Growth* or trying to follow farther the problems raised therein." (p. 329).

particular culture with another, until we understand something of the nature and range of all of culture.

These comparisons involve, the paper continues, three aspects of cultural phenomena, (1) content, (2) form or style, and (3) the values of the content and of the style. Content remains much the same wherever it is carried; form and values vary from culture to culture and from period to period. The main conclusions of the paper concern the first of the three aspects, culture content. Style and value, the aspects in which each great civilization displays its individual qualities, are more briefly explored.

The Oikumenê is a vast nexus of cultural content which has developed among peoples on the Eurasiatic land mass and, more recently, has been extended to the Americas. The term means "the inhabited," which is what the Greeks called their known habitable world: Kroeber (p. 379) shifts its ancient meaning from "range of mankind" to "range of man's most developed cultures." It is shown to be a great web of culture growth, reaching from Japan and China to Britain and the Americas. Within it, Kroeber writes, new cultural materials such as sculpture, domesticated plants and animals, divine kingship, have tended to be transmitted from end to end. New idea complexes and their related practices similarly tend to spread through a long stretch of the area. The generative center for many new culture elements has been in the region of Egypt-Mesopotamia and, as the element was taken up successively by outlying groups, each group developed the element to a new intensity. "The simile inevitably rises to mind of a spark somehow falling on a textile, slowly smoldering, and finally beginning to eat its enlarging way through the fabric, the greater intensity of combustion being always where the flame has reached only lately, until the spatial frame of the cultural web is reached with, so to speak, the oceans." (*Ibid.*, p. 380.)

Not all inhabited areas have been part of the web. The author notes that Australia and native America, for example, have not. But primitive peoples within the Oecumenical land mass, or adjoining it, have derived their cultures through reductive selection from the civilization characteristic of the Oikumenê as a whole.

The geographic and social limits of the Oikumenê are thus sketched, and further study of this world stage may proceed. We may want to ask why certain cultural materials have been taken over in every part of the stage and others have not, why transmission has been more rapid for some elements and slower for others, why some peripheral peoples have quickly come to adopt the materials of civilization while others have persistently held off.

In the paper "The Novel in Asia and Europe," Kroeber does offer some suggestions on one such question. He finds that the novel, in its main varieties, has appeared only within the past millenium and has flourished only in the far eastern and far western edges of Eurasia. The two novel writing traditions apparently evolved quite independently of each other. "This coincidence," the paper concludes (p. 416), "most likely roots in the fact that during the late period it was only on these two peripheries that there existed forms of civilization that were at once mature and yet still vigorously productive in creativity."

Of the other papers in the section, we here can mention only the one entitled "Is Western Civilization Disintegrating or Reconstituting?" in which certain trends of civilizational development are postulated. The kind of development traced does not clearly prevail in technological activities, the "reality ingredients," which are more unendingly accumulative than are the value activities. But in a fine art, a philosophy, or a science, Kroeber notes (p. 402) a usual rise and fall. A value or a style "tends to develop and progress, even though it later degenerates and dies. An art or a philosophy moves on; it cannot continue to spin on a pivot." Each civilization is essentially characterized by its own particular styles and values, and these are always in a state of developmental flow. This development is not reversible, although a culture may be rearranged at some juncture

of history and be started off in a new direction.

The question posed in the title of the paper is answered by comparing the present stage of Western civilization with that of its earlier periods. The author concludes that it appears somewhat likely, or at any rate possible, that our civilization is in a second stage of reconstitution, rather than in one of dissolution.

The final paragraph (p. 408) of this paper tells us that the analysis is an endeavor in applied anthropology, of a long-range variety. It leans heavily on history, "with emphasis, for the time being, not in the mere events of history, which are as unending as the waves of the sea, but on the qualities of its secular trends; and that these trends be construed, so far as possible, in terms of the style-like patterns which so largely characterize civilizations, and in terms of the developmental flow, interactions, and integration of these patterns."

If, after reading these papers, we seek sharper criteria for distinguishing these "style-like patterns," or further leads toward formulating the characteristic values of a civilization, it is because we have been made aware of that bright and promising terrain for anthropological study to which Kroeber has pioneered. His concepts, however they later may be amended or reconsidered, have the virtue of being organic to specific observations, and are not as external to the data and entangling as are, say, those of Toynbee. Indeed, Kroeber's comment (p. 378) on Toynbee's scheme applies also to his own, better based approach, ". . . this scheme has served him [Toynbee] well as a scaffold from which to rear a most stimulating structure of fertile comparative interpretations of a large part of human history."

Perhaps the fundamental problem which Kroeber poses for himself in these studies is the broad exploratory search for regularities in the development of civilizations and of civilization. The sweep of the search is vast—within a civilization, among civilizations, in the whole of civilization—a search to be undertaken only by a venturesome mind of large courage and compass. The method is to choose a likely subject, such as dress fashions, sculpture, the novel, or an intriguing idea, as the developmental flow of civilizations, and to compare the various occurrences in space and time and context. The comparisons require concepts, such as those for the delimitation of a civilization, or for the distinguishing of content and value. The concepts are built up as the exploration is carried on, and as further investigation appears to require the development of new concepts or the refurbishing of old.

The results of these studies have been to bring significant regularities to light: those documented in the "small domain" of evening-dress fashions draw attention to the stability of pattern limits (of the basic dress pattern, in this case) within which the apparently aimless fluctuations follow a long-term swing. During the last three centuries, the secular swing has been affected, though not disrupted, by the general state of the whole culture and society.

Another set of regularities postulated by these studies has to do with the developmental tendencies of whole civilizations: that, for example, the values which characterize them do not remain constant but are impelled to develop, that the development is irreversible but reconstitutable. The contemporary implications of reconstitution or disintegration are equalled by the current applicability of the concept of the Oikumenê: If an interwoven cultural network has existed over the main habitat of humanity since times primeval, how much more total is its scope, more intense its effects, and how much more rapid is transmission within the modern Oikumenê, in this the twentieth century? The importance of this fact for a knowledge of man and society has not escaped anthropologists and they have been turning in increasing proportion and with mounting interest to studies of peoples within this new total culture sphere.

STUDIES "AT A DISTANCE"

A series of studies, reflecting such growing interest, was initiated with Ruth Bene-

dict's *The Chrysanthemum and the Sword* (1946). This holistic depiction of Japan has drawn wide comment, and in 1953 there appeared a most interesting summary of the professional articles and scholarly symposia devoted to the book which have come from Japanese scholars (Bennett and Nagai, 1953). Most interesting, because it reviews the appraisals by sophisticated and learned members of a society of an anthropologist's analysis of their civilization.

Benedict's work does not try to compare various civilizations, as does Kroeber's, nor is it concerned with the nature of civilization in general. It mainly sketches the principal motifs in the single civilizational whole of Japan. An assessment of these motifs and the method of deriving them is not within our present scope, but the Japanese reactions to the book, as brought together in 1953, deserve comment.

The methodological criticisms which the Japanese scholars make are not essentially different from those made by American and European reviewers. Bennett and Nagai classify them under six headings. (1) *The meaning of "Japanese."* Benedict is said to be unduly vague about which Japanese are meant; differences of class, region, and period tend to be glossed over. Moreover, the patterns of behavior are ideal-typical patterns, which reflect what many Japanese like to aspire to or want to believe of themselves, rather than their actual, real behavior. (2) *The meaning of "culture."* The concept is endowed, say some of these critics, with deterministic qualities; hence, that which the study seeks to prove is also assumed. (3) *Use of empirical data.* Most of the critics note that interpretation of the data tends to be over-generalized. Statistical variations are not taken into account; the differences between what people say and what they do is not distinguished; hypotheses about the effects of child-rearing practices are not convincingly linked to the evidence. One critic, with training in philosophy, remarks that these over-simplifications come from Benedict's working model of a simple, primitive society; hence she sees Japanese society as though it were uncivilized and undifferentiated. This comment is particularly significant since, as we shall see later, it is repeated in relation to other works using Benedict's approach. (4) *Need for an "institutional" approach.* This whole-culture approach seems too static to several of the critics, too severely integrated, and too heedless of conflicts and differences. It should be replaced or supplemented, they say, by studies of varying institutional contexts which would bring out conflicts and differences. (5) *The problem of historical change.* Benedict is said to overemphasize the continuities in the culture and underplay the vast changes which have come about. (6) *Need for an interdisciplinary approach.* The task of analyzing a modern, complex society is simply too much for any scholar, working alone, to attempt. A team of cooperating specialists is needed for the endeavor.

Yet for all these pungent critiques, warm appreciation of the book was expressed by the critics. Some of those who objected to Benedict's interpretation of the information she obtained from respondents, applauded the fact that she collected this information at first hand from living respondents. The empirical procedure seemed to them a long step in advance of the more purely speculative trend which had prevailed among Japanese social scientists. While a number deprecated the adequacy of Benedict's lone resources in sizing up a whole civilization—and one which she had never seen functioning in its homeland—they still were favorably impressed by her use of diverse sources and specialists and by her deft organization of those data which she could muster.

Similarly, although these Japanese commentators were strongly critical of some of the concepts presented, they were especially attracted to her general approach, ". . . the battery of imaginative insights and concepts with which she interpreted her data. Particularly important here was her attempt to portray the *whole* of Japanese culture—a goal which has been common enough in certain branches of Japanese humanistic studies for many years." (Bennett and Nagai, 1953, p. 406). Characteristic of these comments is one which was pointed

out and translated by Mr. Takao Sofue. It was written by Kawashima (1949, p. 263), a scholar widely respected in Japan and Professor of Sociology of Law at Tokyo University: "It is wonderful that the author, who had never been in Japan, could delineate so vividly the various hidden aspects of Japanese mental life and culture . . ."

Thus, despite the grave faults they find in it, the book has impressed a number of these Japanese writers as a stimulating and seminal work, one whose scientific leads should be followed. Part of the acclaim may be due to the fact that the first Japanese edition appeared in 1948 when there was great interest among educated Japanese both in reexamining the nation's career and in knowing the views of Americans about it. The Japanese publisher's blurb did not hurt sales, however much it may have violated the facts. Mr. Sofue relates that it read, "It is this book that decided the final occupation policy of MacArthur."

But there seems to be more to their good estimate than merely the special interests of the early post-war years. The books does seem to tell something about their civilization which they had not known before, or had only partly known and had not seen formulated, as Benedict attempts to do, for the whole culture. It may be that an oversimplified model for investigation, which blithely, perhaps deliberately, glosses over statistical variations, may have some uses toward the understanding and the further study of a civilization.

Yet another effect of this book must be noted. Whatever its stimulus value may be for scholars, it had a relatively wide audience in Japan and among many Americans who have lived in Japan. Readers of both kinds usually found much that was interesting, pertinent, and enlightening (if irritating) in the book. To a good many of them, anthropology came to mean a study that was concerned with problems of living people here and now, as well as with the long ago and far away. The public image of a discipline does not necessarily determine its course, but it is also not irrelevant to the direction which that course may take.

The direction of study set in Benedict's book on Japan has been followed by more recent works, most of them the results of the Columbia University Research in Contemporary Cultures. This project was inaugurated by Ruth Benedict under a grant from the Office of Naval Research. After her death, the project was led by Margaret Mead. One of the first book-length studies to emerge from that project is Mark Zborowski and Elizabeth Herzog's *Life Is With People* (1952).

It is a depiction of the *shtetl,* the Jewish small-town community of Eastern Europe, mainly as it existed in the years before World War I. Shtetl culture was a distinctive civilizational sphere, even though it existed in a vast series of cultural islands scattered within various national cultures. While it was not clearly set off from the environing civilization by spatial or political criteria, it was clearly distinguished from them in many ways. The book is mainly concerned with depicting the central and distinctive attributes of shtetl life.

In the sense that it deals with the major themes which wove through the whole fabric of that life, and is a generalized "composite portrait" which does not aim to portray any one community or attempt to give a corpus of ethnographic detail, this work is an example of what has come to be called the patternist or configurational approach. The authors give their theoretical outline in an appendix (pp. 431–432) and in it one can see readily how they have shaped the study to bring out the main emphases of shtetl life. The subject of the first of the five parts of the book is "Sabbath as a culture theme." Then follow such discussions as that on the role and symbolism of the sacred Law, on "good deeds" and the institutions of the community, on the life cycle and the calendric cycle. The final section is entitled "As the Shtetl Sees the World."

Hence this work, like Benedict's on Japan, presents a generalized inside view of a civilization, sketching the highlights of experience and the broad linkages of

people and ideas within the orbit of that civilization. Like Benedict's book also, it had to be done "at a distance." Not, in this case, because of a wartime necessity, but because of the physical extinction of that way of life. The shtetl study, too, draws on a wide range of resources—literature, law, folklore, as well as living respondents. And the fact that the respondents had been long removed from shtetl society may have made for a greater nostalgic recall of harmony and rewards than of misery and conflict. In one major respect the shtetl study was done differently: it was based on the work of a team of cooperating specialists. The two authors thus had the advantage of utilizing the preliminary studies and the advice of their co-workers when they came to write the book.

It is remarkably well written. Cahnman, a sociologist who was not uncritical of the theoretical foundations of the study, nevertheless began his review (1952, p. 655) with the sentence, "This book makes beautiful reading." Anthropologists are coming to be more cognizant of the humanistic component of the discipline: this is a fine humanistic contribution to anthropological literature, perhaps even to literature in the wider sense as well.

Reviewers were not loath to point out sundry short-comings of the book, but the various critics agreed that it gives a vivid sense of the main concerns and meanings which underlay shtetl life, concerns and meanings which were constant through all the complexities of this special sub-type of European civilization. Thus the Sabbath observance is lucidly drawn and its unifying, vivifying effects clearly shown. On another plane, we note the dominant concern for maintaining the social web of the community and for ensuring that no member is demeaned. Hence the great indecency of inflicting shame on another, the multiple associations for helping others, the high desirability of being a donor rather than a recipient, and the great personal pleasure derived from participating in a proper societal enterprise.

Those reviewers who had some knowledge of the shtetl uniformly commented on the authors' skilful and convincing presentation of such themes as these. But they also added strong comment on the deficiencies they saw in the work. Their criticisms are much like those made by the Japanese critics of Ruth Benedict's whole-culture study. They too object that the shtetl portrayal is over-generalized, that it is too static, that it slights change and conflict. Thus Raphael Patai observes (1952, pp. 543–545) that the "historical understructure" is ignored, that the relation between the shtetl and the environing peoples is largely neglected, that the respondents formed a biased sample. Ben-Ezra notes (1953, pp. 183–185) that some of the characteristics postulated for all of East European shtetl culture were really valid mainly for Poland, others were only typical of urban communities, still others of particular classes. Cahnman similarly comments (1952, p. 656) that the book tells us much about the beauty of holiness and about marital devotion but little about economic conflict and grinding poverty; that, after being confronted with the ideal type of family life, one might like to learn something of the modifications and the deviations. We are offered, he writes, "a romantic idyll."

In like manner, Moshe Decter's extensive review gives thoughtful praise to the book as "an informative and well-rounded study, the best of its kind in English." But one of Decter's concluding passages (1952, p. 604) remarks, "The paradox was that the shtetl, more miserable than this book shows it, also was part of a chain more magnificent than it imagines. The anthropologist's single snapshot, slightly retouched and beautified, prevents us from grasping the second reality as well as the first."

Anthropologists may want to ask whether this critique by a non-anthropologist is a useful one for our purposes. After all, how much can be included within the cover of one book? Can an anthropological work be expected to convey both the misery and the magnificence of a long historical career? Moreover, a snapshot—even a slightly beautified and simplified one, provided it clari-

fies a strategic vista—can be a most useful contribution.

It is true that processes of change are not much considered in the book. Thus we are told (Zborowski and Herzog, 1952, p. 112) that the holy scripture, the Torah, was viewed as a code that was absolutely binding and yet at the same time subject to interpretation and adjustment. But we are not shown how the adjustments were made and what regular patterns prevailed in the changing interpretations. It is also true that the environing milieu of non-Jewish society is frequently alluded to, but its effects are not really incorporated into the analysis.

However, it is at least arguable that before processes of change can be formulated, some basis of comparison must be established so that it is known from what, or to what, change has taken place. And the book gives such a basis as of the decades just before World War I. The effects of the extra-shtetl society are certainly significant, but before the impact of any exterior force on a social entity can be gauged, it is well to know something of the nature of the entity. Again, the book provides some of the requisite understanding of that nature.

As for the slighting of regional, class, or sectarian differences, there is something to be said for presenting the generalized version (built up indeed by the selection of regularities among different special phrasings) so that the likeness of the whole may be comprehended first. Then the regional or class variations better may be seen as differences within a given range of custom and of theme. Similarly, it may not be all bad to start with a sympathetic portrayal of how the people like to see themselves. Ideal patterns do have a governing effect on real behavior, even though that effect may not be what the people say or think it is.

The critiques of Zborowski and Herzog's study are useful insofar as they point to next steps in research, steps made feasible and possible, even obvious, by these first attempts with a new and promising approach. Such critiques tend to be only captious if they imply that this effort, and others like it, are the last word on the subject or the fruit of a long-matured research development.

Perhaps the research step next indicated by this and similar works is one which the reviewers have not really examined. It is implied in Zborowski and Herzog's statement (p. 20) of their purpose in the shtetl study. "It is an attempt to show the special ways in which these people have met the problems common to all mankind." But the common problems of mankind are implied rather than systematically stated. We get a lively impression that the shtetl solutions are special ones, but little specific notion of the degree and manner of their specialness. The authors scarcely can be brought to task for this, since the necessary theoretical concepts have not yet been well developed and their establishment will demand a broad research enterprise.

Let us give one example of the materials with which such an enterprise may deal. Shtetl people shared the common concern of all peoples in maintaining the net of interpersonal relations. As we have noted, there seemed to be an especially deep concern with that maintenance in the shtetl, so that—to use Sapir's phrase—the court of last appeal even in matters religious was in the social act rather than in the private emotional experience. Yet there are other peoples who also seem especially sensitive about societal relations—Japanese for instance, or Brahmins. As yet we have no clear-cut criteria by which to assess the varying degrees and types of concern with this common problem. It would seem that Japanese are most concerned with the proper interlocking of the component parts of society; Brahmins seem engrossed in the preservation of one's status in the social hierarchy; shtetl Jews seem to have been absorbed with keeping the society going as a constituency of independent and fundamentally equal persons. In another context, Mandelbaum (1955) has hazarded that the Japanese kind of emphasis seems to have been best suited for the accomplishment of specific tasks, the Hindu to cultural and societal stability, the Jewish to adaptability and social continuity. Such speculative comparisons must remain only

speculative in default of a firmer theoretical basis concerning the common human problems and the range of variation in meeting them.

Yet another major theoretical question was raised by several reviewers of *Life Is With People.* The question was particularly brought to their notice by Margaret Mead's methodological comments in her introduction to the book. Thus Mead wrote that anthropology has been the study of people outside the main currents of history, and from this experience came the special approach used in anthropological studies. Cahnman's review (1952), though brief, fastens on the flaws he finds in that approach. Of Mead's mention of the researchers' happy discovery that there was such a thing as shtetl culture, he is scornful, noting it as the outcome of the "hallmark of this kind of research, namely, the disregard of historical documents." Even a research partner like Zborowski who knows better, Cahnman presumes (p. 656) is pressured into the naïve approach. "The result of these pressures is that you have to revert to the bush, even if you live in the shadow of the New York Public Library. And you must believe that life is what people tell you. Once more, what may have been a necessity in studying preliterate tribes is made a virtue in the face of a highly documented phenomenon of history."

Mead has vigorously countered strictures of this kind. In defending the methodology of the national culture studies done by her co-workers and herself, she writes (1954, p. 397), "It does not, as has frequently been claimed, 'ignore history.' It merely, for purposes of a particular inquiry about a designated group of living individuals, holds history constant." Mead presumably does not mean that history, which is change, is treated as though it were non-change, but rather that she focuses first on the characteristics of a people and their culture at a particular time in their history.

Nevertheless, a good many writers, especially in other social sciences, have come to share the impression that anthropologists deal with complex civilizations as though they were static entities, isolated from outside influence, autonomous in function. They may perhaps find support for this view less in Mead's actual analyses of complex cultures than in her statements about the method of her analysis.

An extensive discussion of that methodology is given in the manual, *The Study of Culture at a Distance* (Mead and Métraux, 1953). In it Mead (p. 10) stresses the significance of anthropological experience with primitive peoples. "This method is called anthropological because it has been developed from methods used by anthropologists in primitive societies and is rooted in certain methodological assumptions that are basic to anthropological work." The most suitable milieu for anthropological theorizing is said (p. 3) to be primitive society: "Anthropologists who wish the best research conditions for their theoretical problems must continue to go to living primitive societies; historians who wish to work on problems of method and theory will correspondingly choose the best-documented periods." The key concept of modern cultural anthropology is said (p. 22) to have come out of the study of comparatively changeless cultures: "This concept of culture, once developed on relatively static primitive societies, has proved useful, when suitably modified, to the study of groups that do not have all the characteristics of the primitive societies in which the concept was developed."

Statements like this last one evoke unnecessary ambiguity. The concept of culture, as indeed it is well formulated by Mead in a paragraph preceding this statement, has to do with the life of man in society, in *all* society whether more complex or less complex. Hence the characteristics of primitive societies—whatever they may be—do not have any specially paramount place in the concept. Moreover, the assumption that primitive societies are in general "relatively static" is probably a bit of a fiction, a useful fiction perhaps, but one more fostered by the observer's ignorance of what the history has been than by any systematic comparison of different rates of change. Nor is it undebatable that a primitive society is, like agar for bacilli, the best

culture medium for the growth of anthropological theory. It depends on what kind of theory is sought. If it is theory about relatively isolated small communities, with little specialization, simple technology, and no literacy, then the primitive is the place. But surely few anthropologists, Mead perhaps least of all, would want to confine anthropological theory within such narrow scope. Certainly anthropological theory should encompass varying conditions of culture, both in primitive life and in complex civilizations.

It well may be that there has been special advantage in the fact that anthropology and many contemporary anthropologists began with the study of primitive peoples. From such beginnings has come the inclination to listen to what people say as well as to peruse what has been said about them, to watch what they do, as well as to learn what they think they do or what they want to do. The anthropologist who has been a lone observer studying an unknown tribe has thereby usually accrued confidence in tackling large new problems and in commanding a wide range of data. Mead even draws (p. 92) a further implication, "This habit of control of all the material—exaggerated to an extreme in the case of the anthropologist who has worked alone in an unknown culture—is undoubtedly related to the special kind of certainty that anthropologists often display."

Those beginnings directed the observer's attention to the broad invariant patterns of behavior, the socially agreed prescriptions for action within which there is variation, choice, decision. The ethnographer in an exotic culture could not help noting these basic ways, partly because he could not assume that he already knew them, partly because he was a stranger in that society, and the respondents answered his questions as to a stranger, by generalizing about what "we do" rather than by particularizing about what this one did yesterday or what that person does occasionally.

This experience has enabled some anthropologists to look at a complex civilization with fresh eyes, undistraught by old and possibly misleading assumptions. It has led them to find, with the enthusiasm of discovery, the basic lifeways of that civilization, ways which may be obvious to specialist scholars but also are usually so much taken for granted that they are rarely formulated by them for critical examination and systematic use.

This is all to the good. But it seems unnecessary to confuse that good effect by reference to certain supposed characteristics of primitives. It is true that more than a few able anthropologists have studied primitive societies *as if* their cultures were static and their ways free of variation. And there is a stage of social research where it is useful to study any society, primitive or not, in that way. It seems bootless however to assign attributes to primitive societies which have mainly been the consequences of the ways in which anthropologists have studied primitives. It is a disservice to the many valuable methodological contributions made by Mead and her co-workers to have their pertinence for an understanding of complex societies beclouded by such references to primitives. These references have been taken amiss by more than a few social scientists as imputing static and unvarying qualities to complex cultures as well.

The methodological leads discussed in *The Study of Culture at a Distance* are many, diverse, and stimulating. While the book is based on the studies done under the Columbia University Research in Contemporary Cultures, which could not carry on field work in the places studied and so had to be done "at a distance," it contains much that is useful for any study of a complex culture. The organization of team research is discussed, and the uses of such sources as free interviews, films, and novels are demonstrated. Many of the papers included in the volume were written by various hands as working papers in the course of the project's development. Mead was responsible for the total design of the book, Métraux selected material suitable for inclusion and wrote a number of the papers. Mead's discussion of interview technique is particularly good, as is Gorer's statement on national character. There are sections

on group research, work with informants, written and oral literature, film analysis, projective tests, imagery, end linkage, and on applications of the studies. It is such a rich outpouring of ideas and data that one wishes for a Maxwell Perkins to temper the strain of Thomas Wolfe in the writings of Margaret Mead and Rhoda Métraux.

AMERICAN COMMUNITY STUDIES

In W. Lloyd Warner's *American Life: Dream and Reality* (1953), we have a concise summary of the studies done by the author and his associates over some twenty years. These are studies of American communities in various regions of the country and were done (p. viii) "with the techniques he [the author] had previously used in the investigation of Australian tribes and which other anthropologists have used in Africa, Polynesia, and New Guinea." The book is based on the many scholarly monographs and articles which have come out of these studies, but it is written clearly and simply "for all readers."

Its chapters discuss the main topics which have been considered in detail in earlier publications of this major research enterprise. First comes an account of "an American sacred ceremony," Memorial Day; this sets the style of the functional and structural analyses which follow. There are essays on social class and color caste, the family in a class system, individual opportunity and social mobility, the factory in the community, ethnic and sectarian groups, personality development, associations, and mass media.

Since the publication in 1941 of the first volume, by Warner and Lunt, of the "Yankee City Series," there has been written an ample exegetical and critical literature of commentary on Warner's concepts and methods. We need not amplify that commentary here. It seems that few professional students of American society do not take exception to some of Warner's insights, techniques, and conclusions; and few (if any) have remained uninfluenced by his writings.

Of particular interest for our present purpose is the second chapter of the book which deals with ways of studying contemporary society. The author (p. 27) proceeds "to tell what a social anthropologist must do when he studies his own society." The fundamental approach, he writes, is not different from that used in the study of primitive groups; basically the theory and method are the same. Warner stresses that this can be so because contemporary American society does not differ in kind but only in degree from other societies. However, we are told (p. 29) that despite the basic similarity certain adjustments in method are necessary. "Although, in the study of modern society, the anthropologist does not have to change his approach to the body of theory, he does have to change almost everything connected with method and technique." For one thing, the whole society cannot be brought under direct examination, as is true in less populous societies. Hence a community, a territorially defined social entity, is used as a laboratory and as a "representative microcosm."

The study of a modern community, Warner points out, entails certain problems of method which are not as significant in the study of tribesmen. First, the use of writing and of other mass media of symbolic communication introduces complex effects on social life which are not easy to trace. Then culture change often comes from within whereas the more usual anthropological interest has been in changes impinging from outside a society. The author draws attention to the importance of understanding social persistence as well as social change. Another problem in studying a modern community lies in the people's use of number concepts. The people govern their action, especially on the governmental and economic plane, by notions of percentage and of variability, notions which the author says are not held by Australian aborigines. Finally Warner mentions the difficulty which arises because the anthropologist is himself a creature and a carrier of the culture he is studying, a factor which could easily dull an observer's acuity. This is overcome by the anthropologist's training in identifying social similarities and differences across various cultures. And

Warner lists some of the methodological advantages which accrue in the study of contemporary American society—the availability of documentary evidence, of statistical evidence, the insights which come from a participant's inner knowledge, the resources available from other specialist social scientists.

The high degree of specialization in contemporary American life is noted; flowing from this fact are two related and in some ways contradictory tendencies. Very small groups proliferate, each having special interests and recondite symbols, as among litterateurs or among scientists. Yet these small clusters must be tied into the general symbol system and social order; they are not equipped to carry on any autonomous existence. So as society grows more complex there is increasing standardization of public symbols which are understood by all levels of society and by every kind of person. The vehicles of the standardization are the mass media—newspapers, magazines, motion pictures, radio, television. The chapter on method concludes with a discussion of the concepts of status and role, concepts which Warner notes as being fundamental to the study of all society, contemporary American society not the less.

The book is an able popular presentation which stimulates further questions. Thus the concept of status is undoubtedly a fundamental one, although it is not much used in the book. It would be enlightening to know more about the various statuses occupied by particular individuals and how communities or classes differ in the number and kind of status positions which a person may hold. This indeed is one of the strategic variables as between less complex and more complex societies. In an American Indian tribe like the Plains Cree, there were a limited and well known number of status positions for a man. Many a tribesman fulfilled a large share of all available statuses. One man could be, and not infrequently was, hunter, warrior, kinsman, shaman, singer, craftsman. In Yankee City there are many more status positions and one man can scarcely know about them all, much less fulfill the social requirements of each. What societal and personal consequences flow from the increased number of status positions in contemporary communities, as contrasted with the same communities at an earlier period and with communities in other civilizations?

The community which is studied, the author notes (pp. 32–34), should be a representative microcosm which exemplifies central tendencies of American society. But since a goal of the research is to identify such central characteristics, how can they also be used as criteria for the selection of the communities to be studied? The answer seems to be that the criteria used in the first instance to select "Jonesville" as a typical community were such manifest qualities as size, ethnic and racial composition, marketing facilities. The less obvious characteristics of "Jonesville" as later determined by the study may then be used for comparisons and more knowledgeable sampling.

Other questions are suggested by the author's comments on similarities and differences in methods of study as between simple and complex societies. They are similar in that the anthropologist continues to gather his information at first hand, listening, watching, participating in the community's life. Similar also in that the scope of the study is not restricted to any single institution or activity. Nor is it tightly confined by a rigid framework of special theory or procedure. It is different in that the social whole cannot be observed by the anthropologist or even by a large team of analysts. The whole must be sampled (true, incidentally, in so-called simpler societies also), and the sampling can be done by using such special devices of modern complex culture as tests, questionnaires, surveys.

So much Warner does tell us about the study of a contemporary community. But we would like to know more about the system of procedure, how much is necessary in the way of preliminary hypotheses, at what stage of the study is the questionnaire to be used, when are the macrocosmic factors—as of financial credit policies—brought into the account? And we want to know more about how Yankee City compares with

Jonesville in some of Warner's salient considerations, as those of family, class, religion, and personality development. Further, these descriptions and analyses of American communities arouse our interest in comparing them with communities in other national cultures or civilizations.

A NATIONAL CULTURE STUDY

A background for at least one such comparison is richly given in Robert H. Lowie's *Toward Understanding Germany* (1954). Lowie's opening sentence tells us that the book deals with the social psychology of the "Germans" during the last two centuries. The rest of the first chapter defines those included under "German" as anyone who uses standard German as a primary medium of communication in so far as he does not employ his local Germanic dialect.

Then follows a chapter on method of investigation in which the author states, as have other anthropologists here discussed, that the ethnologist's procedures of "observing all he can and pumping suitable informants," which are suitable for the study of small primitive tribes, are alone not enough for the study of a complex civilization. The anthropologist must adapt to this other medium on which he works and adopt other techniques, mainly in the use of documentary evidence. Newspapers, letters, fiction, drama, social surveys are utilized as evidence for understanding Germans. The accounts by German visitors to other countries and by non-German spectators of the German scene are particularly revealing and are tellingly used. The book is particularly notable for the skill with which the author weaves the literary sources into the fabric of his exposition.

But others besides anthropologists have written analytical pieces about Germany, have used similar literary sources, have observed and listened. What special contributions, then, does an anthropologist have to offer? In his chapter on method, Lowie indicates two such contributions. One is the comparative point of view. An example is cited of a work by a political scientist in which the 1871 extension of suffrage in Germany is discussed, with an implication that since women could not vote, this measure was not a liberal one. Lowie points out that a comparison with other governments of the same period shows only the State of Wyoming having universal suffrage. The same political scientist is cited as positing an authoritarian character for German society, giving as one evidence the paucity of nonconformist sects. Lowie compares Germany in this respect with Scandinavian countries and finds that these presumably non-authoritarian peoples also do not have many sectarian growths. Over and again in the chapters of the book, Lowie demolishes such easy generalizations and over-facile implications.

The second contribution which the anthropologist is particularly well prepared to make, Lowie continues (pp. 29–30), is to keep an even keel in the matter of moral judgments. "It is not so easy to abstain from playing the moralist when considering contemporary civilizations; wholly to do so may indeed be impossible, but the degree to which the ideal of detachment is approached will be the measure of scientific worth. A judge may not rid himself of all his personal likes and dislikes, but their free indulgence disqualifies him from the bench."

Lowie succeeds in maintaining an impartial and discriminating view of German life, detached but not aloof. The whole of that life is not surveyed; certain aspects are selected because they are "both significant and accessible to observation." They are particularism (local loyalties and regional differences), the class structure, the family, the Jews of Germany, the political relations to Naziism and to democracy. These topics, the author says, are not entirely discrete; there are reciprocal relations and influences among them. And the chapter on methods ends (p. 30) with this transition to the discussion of the selected topics. "In any case, what unifies the treatment is the ethnological approach—the attempt to separate what is distinctively German. It is my conviction that much of what is popularly conceived as German is in reality either generically

human or occidental or Continental European."

The reader readily comes to share the author's conviction and this conviction raises the hope for future works in which more positive conclusions may be reached as to what it is that is distinctively German. Thus the chapters on particularism offer a rich diversity of evidence, but the main conclusion (p. 67) is that despite much localism "German attitudes toward particularism and nationalism are not unique." This conclusion needs stating, but it still does not tell us whether the German manifestations of this widespread phenomena are generically human, or Occidental, or Continental European—or whether indeed they are none of these or whether the question is irrelevant.

The chapters on social classes do stress that Germans are distinctively different from most other Europeans in the matter of social stratification. They have not only maintained rigid class distinctions but have insisted on minute gradings within a class. Moreover, the upper classes do not have the "gentleman's code" and so are more apt to display brashiness, immodesty, and arrogance than are gentlemen of England or Spain. These well may be distinctive characteristics, but in what degree? This question, arising out of Lowie's bountiful array of evidence, calls for more detailed comparisons of Germans with other Europeans and for comparison with, say, Texas oil executives or Rajput nobility. It calls also for some translation of the concept of a "gentleman's code" to some general terminology of social relations. Then the German deficiency in this type of social ideal may be placed on a scale of similar cross-cultural behavior. In that way the degree of German distinctiveness may be more accurately comprehended and the implications of this distinctiveness for the whole culture may be assessed.

The author is by no means oblivious to this desideratum. At the end of his chapters on the family, he says of the German family structure, ". . . it is at present impossible to place it definitively among equivalent systems the world over until we have very much more accurate information than we as yet possess about the family life of other nations." With this statement there can be no disagreement. But we would wish for a different emphasis in the chapters than that which is reflected in the sentence (p. 266), immediately following the above quotation. "What we can state with great positiveness even today is that the average German father and husband was not the incarnation of fiendish brutality that Dr. Abrahamsen has delineated." The most positive conclusion about the family is a negative one. And the strongest shafts of argument are aimed at the work of a psychiatrist, an amateur at societal analysis, whose efforts may not deserve so much critical attention. Perhaps the author's keen perceptions might better have been turned to formulating hypotheses about the German family in comparison with other families of civilized societies.

However we may differ in the matter of such tactical emphasis, we can only applaud Lowie's insistence that all the evidence used be rigorously specified. Generalizations about Germans, the author repeats, must take into account variations of class and region and period. In this he is as critical of works by some non-anthropological social scientists as some of them have been critical of Benedict on this same score. We may concur in Lowie's demolition of erroneous stereotypes and at the same time encourage the formulation of hypotheses which come out of valid evidence and which are to be tested against further evidence.

Lowie's methodological rigor stipulates that no trait is to be called distinctively German unless it is pan-German, pan-diachronically so and shared only by Germans. Following this stipulation in the concluding pages, he notes (p. 354), "The concept of a German culture sphere with which we have been tentatively operating thus turns out to be an ill-defined, if not indefinable, entity." It is not, he continues (pp. 355–356), ". . . that Germans are exactly like other peoples, but rather that western Europe as a whole presents a continuum—one culture and with admittedly

innumerable local variations." We may infer that the author would not object to delineating a unit for study—whether a civilization as Kroeber does, or a national culture as Benedict and Mead have done, or a community within a national civilization as Warner advocates—provided that the purposes of, and the criteria for, the delineation are set forth clearly.

The reviews of the book, both in scholarly and in general publications, generally pay tribute to the usefulness of the work in aiding toward an understanding of Germany. One historian, S. K. Padover, notes (1954, p. 40) that the ethnological approach may be well for primitives but is less fruitful in complex industralized cultures. He objects that the picture given of Germany is a static one, that it neglects political analysis, and harbors the delusion that it is possible to study mankind without moral judgments. The first comment we have encountered and have countered before. The ethnologist's usual method of study is not necessarily unsuited to the study of a complex culture nor does it displace the necessary contributions of political scientists and other social scientists. Further, it is well to have a base line—a static picture if it must so be called—from which to appraise change. Static is hardly the term for Lowie's portrayal, drawing as it does on two centuries of German history with frequent comment on change. The note that moral judgment is inevitable may, in the last analysis, possibly be true. But not in the first analysis. Surely Lowie is right in claiming that the evidence must first be collected and ordered according to canons of scientific procedure, i.e., pan-cultural procedure.

A political scientist, H. J. Morgenthau, remarks (1954, p. 2) in a review of the book that "What is lacking to a rather surprising degree is a theoretical framework which would give meaning to a mass of material which is largely left to tell its own story." It cannot be gainsaid that the theoretical notions in the book are not as highly developed as the presentation of the data. But this is in no small degree because anthropological theory is still in a fairly rudimentary state or, rather, such elemental concepts as that of diffusion have yet to be developed in detail. Lowie eschews certain wrong generalizations but he is not in the least opposed to theoretical generalizations. And while he rejects premature moral judgments, he is not without a moral position, as may be discerned in various passages of the work.

As for the impact of the book outside the scholarly sphere, we may refer to a review (Lindemann, 1954, p. 3) in a Stuttgart newspaper. It was captioned *Im Fremden Spiegel,* and it commended the book to German, readers as a true mirror, reflecting accurately the whole lineament of the nation. We may add that for American readers, as for German, it is a most useful work. And it is all the more useful because it is done in a manner which—to use for once some value-laden terms in this survey—is urbane and civilized.

SOME RECENT PUBLICATIONS

Only brief mention can be made here of some of the other pertinent anthropological studies which have been published in the period under review. The civilized societies of East Asia have been relatively well represented among these writings. A survey of work focused on community studies has appeared in *The Far Eastern Quarterly* under the title "Community Studies in Japan and China: A Symposium" (1954). Robert Redfield contributed an introduction to the symposium, Morton H. Fried wrote on China, and Richard K. Beardsley on Japan.

For Japan we have Edward Norbeck's *Takashima: A Japanese Fishing Community* (1954), a fine depiction of a rural community. Its concluding chapter is on the impact of Westernization; in it the influences of the West on Japanese civilization are shown as they affect the life of these fisherfolk. William Caudill's monograph, *Japanese-American Personality and Acculturation* (1952), does not relate directly to the study of civilization but does contain a number of useful insights for an understanding of the two civilizations involved.

A series of reports on Japanese social relations have been issued, in mimeographed form, by the Ohio State University Research Foundation, and are the work of John W. Bennett, Herbert Passin, and their associates (1952–1953).

On China there are two significant recent works by Francis L. K. Hsu. One is *Religion, Science, and Human Crises* (1952), which is subtitled "A Study of China in Transition and Its Implications for the West." The second is *Americans and Chinese: Two Ways of Life* (1953) in which the comparison of these two civilizations is made over a broader front than in the first volume. Morton H. Fried's *Fabric of Chinese Society* (1953) tells of the social life in a Chinese county seat. A study of a class, amplified by some cogent life-histories, is given in *China's Gentry: Essays on Rural-Urban Relations,* by Hsiao-tung Fei (1953). A set of pertinent essays on Chinese civilization, not written by anthropologists, but issued as a memoir of the American Anthropological Association is *Studies in Chinese Thought,* edited by Arthur F. Wright (1953). It is the first of a series called "Comparative Studies of Cultures and Civilizations" which is under the general editorship of Robert Redfield and Milton Singer.

Overseas Chinese are discussed in *The Chinese of Sarawak: A Study of Social Structure* (1953), by Ju-k'ang T'ien, who traces some of the changes in Chinese culture among these transplanted Chinese.

In the past decade there has been a significant forward surge in anthropological studies of cultures on the Indian sub-continent. The results of these studies are beginning to appear in print. Notable among them is M. N. Srinivas' *Religion and Society among the Coorgs of South India* (1952). Srinivas complements his description of Coorg life with an analysis of the influence on them of the complex of Brahmanical civilization, a process he labels "Sanskritization." S. C. Dube's *Indian Village* (1955), entails some discussion of the larger civilization. Irawati Karve's *Kinship Organisation in India* (1953) discusses some features of Indic civilization; on a different plane Adrian Mayer's *Land and Society in Malabar* (1952) does also. In press at the present writing are two important volumes of village studies by anthropologists, both containing illuminating comments on Indic culture. One is edited by M. N. Srinivas and published by the Government of West Bengal, the other is edited by McKim Marriott and will be issued as one of the series under the general editorship of Redfield and Singer.

A book which deals with the effect of different civilizational backgrounds on a newly established state is Raphael Patai's *Israel between East and West: A Study in Human Relations* (1953). Patai writes of the difference in world view among Israelis from the Arab and North African countries and those from Europe and North America. Hamed Ammar's *Growing Up in an Egyptian Village* (1954) has some cogent comments on the civilizational matrix of child rearing and education in a village of the province of Aswan. Another volume in the series of studies on cultures and civilizations organized by Redfield and Singer is *Studies in Islamic Culture History* (Grunebaum, 1954). This volume, like the one on China, was issued as a memoir of the American Anthropological Association; its essays are not by anthropologists but are full of anthropological relevance.

In the field of European peoples and cultures, there is a volume, also not by an anthropologist although published in an anthropological series (that of the Wenner-Gren Foundation), which has relevance to our subject. It is Margaret T. Hodgen's *Change and History* (1952); the subtitle is "A Study of the Dated Distributions of Technological Innovations in England." It presents some cogent ideas about a way of handling the multifarious data of one aspect of a civilization. For other European countries, Métraux and Mead's *Themes in French Culture* (1954) is another product of the Contemporary Culture project; Turney-High's *Château-Gérard: The Life and Times of a Walloon Village* (1953) has attracted favorable notice; and J. A. Pitt-River's *The People of the Sierra* (1954) portrays the social structure of a rural com-

munity in the mountains of southern Spain. This last work is one of exceptional merit.

A welcome addition to Latin-American studies is Charles Wagley's *Amazon Town: A Study of Man in the Tropics* (1953). While the ecological stress is strong in the book, as the subtitle indicates, it also includes comparisons of the culture of the Amazon town with that of Plainville in the American midwest. The impingement of urban power-science influences on this tropical settlement is aptly shown. Two volumes, both edited by Sol Tax, also deal with the nature and influence of Western civilization in Latin America. They are *Heritage of Conquest* (1952) and *Acculturation in the Americas* (1952).

One of the preliminary reports of a team research enterprise in Puerto Rico led by Julian H. Steward is found in "The Cultural Study of Contemporary Societies: Puerto Rico" (1953) by Manners and Steward. This paper tells of some of the cultural differences which prevail among different communities of the island according to the crop grown—sugar, coffee, and tobacco.

Fernando Henriques' study of Jamaican society, *Family and Colour in Jamaica* (1953), includes considerations which extend widely beyond the bounds of family and race on this island.

Two works may be mentioned which are devoted to various cultural and social aspects of the development of "underdeveloped" peoples. The studies on them do not deal directly with the subject under our present consideration but they frequently offer implications for the understanding of Western civilization and of other complex cultures. One is the casebook, *Human Problems and Technological Change* (1952), edited by Edward H. Spicer. The other is *Cultural Patterns and Technical Change* (1954), edited by Margaret Mead and bearing the subtitle, "A Manual Prepared by the World Federation for Mental Health."

THE PROSPECTS FOR CIVILIZATIONAL STUDIES

The vigor of recent anthropological advances in the study of complex civilizations is reflected in the publications of even so short a period as 1952 through 1954. The advances have used several differing approaches and have deepened our understanding of various civilizations. A common element in most of these studies is the method of collecting the data and the conception of the main problem. E. E. Evans-Pritchard gives one view in his foreword (1954, p. x) to Pitt-Rivers' book on a Spanish community, ". . . what constitutes an anthropological study is not where or among what sort of people it is done but what is being studied and how it is being studied. What is being studied is a complicated set of interpersonal relations and the method of study is to get to know well the persons involved and to see and hear what they do and say . . . the problems investigated, though viewed only in relation to a small community, are fundamental problems of the larger society . . ."

Robert Redfield, in his introduction (1954, p. 4) to the symposium on community studies in Japan and China, amplifies a similar view of anthropological method and conception in the study of a civilized community. "It preserves the direct perception. At the same time, the maker of a community study, while retaining the 'holistic' human reality, strives to develop and to use methods that will qualify as scientific: he struggles to define the concepts for the characterization of this human whole, and he refines and submits to examination and criticism his procedures of observation, record, and analysis." These community studies, Redfield continues, show three main purposes. One is to ascertain the general and persisting character of the society and the culture; another is to obtain some guidance for practical action; the third is to understand the general nature of a selected class of social phenomena, as social structure with special interest in work groups or in godparent practices. He adds (p. 7) that anthropologists working with data from civilizations tend to provide fresh conceptual perspectives. "The humanistic student of China or of Japan does not ordinarily conceive of those civilizations as eco-

logical system, social structure, or modal personality."

In our survey, we have seen how some of these purposes have been sought and how some of the grand concepts have been used. Warner's community studies, however their findings may later be amended or augmented, demonstrate the usefulness of direct observation and of a holistic conception. More such community studies, in various civilizations, will provide data to enhance the results of national culture studies like Lowie's. However much all of us, like Lowie, champion the comparative method, in this field we have as yet little material for making effective comparisons. Useful as is Lowie's clearing away of fallacies by revealing apt comparisons, it also has the merit of leaving the student of civilizations champing for more material fodder.

The results of the Benedict and Mead studies have offered up hypotheses to nourish theoretical development. Done "at a distance" they give promise of more potent hypotheses and more readily verifiable conclusions when such studies are carried on without the handicap of remoteness. The civilizations studied by archeologists must also be analyzed "at a distance": the procedures used by Benedict and Mead may turn out to have special pertinence for archeologists. We have not dealt with studies of the civilizations of antiquity in this survey, but this was for lack of space rather than lack of relevance.

Archeology, art history, political chronicles, novels—all the record of humankind is scanned in Kroeber's panoramic view. He is one of the very few who has seriously and systematically set himself to study the quality of civilization. In the long run, it may not be really of high importance whether his particular formulations, as of the disintegration and reconstitution of civilizations, are borne out by further research, or if his notions of value and style become generative of additional consequential concepts. If such turns out to be the case, so much the better. But perhaps the more significant fact is that he has opened a new door for anthropological theory: he has shown us the possibility of a new domain of strategic ideas which we had hardly perceived before.

To exploit this domain will take much spadework. In whatever context we may apply our methods of studying civilization, whether in the little community or in the vast reaches of a great tradition, it does us little good to perpetuate certain questionable notions about these methods. The notion that anthropological method was perfected on simple and static primitives and is best used in studying primitives is, as we have noted above, a misleading one. Anthropologists' insistence on the comparative method would come with better grace if that method were clarified, lucid examples given, its limitations defined. In a sense, all measurement is comparison: no analysis can well avoid comparison. There is need of sharper, positive comparisons plotted on a graph of social theory. The comments (1950, pp. 281, 282–283) of a political scientist, G. A. Almond, reflect the opinion of not a few social scientists about the recent anthropological trend. He notes that anthropologists "will discover when they turn to this sober task of analysis of modern society and international relations that there are other workers in the vineyard of the Lord who, though lacking in modern tools, have nevertheless developed certain rude formulae about when to come in out of the rain. . . . It is not that the anthropologist is incompetent to deal with modern cultures. His integrative concepts and hypotheses are of great fruitfulness, and his methods—combined with those of the social psychologist and psychiatrist—have an enormous potential value. But the specific interpretations of modern culture thus far made are significant not for their accuracy, but for their suggestiveness."

Almond's comments were made in a review of two books published in 1949. It may be said fairly that later efforts have contributed something in the way of accurate data as well as additional suggestive ideas. However, the image of anthropological studies of civilizations, as reflected in recent reviews by non-anthropologists, still tends to resemble Almond's depiction. Some anthropologists have already reacted de-

fensively against certain calumnies which they perceive in that image, and it may be presumed that the critiques will have some benign effect on future research designs and on the clarity of exposition.

It is not unlikely that the increased research on civilized societies and cultures will have some general effects on the development of anthropological thinking. A discipline cannot but be affected by the medium in which it works, just as every art and every science is so affected. Certain immediate effects of this medium are apparent. For one thing, a piece of writing on a civilization usually rouses interest among members of the society analyzed and among scholarly specialists in that culture. Thus an author has the benefit, which he sometimes cannot be blamed for judging to be a dubious one, of having a battery of critical comment on his work.

Another effect is that such writings frequently are seen to have implications for practical programs. This can be a disadvantage, as when the anthropologist's energies are drained away to facilitate some specific action program. But it also holds the great advantage of exposing theoretical formulations to practical tests. The practical aspects usually keep theoretical thinking from settling into a repetitious rut, as may happen without such salutary contact with practicality.

In all, this anthropological effort has made a promising beginning and there is fair prospect for further research which will carry well beyond the beginning. The first products of an important research enterprise in civilizational study, that led by Robert Redfield and Milton Singer, have already appeared. Redfield has stated (in Wright, 1953, pp. vii-viii) the aim of this enterprise in these words:

> "Through critical analysis and testing of the methodology of comparative cultural studies, through the exploration by groups of specialists of new methods for making the systems of thought and value of the major civilizations more nearly intelligible to one another, and through the encouragement of original research whose methods are likely to have a wide cross-cultural applicability, we hope to achieve, not yet a unified science of cultures, but at least a set of coordinates within which we can order and evaluate the studies already made, a framework of concepts and hypotheses to direct future research, and possibly some new and valid methods for characterizing and comparing cultures."

These are worthy hopes for future achievement. The studies we have surveyed show that past accomplishments provide foundation and justification for this prospect.

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Universality and Variation in Human Nature

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THERE are two ways of regarding human nature and universal aspects of it: from outside the species and from within it, or from the point of view of its distinctive, universal traits versus that of the variation of its members, as human beings. We know that all normally developed men are capable of cultured behavior, and we know that all normally developed men have non-opposable great toes. These are just the universals we need not consider, because they imply nothing more as to differences among men within the communality of human nature. Rather, it is the scale and range of human differences within likeness which I wish to consider.

This is not to deny the great, and still growing, importance of defining and delimiting general human nature. This problem promises to go on bringing closer together the interests of physical and cultural anthropologists. I need not argue this, but only point to LaBarre's new book, *The Human Animal* (1954), as a perfect demonstration of this convergence, or to the attention which Kroeber has been giving to the same matter in recent talks. But the other problem, that of differences among men in their specifically human traits, is perhaps the encompassing problem in the study of the living species, and this also promises to bring the physical and cultural anthropologists more closely together in the maturity of anthropology. This problem has a history.

THE STUDY OF THE TYPE

Physical anthropology and craniology arose from the interest in racial differences, and the fact that different groups of mankind differed strikingly in skull or skin color. For a long time anthropology occupied itself in describing these groups and setting them off against one another, at first fairly simply and without scruples reflecting an awareness of culture, using skin, hair, and the index of the head, then in more complicated fashion, as calipers became standard baggage and the great collections of crania began, and rudimentary statistics appeared. As measurement after measurement was added, the list of ways in which racial groups might be compared became long, and at last unwieldy. Main identifications were made, and major types set off early in the game, including the Mincopies of Andaman. More detailed work and batteries of measurements went into the attempt to sort out, segregate, make distinct, the varying racial strains of a limited area, showing what could be done by the best of these methods in such a work as Coon's *Races of Europe*.

The snuff-and-quill-pen stage, during which the monogenesis-polygenesis controversy flourished, thus was succeeded by a white-coat-and-pince-nez stage. During this there were discerned such named types as Nordic, Alpine, and Mediterranean, taken ideally to have been pure races, now blurred to vision by long-standing mixture. This dressy scientific view was being used to make respectable some very disreputable ideas, at the hands of racists, beginning with Lapouge. Any Nordic was better than any Alpine. In any case, early and late, the assumption was that the range of human variation was wide, that the differences within populations or races were small, and the differences between them large, running as far as the opinions of those who held that living races had completely separate pre-human origins, perhaps identifiable as the orang, the chimpanzee, and the gorilla.

But most of the anthropologists were not as foolish as these racists and polygenists. Still, their honest endeavors to use more and more descriptive traits—a natural extension of previous work—to establish and discriminate minor racial groupings, to bring order out of chaos, and bring racial history forward into the light, met with difficulties and bafflement from sheer weight of measurements. They, unlike the racists, took notice of the variations in their populations and measured it with the standard deviation. Consciously or not, however, they resisted this disturbing *Abweichung*, which seemed like a deviation, or a dereliction, from the type in more than a statistical sense. They were looking for the type itself, the mean, the golden mean. Frustrated by the failure of the wealth of cranial measurements to reproduce the whole, Crewdson Benington (1911) devised a satisfactory though laborious way of arriving at some of the mean contours of the skull and drawing them. The urge to find the type was very strong.

The ethnologists had been doing something not entirely different. More slowly, they had been finding that different groups had different cultures, and describing those cultures as if they had ideal, pristine forms. But they were also finding the common things in culture and, finally, discovering the general nature of culture itself as a phenomenon and as a determiner of human behavior. They were too late to forestall the excesses of the racists, and in fact arrived just in time to provide a basis for criticisms of the early students of comparative intelligence.

Thus there has been a long trend in physical anthropology of searching for the type, eventually supplemented, and more and more supplanted, by attention at last to the individuals, and by exploitation of the variation, a new idea. This shift in trend came from two sources, or so I would argue.

THE TURN TO THE INDIVIDUAL

One is to be found in the limitations of the type concept itself, and failure to do much with measurements beyond finding their averages; hence the tailoring up of that dummy, the type. These limitations were too much for someone with the mental energy of Hooton, who was interested in races, but in much more than races. It was his impatience with the unfruitfulness of types and measurements as a means of systematic study of the individual which caused him to welcome and champion Sheldon's system of body typing, and to proceed with development and experimentation of his own along this line.[1] For anthropology, Sheldon's contribution certainly has been the notion of "components" of physique: a few general, major aspects of an individual's development, shape and body composition, each ruling a principal category of deviation, and, by their more or less independent contributions or emphases in the whole, determining the entire range of body type or shape. It is a system which sums up physique for any individual descriptively and simply; and whether Sheldon is approximately correct in his own rather formalized development of it is prob-

[1] This had long been clear to the writer, but Hooton said as much himself in June 1952 during discussion at the Wenner-Gren Foundation's International Symposium on Anthropology, and in "Your Body and Your Life" (mss., F. L. Stagg co-author).

ably not of eventual importance. He does in fact seem to be describing something real and recognizable, although, insofar as it is different simply from muscle and fat, it is something which is waiting better identification before it will be of theoretical value. It has not yet, I should say, produced a basis for forward steps in physical anthropology, because it has not yet provided itself with the necessary anchor points in physiology, genetics, or embryology to make it a firm step in itself. Nevertheless, it has introduced a way of describing individuals which was beyond the best efforts of straight individual measurements (cf. Benington's contours, above), at a time when something of the sort was needed by anthropology; and it makes a suggestion of great theoretical and practical worth in itself, that of certain principal components determining, or highly correlated with, many other features or measurements which otherwise would be assessed each by itself without formal recognition of their interconnections. And it is certain that this approach will be developed along other lines—that Sheldon's particular components will be amplified, substituted for, or made explicit, by studies of how the actual constituents of the body—the skeleton, fat, muscle and fluids—are distributed, and how they vary, together and independently. Put most generally, this whole approach, and indeed the key to the study of the individual, consists in finding the cardinal directions, the principal axes of physical variation.

The other source is the coming of age of human genetics. This, paradoxically, had to emerge from its concern with the individual and to develop its population aspects before it could suggest the reverse idea to anthropology: that a race or population was not a type, but a continuing body of significantly varying individuals. The genetic debut began somewhat naively also, by looking first for general blood group distinctions among the major racial stocks or geographical areas and, not finding them, going on in the hope of establishing blood group "races." This outlook was similar to the traditional one depending on skin, hair, and the cephalic index, but it had the advantage of using traits of known and simple genetic basis, and of an unprejudicial, apparently non-adaptive nature, as it was then supposed. The more advanced of these classifications gave signs of converging on those using the old-fashioned criteria.

Beyond this, however, genetics had a strong and healthy influence on the general view, by pointing to the essential transmissibility of genes at the borders of populations, and thus to the intergradation of racial groups as a natural thing, instead of letting it seem like an obnoxious, unnatural factor, i.e. hybridization, which, like variation, tended to obscure the clearcut outlines of original "types." (The conception was briefly overemphasized, with assertions or implications that there was therefore no such thing as race at all.) Another contribution was the suggestion that, out of the many thousand gene pairs on the human chromosomes (40,000 to 44,000 has been estimated), only a small percentage (5 or 10 per cent?) contain alleles differing in kind or proportion from race to race. This seems fair enough as a point of view, though not as a datum, as long as it does not imply that there are categories of racial versus non-racial genes.

THE RANGE OF ADAPTATION IN PHYSIQUE

For we are here at a point important in our present understanding of race. What has become of "racial" traits? They used to be simple enough to define: they were the physical features in which races differed. It was thought advantageous in classification to use those which were supposedly not adaptive or responsive to the environment, and thus most likely to be inherited unchanged from generation to generation (e.g. not body fat, or color which might come from tanning); otherwise the study of racial history or race mixture would be a hopeless task. The geneticists expressed the doubt that the obvious external, varying traits were as "non-adaptive" as they seemed, even if the nature of the mode of the adaptation involved could not be shown; and they thus argued their point that the genetically simple antigens were

the criteria to use in place of the possibly adaptive traits of skin, hair, eye color, and so on. At the moment, however, it is suddenly beginning to look as though these blood characteristics are manifestations of strongly adaptive features themselves, and readily sensitive to selective processes. The sickling trait, in its heterozygous state, may confer, or be related to, an immunity to malaria (Allison, 1953a, b, 1954); and the ABO antigens seem also to be related to certain susceptibilities or resistances. Individuals of group O appear to have a strikingly greater susceptibility to peptic ulcer and to toxemia of pregnancy, or perhaps the A and B substances provide some protection against these afflictions (Aird and others, 1954; Pike and Dickins, 1954); and group A is significantly more common among victims of cancer of the stomach (Aird and others, 1954); furthermore, certain apparent fertility differences have been noted over a long time, particularly one working to the disadvantage of group O wives of group A men. If, therefore, the sickling trait is characteristic of certain environments because of malaria, instead of being characteristic of certain racial strains because of mutation and drift, or chance, it can hardly be used as a marker of such racial strains, or to trace migrations from Asia to Africa of a hypothetical component of the African Negro population, as has been suggested. In any case, instead of exemplifying neutral, non-adaptive, single-gene traits under the action of chance factors, these blood systems are now promising to provide examples of the more important phenomena of selection, and in particular, of adaptive or balanced polymorphism.

In this, apparently illustrated by the sickling gene, and strongly suggested at least by the distributions of ABO (Brues, 1954) and MN, heterozygosity confers a benefit on the individual or on the species, even if a homozygote is essentially lethal, as is the case with the sickling gene. Thus this gene was a beneficial mutation in the presence of endemic malaria, though a gene which should be eliminated through negative selection in another environment or population. There are other ways in which polymorphism, or the maintenance of different alleles, may benefit a population; evolutionists have been increasingly aware of the significance of the phenomenon as a source of materials for rapid change or microevolution, and that such a fund of genetic variability is a protection for a species or population in the capacity it provides for such rapid change or adaptation (Dobzhansky, 1951; Cain and Sheppard, 1954).

What does all this mean to race in man? It involves no radically new viewpoints, but does seem to bring to a culmination some previous trends of opinion. The latest developments emphasize adaptation as a cause of racial differentiation more strongly than its fondest advocates might have dared, shortly before, when the best arguments were that it stood to reason, and when there was no actual indication that blood group proportions did not vary simply by drift.[2]

More and more useful evidence of many kinds is coming to hand. Brown and Page (1952) found that Eskimos could maintain a higher blood flow in the hand immersed in water at varying temperatures than could Whites. Is this a personal adaptation, attained during life, or is it a "racial," genetic difference? Todd and others (1940) found the eyeball of American Negroes to be significantly larger—on the order of 8% or more—than that of American Whites (and Karpinos, 1944, demonstrated higher grades of visual acuity in the records of Negro draftees for a selected period, believed to be independent of stringency of military selection). Is this significant, and adaptive? This eye difference does not seem to be connected embryologically with skin differences. Roberts (1952, 1953a, b) has shown statistically that Bergmann's and Allen's rules hold for man: heat production measured in different populations is correlated (inversely) with mean external temperature, and body weight and shape accommodate themselves

[2] This proposition, of purely random drift of blood group proportions, was not necessarily taken for granted by geneticists, e.g., Stern, 1949; Boyd, 1953.

to this also by the adjustment of body tissue and body surface. Not only is there a general world-wide relation to temperature, which might reflect rapid adjustment of a generalized population to local conditions, but also there are residual differences distinguishing racial groups. Newman (1953) has dealt with these and related physical features for American Indian material, to suggest relatively recent adaptation in form among New World populations (i.e., within the limits of the period of occupation by them). Coon (1954) has reviewed much of the literature bearing on adaptation in racial features, especially skin, and relative size of trunk and extremities. In the nature of a supplement to his book *Races* (with Garn and Birdsell, 1950), this article in particular relates types of man to types of climate, applying Bergmann's, Allen's, and Gloger's rules[3] to specific cases, and stressing heat control not only through surface-mass relations, but also through mechanisms of the distribution of blood supply and of perspiration areas, etc.

Coon ends by observing, "what a wonderfully adaptive thing the human body is," and viewing comprehension of this as, "a much healthier commodity than the recently traditional hide–race point of view." This leads us back to the general question of human variability and its meaning. Perhaps it is possible to avoid opposing "genetic" concepts of race to "old-fashioned" concepts, and instead, to expand the latter—since races, after all, do exist—by taking a more general viewpoint based upon the former. This again is not a new suggestion, but the emphasis has been modified from year to year, and that is what we may anticipate in the future. For the present, we may emphasize the universality of the human genetic heritage and explore it most usefully by using race as one way (this is what Coon is talking about) of studying its dimensions. The change in viewpoint lies in trying to view the total range at once, in appreciation of the variation within it, rather than trying to isolate a race here or a race there, as the taxonomic equivalent of a cigar-store Indian.

It is to be hoped that genetically well-understood traits of general distribution will shortly begin to multiply. Discovery of useful blood antigens has progressed rapidly, and if the ABO groups, or the sickling trait, or others are actually selectively influenced to a strong degree, that is a gain, not a loss, in spite of any disappointment in their use for the study of racial history. Other physiological traits are on the horizon, such as might be used to study patterns of individual or group variation (see Williams, 1953). Excretion constituents seem especially promising (Berry, 1953; Sutton and Vandenberg, 1953), providing complex patterns, relatively constant for an individual, and suggesting that the genetic basis may turn out to be sufficiently clear to make them a most useful tool. Harris and others, from family studies, have found indications that a single gene pair controls distinguishable grades of excretion of beta-aminoisobutyric acid (Harris, 1953; Calchi-Novati and others, 1954), which is only one of a sizeable number of substances in urine which may be studied by the relatively simple technique of paper chromatography. An important field still to be opened is that of linkage. In spite of the growing number of satisfactorily established and common single gene traits, known linkages, apart from the sex chromosomes, are still almost a blank: only two plausible examples obtain, that linking the Rh locus with the uncommon, and therefore not particularly useful, trait of elliptocytosis (Lawler and Sandler, 1954 and previous papers), and that linking the Lewis and the Lutheran blood antigen systems (Mohr, 1951).[4] As to the genetics of continuously varying measured traits in man, this is terra incognita (cf. Dobzhansky and Wallace, 1954).

With more precise knowledge of the nature of traits under investigation, and fu-

[3] These deal with variations among kindred species or populations connected with heat economy: surface/mass relations, relative size of extremities, and color of fur or feathers, respectively.

[4] Kloepfer, 1946, produced statistical evidence of possible linkages between certain morphological traits, but a similar investigation by the writer (in preparation) did not support Kloepfer's findings where the traits used corresponded, and did not turn up other promising linkages.

ture developments in line with recent ones, it will be more reasonable to make statements and assessments of what is modal for man, and what is extreme, specialized or highly adapted. That is, it should be more meaningful to consider which kind of race or population is more generalized or genetically amorphous, and which has moved to a peripheral position, so to speak, through adaptive pressure of some kind. Mead (1954) says "The common anthropological assumption of the psychic unity of mankind is that a child at birth is equally capable of learning any natural language and of coming to embody any human culture," so that such children "are capable of becoming equally complete representatives of Eskimo, Mexican, Siamese, French or Russian culture. . . ." I quote this "psychically" proper statement, an expression of the universality of human nature which is the point of my discussion, only to be perverse, and to query whether an infant Nilotic Negro could in fact become a "complete" representative of Eskimo culture, and vice versa, or whether he would die trying. And have these two culture-environments put a really extreme pressure on the adaptation potential of the human species of recent times, and on rates of evolution through genetic segregation of existing material, or have actual mutations provided new adaptations?[5] If, as Coon (1954) suggests, the original and central genetic heritage of hairless man was a tannable skin of varying middle grades of pigmentation, how much of an excursion from this is the development of a "black" skin, and what rate of change is possible? Or the same for a fat-masked Eskimo face, with a skeletally recessed nose? How rapidly can body shape change? Dobzhansky has often defined races as populations differing in the *incidence* of certain genes; should this be taken to mean that the genetic material for the whole human range is present in at least some generalized populations (like the various blood type genes), or are there actually any race-limited genes? These are interesting questions, not new, but becoming more useful. (More information about them should resolve, along the way, questions as to whether different racial stocks descend from different fossil forms, as Weidenreich held, or whether *Homo sapiens* might have evolved from the Neanderthal line within Wurm times).

At any rate, as the understanding of adaptability, and the connected essential genetic variation in any population, goes up, the idea of neat fundamental distinctions among racial groups goes down. For the genetic explanation of variability destroys the idea of group homogeneity and emphasizes human universality. And still none of this should vitiate the reality of group or individual differences, as some have insisted, for it is the strong genetic determination of individual differences which is at the center of the whole business.

ADAPTATION AND BEHAVIOR

What about differences leading to behavior, in intelligence or personality? Racists were much interested in this—in group differences—but plainly the only information of which we could make scientific use will lie in the variation of the individuals within one culture and one population or race. Were we able to establish such differences between races, it would be a sterile finding except as we could again apply the knowledge to the variety within a group, i.e., that of the individuals.

In practical affairs, we proceed on the assumption that intelligence differs natively in degree and in kind. Children, progressing through school and into college, are formally tested for aptitudes and relative intellectual development, aside from school grades, and are assorted or advised, to varying extents, accordingly. But the scientific element, which is anthropology's interest, is certainly less than could be desired. The enthusiastic measurement of "racial" differences by some form of an I.Q., thirty years back, shortly generated its own correctives (see especially Klineberg, 1931, 1935) and subsided. Nevertheless, using the same kind of measure, Burks (1938; also Wright, 1931) and Newman, Freeman, and

[5] Kroeber suggested the same kind of view, of appreciating the bounds of human nature through known extremes of culture forms, in a recent talk in Cambridge, Massachusetts.

Holzinger (1937) were able to show that heredity was accountable for a very large proportion of the individual differences in I.Q. scores; these studies were the high water mark of efforts in this particular direction (see also Hogben, 1933). At the same time, comparative work with such tests was becoming continually less satisfactory as a measure of native intelligence (Davis and others, 1951). It becomes clear that the missing element in all this is any explicit conception of what "intelligence" may be, and that is just the point which the usual "I.Q." schedules beg, since these are generalizing tests, assuming that geometric, numerical, and verbal abilities should be averaged out. They accept Spearman's "g" factor at the beginning, while other psychologists working in the opposite direction have been satisfying themselves of the existence of a number of independent mental factors of faculties (Vernon, 1950).

Fresh air seems to be blowing on the matter from experimental work with animals (Scott, 1953; Fuller and Scott, 1954). Quotes from the first article cited will convey the possibilities:

"The conclusion must be drawn that the fruitful way to analyze behavior in terms of genetics is through specific processes rather than through overall adaptation or 'intelligence' . . . the actual situation appears to be one in which each individual may have dozens of capacities which are independently inherited and all of which may modify his behavior. Once the individual is faced with a situation demanding adaptation, he organizes these capacities in such a way as to produce an adjustment. Another individual with a different set of capacities may meet the same situation equally well by organizing his different capacities in another way. The task of geneticists and psychologists is to discover and measure these basic capacities. . . . The general theoretical picture is that an individual has within him a very large number of physiological processes, each independently affected by heredity and all of which may go into his behavior. . . . clear-cut genetic results can be expected in the study of behavior only where a trait is measured which is either a physiological process or largely based on one."

The advantages of this sort of approach are various and sizeable. Greater latitude for comparison is available if different species may be used, or different breeds of dogs. Viewing "intelligence" as adaptability to situations lessens the formal intellectual emphasis without deprecating human mentality at all. Rather, this admits as factors of intelligence those social and behavioral capacities that have always been so impressive—and perhaps not yet adequately recognized—in the studies of primates. Thus it suggests that "intelligence" must be looked on as a panel of faculties ranging from the most formal intellectual traits of which man is capable, into traits which are primarily in the categories of emotion or personality, without making a line anywhere to correspond to what we usually think of as the limits of "mental" qualities. Finally, such an individualizing of faculties fits genetic theory as no notion of general intelligence ever did.

What about differences in personality? It is to be hoped and expected that traits of native "personality," along with specific traits of intelligence, eventually will permit identification and measurement, and genetic study of their variation, in precise terms. After all, it is only repeating one of Darwin's basic assumptions to point out the following, about either personality or intelligence. If there were not even the suggestions we already have of individual genetic differences, these still would have to be postulated. For human personality and intelligence can have arisen only through human evolution, and evolution can take place only through the genetic variation of the individuals of the species.

The path ahead already has been suggested, and the convergence of biological and cultural studies demonstrated, in the papers assembled by Kluckhohn and Murray for *Personality in Nature, Society, and Culture* (1953). In any case it would appear inevitable that students of personality and culture must come into this area in the end. For they will not have all their solutions until they know more about the biological basis of personality, meaning its

precise modes and range of variation, which will in the long run call for understanding of the genetics involved, as a means of proving the reality of the elements under consideration. This is one area, then, where physical and cultural anthropology must certainly come together, since their interests will lie closer in these matters, and genetics appears to be a major key by which the exact nature of anything having a biological basis must be analyzed. It is, of course, much too early for such a rapprochement now, and physical and cultural anthropologists therefore work apart, without a great deal to communicate from day to day. But it is not too early to be aware of crossing paths ahead, since this is important to the nature of the whole science of anthropology. Furthermore, one major change has taken place in anthropology: the transfer of interest from the group to the individual, in physical anthropology away from the racial type, and in cultural away from the simple model culture of a group, above all, in the appearance of the "culture and personality" field. This in itself is, we believe, a necessary step in any move toward common ground.

At the moment, then, one general problem before the profession is that of trying to see the scale of variation in man, and of trying to keep this view up to date; of looking more earnestly for the significant points of variation in human beings, as distinguished from the superficial or the conveniently observed ones; of finding ways of describing these variations precisely, i.e., of scaling them; and of testing them eventually for reality through their behavior in inheritance.

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Function

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IN any discussion of *function* in the anthropology of 1952–1954 the two most pertinent questions are: What is the theoretical status of the concept? And what substantial contributions have been made through its use? A qualification must be made here immediately, especially when one is discussing anthropological work of recent date; one must envisage the possibility that many of the contributions made through use of the *concept* of function may not use the *term*. It is already more than a quarter of a century since, initially through the stress laid upon it by B. Malinowski, the notion of function explicitly has been part of the intellectual framework of anthropological inquiry. There has been ample time for the notion to have passed through phases of enthusiastic acceptance and regular use to scrutiny and challenge, and on to synthesis and absorption. It can be fairly claimed, we think, that in many modern anthropological studies the notions of functional analysis are inherent though the term may never appear. This will be dealt with later. For the present we speak specifically about the concept of function as implied in the use of the term.

But first to make one point. Recognition of the concept of function as a theoretical tool, and hence of "functionalism" as a brand of anthropology, very generally has been regarded as a British attribute. It may come as a surprise then to realize how little attention apparently is paid now by British social anthropologists to methodological consideration of function as a notion, and often how little is their use of the term.[1] The reasons for this are complex and some are mentioned later, but the most important undoubtedly is that "functional" concepts have penetrated so deeply into British thinking about anthropological problems that they have been incorporated often without specific reference. But what is now almost a commonplace to all anthropologists is still relatively new to the sociologists. The attention they have paid to the subject in recent years is one of the reasons why so much space later is devoted to their analyses.

GENERAL SENSE OF THE TERM

The use of the term "function" is very varied. For anthropological purposes we can discard its two lay senses. One is the popular usage of "function" as a formal, social gathering; an occasion of activity and display of a set kind. This quasi-ceremonial usage, though superficially most close to the interests of anthropologists, has been ignored by them because of its lack of precision and theoretical sophistication. Another usage of "function" as equivalent simply to "activity" deliberately has not been adopted by anthropologists, though

[1] E.g., the eight essays by various authors in *The Institutions of Primitive Society*, edited by E. E. Evans-Pritchard (1954).

they occasionally slip into it—as in such expressions as, a certain office-holder "no longer functions." But in such usage there is an element of obscurity. It is not clear how far there is implied in the concept of function as simple activity an attribution of purpose or end to which it is directed—how far, in terms of the dictionary definition, the activity is regarded as being "proper" to the thing.

This begins to touch on our difficulties. For the term "function" in anthropology, as more broadly in the sciences as a whole, has had two main senses or groups of meanings. One is the relation of interdependence. This is allied to the mathematical concept of function—as a variable quantity in relation to others in terms of which it may be expressed or on which its value depends. In this sense, of a relation which is reciprocal and reversible in terms of cause-effect, function is akin, in the social sciences at least, to covariation (Nadel, 1951, pp. 101, 287, 368–371). But this notion of function as mere interdependence, as non-randomness, does not carry us very far. In the history of social anthropology in particular, the concept of function has not simply been used to chart inter-relationships. It has been linked fairly consistently with the problem of assignment of meaning, in the wide sense.[2] We do not overlook Linton's distinction between form and meaning as passive qualities, and use and function as dynamic qualities, with emphasis on meaning as the subjective associations held by society and on function as satisfaction of need. Nor do we disregard the efforts of Chapple and Coon, and of Homans, to study functional dependence in terms of variation of human interaction over time, and to extract meaning from the degree of interaction in itself. But as Linton pointed out that the four concepts he examined are mutually related, so also Chapple and Coon went beyond the notion of mere covariance, by recognizing that variations can be of more or less significance, by selecting some phenomena as more important for study than others, and by relating their findings to such central themes as the strengthening of individual and social equilibrium.[3]

The second sense of the term "function" in anthropology, then, has had an orientation toward given ends. For Malinowski, as for many later writers, these ends were duplex, one component being the needs of individuals, the other the needs of society and culture. One of his typical formulations (Malinowski, 1931, pp. 638, 639) is, "a functional explanation of magic may be stated in terms of individual psychology and of the cultural and social value of magic," or, more positively, "magic serves not only as an integrative force to the individual but also as an organizing force to the society." Though he said that the real importance of "the so-called functional method in modern anthropology" consists in the parallel study of mutually dependent phenomena or aspects of tribal life, he was never content with this alone but consistently went on to analyze the functional character of kinship usages, of magic, of myth, of religion, etc., in terms of "the deep although derived needs of the individual and of the community." For the community, the cultural need was "the body of conditions which must be fulfilled if the community is to survive and its culture to continue" (Malinowski, 1931, p. 629; 1936, p. 44). This well-known implication of need-fulfilment in the concept of function has involved reference to notions of society as a totality, having a certain unity and integrative character, the elucidation

[2] Firth, Raymond, 1951, pp. 33–35. In economics, terms such as "supply function" and "demand function" connote essentially variable elements, their kinship with mathematical usage being shown by the ease with which they are expressed in symbolic form in equations. But expressions such as "the functions of money" imply that there are activities normally expected of a monetary medium, with corresponding requirements to be fulfilled in an economic system; and discussions about the meaning of the word "money" usually involve examination of it in such terms. As regards problems of meaning in the technical sense, it is obvious that symbolic logic and linguistics deal with many aspects not immediately related to functional considerations. But use of the term "function" by linguists implies significant activity, not mere relationship. (See, e.g., Jakobson, R., 1953, pp. 13–14.)

[3] Linton, 1936, pp. 402–419; Chapple and Coon, 1942, pp. 36–42 *et passim;* Homans, 1950, pp. 110–113 *et passim.*

of which has persisted into contemporary discussion.

RECENT ANTHROPOLOGICAL HISTORY OF THE CONCEPT

But to appreciate the significance of the use of the concept of function and of functional analysis in anthropology in 1952–1954, it is necessary to review the history of the concept. From the time when Malinowski (1926, 1927, 1931, 1932, 1944) in his articles on social anthropology and on culture in the encyclopedias and elsewhere began to put forward the claim of functional anthropology to constitute a specific and necessary method, the literature on the subject has been considerable and at times confusing. But for social anthropologists in particular a significant milestone was the paper by A. R. Radcliffe-Brown "On the Concept of Function in Social Science" (originally published in 1935 and reissued in 1952 with only two small verbal additions). Radcliffe-Brown was concerned to give a clear statement of the concept of function, having been stimulated thereto by earlier and, as he thought, inadequate views. From his presentation a number of points stand out. He regards functioning as the result of *activity*—it is process. The concept of function involves that of *structure,* and functioning tends to the preservation of the structure—it assists its *continuity*. This implies the notion of *functional unity*. Such a notion of functional unity is an hypothesis that can be *tested*. There may be degrees of *efficiency* in organic functioning, but since we cannot define dysnomia, social ill-health, by simple analogy in terms of disturbance of the usual activities of a social type, we look to conditions of functional disunity or inconsistency for criteria. To establish the degree of functional unity or disunity of a society it may be possible ultimately to establish a *purely objective* criterion. He suggested that the acceptance of "the functional hypothesis" was of advantage to anthropologists since it resulted in the recognition of a great number of problems, some of a comparative order (in which he himself was especially interested) and others of an intensive mono-societal order.

In this essay Radcliffe-Brown made three points of general significance which were a distinct advance in "functional" thinking. The most important of course was his insistence on structure as the correlate of function. On the structural side, Malinowski's concept of functional analysis had always been weak.[4] His concept of function as complete contextualization, as inclusive of all relations of interdependence made insufficient allowance for degrees of effect. He attempted to remedy this by his "need" theory. But he thereby omitted to make clear enough the vital link between sociocultural activity and basic structural principle. In his reaction against the aridities of purely formal comparison he tended to regard form as determined by function to an extent which blinded him at times to the allowance that had to be made for the rigidities of social pattern. Yet in their fundamental thinking, there is not perhaps so much difference between Malinowski and Radcliffe-Brown as often has been supposed. Malinowski's notion of instrumental imperatives of culture includes elements of pattern organization in quasi-structural terms. And his affirmation (Malinowski, 1931, p. 624) that the fundamental institutions of human culture have changed by way of increasing differentiation of form in accordance with an increasingly definite function has much in common with Radcliffe-Brown's more cautious view (1952a, p. 183) that change of social type is dependent on function, i.e., on the laws of social physiology, as exemplified in European institutions during the last twenty-five centuries.

The second point to be noted here is the attention Radcliffe-Brown draws to dysnomia in terms of functional inconsistency and disunity. This is a point referred to later by Bateson (1936, p. 31), in his useful critique, in terms of the mutually antagonistic effects of certain functional relationships, leading to a reduction in

[4] Lévi-Strauss (Kroeber and others, 1953, pp. 532–533) has pointed out that a functionalist may be far from a structuralist—his example being Malinowski.

solidarity, a relaxation of obligations, etc. It is also taken up by Merton (1949, p. 37) in broader terms—of the dysfunctional consequences of some social forms, and the ultimate problem of developing an organon for assessing the net balance of consequences if social research is to bear on social technology.

The third point here is Radcliffe-Brown's specific stress on *social* function in terms of correspondence to group requirements. It is incorrect to say, as one sometimes hears it said, that Malinowski related function to individual needs and Radcliffe-Brown related it to social needs. Malinowski, as observed already, was concerned with group reinforcement, while Radcliffe-Brown admitted that an essential part of the "functionalist" task is the investigation of the individual and of the way in which he is moulded by, or adjusted to, the social life. But whereas for Malinowski the group tended to be a cultural universal, for Radcliffe-Brown it has been for the most part an identifiable, though abstract, type of social unit with time-place coordinates in a particular cultural system.

In some other respects Radcliffe-Brown's treatment was less satisfactory, leaving residual problems of a refractory kind, from the influence of which anthropology only now is working free. One of these, in some ways more a verbal than a substantial difficulty, lies in the definition of function. Radcliffe-Brown does not take up Malinowski's definition in terms of derived needs of individual and community. In fact, he does not refer in the essay to Malinowski at all. He goes back to Durkheim, but substitutes for the French equivalent of the term "needs" that of "necessary conditions of existence." He does this, he says specifically, to avoid the possibility of a teleological interpretation. "Function" then becomes the "contribution" which a partial activity makes to the total activity of which it is a part. Malinowski later characterized this as a "glib expression" and demanded more definite and concrete reference to what actually occurs and what can be observed. The definition, curiously enough, is reminiscent of some phrasing of Malinowski's own, years before (1927, p. 111): "Above all, we want to know how the various aspects of culture influence one another, and in what measure they contribute to the integral working of the cultural scheme. It is clear that such functional Anthropology would be capable of supplying us with criteria of cultural efficiency." More recently, Radcliffe-Brown (1952a, p. 200; 1952b, pp. v, vi) has defined social function in terms of the relation of a socially standardized mode of activity or mode of thought, to the social structure to the existence and continuity of which it makes some contribution. But as Nadel (1951, p. 371) has pointed out, the correlation between functional activity and social existence implies objective or absolute utility for the observer, and "smooth cooperation" as an end. And as Talcott Parsons (1954, p. 217) has indicated, any such conception of function which is oriented toward the maintenance of social existence does involve a teleological element.

A second difficulty in Radcliffe-Brown's treatment has been the notion of the functional unity of a social system. This is in some ways a peculiar concept. From one angle it appears as a more sophisticated version of the group referent of Durkheim, an abstract, neutral principle whereby individual behavior could be treated selectively and given coherent explanation in terms of major theory. But from another angle it is a much more substantial concept, associated with notions of social equilibrium, and of opposition (that is, socially regulated and organized antagonism) as an essential feature of every social system. Here one is tempted to look beyond the scientific environment of the social analyst into a field of his social interests and personal temperament, possibly with a strong aesthetic component, in which a conviction of the importance of *order* is a general and not merely a sociological regulating principle. Be that as it may, and even though Radcliffe-Brown has spoken of this concept of functional unity and integration as only an hypothesis, its currency in practice has tended to give to some interpretations of social phenomena a bland and facile air.

It is in reference to this point, in particular, that we may consider some sociological views on function.

GENERAL SOCIOLOGICAL CONTRIBUTIONS

Sociologists such as Max Weber (1947, pp. 15–20) and Karl Mannheim (1940, pp. 240–243) have examined concepts of functional interpretation long ago. But it is comparatively recently that they have done so with specific reference to the theoretical treatment of the same theme by anthropologists. Here, as in so many other conceptual inquiries, the way has been led by Talcott Parsons.

In his earlier work Parsons (1949b, pp. 436, 437, 438, 713) was content to use the terminology of functional explanation without subjecting it to special scrutiny. But as his interest developed it began to play more part in his work, until we get the "structural-functional analysis" of himself and those who have benefited most from his massive frame of reference. As he points out, once use is made of the notion of the structure of a system as a positive constituent of dynamic analysis, there must be some way of linking these "static" structural categories and the factual statements associated with them to the dynamic variable elements in the system. This link is supplied by the "all-important concept of function." It is very clear that the synthetic and dispassionate approach of Parsons to the notion of function, the problems it presents, and the use to be made of it have continued to be of great importance, especially in their more recent formulations. Parsons regards the concept of function as a valuable tool. He speaks of it as a principle relating action to object. He points out that it is always relative to a given basis of reference. "The functional problem of social systems," he says (1951, p. 25), "may be summarized as the problem of location and integration." Such problems are set by the nature of the human organism itself and by the pressures of scarcity and time, opportunity and resources in the situation. These constitute the conditions and, as Parsons puts it, "the empirical necessary preconditions of social systems in operation." These, in general terms, are what Parsons refers to as functional imperatives, a term which seems to be broadly equivalent to requirements for action. Such functional imperatives are unevenly distributed within the given social system; as, for example, those in the kinship cluster contrasted with those in the economic cluster. But while a set of functional imperatives is imposed by the nature of human action in society, it is also necessary for the process of selection to take place between ends and between means for the realization of ends in accordance with standards of evaluation. Such evaluation "of all the strategically significant categories of the object world," is itself a functional imperative of a system of moral standards. Yet systems of action are functional systems while cultural systems are symbolic systems in which the components have logical or meaningful rather than functional relationships with one another. Hence the imperatives which are characteristic of the two classes of system are different (Parsons, 1951, pp. 173, 177, 241). In this treatment, to which it is almost impossible to do justice in compressed version, Parsons seems partly to be bringing in Merton's difference between manifest and latent functions and partly restating in more formal language the difference which Malinowski envisaged between basic needs and derived needs, or, as he called the latter, cultural imperatives.[5] Linked with this conception of the symbolic autonomy of the cultural or social system is the difference between the needs of the system and those of the individual participants or actors who operate it. Parsons points out the dangers in the use of functional analysis which may involve either a metaphysical teleology or hidden political and ethical preference. To avoid this, he holds that it should be sufficient to bear constantly in mind that the concept

[5] In Malinowski's view (1944, p. 121), responses to these cultural imperatives are as vital as to the basic human needs; failure in social cooperation or symbolic accuracy means immediate or long run failure to survive.

of "systemic needs" is a kind of shorthand for motivational processes.

The contribution of Talcott Parsons to functional theory has been architectonic in the style of its thought, scholarly in its impartiality among theories. Its elaborateness and the closeness of its relation with other aspects of his theory sometimes makes it difficult to use alone. But part of his contribution has been to use the concept of function with more flexibility and more richness of content than the anthropologists have done; to relate it more positively to structural concepts, in more meaningful ways; and, supported by sociological colleagues, to face the difficulties inherent in its implications and try to remedy them.

These difficulties, associated especially with the vagueness and lack of precision of the concept of function, even when specifically defined, were faced most directly by Robert Merton (1949, pp. 21–81). In what he described as an attempt to lay out the foundations and framework of "the kind of social theory called functional analysis," he set out to modify the assumptions, concepts, and procedures, both implicit and explicit, in the functional interpretations of sociologists, psychologists, and social anthropologists. But in bringing the functional notions of anthropologists more directly into sociological perspective, Merton did not spare his criticism. The anthropologists, myopic from their intensive studies of small-scale societies, had developed the notion of functional unity to a point to which it seriously threatened social theory. Not only was the idea of functional unity "manifestly contrary to facts" but it was also "of little heuristic value." Merton pointed out that in transferring the concept from the small scale to the large scale, from the simpler societies of the primitive field to the complex, highly differentiated societies of the West, the social theorist has paid an excessive intellectual penalty, which he exemplified by reference to the functional analysis of religion. In this we would agree with Merton's basic viewpoint. Indeed we have pointed out "The hypothesis that religion is an integrating force is more closely applicable to the simpler than to the more highly complex societies. With social and economic differentiation religion often becomes a banner for sectionalism" (Firth, 1948, p. 41). But one may confuse here *theory* and *field*. For religion a concept of functional unity fairly may be said to have had its main genesis in the field of the more primitive societies—as in the Australian material analyzed by Durkheim. His examination implicitly stresses the functional integration of society in representing society's interior life as the total, outside which nothing exists, the source of such basic categories as space, time, and causal relation. "The rhythm of the collective life demonstrates and embraces the varied rhythms of all the elementary lives from which it results" . . . (Durkheim, 1915, p. 439 *et passim*). Moreover, Durkheim emphasizes that his study has a comparative and general application. However, Durkheim was not an anthropologist but a sociologist, and the essence of the notion of functional unity is in line with, if it does not stem from, his conception of "organic solidarity" based on the division of labor and from allied notions. Members of such a society are united by bonds which extend far beyond the brief moments when exchange takes place: "Chacune des fonctions qu'ils exercent est, d'une manière constante, dépendante des autres et forme avec elle un system solidaire" (Durkheim, 1932, p. 207). This is a conception which, if it did not precede his analysis of material from the non-literate societies, owed almost nothing to them.

Again there is the question of the postulate of the unity of the total society. Merton asserts that this is "a question of fact, and not a matter of opinion," and cannot be usefully posited in advanced of observation. Such a challenge to further inquiry is valuable. Yet surely the perception of such unity is a matter of abstraction? The postulate need not be there as a hard assumption, but it must be there as hypothesis before observation can confirm or deny it. Moreover, observation alone cannot correlate the behavior of individuals in diverse situations of place and time and establish

as "fact" the *condition* of a "total society." If *"integration"* is a plainly formal concept, as Merton holds (1949, pp. 32, 46), then should not *"unity"* be put into the same category?

What Merton has done is important. He challenged in a very useful, if at times selective, way the notions of functional unity, of functional universality, and of the indispensable character of social or cultural items. He set out the logic of procedure in functional analysis: the establishment of some functional requirements, for operation or survival of a social system; the relation of these functional requirements to a particular kind of structure; a concrete description of structures and processes through which these requirements are met in normal cases; search for equivalent or compensating mechanisms, if some of the typical ones are inadequate or interfered with. His elaboration of these rules in his "paradigm" drew attention to significant questions and made several valuable and necessary distinctions. Of these, the most striking, as for him the most memorable, is the distinction between manifest and latent functions, which has now passed into current anthropological thought in various forms.

Further points of criticism of functional concepts have been developed by George C. Homans (1950, pp. 268–272). Acknowledging that the theories of "functionalism" were first developed in anthropology and that they have made a contribution to social science, Homans acknowledges also the reciprocal debt to Durkheim and Talcott Parsons. Yet, like Merton, he has seen difficulties in the use of the concept of function. One is the lack of clarity as to what is meant by the unit entities or elements which have been isolated for discussion and seen as related to one another in the social structure. Homans does not refer specifically to the unclassified use of unit entities of a wide range of magnitude. But he does draw attention to the ambiguity when *institutions* are so cited and it is not indicated whether the institution is a general department or aspect of human activity, such as religion, or a specific organization or body such as a church. He overhauls also the notion of continuity or survival as a reference point. In view of the fact that since society has nearly always managed to survive somehow or other, he argues that it is not easy to see just what is the contribution of any socio-cultural item to this. Here he is catching up a point made in other words by Radcliffe-Brown (1952a, p. 183). In pointing out also that because a recurrent activity is inter-related with others it does not therefore necessarily contribute to social continuity, he stresses again, as Merton has done, that such broad assumptions properly should be used as hypotheses, not axioms. To try to avoid such difficulties, Homans has given his own reclassification of the elements of social behavior.

We may now consider a very recent systematic treatment in which the concept of function occupies a central place. The pervasive character of modern social theory makes it difficult to attribute "influences" or "priorities" to phases of ideas. It is hard for the observer to see then just where the critical examination of the notion of function and the positive suggestions about it have contributed to the most recent formulations. But the synoptic treatment of Marion J. Levy (1952, pp. 27–110) is frank as to its sources, owing a primary inspiration to Talcott Parsons but drawing upon almost the whole range of the social sciences for consolidation of the theory. Anthropology of 1952–1954 is set firmly, as far as its general social theory is concerned, in a sociological matrix.

Levy aptly remarks that structural-functional analysis is not something new in either the social or the natural sciences; the only new aspect of it is its formidable name.[6] In his earlier attempt to define the concept of function, Radcliffe-Brown had associated it with the notion of structure. Functioning, he argued, tends to preserve

[6] Our resolution is still further tested a little later when we are told that the primary orientation of his book is to "structural-functional requisite" analysis and that distinctions must be drawn between eufunction and dysfunction, eustructure and dysstructure.

structure, to assist its continuity. Moreover, he stated, one can observe structure only through its functioning. But in such recent work as by Levy, structural theory has become clipped to functional theory to a degree which Radcliffe-Brown himself apparently had not envisaged. In fact, the position seems to have become reversed from Radcliffe-Brown's formulation—though not from his actual analyses, in which structural considerations have been primary. Levy separates the concept of function from that of the functional requisites of a society. Function is regarded as the consequences of structure, as a condition or state of affairs resultant from the operation of a structure through time. Even mere persistence of a structure has as its resultants certain functions.

Here one is getting to the border-line of personal arrangements of the counters of intellectual play. For one may argue that one cannot know a structure apart from its operations, and that the distinction between structure and function is so much verbal expertise. I think this would be a harsh judgment. Granted that, as Parsons has hinted, structure and function are relative terms, and that the concept of "structural-functional" has come into being as a unitary term to express this empirically indivisible relativity. Granted also that there is a danger of a mere load of words in itself obscuring thought, however refined the analysis may be. Yet such analysis and synthesis of concepts of a functional order have been stimulated by real obscurities in the literature, and have resulted in significant distinctions being drawn. To many, the newer terminology may not be acceptable. As Merton (1949, p. 54) has said, "taxonomies of concepts may be multiplied endlessly without materially advancing the tasks of sociological analysis." But if the analysis be regarded as a framework of ideas rather than as a framework of terms, there is much that can be gained.

If now we try to see briefly the connotation of function by sociologists and anthropologists as of 1952, we see at least four distinct usages: (1) function as the *activity* of object or entity; (2) function as *relation of interdependence* with activities of other objects or entities—the contextual identification; (3) function as relation of interdependence *of special quality,* e.g., in regard to requirements or ends such as maintenance of a social system, this quality being positive or negative in character; and (4) function as *consequence of structure.* Contrary to Levy's view, we doubt if this can be treated as the most general sense of function, unless it be argued that every object or entity connotes a structure. But this raises problems, on the one hand, of the consequences of the activity of amorphous entities, and, on the other, of the heuristic value of giving more limited usage to "structure" for social analysis.

A note may be made, in passing, to questions of recognition of kinds of functions. One such question relates to the distinction between manifest and latent functions. Such a distinction already was implied in Sapir's usage of "explicit and tacit requirements" satisfied by a language system.[7] Merton's specific recognition of this distinction stimulated discussion and gave a very useful refinement of terminology, but it left untouched one fairly obvious difficulty. For his definition, Merton drew attention to the difference between the intended consequences of action and the unintended consequences, and he allied these with the recognition or non-recognition of them. The former were manifest functions, the latter latent functions. Levy, while adopting the definition, has pointed out the fairly obvious corollary that in any system what is manifest to one person may not be to another. Hence not only the action and its results must be specified, and the system in which it is involved, but also the actor or actors from whose standpoint it is being viewed. Incidentally, Levy also points out that Merton's treatment of dysfunction takes account only of latent forms.

Another point, which is related to this, but which does not seem to have received

[7] He was talking of the possibilities of an international auxiliary language, and thought that much of the difficulty in its adoption lay in lack of clarity as to its "fundamental functions" (Mandelbaum, 1949, p. 110).

full treatment, though it is referred to in Levy's systematic appraisal and by Merton, is the difficulty from the observer's point of view of assessing functions in empirical situations. Much depends upon his view of the overall character of social relationships, and on the theory which he thinks applicable. For example, one can discuss the "protest functions" and "pressure functions" of trade unions as introvert functions, serving their own ends and maintaining their internal solidarity. One can see these as dysfunctional from the point of view of society as a whole, linked with various restrictive and disturbing practices. On the other hand, one can regard them as part of the general process whereby groups necessarily express themselves and work in society, giving confidence and energy to their members and gain to the society which relies on their efforts. In this sense they may be regarded as having positive extrovert functions, manifest if they see their group solidarity contributing to social strength as a whole, but latent if they do not see this. Too much recent treatment of function still adopts an exclusive attitude, seeing behavior pattern either in completely positive or completely negative terms, in relation to the social system.

Before concluding this brief account of the work of the sociologists, a reference may be made to the inquiry into the notion of function, and use of the concept, by a philosopher, A. Macbeath (1952, pp. 121, 129, 138–139, 142–143). He uses the term "function," in the first place, as equivalent to interdependence. It is this interdependence of its institutions, whereby they mutually support one another, to which functionalist anthropologists refer when they speak of the pattern of the culture of a particular people. He points out that this does not mean that the institutions are logically connected or rationally coherent, but only that they are so connected for the people concerned that the satisfaction provided by one act has incentives to perform the duties required by another. Constancy again means only lack of complexity. On the other hand, he uses the term "function" also in reference to ends. He speaks of the important functions which the arrangement of economic support by brother to sisters fulfils in the life of the Trobrianders: "It not only provides for the satisfaction of economic and other needs but it helps to give greater stability to marriage, and it provides a mechanism whereby the chief collects tribute and his justification for exacting it." He refers also to Malinowski's account of the principle of reciprocity, saying that it may be seen from three points of view, that it performs three *functions* in the life of the Trobrianders, and that its *requirements* may be complied with from three different sorts of motives (italics ours). These three points of view are the recognition of the system as moral, right, and obligatory; the expression of the principle in systems of exchanges which it is to the individual's own interest to keep up; and recognition that, if the requirements of the system are not complete, unpleasant consequences are likely to follow. These consequences, according to Malinowski, are essentially of the *nature* of, or perform the same *function* as, legal sanctions in more advanced societies. Macbeath, then, tends to equate the concept of function with fulfilment of requirements and to find in the fulfilment of requirements the essential nature of the principle or institution concerned. This virtual equation of character and function reminds us of the layman's view as expressed in the dictionary definition of function as activity *proper* to an entity. But Macbeath is not concerned to examine the concept of function itself; he uses it simply to advance his examination of Malinowski's material.

GENERAL TREATMENT OF FUNCTIONAL CONCEPTS IN RECENT ANTHROPOLOGY

It is from this general sociological base that we can pursue our inquiry into the work relating to function done specifically in anthropology between 1952 and 1954.

In considering the theoretical status of the concept of function, it is significant to note that interest in the theoretical exploration of the concept as a topic seems for the time being to have died down. One

would not have expected such a full scale analysis as Kroeber and Kluckhohn devoted to *culture* in their critical review of its concept and definitions. But if we consider only the close relation in the work of Malinowski between his concept of culture and his theory of function, it is somewhat surprising to find in the Kroeber and Kluckhohn review almost no consideration of the concept of function itself. Indeed it enters into the field of conceptual elements recognized in definitions of culture only indirectly under the head of "dynamic structural relations." Only three of the formal statements on culture cited in the section on definitions introduce the term "function," those by Bidney, Gillin, and Turney-High (Kroeber and Kluckhohn, 1952, pp. 44, 61). Other statements as by Radcliffe-Brown, Wallis, Forde, also defining culture in functional terms, or discussing function in relation to culture, are cited in other contexts (pp. 84, 85), but the functional concept itself is not specifically examined.[8] Essentially the reason for this omission would seem to be the tacit acceptance of "function" as a term of general usage rather than one which should bear theoretical weight as a critical concept.

To some extent, this position would also seem to lie behind the relatively small attention paid to the concept by Bidney. Seeing that in carefully choosing as a title for his collection of essays the name *Theoretical Anthropology* he intended a study of postulates and assumptions underlying the development of modern cultural anthropology, one might have thought a philosopher would have found essential a full scale essay treatment of the theme. What one does find is a section on the concept of functional integration and some discussion of "functionalism" as a movement or trend in anthropological thought, but this is linked closely to the examination of Malinowski's cultural theory and to the more general concepts of cultural integration and of ethno-history. In his discussion Bidney neatly points up the implicit use of the category of function by Boas and his followers in field investigation and the debt which the functional theory in its explicit form in anthropology owes to the naturalistic instrumental approach developed at the time by John Dewey.[9] One wonders, however, whether the use which Boas and his followers made of the functional category was not really very limited and empirical, and a very different thing from the later developments by Malinowski and Radcliffe-Brown. Indeed, Bidney's own frank expression (1953, pp. 217, 224–236, 366, 374) that it remained for these two anthropologists "to make functionalism a fighting term" suggests this.

Malinowski and Radcliffe-Brown in the twenties and thirties did not merely say that items of culture were interrelated. They had to show by the analysis of concrete examples that much more positive results could be achieved by studies which bore a specifically "functional" label than by the methods of simple collection and analysis of ethnographic facts under the conventional heads or compartments of the day. In particular, though their rejection of conjectural history was too forceful and too negative for acceptance in toto, their insistence on the understanding of cultural elements and processes in terms of the set of contemporary phenomena, and on the integrative character of society and of culture, resulted in the discovery of many relationships hitherto unperceived. This great service could not be overlooked even at the height of the controversies which its expressions evoked. But these controversies have had their effect in one way by inducing a certain lassitude—at least among British anthropologists—at the thought of now undertaking further full-front examination of the concept of function. Linked with this also has been the growing realization that the concept of function, as Malinowski used it and also as redefined by Radcliffe-Brown, has always been better as an heuristic instrument than

[8] It is interesting to see that the authors state that Part 3 of their treatise will "serve the function" of a thesaurus of representative or significant statements on cultural theory.

[9] He might also, as Kluckhohn did earlier, have pointed to the more general climate of intellectual opinion, from biology to architecture, at the time.

as a classifying instrument. Moreover, in British anthropology a competitor for conceptual attention soon appeared in the field. Interest in structural concepts and recognition that earlier functional analysis needed, as it were, a formal stiffening by such concepts, turned attention away from explicit considerations of function. Furthermore, as the range of easily recognizable relationships between contemporary phenomena in culture became explored fairly widely, though not yet systematically, there was less reason to focus attention upon functional concepts *per se*.

But a further reason is that so much of "functional thinking" has passed into general currency unnoticed or at least unnamed. There is no need to repeat Malinowski's embarrassing technique of claiming as "functionalist" all those of whose work he approved. But it can in a very real sense be said that all British social anthropology today is functionalist. This is brought out very clearly by Fortes (1953, pp. 16, 18–27) in his inaugural lecture when he calmly assumes that functional anthropology is "the generally accepted basis of theory and research in Britsh social anthropology." In this he has picked up the affirmation of Evans-Pritchard who, despite his disagreement with what he regards as some underlying assumptions of functionalism about the character of social systems, has stated (1951, pp. 58–62) quite categorically that he looks upon himself as a functionalist and a follower in the footsteps of Malinowski and Radcliffe-Brown. It is true that Fortes has claimed that the chief innovation for which the functionalist movement stands was a contribution of the Cambridge School of Anthropology—the principle of the intensive study of limited areas. It might be argued that this was a procedure rather than a principle, and that the innovation of Haddon and his colleagues was not so much in studying a limited area as in going to the field to collect data themselves rather than let it be accumulated for them. And here Franz Boas has at least equal credit, since, though he did not go specifically for anthropological work to the Central Eskimo in 1883 and 1884, he was the first to make an intensive area study of a modern ethnographic type (Herskovits, 1953, pp. 66–68). Indeed, as Fortes admits, it is the body of theory that grew up with intensive field work as its concomitant that gives functional social anthropology its basis of discipline. Yet on one point there may be ground for question. Fortes (1953, p. 28) has stated "the functionalist point of view has always been precise and consistent." This surprising statement cannot be meant literally. By it he apparently means that this view had as its goal the search for general laws or tendencies of human social life, "regularities independent of period or place in social organization and culture." This means revealing the functions of institutions in relation to the whole social system. It is only in characterizing the functionalist point of view in these broadest terms that the labels of precision and constancy have any chance of being accepted.

But another reason for the virtual absorption of functionalist ideas into the body of modern social anthropology without further exploration of meanings is probably the feeling that this exploration has, for the time being, gone far enough. To the penetrating analyses of Parsons and Merton have been added the reformulations of Nadel (1951, pp. 368–371) and of Marion Levy, and such useful reviews as those of Eggan (1954, pp. 746–747, 753–755). With all this at his back, the contemporary social anthropologist has been able to go onward to substantial, and not merely to formal, inquiry.

When we turn to the contexts in which the term function is actually used, however, we still find different emphases, and by no means clear-cut agreement on what they represent. Even the classic Wenner-Gren Foundation 1952 International Symposium which resulted in *Anthropology Today* illustrates this. Redfield's description of "the functional model" as one in which a culture or society is seen as an organization of means designed to achieve certain ends, is a fair thumbnail sketch which frankly recognizes a teleological emphasis. Bidney's reference to functionalism in the context

of value analysis is in the same general strain, with survival of individual or society picked out as the major value criterion. Contrasting to some extent with this is Willey's craftsman's emphasis on functional interpretations in archeology as designed to elucidate uses of artifacts and their relations to socio-political and other nonmaterial features. He gives an interesting demonstration of the kind of hypotheses that can be formulated by such means, while he also is careful to point out their limitations, and the speculation that lies beyond. Beals and others, admittedly with different themes in mind, are concerned with the lacunae in "historical" appreciation by functionalist-trained scholars (Kroeber and others, 1953, pp. 380–383, 631–634, 694–696, 734). Another example, superficially in line with the last, but actually of a very different cast of thought, is given in Dittmer's more recent discussion of ethnological methods. He uses the term *Funktion* in discussing social functions, cultic functions, etc., in an ordinary sense of correspondence to requirements. But he dismisses the "functionalist method" in brief space on the grounds that it can contribute little to "historical" inquiry, which he regards as the essential task (Dittmer, 1954, pp. 9–10, 15, 53, 58, 95).

But we need glance only briefly at the use of the term "functionalist" as a label for a set or category of anthropological studies, for the totality of a method, or for a school of people using such a method. It helps to complete the picture to see such views as that functionalism was the major reaction in Britain to the study of memory cultures; that functionalism has been "a prevailingly fashionable subject"; that Malinowski was a "classical functionalist." It is interesting too to have Murdock's statements that he has supported functionalist anthropology at one time and traditionalist anthropology at another; or that he becomes more historical as the functionalist position gets more adherents. And one can reflect on Linton's saying that even the functionalists appreciate that frequently in cultural phenomena what you have is not function (Tax *et al.*, 1953, pp. 348, 354; Kroeber and others, 1953, pp. 395, 622). Such *obiter dicta* throw unexpected, often welcome, sidelights on men and opinions. But they do not let us know clearly what is a "functionalist," and they may have overtones that are more appropriate to informal than to formal discussion.

Now we consider the use made of the term function, the analysis of a functional kind, and the results, from within the discipline of anthropology in ordinary general work.

It is convenient here to refer initially to statements by Lévi-Strauss, whose integrative approach and acute critical scholarship have had such an important influence on anthropology in recent years. In his published work, Lévi-Strauss seems not to have devoted any particular critical attention to the concept of function. As many others do, he takes it in his stride, using it as a tool where he thinks it appropriate, assuming that it is sufficiently well understood not to necessitate specific definition. For the most part, he is content to utilize such terms as "process," "operations," "relation," and the like, in contexts where the term function might have been used by others. How far this is due to championing of the work of Mauss rather than that of Malinowski, it is hard to say. Certainly he has indicated his clear preference for a use of the term function in a way analogous to the mathematical, as he says Mauss conceived it, rather than in the "naively empirical sense" of a practical service rendered to society, as conceived by Malinowski. This championing of the "example of algebra" still leaves certain questions unanswered. It is true that Malinowski at times was content with too superficial and too temporary relationships labelled as functional. Yet he was searching, in his concept of function as satisfaction of need, for something more permanent and deeper than "practical service," as Lévi-Strauss terms it. Lévi-Strauss says "There, where Mauss envisaged a constant rapport between phenomena, wherein is found their explanation, Malinowski asks himself only, what do they serve in order to seek their justification."[10] But Malinowski was not content

[10] Lévi-Strauss, C., 1950, p. xxxvi; cf. also 1949a, pp. 24, 592, 613, 614; 1949b, pp. 363, 374. Balan-

with mere association. The fact of constant rapport might in itself not be sufficient to provide explanation for associated phenomena. Relation, in itself, does not necessarily touch the problem of meaning. And function, to Malinowski, should not be separated from meaning. Though he did not make much of his debt, it was perhaps most from Durkheim's definition of function in terms of the relation of correspondence between activity and need of the social organism, that Malinowski derived much of his own concept.

More recently, Lévi-Strauss has given a brief formulation which hints at his own conception of function. He points out that social anthropology was born from the discovery that all aspects of social life—economic, technical, political, juridical, aesthetic, religious—constitute a significant whole and that it is impossible to understand any one of these aspects without considering it in the context of the others. Social anthropology, then, tends to operate from the whole to the part or at least to give a logical priority to whole over part. A technique, for example, has not only a utilitarian value but also fulfils a function. For the technique to be understood, this implies social considerations as well as those of mechanics, history, etc. Linked with the assembly of functions are notions of structure and, in another projection, those of culture. This would seem to be in line with Lévi-Strauss's general view (1954, pp. 105–106) of the essential relational character of the concept of function.

Other recent anthropological treatment has been concerned with the use of functional criteria as an aid to the construction of both formal and substantial propositions at least as much as with analysis of the concept itself. E. R. Leach, as part of a valuable modern trend toward model construction and analysis, is interested in the implications of alternative possibilities—in the case under discussion where a matrilateral cross-cousin marriage rule exists in association with local descent groups. By *"implications"* he understands specifically the "function" of rules of behavior in a "mathematical" sense. That is, given such a rule and the existence of various other elements common to two or more societies, can it be inferred by logical arguments that some hitherto unknown characteristic or relation also must be common? From this point of view, though Leach is not at all unmindful of the empirical situation, he is not much concerned with what he says Malinowski might have called the overt function of the operation of the rules. He thinks that, since in different societies one and the same rule may doubtless serve different immediate ends, comparison in terms of such ends can lead only to purely negative results. This would seem to be linked with the distinction he draws between structural explanations, expressed in terms of persisting relations as between local descent groups, and essentially psychological explanations, relating to temporary relationships between individuals (Leach, 1952, pp. 27, 37). There is much in this with which one can agree. And yet the antinomy seems somewhat forced and artificial, if only because persisting relations between groups derive their continuity, in the last resort, only through the meaning which individuals give to what, in Leach's terms, are but temporary relationships. Leach draws the contrast between the hyperbole of functionalism which he says insists on the analysis of whole cultural systems, and a more limited approach to the comparative method. With Lévi-Strauss, he pursues the comparison of models but insists, in particular, that such comparison must always take into account "the whole range of institutional dimensions with which the anthropologist normally has to deal." It must also start from a concrete reality, a local group of people rather than from an abstract reality such as a lineage concept or the notion of a kinship system (Leach, 1952, p. 53). Such an analysis, when stripped of its polemic, does appear to make effective use of the concept of function by absorbing into the treatment much of the refinement that has been introduced during the last quarter of a century. Methodologically, it

dier, G., seems to share this critical estimate of "functionalism" (1954, p. 6).

does seem to leave still undefined the issues involved in incorporating "the whole range of institutional dimensions" into anthropological analysis. Practically, it seems another of those useful fusions of the ideas of Malinowski and Radcliffe-Brown in the crucible of originality, which Homans for one has managed so successfully. But in this immediate context, it has produced a brilliant example of working in model form with the "consequences of structure." It is reminiscent of Redfield's designation of a "functional model strongly associated with conceptions of structure" (Kroeber and others, 1953, p. 734)—though Leach himself would probably describe it in reverse terms.

A range of related intermediate usages of the term function is given in the work of various American authors, e.g., James B. Watson (1952); Sol Tax (1953); S. Leacock (1954); E. H. Spicer (1954). Sol Tax, in a section headed "The Functions of Wealth" in his study of a Guatemalan peasant economy, is concerned with the *associations* of different degrees of wealth with different types of family and different styles of life. Spicer, in discussing functional linkage between aspects of culture, states that he does not mean anything more by this term than the *conjunction* of cultural behaviors. This has nothing to do with similarity of form. An example he gives of one of the closest functional linkages in Yaqui culture is that between the "complex of traits" that makes up the military aspect of the culture and that which makes up the political aspect in respect of village government. By procedures of joint signatures, in the transaction of routine civil business at the military headquarters, the civil government and the military society "function together." Such functional linkage operates further in the ceremonial field and tends to relate closely the behavior patterns of all the different types of organized social units in the community. Such a concept of functional linkage Spicer regards as an integral part of his general analysis of the basic configuration of one of the native cultural systems in Sonora. The concept of configurational analysis is also explicitly brought forward by Watson as a means of identification of factors of cause or effect and of establishing relationships among them. As part of such an analysis, functional considerations are examined. It would seem that such considerations are regarded as being of the order of concrete relationships in a contemporary field, since they are distinguished specifically from logical, historical, and reconstructive considerations which are differentiated as being separate categories. This is a use of the term function which, although in line with ordinary anthropological usage, seems to be more restrictive in its connotation than most. Although it is allowed that the functional consideration is closely akin to the logical in his Cayua analysis, Watson regards the relation between the availability of the machete and its adaption in the increasing scale of agriculture as an example of a causal relationship predicated upon logical grounds. Most "functionalists" would include this under the functional category.

A restriction of rather a different kind is suggested, though not examined, by Leacock in his comparison of the concepts of Mauss and Malinowski. While he emphasizes Mauss's concern with the study of social systems in their entirety, and describes it as a specifically functional approach, he points out that Mauss was not advocating functional studies in Malinowski's sense of the term. While on the one hand, this was because he was not in sympathy with Malinowski's relation of functional concepts to individual human needs, Leacock argues that it was also because Malinowski wanted to restrict functional studies to one society. It is true that Malinowski himself was primarily concerned with such study in field terms, and that temperamentally he was not interested in close institutional comparisons between social systems of similar structure. Nevertheless at no time did he reject such comparisons. What he demanded was that they should be based upon much fuller studies of the integral relationships of the items compared. It should not be forgotten that one of the earliest statements of his functional points of view was this: "The facts of daily life, the emotional side of family

relations, the magico-religious ideas of the aborigines about kinship and sexual relations, customary as well as legal norms—all these factors must be taken impartially into careful consideration in order to give the full picture of an institution as it embraces living man in living society. In other words, each social institution must be studied in all its complex functions as well as in its reflection in the collective psychology." Yet this statement is from the foreword (1913, pp. v–vi) of his elaborate *comparative* study of family and kinship among the Australian aborigines.

A critique of functionalism, especially in reference to the work of Malinowski, is also given by C. S. Belshaw (1954, pp. 135, 140–141, 151), but from a special point of view. He sees Malinowski's theory of functional response to basic needs as an ideal construct, and links with it "the false theory of functionalism, that primitive society attains its ends in a manner well suited to it, and therefore efficiently." With these he contrasts the "more pertinent" view of function as interrelation of action, which he finds more adapted to his examination of social change.

INSTITUTIONAL STUDIES

The major part of this essay has been concerned with the theoretical status of the concept of function in anthropology 1952–1954 and the conditions which have been responsible for this. But an examination of the questions of where function stands in anthropology today means also considering what kinds of substantial propositions have been formulated with its aid. One can do no more than refer briefly to these, since in a sense nearly all modern social anthropology would come under this head. But a few examples, rather arbitrarily selected, will illustrate the general position.

First let us consider several contributions by Johansen, Rapoport, Srinivas, and Wilson, from the general field of religion, in which the propositions are not stated in functional terms, or at least in which the term "function" occurs only casually and incidentally. Johansen (1954) is concerned to elucidate, from a combination of linguistic and anthropological points of view, what he terms the non-ritualistic aspects of Maori religion. By this he implies the secular relations which give meaning to the religious ideas and practices of the Maori. His method is not that of the functional anthropologist, with its search for systematic correlates, but he begins his analysis with a study of the kinship structure, and ends it with an interpretation of Maori spirit belief in terms of what he calls "situation," which is broadly equivalent to social context. Johansen is dealing with pre-European Maori culture on a single time plane. The central problem in Rapoport's study, on the other hand, is change in religion and religious values—in this case among the Navaho (1954). His analysis is at a different level of sophistication, with psychological and sociological interpretations fused into the anthropological, and could easily be claimed as essentially of a functional type. In particular, he describes not only the qualities of Navaho society and of the proselytizing missions, and the overt social qualities of Navaho responses; he also brings in postulates of a dynamic order in terms of the personal need-dispositions "functioning in the context of the changing Navaho system" (Rapoport, 1954, p. 5). The results show how conversion to Christianity is not an automatic process but reflects and is a response to socio-cultural disorganization and emotional need of individuals. By contrast, the analysis of Coorg religion by Srinivas (1952) is a study in social solidarity. His detailed study of the patrilineal joint family, strong and sharply structured, is related to an elaborate ritual idiom of complex performances, the major effect of which is in the direction of strengthening this social unit. Srinivas himself does hardly use the term function, if at all. But by Radcliffe-Brown in the preface (1952b, p. vi), the study is described as an investigation in the social function of religion, showing how the rituals express and maintain the solidarity and continuity of the structural system. An example of rather similar type is given by Monica

Wilson (1954). She is concerned with Nyakyusa interpretation of symbolism in their family rituals and the attitudes and ideas that underlie this symbolism. Her conclusions can be exemplified in such statements as that Nyakyusa funeral rituals are an assertion of the supreme importance of procreation; that they are a public and formal expression of change in status, that there is reflected in them the value set on cattle and the dependence on vegetable foods; that they enhance fear and make men turn to their kinsmen to relieve it. It is argued, furthermore, in line with the views of Radcliffe-Brown, that the sentiments expressed in the Nyakyusa ritual are those necessary to the continuance of the society. As an example of this, it is held that fear makes for the solidarity of the kinship group and for cultural continuity, and when it is fear of supernatural sanctions, it helps to maintain order in Nyakyusa society.

In varying degree all of these studies are examples of functional anthropology, and many of their propositions might, without much difficulty, have been phrased in specifically functional terms. Would there have been any advantage in so doing? For the most part, no. Most of the forms of expression mentioned are equally valid as instruments for the exploration of social relations and the phrasing of valid and sensitive propositions. It also might be argued that if anthropological analysis can proceed without bringing in the terminology of function with its admitted difficulties, then it is better omitted. There is much to be said for such a view. But, in our opinion, it would not be entirely satisfactory. Adoption of it should mean that the alternative terminology is at least equal in flexibility and precision. Examination of the terminology in vogue shows this hardly to be the case in at least two directions. Firstly, expressions such as, that certain types of ritual are an *expression* of changes in status, that they *reflect* other social situations, structures or principles, that they *are an assertion* of certain social values (italics ours), all conceal a quality of relationship. From the crude empirical point of view, these rituals are modes of action; in themselves they may neither assert nor deny anything about society. To say that they are an expression or a reflection of something else, may, as with Leach (1954, pp. 11–16), embody a sophisticated hypothesis. But usually it is only another way of saying less precisely that they are in such relation to the other entity that they are covariant with it. The terms to indicate such relationship sometimes have a double meaning. Thus with the term "expression." This may mean an overt indication by word or act, as when a ritual expresses the importance of a food staple by referring to it in a formula or by using in it some object which is associated with abundance. Or it may involve no overt reference at all. The two entities may be in parallel relationship without the one being at all a direct translation of the other. The reference may be indirect and symbolic—this demands evidence as to the quality of the relationship. The second direction in which some obscurity may arise is in the lack of distinction between social and individual functions. For the most part, the terms of *assertion, expression, reflection,* refer to social relationships, to the position of groups as well as individuals in a social system. But at times they seem to refer also to individual characteristics, behavior, emotions. Thus, in a statement that some of the rites performed at Coorg rice harvest, like tying plants and creepers, locally prolific, to every part of the house, and uttering a prayer for increase before cutting the sheaves, *express* a desire for plenty (Srinivas, 1952, p. 231); the symbolism and overt statement in the rite clearly from the social point of view link it with the importance of abundant rice supplies to the community. Yet the expression of desire may be primarily an individual matter. The same point comes out in Wilson's significant statement (1954, p. 240): "Surely men express in ritual what moves them most, and since the form of expression is conventionalized and obligatory, it is the values of the group which are revealed." Such an equation between individual emotions and group values may be a reasonable

assumption in general. But it can by no means be taken as universal. The conventionalized obligatory ritual forms may be taken to represent group values; they often may not correspond to the current emotions of the individuals who operate them and who are moved by a wide range of considerations relating to their own personal aims, resources, and status relations. Hence the inability by such expressions to get beneath the social surface, to indicate why, if the rituals stress, emphasize, express, reflect, enhance, social solidarity and social unity, maintain the structure and continuity of the society, the society can ever suffer change and the rituals themselves wither away. Couching of propositions in functional terms would not in itself avoid these difficulties; it might, however, induce more awareness of them.

In many other studies, too, the concept of function is introduced as occasion serves, usually with the connotation of some significant relation to given or to tacit ends. So with the study of changes in Iroquois kinship by Voget (1953), indicating how changes have been effected through a functional redefinition of status types and roles owing to changing conditions of life, or with the study of Malabar territorial segmentation of caste structures by E. J. Miller (1954), indicating its two functions—of promoting localized interdependent relations between castes, especially at the village level, and supporting the hierarchical order of castes through differential mobility.

Some other contributions, mingling both theoretical and empirical considerations, have embodied some more specific uses of the concept of function. We take examples first from the field of kinship. Gough (1952) has shown from the examination of Nayar and Mappilla material from Malabar how a series of incest prohibition rules of exogamy are to be understood as variants of a matrilineal kinship system. She points out that within the basic kinship pattern each variant is modified uniquely by the means of subsistence of the group concerned and by its position in the political system and is, at the same time, in harmony with the system of moral beliefs which its particular religion sanctions. The range of incest prohibitions of the rules of exogamy is shown in each case to be "a function of the total kinship system." This meaning of function apparently is equivalent to covariation. An equivalent notion is that of "repercussion," as when the Mappilla ban on fraternal polyandry while the levirate is maintained tends to split the family and cause property to be divided every generation shortly after the death of the father. But the concept goes further. The hypothesis that incest prohibitions cannot be isolated for analysis in their own right is regarded as equivalent to the statement that they have *meaning* only in relation to a particular kinship system as a whole. Again, the *function* of Mappilla prohibition on marriage to the daughter of a foster-mother "is to be sought in terms of" Muslim moral values, which would appear to be equivalent to finding meaning of the custom in such values. Yet the interpretation implicitly would seem to go even further. It is stated that in South Malabar the sororate is rare and has no special function, but the levirate is common and enjoined whenever possible: "Its function is to keep fatherless young children in the *taravad* by keeping the mother there as well, and also to avoid the need to pay back the widow's dowry by providing her instead with a second husband (Gough, 1952, p. 100). In form, at least such a statement is teleological and might be paralleled by many from Malinowski. What it illustrates is the ease with which the formal expressions of function slip over from the "mathematical" or "relational" to the teleological because they are so often based upon tacit or implicit assumptions about social ends. It is assumed, in other words, that it is personally desirable, and perhaps socially valuable, to keep fatherless young children in their dead father's group. It is assumed also that repayment of dowry is something which is to be avoided either by persons or groups, though presumably here, there is no assumption that it is socially valuable not to pay. In other words, "function," in this context, is dealing with temporary personal relationships at least

as much as with permanent group relationships.

A treatment of some aspects of Yap kinship by Schneider (1953) has some analogies with this. There is the same use of the term "function" as equivalent to operation or relationships. The Yap system depends on what Schneider (1953, p. 215) terms "the device" (apparently implying not creation but only use) of the "condition of life" of the person through whom the kinship is traced. The examination of "how this device works" would seem to be an alternative expression for "the analysis of the functions" of the device. In line with this, Schneider specifically sets out the "functions" of the Yap matrilineal clan—as, regulation of marriage by exogamous rule; provision of sanctuary in war and responsibility in peace; and provision of a widely extended group "of last resort" in borrowing, begging favors, and promoting political ties. The "mathematical" aspect is seen in such a statement as "it is as a function of the maximization of the solidarity between siblings that solidarity in the conjugal relationship is correspondingly minimized." But the notion of function seems to connote that of meaning, also, and to imply some orientation to ends. Schneider suggests that one important function of the use of kinship terms as forms of address is in imposing on the situation a kind of sanction which enforces conformity with the social definition of the relationship. Again he points out that no kinsman, irrespective of his status, is addressed by a kinship term. Here he asks about the meaning of this and suggests that the meaning remains the same as in the case of the nuclear family. Whereas the use of a kinship term serves as a symbol of the normative definition of the relationship, the absence of that symbol permits the relationship to become established on other grounds (Schneider, 1953, pp. 228–229, 233). Bearing in mind what has gone before, the term "meaning" might easily have been replaced by "function."

In an essay on the *kibbutz,* Spiro (1954) discusses the functions of the nuclear family in classical terms, though in order to give point to his thesis that in Israel the kibbutz fulfils the functional roles of the family. He argues that it is able to do this only because it forms a society whose members view one another psychologically as kin. A concept of function of a rather more developed order, stressing even more the relation of custom and belief to psychological and indeed psychobiological elements, is that indicated by Spiro in an earlier study (1952) on Ifaluk ghost belief. His contribution is concerned specifically with the notion of functionalism and with the interpretation of such a notion in teleological terms. He makes full use of the specific functional categories introduced by Radcliffe-Brown and Merton, such as functional and dysfunctional, manifest and latent function. He also less specifically uses the notion of degrees of function, as when he speaks of belief in ghosts as being not the only institution which could serve the *vital function* of protecting an individual from psychological disorganization. The substantial propositions which arise from his analysis of Ifaluk material are suggestive and argued out in some detail. What is interesting also is his complete acceptance of the notion and term "function" as a useful instrument in such an analysis.

Similar frank acceptance of the concept of function as involving social teleology finds full expression in a comparative study of African age groups by S. N. Eisenstadt (1954). He sets out a hypothesis applicable, he thinks, to "the conditions of emergence of the functions of male age sets." He points out that a system of age sets *fulfils functions* which are not dissimilar from those of family and kinship and descent groups, but these age sets are structured according to different criteria. His major hypothesis is that age-sets systems *arise and function* in societies in which the basic allocation of rules is not overwhelmingly determined by membership in kinship groups and where some important integrative functions remain to be filled beyond these groups. Such integrative functions—Eisenstadt uses the alternative word *tasks*—include leadership in war, the organization of public activities

such as education, the occupation of economic offices.[11] The hypothesis is based explicitly on various assumptions concerning the functions of age differentiation in a process of socialization and in maintaining the continuity and stability of the social system. Among these functions as seen in terms of age-group organization are: conferring on an individual full social status and membership in the community; freedom, to some extent, from family and kin discipline, with corresponding imposition of self-discipline among his equals; giving important educational experience through both technical and symbolic knowledge; giving a new frame of reference through which the individual can relate himself to the total society and identify himself with its values and symbols. In such treatment, Eisenstadt uses the term "function" with all three implications discussed earlier. First, he treats it as equivalent to a set of associations; second, he treats it as equivalent to basic prerequisite; third, he gives it a more dynamic connotation of a regulative mechanism, at times equivalent to operation of the society or social process itself. In such analysis he also implies not merely that age sets fulfil social requirements, but also that this fulfilment provides the reason for their origin—"Age sets arise to fulfil some of the educational and integrative tasks which are beyond the scope of the family and descent groups" (Eisenstadt, 1954, p. 102). It is this last usage perhaps which is open to criticism. Whatever be the functions which age groups fulfil in contemporary conditions, it may be very much of a question, forever unanswerable in the absence of historical evidence, as to whether such institutions came into being in response to the stated present requirements or whether the original requirements of the society then were very different.

[11] The author's hypothesis is concerned, of course, only with African societies. It seems not to deal with negative cases and is not intended to apply to more widely differentiated societies of the West.

The upshot of the contributions of anthropology in terms of function during 1952 to 1954 may be seen as a relative lack of interest in re-examination of the concept itself but a readiness to utilize the notions it has developed, either with or without specific use of the term. It cannot be said that the full range of Merton's criteria in his "paradigm" yet have been met, or much use made of the elaborate systematic expositions by Parsons and Levy. On the other hand, it does seem that discussion has advanced from the somewhat sterile verbal battles about meaning of the term function to the formulation of more refined and substantial propositions which use its notions or at least its spirit.

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Comparisons in Cultural Anthropology

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INTRODUCTION

IT is part of the thesis of this paper that there is no distinctive "comparative method" in anthropology, and that the persistence of this expression has led to unnecessary confusion and artificial dichotomies in much of the theoretical writing on this subject. Thus, we prefer to discuss comparisons in anthropology rather than the comparative method. This simple semantic change makes a difference, for it highlights the fact that the method of a comparison is only one aspect of comparison, other relevant aspects being the aims or objectives, the content, and the location in space of the entities compared. Our subject at once becomes broader than most considerations of "the comparative method" and includes comparisons within a single society as well as cross-cultural comparisons, comparisons over time as well as in space.

The unfortunate tendency to identify "the comparative method" with a particular type of research design or anthropological school of thought, dates back to 1896 when Boas identified the comparative method with the early evolutionists. His juxtaposition of his "historical method" against the comparative method of the evolutionists obscured what is fundamental for our purpose, namely, that both used comparisons toward the end of arriving at general laws. Of course, Boas was not against comparisons or comparative method. He wanted to improve it and specifically referred to his historical method as an improved comparative method. What we should like to emphasize is that the differences in anthropology are not between approaches which use comparisons and those which do not. All approaches—functionalism, diffusionism, kulturkreis, or evolutionism—make use of comparisons, but in different ways and for different ends.

Comparison is a generic aspect of human thought rather than a special method of anthropology or of any other discipline. Laymen as well as scientists make comparisons. The major difference between common-sense, everyday comparisons by the layman and those by the scientist, is that the latter, in their systematic study of similarities and differences, strive for a greater degree of control by utilizing the methods of correlation and co-variation.

It does not follow, however, that those

[1] We are grateful to the Behavioral Sciences Division of the Ford Foundation for a grant in aid, a portion of which was used for research assistance in the preparation of this study.

studies which use quantification and express co-variation statistically are the only valid, useful, or scientific studies. Nor must all comparisons necessarily be directed toward testing hypotheses or arriving at general principles of societal development, worthwhile as these objectives are. Comparisons may have other values, depending upon the nature of the data and the objectives of the study. And so long as cultural anthropology feels a sense of kinship with the humanities as well as with the natural sciences, comparisons which increase our general understanding shall have their rightful place.

Most anthropological writing contains comparisons. Even the monographs which are primarily descriptive generally make comparisons with earlier literature, and many have a final comparative chapter. Textbooks use comparisons as illustrations, theoretical articles compare methods, points of view, and schools of thought, or review the literature of an area in a comparative manner. There are comparisons between single culture traits, between institutions, between subcultures, between areas, nations, and civilizations. There are synchronic and diachronic comparisons, controlled and uncontrolled, localized and global, formal and functional, statistical and typological. The kinds of comparisons made by anthropologists seem to be of an endless variety indeed.

This paper attempts to classify and analyze comparisons found in the literature for the five year period 1950–1954 in order to determine the major types of comparisons, their objectives, methods, research designs, and the location in space and time of the entities compared. References to earlier comparative studies will be made only when necessary for background purposes. The scheme used for the classification of comparisons will be presented later. Here let us first examine some of the highlights of recent theoretical articles on comparative method.

Within the past five years there have appeared an unusually large number of theoretical writings dealing with comparative method in anthropology.[2] In addition, an equally large number of books and articles have touched upon problems of comparative method indirectly or in passing. In all, probably more has been written on this subject within the past five years than within any comparable period since Boas published his famous piece of 1896. It is noteworthy that many of the authors cited above refer back to Boas, accepting, modifying, or rejecting his position. This concentration of interest in comparative method is probably a reflection of the growing maturity of anthropology as a science, the ever-increasing concern of anthropologists with problems of theory and method, and the accumulation of great masses of data which cry out for systematic comparative analysis.

A review of the literature cited above suggests a number of observations. Many of the theoretical discussions still use the phrase "the comparative method" as if it were a unitary and distinctive method of anthropology. For example, Ackerknecht (1954), who uses the expression "the comparative method" over thirty times in his short piece without once defining it, treats it almost as if it were a culture trait. He attempts to trace its introduction into anthropology from the biological and natural sciences and finally concludes that it was probably a case of convergence, if not of independent invention! He writes of the method as being "abandoned" by the functionalists and cites (p. 117) the publication of Murdock's *Social Structure* in 1949 as a sign of "a renaissance of the comparative method." Kroeber (1954, p. 273), in commenting on Ackerknecht's article, quite properly points out that ". . . the comparative method has never gone out, it has only changed its tactic."

The titles of some of the papers on comparative anthropology are in themselves revealing. Thus Radcliffe-Brown (1951), like Ackerknecht, follows the old tradition

[2] Murdock, 1950a, b; Steward, 1950; Evans-Pritchard, 1951; Nadel, 1951; Radcliffe-Brown, 1951; Köbben, 1952; Ackerknecht, 1954; Kluckhohn, 1953, 1954; Lowie, 1953; Schapera, 1953; Eggan, 1954; Herskovits, 1954; and Whiting and colleagues, 1954.

and calls his paper "The Comparative Method In Social Anthropology." He gives two major purposes of comparisons, the reconstruction of history, which he identifies with ethnology, and the discovery of regularities in the development of human society, which he identifies with social anthropology. He frankly defines the comparative method as a library method of "arm-chair anthropologists" and calls for more rather than less armchair anthropology. He writes (1951, p. 15):

> At Cambridge sixty years ago Frazer represented armchair anthropology using the comparative method, while Haddon urged the need of intensive studies of particular societies by systematic field studies of competent observers. The development of field studies has led to a relative neglect of studies making use of the comparative method. This is both understandable and excusable, but it does have some regrettable effects. The student is told that he must consider any feature of social life in its context, in its relation to the other features of the particular social system in which it is found. But he is often not taught to look at it in the wider context of human societies in general.

Singer's summary (1953, p. 362) of the discussion on Schapera's paper, titled "Some Comments on Comparative Method In Social Anthropology," is germane here. He writes,

> Schapera's original paper which was circulated before the conference was entitled 'Some Thoughts on the Comparative Method in Social Anthropology.' . . . dropping the 'the' from the title of the revised paper is perhaps the most eloquent, if inconspicuous, testimony of the impact of the conference: for Schapera and the other participants agreed that there is no single method of comparison in anthropology, that method is largely determined by problem, and that a method appropriate for the comparison of kinship systems is not necessarily most appropriate for other types of cross-cultural comparisons.

Eggan's excellent paper "Social Anthropology and the Method of Controlled Comparisons" (1954) gets away from "the comparative method" in the title and speaks instead of methods of comparisons. But even Eggan lapses again and again into the older terminology. He writes (p. 747), "In the United States . . . the comparative method has long been in disrepute, and was supplanted by what Boas called the 'historical method.' In England, on the other hand, the comparative method has had a more continuous utilization." Or again, he writes (p. 749) that most of Boas' students were predisposed against "the comparative method" and "hence against any generalizations which require comparisons." The use of the term "the comparative method" makes the above statements confusing. It is doubtful that the Boas students were against all comparisons. Certainly they have contributed their share of comparative studies. Rather, they objected to what they thought were uncontrolled comparisons, comparisons out of context.

Murdock (1954) and Whiting (1954) think of the comparative method almost exclusively in terms of the testing of hypotheses on a global scale with a heavy reliance upon statistics. Schapera (1953) tends to identify the comparative method with the intensive study of limited areas as a prerequisite to testing regionally derived general propositions in other areas. Eggan recognizes the validity and usefulness of a wide range of comparisons from those within a single community to global comparisons, but prefers the more limited and controlled comparisons to the more global and less controlled.

Lowie (1953) and Nadel (1951) take exception to the trend of identifying "the comparative method" with a particular school or approach in anthropology. Lowie challenges the meaningfulness of equating the old dichotomy of historians versus generalizers with that between the ethnographers and social anthropologists, as suggested by some British anthropologists. He makes the point that comparisons are just as important in an intensive study or descriptive integration of a single community as they are in cross-cultural analysis, and sees the two as part of a single continuum of comparisons. An intensive study of a single community "implies cognizance of correlated phenomena and thereby precludes erroneous inferences due to the currency of the same labels. . . . Complete

description involves a *global* survey of correlations because only such a global survey guarantees accurate definition of the cultural phenomenon under discussion in relation to its real or apparent equivalents elsewhere." (p. 532).

Nadel offers us by far the most systematic and comprehensive treatment of comparative method. He defines it in terms of the systematic study of similarities and differences through the use of correlation and co-variation. It is therefore not a distinctive method of anthropology, but one shared by all the sciences. Following Durkheim, he distinguishes (1951, p. 226) three applications of the method of co-variation: (1) in the study of broad variations in particular modes of action or relationships within a single society; (2) in the study of the same society at different periods of time or of several essentially similar societies which differ only in certain respects; (3) in the study of numerous societies of a widely different nature. Nadel does not regard these three applications "as separate and independent lines of inquiry." Moreover, he believes that regularities can be derived from all three applications, the major differences being that the regularities derived from "narrow-range applications," i.e., within a single society, "are themselves of narrow applicability; they would exhibit specific phenomena present in only a limited number of societies. . ." (p. 227).

While Nadel recognizes the value of cross-cultural comparison and its distinctive place in anthropology as compared with other disciplines, he would not define anthropology exclusively in terms of cross-cultural studies. Indeed, he takes exception to a statement of Radcliffe-Brown which suggests that a study of a single society cannot "demonstrate" co-variations but can only lead to hypotheses which have to be tested in other societies. Nadel writes (1951, p. 240):

> Though this conclusion undoubtedly often holds, I do not think it applies invariably. Thus, if we include time perspective and cultural change in our enquiry, the necessary co-variations will be available, too, in societies sufficiently differentiated to exhibit the "broad" variations in the behavior of different group sections we spoke of before. Furthermore, in any society, . . . inasmuch as cultural elements 'hang together' in their own institutional setting, they do so by means of co-variations; the standardized, predictable patterns of behavior which are the elements of social existence mean nothing else.

Many of the recent writings on comparative methods and problems in anthropology express the particular theoretical preferences of the authors but they do not provide us with a systematic examination and analysis of contemporary comparative research. In this sense, the theoretical writing has lagged behind the field work. Steward (1950) reviews a good sample of community studies and older ethnographic studies and points to difficulties in comparability due to the uneven coverage which seems to depend largely upon individual interests. But he does not deal with the vast number of comparative studies in the literature. Similarly, Kluckhohn (1953) raises important theoretical problems in connection with the comparability of anthropological data and reports on the comparability of anthropological monographs based upon the examination of the table of contents of ninety monographs, but does not deal extensively with comparative studies as such. The single article within the past five years which makes some attempt at an evaluation of comparative research is the excellent piece by Köbben (1952), titled "New Ways of Presenting an Old Idea: The Statistical Method in Social Anthropology," in which he critically reviews *one type* of comparative study. His work will be cited later.

ANALYSIS AND CLASSIFICATION OF COMPARISONS

A total of 248 writings dealing with comparisons, within the period 1950–1954, were examined in the preparation of this paper.[3] These include 52 books, 173 articles, and 23 dissertations. Twenty-eight of these

[3] I am grateful to Dr. Ruth Landman for bibliographical research assistance in preparation of this paper.

writings deal primarily with theory and method in comparative anthropology and have been summarized earlier. The remaining 220 writings (45 books, 152 articles, and 23 dissertations) are reports of comparative research. The 152 articles with which we will be concerned were found after an examination of 23 scientific journals, including most of the major anthropological journals which are concerned with cultural or social anthropology. While the coverage is not exhaustive, it probably represents about ninety per cent of the comparative writings in the past five years.[4] Only a few of the dissertations cited were available to the writer. The analysis of most of the dissertations is based primaly upon published abstracts and is therefore partial and tentative.

In the light of recent discussions as to whether British or American anthropologists were more vitally concerned with comparative studies, it is interesting to note that 40, or seventeen per cent, of the 220 writings, were British publications. This is a high proportion in view of the relatively small number of British anthropologists. However, it demonstrates that American anthropologists are also active in the field of comparative studies. Our survey of the major French and German anthropological periodicals yielded very few comparative studies for the period covered.

In our analysis and classification of the above writings five broad dimensions of comparisons were considered: (1) the location in space of the entities compared, (2) the content, (3) the aims of the comparisons, (4) methods of obtaining data, and (5) research design. These dimensions were, in turn, subdivided so that each comparative study was judged against a check list of numerous items. (See Table 1.)

The geographical distribution of the comparative studies is shown in Table 2 (note that Ie and If have been combined, and Ib divided as between continents or nations or as within one continent): It can be seen that the greatest number of studies occur in North America and Latin America, the smallest number in Europe and Oceania; Africa and Asia hold an intermediate position. Although the location of the entities to be compared may seem like a relatively unimportant consideration, we find that it correlates significantly with the other major categories, but especially with methods. Comparative studies within a single culture area seem, by and large, to be interested in controlling the greatest number of variables and in relatively modest and limited goals. Global comparisons generally have more ambitious goals, and seek world-wide typologies or evolutionary sequences.

The relationship between methods used and the location of the entities compared can be seen in Table 3.

One of the most striking conclusions to be drawn from the data in Table No. 3, is that comparative studies in anthropology can no longer be defined as library studies. Each of the three methods, library comparisons, library plus field work, and primarily field work comparisons, are used about equally.

As we move from the global and larger categories to the smaller ones, we find an increasing reliance upon field work. Conversely, as we go from the smaller to the larger categories (Table 4) we find an increasing use of library comparisons.

The inverse relationship is most striking when we compare the two extremes of our geographical categories, i.e., global or random comparisons as over against comparisons within a single local group or culture (Column I versus VI in Table 3). In the former, there is a complete absence of comparisons based primarily upon field work and a predominance of library comparisons. In the latter, there are no library comparisons and a large number of studies based on field work. The zero scores in Column I and Column VI, Table No. 3, though understandable in terms of the nature of the research, are by no means inevitable. As comparative field research designs organized on a world-wide basis increase (for example, the Cornell Project

[4] Unfortunately the two major Indian anthropology journals were not available to the writer and so articles and books on India are not well covered.

TABLE 1

Outline For the Classification and Analysis of Comparative Studies

I. Location in space of the entities compared [5]
   a. comparisons of cultures or aspects thereof selected randomly over the globe, i.e., global comparisons
   b. comparisons of societies or aspects thereof located in different nations or major civilizations
   c. comparisons within a nation
   d. comparisons within a single culture area (for example, the Plains or Southwest in the U.S.)
   e. comparisons of local groups within a single culture (for example, different bands within a single tribe, or between two Blackfoot Indian tribes)
   f. comparisons within a single local group (band, village, or other type of localized settlement)

II. Content of comparisons
   a. material culture
   b. settlement pattern
   c. ecology
   d. technology
   e. economics
   f. social organization
   g. political organization
   h. religion
   i. mythology
   j. art
   k. warfare
   l. personality and culture
   m. life cycle
   n. sex
   o. disease
   p. relations with other communities
   q. acculturation and culture change
   r. race relations
   s. law
   t. values
   u. total culture

III. Aims of the comparisons
   a. establish general laws or regularities
   b. document range of variation in the phenomena studied
   c. document distribution of traits or aspects of culture
   d. reconstruction of culture history
   e. test hypotheses derived from Western society
   f. test hypotheses derived from non-Western societies

IV. Methods of obtaining data
   a. library comparisons
   b. comparisons based upon library data plus field work
   c. comparisons based primarily upon field work

V. Research design
   a. statistical comparisons
   b. broad typological comparisons
   c. descriptive, functional analyses of one or more aspects of culture
   d. descriptive and analytic comparisons of total cultures
   e. restudies by the same investigator
   f. restudies by different investigators

[5] Most of the geographical categories under I. above are self-explanatory. Categories Ic. and Id. are intended to distinguish between tribal studies of peasantry, rural, and urban groups. The culture area is taken as the frame of reference of the former, the nation for the latter

TABLE 2

LOCATION OF STUDIES

	Oceania	*Asia*	*Africa*	*Europe*	*Latin America*	*North America*	TOTAL
Random or global comparisons (34)	–	–	–	–	–	–	–
Comparison between continents or nations (20)	2	9	2	6	8	6	33 (13 repeat)
Comparison within one continent (31)	1	5	8	0	8	9	31
Comparison within one nation (31)	0	9	1	3	10	8	31
Comparison within one culture area (70)	10	2	17	0	14	27	70
Comparison within one group or culture (34)	7	3	2	0	9	13	34
Total	20	28	30	9	49	63	

TABLE 3

DISTRIBUTION OF METHODS BY CATEGORY OF COMPARISON

Method	I. Random or global comparisons (34)	II. Comparison between continents or nations (20)	III. Comparison within one continent (31)	IV. Comparison within one nation (31)	V. Comparison within one culture area (70)	VI. Comparison within one group or culture (34)	Total number of cases
Library comparison	28	6	20	3	23	0	80
Comparisons based upon field work and library data	6	6	7	6	37	9	71
Comparison based primarily upon field work	0	8	4	22	10	25	69

TABLE 4

DISTRIBUTION OF METHODS OF THE THREE LARGER CATEGORIES COMPARED WITH THAT OF THE THREE SMALLER CATEGORIES

Method	Large groups (I, II, III)	Small groups (IV, V, VI)
Library comparisons	63.5%	19.2%
Comparisons based on field work plus library data	22.3%	38.5%
Comparisons based primarily upon field work	14.1%	42.2%

on the effects of technological change and the Whiting field study of socialization in five cultures, now under way), the zero scores will disappear. Similarly, with the increase of restudies of local communities by the same or different investigators, library comparisons within this category will be possible.

Another interesting aspect of the relationship between method and geographical categories can be seen by comparing the distribution of methods in the one nation category (peasantry and rural studies) with the culture area category (tribal studies). See Columns IV and V, Table 3. Seventy-one per cent of the studies in the former as compared to only fourteen per cent in the latter are based primarily upon field work. Moreover, twenty-nine per cent of the comparisons within a nation based primarily upon field work, were done cooperatively by research teams, rather than by a single investigator, as over against one per cent within a single culture area. Since the comparative study of peasantry is a much more recent trend in anthropology than comparative tribal studies, it is here that we find the greatest concentration of field work and cooperative research. However, comparisons based upon tribal studies still outnumber the others by more than two to one.

The distribution of content in the 220 studies examined shows that the bulk of comparative work is being done in six fields, social organization, 68; culture change and acculturation, 65; total culture, 39; economics, 30; religion, 27; culture and personality, 21. Studies of social organization and culture change each constitutes approximately thirty per cent of the total number of studies. The relatively high number of total culture comparisons is a tribute to the holistic approach of many anthropologists. The fields in which we find the fewest comparative studies are race relations, 1; law, 2; relations with other communities, 3; sex, 3; life cycle, 4; mythology, 5; warfare, 5; settlement patterns, 7; and art, 8.

It will be seen (Table 3) that sixty-one per cent of all the studies are within the three smaller categories and thirty-nine per cent in the three larger categories. If we assume that the comparisons within small geographical areas give one greater control than widespread comparisons, we might interpret the above distribution to mean that contemporary comparative anthropology has moved a great distance toward the limited and controlled comparisons which Eggan and others have called for. Studies of social organization and culture change are concentrated in the smaller geographical categories. Thirty-five per cent of all the studies of culture change and acculturation are found concentrated in the category of a single community or culture.

The classification of the writings in terms of the theoretical aims of the comparisons proved extremely difficult because of the lack of any explicit statement in so many of the writings. The categories we have listed in our outline must therefore remain as items for future analysis of comparative studies. However, some general findings can be given here. Approximately forty per cent of the studies are descriptive, functional, comparative analyses of one or more aspects of culture, which seek to establish the relationship between variables, either for the purpose of establishing typologies or refining existing types. Approximately thirty per cent of the studies deal with acculturation and culture change. The culture change studies are generally historical reconstructions intended to show the direction of change. Only a few studies explicitly formulate developmental hypotheses. Approximately eighteen per cent of the studies are concerned primarily with demonstrating the range of variation in the phenomena studied; another eight per cent are straight distribution studies, and three per cent are attempts to delineate or redefine the nature of culture areas. Let us now examine the studies in more detail.

GLOBAL OR RANDOM COMPARISONS

Twelve books, 18 articles and 4 dissertations making a total of 34 out of 220 writings examined, fall into this category. All have in common the comparison of societies

selected either at random or in accord with some special sampling design, but in no case limited to a single culture area, region, nation, or continent. Twenty-seven are library comparisons, and 10 are library plus field work comparisons.

The content covers a wide range, seventeen of our twenty-one content categories (see Table 1). The largest number are studies of social organization (8 cases), followed by economics (4), technology (4), religion (4), socialization (4), disease (4), etc. Seven studies deal with culture change and/or acculturation.

The objectives of these writings show a wide range, from the tracing of single trait distribution, to the testing of one or more hypotheses and to the reconstruction of stages in the history of human society. However, the writings can be divided into sub-groups in terms of a combination of methods and general research design: 1. *Statistical Comparisons* (10 cases),[6] 2. *Broad Typological Comparisons* (6 cases),[7] 3. *Functional Cross-cultural Analysis of One or More Aspects of a Culture* (7 cases),[8] 4. *Simple Distribution Studies* (3 cases),[9] and 5. *Case Books and Texts* (8 cases).[10]

[6] For example, Murdock and Whiting, 1951, "Cultural Determination of Parental Attitudes"; Ford and Beach, 1951, *Patterns of Sexual Behavior;* Charles, 1953, "Drama in Shaman Exorcism"; McClelland and Friedman, 1952, "A Cross-Cultural Study of the Relationship between Child-training Practices and Achievement Motivation Appearing in Folk-Tales"; Whiting and Child, 1953, *Child Training and Personality: A Cross Cultural Study.*

[7] For example, Redfield, 1953, *The Primitive World and Its Transformations;* Meggers, 1954, "Environmental Limitations on the Development of Culture"; Fried, 1952, "Land Tenure, Geography and Ecology in Contact of Cultures."

[8] For example, Freedman and Ferguson, 1950, "The Question of 'Painless Childbirth' in Primitive Cultures"; Aberle, 1952, "'Arctic Hysteria' and Latah in Mongolia"; Erikson, 1950, *Childhood and Society;* James, 1952, "Religion and Reality."

[9] For example, Anderson and Cutler, 1950, "Methods of Corn Popping and Their Historical Significance"; Balfour, 1951, "Ritual and Secular Uses of Vibrating Membranes as Voice Disguisers."

[10] For example, Spicer (ed.), 1952, *Human Problems in Technological Change;* Hoebel, 1954, *The Law of Primitive Man: A Study in Comparative Legal Dynamics;* Goode, 1951, *Religion among the Primitives;* Herskovits, 1952, *Economic Anthropology.*

The Spicer volume deserves special mention because many of the cases have come out of the Cornell Project in Applied Anthropology, one of the few centrally organized comparative research projects with field stations in major ethnographic areas of the world.

Limitation of space permits us to discuss only two of the five sub-categories above, namely, the statistical and the typological approaches.

Statistical Comparisons

All ten statistical studies are based in part or in whole upon the Cross-Cultural Files and the Human Relations Area Files at New Haven. The strengths and weaknesses of this type of study have received much discussion in the literature. Perhaps the fullest evalution of this approach is to be found in the lengthy discussion of Murdock and Whiting's paper (1951) on "The Cultural Determination of Parental Attitudes," by a panel which included, among others, Escalona, Erikson, and Lee. More recently Köbben has provided a searching analysis in his paper, "New Ways of Presenting An Old Idea: The Statistical Method in Social Anthropology."

The use of the physical sciences as a model, the testing of hypotheses derived primarily from Freudian or Hullian thinking, faith in quantification and large numbers of cases, optimism about the possibility of arriving at general laws, and the definition of the cross-cultural method as the statistical method, are characteristics of some of the writings of members of this group. Whiting (1954, p. 528) for example, in his article on "The Cross-Cultural Method," generalizes the steps he used in his own study on *Child Training and Personality* (1953) to define *the* cross-cultural method. Murdock, repeatedly identifies the cross-cultural method with the statistical method based upon the cross-cultural files. He writes;

> We believe that the day is past when we can depend upon an analysis of single cases or single societies to give us scientific answers. We feel that hypotheses suggested by the exploratory

studies of individual societies should be tested by quantitative methods in a large number of societies. (Murdock and Whiting 1951, p. 32).

Murdock (1949, p. 183) believes that "the data of culture and social life are susceptible to exact scientific treatment as are the facts of the physical and biological sciences. It seems clear that the elements of social organization, in their permutations and combinations, conform to natural laws of their own with an exactitude scarcely less striking than that which characterizes the permutations and combinations of atoms in chemistry and of genes in biology." Murdock (1954, p. 30) optimistically writes that anthropology "if it rises to the occasion, may ultimately become the final arbiter of the universality of social science propositions."

While Köbben's discussion deals primarily with the cross-cultural studies published prior to our limiting date of 1950 (i.e., Horton, 1943; Ford, 1945; Murdock, 1949) much of his criticism applies also to the studies covered in our present review. Köbben notes (1952) that the "Grand Design" of the cross-cultural files is not novel and lists as direct precursors the works of Steinmetz, 1898; Tylor, 1889; Hobhouse, Wheeler and Ginsburg, 1930; Niebohr, 1910; and Unwin, 1934. Köbben finds that in some ways the work of these precursors was methodologically more rigorous than the later studies; it was also more meaningful, in that they attempted to deal with the interrelationships between various institutions or aspects thereof, in contrast to the more limited problems posed by the recent studies. For example, they sought answers to the question: How do systems of social organization vary with economic systems or modes of production? On the other hand, by limiting his problem, Murdock arrived at a useful typology of social structures, albeit largely in terms of kinship systems and residence rules. Moreover, Murdock's broad interest in general laws, his concern with evolutionary problems, and his striving for scientific rigor in comparative studies, is a salutary trend in contemporary anthropology.

The questions raised by Köbben and others about the statistical type of study are many and serious, and might be summarized as follows: The units compared are not always truly independent; the conclusions would be changed considerably if the size of the sample were increased; the items compared are taken out of context and are therefore not truly comparable; the items compared are frequently atomized traits rather than functioning wholes; questions asked of the materials are frequently beyond what the data can answer (this applies better to the culture-personality studies than to Murdock's *Social Structure*). The study of Whiting and Child (1953) raises an additional question by its use of a presumed modal or average custom as the basic unit of comparison. It thereby maximizes one of the weaknesses of anthropological reporting of the past, namely, the assumption of an underlying homogeneity in the customs of so-called primitive peoples. We have here indeed a curious combination of sophisticated statistical techniques applied to poor materials in such a way as to eliminate by definition the possibility of studying the range of behavior or custom within any of the societies examined.

Murdock and Whiting (1951) and Whiting (1954) among others, are not unaware of the problems posed by the criticism, and when pressed, have admitted to some crucial weaknesses. For example, when Erikson (1950, p. 38), in discussing the 1951 paper by Murdock and Whiting, suggested that most anthropological data on parental attitudes and child training was extremely uneven and unsystematic and rarely distinguished between observed behavior, ideal patterns, or projections of the investigators' stereotypes, Murdock replied (pp. 40–41):

"The points he (Erikson) made raise very serious problems. . . . In justification of our method, we can only say that in our selected societies, in general, what the sources report is what the informants said was supposed to be the case, so that the comparisons are generally between two supposed or ideal patterns. We have to assume, to make these results valid, that the difference between the ideal pattern and the

manifest behavior is approximately the same from society to society, which is a very questionable assumption, I grant."

Granting limitations in the data and the methods used, many social scientists find the hypotheses themselves stimulating and suggestive. In this connection it appears to the writer that of all the recent cross-cultural studies of a statistical nature done on the grand scale, Murdock's is the most original and creative in the sense that he is not simply testing Freudian or Hullian hypotheses derived from the data of western societies, but that he comes up with original general propositions derived from the data of non-Western societies.

To this writer one of the contributions of the studies by Whiting is to reveal the serious gaps in anthropological data on culture and personality for cross-cultural comparative purposes and the need for planned comparative field research. Whiting and colleagues are now engaged in such a project, "Field Guide for a Study of Socialization in Five Societies," 1954. The detailed directions and questions to field workers recently prepared by Whiting and colleagues to insure greater comparability of data is evidence of the lessons learned from working with library materials.

Broad Typological Comparisons

The outstanding item is the book by Redfield on *The Primitive World and Its Transformations,* which is a comparison on a vast scale, of mankind all over the world before "civilization," i.e., before the growth of cities, with that after the growth of cities. While recognizing the wide range of cultural differences among precivilized (prior to 6000 B. C.) and contemporary primitive peoples, both of whom are treated together, Redfield (1953, p. 1) attempts to go beyond cultural relativism and asks the question: What do these peoples have in common, irrespective of "whether they lived in the arctic or in the tropics, whether they hunted, fished, or farmed," which sets them apart from civilized man? His findings are stated in terms of the now familiar characteristics of the folk society, namely, isolation, homogeneity, the predominance of the moral order, etc. However, Redfield's major concern is with the broad problem of culture change, of evolution, and of the transformation of the folk societies into other kinds of societies, peasant and urban.

In terms of the global nature of the design Redfield yields nothing to the statistically oriented studies. But unlike the latter, which suffer from atomism, Redfield, in the great humanist tradition, never loses sight of man as a whole, and maintains the sense of the wholeness of culture by his constructed types. But at the same time, the emphasis upon the similarities within the type and the lumping together of prehistoric peoples with contemporary primitive peoples tend to neglect differences. Perhaps this weakness, if it is a weakness, is inevitable when working on such a high level of abstraction without the controls inherent in the more limited kinds of comparisons to be considered later. Moreover, in a recent paper on "The Cultural Role of Cities," Redfield and Singer (1954) take a long step in the direction of correcting the earlier stereotyped urban category by showing the considerable range in the forms and functions of cities in different historical periods in various parts of the world.

Although Steward's recent work on Puerto Rico is in our category of studies within a single nation, his theoretical approach properly belongs here. It too, is a typological approach of a global nature which cuts across culture areas to seek out the phenomena intended for study. It shares some of the strengths and weaknesses of the Redfield approach. It differs from the latter, however, in that it deals with more limited problems, for it strives for empirically derived, rather than ideal, types; it shows greater concern with developmental sequences; it is more selective in the variables treated; and, on the whole, manifests a materialistic rather than an idealistic philosophical position. The major emphasis is upon productive relations, technology, social structure, and ecology. Values and ethics are given much less weight;

indeed, some would feel they are neglected, and perhaps it is this which makes for a somewhat mechanistic approach.

COMPARISONS BETWEEN CONTINENTS OR NATIONS

Three books, 16 articles and 1 dissertation, or a total of 20 out of 220 writings examined, fall into this category. This category is defined by the fact that the comparisons are either between nations or major civilizations as such, or are between societies or aspects thereof, located in different nations or continents. Six are library studies, six are a combination of library and field work, and eight are based primarily upon field work.

The range of content of these studies is narrower than that of the global studies. Studies of religion (7), total culture (6), economics (5), and social organization (3) account for over ninety per cent of all the studies.[11] The studies in this category fall into the following groups: 1. *Comparisons between One or More Major Civilizations* (4 cases),[12] 2. *Studies of Variants of One Culture, or Aspects Thereof, in Two Continents* (6 cases),[13] 3. *Problem Oriented Studies with Examples from Two Continents or Nations* (8 cases),[14] and 4. *Distribution Studies, Independent Invention vs. Diffusion* (2 cases).[15]

The studies in this category lend themselves to a variety of interesting theoretical problems. On the whole, the studies are of two contrasting types: first, those which compare historically related peoples and attempt to show the re-adaptations and reinterpretations of culture traits or institutions in a new setting; second, those which compare historically unrelated peoples. The latter—which predominate in this geographical category—are especially suitable for pointing up contrasts, for testing the applicability of generalizations formulated on the basis of studies in other areas, and for the formulation of new hypotheses.

Hsu's interesting study (1953) is the fullest total cultural comparison between two nations done by an anthropologist in recent years. He contrasts the American "individual-centered" way of life with the Chinese "situation-centered" way of life and examines the manner in which these key concepts are reflected in child training, marriage, economics, government, religion, ethics, art, alcoholism, suicide, etc. The book is based primarily upon library sources, plus insights which have come to Hsu from living in two cultures. Hsu paints with a big brush, combines psychoanalytic and anthropological interpretations, and is often closer to the literary than the scientific tradition.

The studies by Bascom (1950, 1952) and Foster (1951, 1953) share the advantage of first-hand comparative field research in their respective areas. This, combined with the controls inherent in the historical research design, gives their work a fresh quality and lends weight to their findings. Foster's ethnographic research in Spain throws new light on the difficult problem of what is Indian and what is Spanish in Mexico and Latin America. His paper on *cofradia* and *compadrazgo* illustrates the differential role of a common trait or institution in two or more cultures, as well as the differential solution in two cultures to a basic need of both. Bascom's comparison of Cuban worship of African deities with the Yoruba practice of rituals involving stones, blood, and herbs, shows the reinterpretation of a trait cluster in a new setting. Moreover, it shows how a study of Cuba can throw light on the native African institutions, which could not be derived

[11] Some of these studies cover two or three fields and are therefore listed more than once.

[12] For example, Hsu, 1953, *Americans and Chinese;* Patai, 1954, "Religion in Middle Eastern, Far Eastern, and Western Culture."

[13] For example, Bascom, 1950, "The Focus of Cuban Santeria"; Mintz and Wolf, 1950, "An Analysis of Ritual Co-Parenthood (Compadrazgo)"; Foster, 1953, "*Cofradia* and *Compadrazgo* in Spain and Spanish America."

[14] For example, Lewis, 1954, "Peasant Culture in India and Mexico: A Study in Contrasts"; Steward and Murphy, 1954, "The Mundurucu and the Algonkians: A Parallel in Processes of Acculturation"; Needham, 1954, "Siriono and Penan: A Test of Some Hypotheses."

[15] Erasmus, 1950, "Patoll, Pachisi, and the Limitation of Possibilities"; Hatt, 1951, "The Corn Mother in America and Indonesia."

from a contemporary study of Africa alone. In the same sense, it may be possible to learn much of sixteenth-century Spain by a study of contemporary Mexican societies, which could not be learned by a direct study of contemporary Spain. The study by Mintz and Wolf (1950), though not based on comparative field work in the regions compared, relies heavily upon historical controls, and is of a high caliber of scholarship.

Lewis's detailed comparison between a Mexican and a north Indian village (1954), based upon field work in each village, covers social organization, economics, politics, and other aspects of culture. He found that despite similarities in their economic base, the two villages had strikingly different systems of social organization. This suggests that we need to restudy the whole problem of peasant communities in greater detail, and within nations and regions, before we can venture broader generalizations about peasantry as a whole.

Goldschmidt's fascinating comparisons (1951) between the Protestant ethic of sixteenth-century Europe with the values of the Hurok-Hupa and other California tribes raises important critical questions about our traditional assumptions as to the relationship between economy, social structure, and value systems. Steward and Murphy, concerned more with structure than culture content, show (1954) how the fur-trapping Montaignais and the rubber-tapping Mundurucu develop similar types of social organization in reaction to a market economy.

Needham (1954), drawing upon a field study of the forest Penan of Borneo offers both confirmatory and contradictory findings on Holmberg's seventeen hypotheses derived from his study of the Siriono of Bolivia. Holmberg's hypotheses were intended to apply to societies "where conditions of food insecurity and hunger frustration are comparable to those found among the Siriono." Penan meets these conditions admirably. However, Needham was able to confirm only five of seventeen hypotheses; two could not be tested, and ten were patently contradicted. Space permits only two examples of the latter. One of Holmberg's hypotheses is that "Aggression will be expressed largely in terms of food: if not, such aggression will be so severely punished that it will be almost entirely repressed." However, Needham writes (p. 230):

> Aggression in Penan society cannot be expressed in terms of food. They do not fight and quarrel about food, do not manifest a strong reluctance to share food, and do not lie about food. On the contrary, they are extremely punctilious about sharing equally in all circumstances . . . .
>
> Penan are born into a culture lacking these aggressive features, and there are no sure signs that it is only severe disapproval of them which represses the assumed aggressive desires. The reaction of Penan culture to food insecurity is not individualistic aggressiveness but scrupulously exact sharing.

Another hypothesis of Holmberg was that "There will be a tendency to kill, neglect, or otherwise dispose of the aged, the deformed young, and the extremely ill. If not, such dependents will occupy a favored status in the society."

To this Needham writes (p. 232):

> This is completely false of the Penan, in conception and action. The old, deformed, and extremely ill are cared for in every way known to the Penan. The group changes or postpones its movements for their sake, even to the considerable detriment of its members. No suggestion so horrifies the Penan as that they might kill, abandon, neglect, or otherwise dispose of such individuals. On the other hand, these are recognized for the burdens they are on the group, and in no way occupy a favored status.

COMPARISONS WITHIN ONE CONTINENT

Three books, 24 articles and 4 dissertations, a total of 31 out of 220 writings, fall in this group, which is defined by the fact that the entities compared, be they single traits, institutions, cultures, or culture areas, are within a single continent.[16] Twenty studies are purely library comparisons, seven combine library and field work, and four are based primarily upon field work.

[16] Note our inclusion of Latin America within this category.

The content covers a wide range, 19 out of 21 content categories. The greatest concentration is in social organization (13 cases), followed by total culture (7), acculturation (4), economics (4), art (3), etc.

These studies fall into four groups: 1. *Culture Area Studies* (5 cases),[17] 2. *Typological Studies* (6 cases),[18] 3. *Problem Oriented Studies Comparing One or More Aspects of a Culture* (9 cases),[19] and 4. *Distribution Studies* (9 cases).[20]

The studies in this category, though preponderantly library comparisons are, on the whole, of high quality, and capitalize upon the controls inherent in the study of continuous geographical areas which, though large, have usually been subject to common historical influences. It should be noted that most of the comparative studies of culture areas are found here. Space permits brief consideration of only three studies.

Lowie's paper (1952) "The Heterogeneity of Marginal Cultures" is critical of the traditional typology which distinguishes sharply between food-collectors and food-producers because, among other reasons, it tends to overlook important differences among the cultures within each type. Lowie stresses the wide range of variation in the culture of food-collectors, in ecological adaptation, social organization, and religion, and emphasizes the creativity of such peoples.

Foster's paper (1952), "Relationships Between Theoretical and Applied Anthropology: A Public Health Program Analysis," reports on a study of the operation of a health program in seven Latin American countries, sponsored by the Health and Sanitation Division of the Institute of Inter-American Affairs. It is one of the few comparative analyses in the field of applied anthropology. This cross-cultural study of "folk medicine" and the nature of interpersonal relationships between patients and doctors revealed a number of basic similarities in all the countries and suggested (p. 16) that regularities are of sufficiently wide validity to supply useful guide lines for health programs in other Latin American countries and in other parts of the world where similar culture types exist.

Wolf's paper (1955), "Types of Latin American Peasantry: A Preliminary Discussion," raises the interesting question of the differential effects of the industrial revolution and the growing world market upon peasantry. He distinguishes seven types of peasantry in Latin America. Two of these—the "corporate type" and the "open type"—are treated in detail. The "corporate type" of the highland areas is characterized by location on marginal land, use of a traditional technology, limited production (primarily for subsistence), reliance upon a variety of occupations to supplement income from agriculture, a strong sense of community defined in terms of the politico-religious system, the predominance of the nuclear family, conspicuous consumption geared to religiously oriented communal ends rather than individual maximation, a "cult of poverty" based upon the need to restrict expenditures, and institutionalized envy.

The "open type," located in the tropical humid lowlands, is characterized by production of a cash crop (sugar cane, bananas, coffee, etc.) for the world market, dependence upon outside capital, the private ownership of land, an alternating cycle between reliance upon subsistence crops and reliance upon cash crops, a greater emphasis upon individualism, a weaker sense of community solidarity, the accumulation and display of wealth, and greater social and economic mobility.

[17] For example, Naroll, 1950, "A Draft Map of the Culture Areas of Asia"; Murdock, 1951, "South American Culture Areas"; Lange, 1953, "A Reappraisal of Evidence of Plains Influences among the Rio Grande Pueblos."

[18] For example, Smith, 1951, "American Indian Warfare"; Bacon, 1954, "Types of Pastoral Nomadism in Central and Southwest Asia"; Wolf, 1955, "A Typology of Peasantry for Latin America."

[19] For example, Flannery, 1952, "Two Concepts of Power"; Goldfrank, 1952, "The Different Patterns of Blackfoot and Pueblo Adaptation to White Authority"; Lowie, 1952, "The Heterogeneity of Marginal Cultures"; Foster, 1952, "Relationships between Theoretical and Applied Anthropology."

[20] For example, Collins, 1951, "Antiquity of the Pineapple in America"; Riley, 1952, "The Blowgun in the New World"; Spinden, 1952, "Power Animals in American Indian Art."

COMPARISONS WITHIN ONE NATION

Three books, 27 articles, and 1 dissertation, a total of 31 writings out of 220, are in this category, in which we find for the first time that the greatest proportion of the comparative studies are based primarily upon field work. Twenty-two studies are based primarily upon field work, six upon a combination of library work and field work, and only three are purely library comparisons.

While there is a considerable range in the content of these studies—15 of our 21 content categories, there is a marked clustering: acculturation (10), economics (8), social organization (7), total culture studies (6), personality and culture (3), etc.

The studies can be divided conveniently into three groups: 1. *Comparisons of Regions, Sub-cultures, or Total Communities* (8 cases),[21] 2. *The Documentation of Range of Variation* (10 cases),[22] and 3. *Culture Change* (14 cases).[23]

Taken as a whole, the category of comparisons within a nation contains some of the most interesting studies, in terms of content, competence, and originality of research design. The study of Puerto Rico by a few research teams under the direction of Steward is a case in point. In line with his concept of socio-cultural levels of integration, Steward stresses the need to distinguish between what is local and what is national in community and regional studies. Viewing Puerto Rico as a socio-cultural whole characterized as a tropical island with a long history of colonial dependency, "part of a capitalistic world," depending upon cash, credit, an export crop, and importing nearly all of its manufactured goods and about half its food, an attempt was made to formulate and test hypotheses which would hold for Puerto Rico and similar "socio-cultural wholes" anywhere in the world. Critical of national character studies and assuming that no single community was Puerto Rico in microcosm, detailed field studies were organized in four rural communities to sample some of the major crop and community types on the island. In addition, a study was made of prominent upper-class families. Although Steward uses the term "sociocultural" the greatest emphasis is clearly upon economic variables, such as methods of production technology, crops, cash, credit, markets, etc. Moreover, the emphasis is upon structural analysis rather than culture content.

Another very interesting study is the comparison of a highland and lowland Totonac village in Mexico, based upon first-hand field work in each (Viqueira and Palerm, 1954). This is one of the few comparative studies in Mexico since Redfield's *Folk Culture of Yucatan* (1941). Eloxochitlan, the highland community, has an economy of scarcity, population pressure, production primarily for subsistence, strong political controls, community solidarity against the outside, collective labor, monogamy, and the predominance of the nuclear family. The world is viewed as hostile, and sorcery and black magic are all pervasive. Tajin, the lowland community, has an economy of relative abundance, an important cash crop in vanilla, the predominance of the extended family, polygyny, an almost Apollonian sense of order and restraint, and the absence of sorcery. Against this background the authors contrast the differential role of alcoholism. In the highland village, drinking is frequent, generalized, socially sanctioned, and drunkenness is common but inoffensive, leading to social cohesion and euphoria. In the low-

[21] For example, Ryan, 1950, "Socio-Cultural Regions of Ceylon"; Fried, 1952, "Chinese Society: Class as Sub-culture"; Viqueira and Palerm, 1954, "Alcoholismo, Brujeria y Homocidio en dos Comunidades Rurales de México"; Manners and Steward, 1953, "The Cultural Study of Contemporary Societies: Puerto Rico."

[22] For example, Wagley, 1952, *Race and Class in Rural Brazil;* Wolf, 1952, "Growing Up and Its Price in Three Puerto Rican Subcultures"; Sanders, 1953, "Village Social Organization in Greece."

[23] For example, Raper, 1951, "Some Recent Changes in Japanese Village Life"; Du Wors, 1952, "Persistence and Change in Local Values of Two New England Communities"; and Zen Sun, 1952, "Results of Culture Contact in Two Mongol-Chinese Communities"; Caudill, 1952, *Japanese-American Personality and Acculturation;* Van der Kroef, 1954, "Disorganization and Social Change in Rural Indonesia."

land village, drinking is infrequent, drunkenness rare, but when it occurs it almost inevitably leads to violence and homicide.

COMPARISONS WITHIN A SINGLE CULTURE AREA OR REGION

This category is defined in terms of comparisons within a single culture area or attempts to treat the area as a unit. It is by far the largest category, with a total of 70 studies: 12 books, 45 articles, and 13 dissertations. Twenty-three are library comparisons, thirty-seven library plus field work, and ten primarily field work. The content coverage is extremely broad, including 19 out of our 21 content categories, with only sex and mythology absent. The greatest concentration, however, is in studies of social organization (30 cases), followed by total culture (11), religion (9), economics (5), technology (5), settlement patterns (4), etc.

The 70 studies of this category can be grouped as follows: 1. *Reviews of Research Trends on One or More Aspects of an Area* (4 cases),[24] 2. *Definitions and/or Reconstruction of Culture Areas* (6 cases),[25] 3. *Detailed, Intensive, Functional Analyses of One or More Aspects of Culture in a Small Number of Societies* (14 cases),[26] 4. *Survey Studies of a Single Aspect of Culture among a Larger Number of Societies* (15 cases),[27] 5. *Studies Concerned Primarily with Culture Change, either in Terms of Acculturation or Internal Development (Evolution) or Both* (12 cases),[28] 6. *Studies of Relations between Communities* (3 cases),[29] and 7. *Single-trait Distribution Studies* (5 cases).[30]

Before commenting upon some of the exemplary studies of this category, it should be noted that, within the past few years, a number of anthropologists have reaffirmed the earlier Boasian position on the methodological advantages possible by careful studies within the context of a single culture area. Kluckhohn (1954) quotes the Boas statement that a primary requirement for valid comparison is that the phenomena compared be derived "psychologically or historically from common causes. . . ." Kluckhohn writes (p. 693):

"One of the main rewards of intensive study of a culture area . . . is that such study eventually frees investigators to raise genuinely scientific questions—problems of process. Once the influences of various cultures upon others in the same area and the effects of a common environment (and its variant forms) have been reasonably well ascertained, one can then operate to a first approximation under an 'all other things being equal' hypothesis and intensively examine the question: why are these cultures and these modal personality types still different in spite of similar environmental stimuli . . . and access over long periods to the influence of generalized area culture or cultures. We are ready now, I believe, for such studies, but no one is yet attempting them seriously."

[24] Evans-Pritchard, 1952, "Nilotic Studies"; Elkin, 1953, *Social Anthropology in Melanesia;* Kluckhohn, 1954, "Southwestern Studies of Culture and Personality"; Keesing, 1953, *Social Anthropology in Polynesia.*

[25] For example, Kirchhoff, 1952, "Meso-America"; Smith, 1952, "Culture Area and Culture Depth: With Data from the Northwest Coast"; Read, 1954, "Cultures of the Central Highlands, New Guinea."

[26] For example, Eggan, 1950, *Social Organization of the Western Pueblos;* Richards, 1950, "Some Types of Family Structure amongst the Central Bantu"; Nadel, 1950, "Dual Descent in the Nuba Hills"; Nadel, 1952, "Witchcraft in Four African Societies: An Essay in Comparison"; Smith, 1953, "Secondary Marriage in Northern Nigeria."

[27] For example, Paul and Paul, 1952, "The Life Cycle"; Fischer, 1950, "The Concept of Incest in Sumatra"; Hogbin and Wedgewood, 1953, "Local Grouping in Melanesia"; Berndt, 1951, "Ceremonial Exchange in Western Arnhem Land"; Wisdom, 1952, "The Supernatural World and Curing."

[28] For example, Tax, 1952b, "The Sixteenth Century and the Twentieth"; Lystad, 1951, "Differential Acculturation of the Ahafo-Ashanti of the Gold Coast and the Indenie-Agni of the Ivory Coast"; Leacock, 1954, *The Montagnais Hunting Territory and the Fur Trade;* Secoy, 1953, *Changing Military Patterns on the Great Plains;* Wagley, 1951, "Cultural Influences on Population: A Comparison of Two Tupi Tribes."

[29] Honigmann, 1952, "Intercultural Relations at Great Whale River"; Starr, 1954, "Levels of Communal Relations"; Underhill, 1954, "Intercultural Relations in the Greater Southwest."

[30] For example, Riesenfeld, 1951, "Tobacco in New Guinea and Other Areas of Melanesia"; Suttles, 1951, "The Early Distribution of the Potato among the Coast Salish"; Lemert, 1952, "Stuttering among the North Pacific Coastal Indians."

Schapera (1953, p. 359) claims at least three advantages for the intensive study of single regions as over against global or random comparisons, namely, it eliminates the need for sampling (since all the peoples of an area should be studied), it solves the problem of what is the proper unit for comparative study, and eliminates the need to deal with large numbers of societies. Instead, the method relies heavily upon typologies. Once types have been established for a region, they can be tested in adjoining regions and later in distant regions.

Eggan (1954, p. 746), too, prefers "the utilization of the comparative method on a smaller scale and with as much control over the frame of comparison as it is possible to secure. It has seemed natural to utilize regions of relatively homogeneous culture or to work within social or cultural types, and to further control the ecology and the historical factors as far as it is possible to do so."

Goldman has given us a forceful statement (1955) on the value of the intensive study of culture areas, especially for arriving at generalizations concerning cultural evolution. He writes (p. 1):

> "Cultural evolution, to rephrase Maitland's classic remark, will be history or nothing. If it is to be history its proper focus is the culture area, or to be more precise, the comparative study of culture areas. A culture area comprises historically related societies each showing significant variations from a common pattern. In these variations—their nature, origin and direction—are revealed the basic processes of cultural development in the area—that is, its cultural evolution. From a comparison of culture areas rather than from the comparative study of historically unrelated societies may emerge the more general and more meaningful laws of development."

Despite the recognition of the great potentialities for deriving scientific generalizations by the intensive study of culture areas, there is still a surprising paucity of adequate and well rounded area studies. Kluckhohn (1954, p. 757) and Eggan (1954, p. 689) independently have pointed this out. This impression is confirmed further by our review of the comparative writings of the past five years. The single attempt at a developmental interpretation of a culture area, seeking broad generalizations, and covering most aspects of the culture, is Goldman's study (1955) on "Status Rivalry and Cultural Evolution in Polynesia"—all the more striking as an example of what can be done by purely library research, given an adequate theoretical frame of reference.

Goldman classifies eighteen Polynesian societies into three types: traditional (10 societies), where social status is based primarily upon seniority of age or lineage and social mobility is limited; open (4 societies), "paying lip service to hereditary rank, (they) reserved their honors for outstanding achievement in war and tribal politics. . . . Social mobility was, accordingly, very high and status gradations were uneven"; and stratified (4 societies), where the distinctive feature was "the fundamental cleavage between the landed and the landless." These three types represent stages of social, economic, political, and religious complexity and are due primarily to an evolutionary process of internal development within Polynesia rather than to diffusion, as is evidenced by the fact that single societies seem to recapitulate the development of the entire area. Goldman then summarizes the fundamental changes in the Polynesian status systems in a series of thirty-eight general developmental propositions covering religion, authority, property, social organization, warfare, etc. These propositions serve as hypotheses which can be tested in other areas. One of the distinctive aspects of this work is the central role it gives to value systems; in the case of Polynesia it is status rivalry, and the manner in which it relates changes in value systems to changes in other aspects of culture.

While most of the studies in a single culture area deal with more limited problems than those considered by Goldman, many are models of controlled comparisons approaching very close to experimental studies. Nadel's study (1952) of witchcraft is a model of this type in which a large number of factors are controlled so that a single variable can be tested. In Nadel's study of witchcraft each of the two pairs of societies shows wide cultural similarities with only

a few differences, chief of which is the role of witchcraft or its absence. Nadel demonstrates how the witchcraft beliefs are causally related to specific anxieties in social life, in Nupe due to marriage relations, in Mesakin due to relations between mother's brother and sister's son. He stresses the role of adult experiences in addition to infantile experiences in the formation of anxieties in the societies examined, and attempts to test a Freudian hypothesis in terms of his findings.

The research model of Wagley's paper (1951) on differential population trends among two Tupi tribes under the influence of white contact, is much the same as Nadel's, although the problem here is culture change. The tribes examined share many cultural similarities as well as a common language, but are shown to have differed, even in aboriginal times, in the attitudes toward family size, which in turn was related to other differences between them.

COMPARISONS WITHIN A SINGLE LOCAL GROUP OR CULTURE

Twenty-two articles and twelve books, a total of thirty-four items, fall into this category. The range of content is fairly wide, touching upon 15 of our 21 content items. However, the greatest concentration is in studies of culture change and acculturation (22), followed by social organization (8), total culture (7), personality and culture (6), values (4), economics (4), etc. As we have noted earlier, 25 studies are based primarily upon field work and 9 upon a combination of field work and library research.

As a group these studies are fresh and reflect some of the most sophisticated methodological trends, both in field work and research design, to be found in contemporary anthropology. Most of the studies are theoretically eclectic, combining a number of interests and approaches, chief of which is the concern with culture change, functional and historical analysis, restudies, the use of quantification and the documentation of range of variation within a single community, and finally, the control of as many variables as possible so as to approach the experimental method.

It is difficult to classify these studies into sub-groups without considerable overlapping. However, the following sub-divisions may serve for our purpose: 1. *Studies Dealing with Research Methods* (4 cases),[31] 2. *Restudies by the Same Investigator* (3 cases),[32] 3. *Restudies by Different Investigators* (4 cases),[33] 4. *Studies Showing Range of Variation in Culture Forms or Personality* (9 cases),[34] 5. *Acculturation Studies* (6 cases),[35] and 6. *Historical Reconstructions Based upon Library and/or Field Work* (9 cases).[36]

The pros and cons of restudies, both in providing a baseline for the study of culture change and as a test of the reliability of anthropological reporting, have been discussed by Lewis (1951, 1953). However, studies dealing with range of variation, for

[31] For example, Barnes, 1951, "Measures of Divorce Frequency in Simple Societies"; Goldschmidt and Spindler, 1952, "Experimental Design in the Study of Culture Change"; Colson, 1954, "The Intensive Study of Small Sample Communities."

[32] Redfield, 1950, *A Village that Chose Progress: Chan Kom Revisited;* Mead, 1954, "Manus Restudied: An Interim Report"; and Firth's restudy of Tikopia.

[33] For example, Lewis, 1951, *Life in a Mexican Village: Tepoztlán Restudied;* Firth, 1952, "Notes on the Social Structure of Some South-Eastern New Guinea Communities"; Nett, 1952, "Historical Changes in the Osage Kinship System."

[34] For example, Roberts, 1951, *Three Navaho Households;* Vogt, 1951, *Navaho Veterans, A Study of Changing Values;* Fenton (ed.), 1951, *Symposium on Local Diversity in Iroquois Culture;* Hart, 1954, "The Sons of Turimpi"; Mandelbaum, 1954, "Form, Variation and Meaning of a Ceremony"; and Tremblay, Collier, and Sasaki, 1954, "Navaho Housing in Transition."

[35] For example, Barnouw, 1950, *Acculturation and Personality among the Wisconsin Chippewa;* Hallowell, 1952, "Ojibwa Personality and Acculturation"; Spindler, 1952, "Personality and Peyotism in Menomini Indian Acculturation."

[36] For example, Bascom, 1950, "Ponape: The Cycle of Empire"; Kaplan, 1951, "Changing Functions of the Huanancha Dance at the Corpus Christi Festival in Paracho, Michoacán," México; Hogbin, 1951, *Transformation Scene: The Changing Culture of a New Guinea Village;* Marriott, 1952, "Social Change in an Indian Village"; Schmidt and Schmidt, 1952, *Wichita Kinship: Past and Present.*

which Herskovits (1954) has suggested the term "microethnography," deserve further comment.

These studies are a much needed corrective to the tendency of anthropologists in the past to assume the essential homogeneity of the culture of folk societies or little communities. The demonstration by some of the articles cited above of a wide range in personality, in family life, and in ceremonial forms, within relatively simple and homogeneous societies, highlights the difference between real and ideal culture patterns, leads to a search for more refined concepts than the catch-all of basic personality and culture, and focuses upon the role of additional factors—personal, social, situational, environmental, accidental, etc. The studies by Vogt (1951), Roberts (1951), Voget (1952), Hart (1954), and Mandelbaum (1954) illustrate some of these points.

Despite a presumed Navaho basic personality, Vogt is more impressed by the range of variation in the reactions of twelve Navaho veterans to army life experiences, than by the common elements. He relates the differential changes in attitudes and values to specific life experiences before entering the army as well as to army experiences. As a result we get a picture of acculturation in terms of understandable human beings rather than as stereotypes and averages.

Mandelbaum's vivid and detailed description of a funeral ceremony and its variations within a single community with a population of 1,200, leads him to suggest a typology of variations in terms of invariant patterns, alternative patterns, contingent patterns, elective patterns, patterns of neutral variation, optative patterns, weighted alternatives, and compulsive alternatives. He then discusses the meaning of the modal statements of anthropologists in the light of these variations.

CONCLUSIONS

One of the distinctive characteristics of cultural or social anthropology has been its simultaneous concern with the intensive and holistic study of small societies and their cultures and with the comparative analysis of these same societies and cultures over the entire world. Traditionally, the former has been based upon field work and comparative analysis, the latter upon library studies, with or without the statistical manipulation of large masses of data.

Our survey of the comparative studies over the past five years reveals an important trend in the relationship between these two aspects of our discipline. Comparative anthropology no longer can be defined as a library method and is becoming increasingly based upon field work. Comparisons based upon library research alone constitute only one-third of all the studies examined. Moreover, most anthropologists have had first-hand experience both in the intensive study of small communities and in comparative cross-cultural analysis.

By the traditional definition of comparative anthropology as cross-cultural comparisons, the many comparisons within a single community or culture which we have cited would have been excluded. However, there is a need to broaden our view of comparative anthropology to include the latter type studies, for our theoretical writing has lagged behind the actual field work. We have included such studies, therefore, as a legitimate part of comparative anthropology because they can make an important contribution in their own right toward the formulation of general principles, and in addition can help establish a more solid basis for cross-cultural comparisons by their careful definition of types and their increasing use of quantification. In short, now that anthropology has achieved its historic task of documenting the wide range of variation in the cultures of the world, we can join our sociological brethren and take a closer and more careful look at individual small societies. The numerous studies and restudies of "microethnography" which we have cited reflect this trend. These studies also reveal a much wider range of variation than might have been expected from our earlier overplaying of homogeneity, and this variation, in turn, serves as a basis for comparative analysis.

The trend toward comparisons based upon first-hand field work in more than one society holds great promise for improving the quality of comparative studies. Field work by the same investigator in the societies compared assures greater comparability of data and leads to more refined insights than is generally possible in working with library data alone. It is important that anthropologists become more aware of the advantages inherent in this kind of comparative study. We suspect that many who have done field work in more than a single society have not given us the benefit of their comparative experience, in terms either of their field problems or of detailed comparative analysis of their data.

On the whole, first-hand field experience in different societies is of greatest value for comparative analysis when the societies compared are on the same general socio-economic level. For example, Lewis' study (1942) of the Blackfoot Indians of Canada, a tribal reservation people, was of little help in his later study (1951) of the peasant village of Tepoztlán, Mexico. On the other hand, the study of Tepoztlán was of enormous help in his later studies of peasantry in Spain, Cuba, and India. If this observation is confirmed by the experiences of others, it has some implications for training programs and planning field research for students. For a marked improvement in comparative anthropology, it might be wise to encourage our students to specialize either in tribal, peasant, or rural societies.

Comparative studies in anthropology might be grouped into two broad types: first, comparisons of historically related societies, in which common history, language, and culture serve as controls against which variables may be tested; and second, comparisons of historically unrelated societies in which similarities in form, structure, and process are a basis for establishing typologies or causal relationships between various aspects of culture. These two approaches clearly are reflected in our earlier grouping of studies by the location in space of the entities compared. On the whole, the three smaller spatial categories, i.e., comparisons within a single community or culture, comparisons within a single culture area, and comparisons within a single nation, contain examples of the first approach, while the three larger categories, i.e., comparisons within a continent, between nations and continents, and global comparisons, contain examples of the latter. The major exceptions are the relatively few studies of Africanisms in the New World and of Spanish influences in Latin America.

While highly competent and interesting studies are to be found in each approach, it seems that each has its distinctive strengths and weaknesses. Some of the advantages of the former are: (1) a large proportion of the studies are based upon first-hand comparative field research, (2) there is a greater certainty about the comparability of the data, (3) the wholeness of culture is maintained and aspects of culture are seen in context, (4) a larger number of variables can be studied functionally, and (5) the objectives generally are of limited scope and the research designs more closely approximate those of the experimental method. Certainly the bulk of our model, small-scale, comparative studies are found in this approach. Perhaps the single greatest weakness to be noted is the lack of broad developmental hypotheses and the paucity of intensive comparative analyses of culture areas as wholes.

The comparative studies based upon historically unrelated societies are, as a whole, more ambitious, seek broader generalizations on a wider scale, in terms either of universals, world-wide typologies, or evolutionary sequences, and are based primarily upon library studies rather than field work. Here we must distinguish between the statistical studies which rely upon a large number of cases, control only a few variables, and tend to atomize culture, and the broader typological studies which seek to maintain the wholeness of culture by establishing types based upon form, structure, content, and process. Though lacking many of the controls inherent in the more limited studies, many of these studies seem more daring and give the satisfaction which comes from painting with a big brush and searching for general laws.

One of the problems of contemporary anthropology is to develop a strategy of research which will combine the strengths of each of the two major approaches outlined above. The quality and reliability of comparative cross-cultural analysis can hardly be better than that of the original field data upon which it is based. As the intensive studies of particular societies improve, they make possible more meaningful and higher quality comparative studies. Similarly, comparative studies point up the weaknesses or lacks in data, confirm or refute favorite hypotheses, and help thereby to guide further field research. Some anthropologists prefer to wait for better data from single societies before attempting world-wide comparisons. Others utilize whatever data is now available on the ground that we cannot afford to lose time. Others would change the research design and employ more limited and controlled comparisons. Finally, still others place their greatest faith in organizing comparative field research projects around specific problems of limited scope.

In conclusion, our survey of the literature of the past five years has revealed a remarkably large number of comparative studies of high quality, a broad coverage of subject matter, a variety of methods and approaches, a wide range of objectives, and a healthy eclecticism which speaks well for anthropology and its future.

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History of Anthropological Thought

A. L. KROEBER

Emeritus Professor of Anthropology at the University of California, Berkeley, Dr. Kroeber, at the time of writing was visiting Professor of Anthropology at Brandeis University, Waltham, Massachusetts. He was 1945 Huxley Memorial Medalist, 1946 Viking Fund Medalist in General Anthropology, and Chairman of the Wenner-Gren Foundation's 1952 International Symposium on Anthropology. His principal volumes are Configurations of Culture Growth, 1944; Anthropology, 1948; and The Nature of Culture, 1952.

COLLECTIVE thought tends to move ponderously, and 1952–1954 is a short period. The roots of the thinking that has reached a new stage, or has come into focus in these three short years, almost always reach back a decade or more. It will sometimes be necessary to follow them back to their beginnings; but I have tried to give special attention to those phases that have warmed to recent radiance or that suggest an impending burst of development.

As such I construe an important rapprochement of biological and cultural study, with which I commence. The well established old-line subjects of ethnology, archeology, and biological anthropology have progressed expectably and steadily rather than being upset by any re-routing of highways and overnight settlements, so that they require little comment in the present short-term review. But I have included some novel items in linguistic and culture history. Then follows another brief section on general theory and methods; after which attention shifts first to the still formative subject of values and finally and at greatest length to the fringe subjects, beginning with personality, which have invaded anthropology from neighboring social science rather than developing autonomously from its older native roots.

If I say nothing about acculturation, it is because I find no novelties there. In fact it seems that there is some tendency for the focus to shift back toward the assimilation which was originally so strong in the subject. The native nationalities or immigrant minorities involved are numerous, but the outcome is pretty uniform: absorption into the rural or urban proletariat; it is chiefly the rate and details that vary. I do not know why these monotonous studies continue to be made except that budding anthropologists have firmly—and perhaps soundly—got it into their heads that the anthropologist's hall-mark is the fact of having made a face-to-face study of living people. So they will do a community-study at all costs even if they have to invent some "hypothesis" to hang it on to, and without worrying too much whether it contributes any new ideas. And I suppose that, as regards having had the experience, they are right. As to whether I am right in seeing no essentially new ideas in this stream of output, I am of course not the one to affirm. But if I am wrong, citations of evidence will be easy.[1]

[1] The report of the Social Science Research Council's 1953 Summer Seminar on Acculturation has appeared in the December 1954 number of the *American Anthropologist* since the above was written.

BIOLOGICAL RELATIONS

A development in biology that is of definite pertinence to anthropology has been the increasing filling-out and enrichment of findings and understanding of organic evolution, as the precondition of cultural growth. This neo-evolutionistic movement must be distinguished from the early or first-half-century pulse of Darwinian evolution, in which a broad theoretic-polemical element still predominated, adaptation was fully recognized, but heredity and variation remained vague and fluid. In the opinion of many biologists, this older doctrine of evolution after a time almost suffered shipwreck; but once the new science of genetics hit its stride two decades or so after the turn of the century, and began to realize its potential, a rapprochement was effected, between it and evolutionary biology, which grew more intimate and drew in many other lines of biological research, from cytology and ecology to paleontology and taxonomy. For the non-biologist, the spearhead of exposition of this great forward lunge is to be found in the writings of Julian Huxley, as exemplified for instance in *Evolution the Modern Synthesis,* 1942; *Evolution in Action,* 1953, and, with co-editors, *Evolution as a Process,* 1954. To these books must be added a paper written for the Columbia Bicentennial and to be published early in 1955, on "Man's Place and Role in Nature," in which Huxley elaborates his basic position as less formally presented in 1951 at a Wenner-Gren Foundation supper-conference.

In these late works, Huxley passes on from biological to psychosocial or cultural or "noetic" evolution, which is limited to man, operates by different mechanisms, but has already proceeded to a point where it potentially dominates the sphere of life and presumably can direct it hereafter. At any rate, he holds that no fundamental improvements in merely biological level and efficiency any longer seem likely or even possible. Huxley realizes fully that a critical point was passed when a method of transmission and transformation of tradition was evolved by our early human ancestors.

The significance of this view is that it completely departs from the position of biologists a generation or two ago, when they either largely ignored culture or saw in it a sort of secondary modification or extension or epiphenomenon of biology, and racism and eugenics had vogue. Huxley fully accepts that noetic or cultural activity proceeds on a separate level which is relatively new, is autonomous, and which, in contrast with organic evolution, still possesses untouched potentialities. He goes on to consider "noetic integrators" of possible future cultural development which are of a scope to dwarf as miniature any plans yet envisaged by applied anthropologists.

In any event, we have a new through-highway bridge-building between biology and the psychology-anthropology-humanities inquiries which deal with culture; and it is gratifying, and an assurance of permanence of the new connection, that this pushing out forward has come mainly from biology. Reciprocating efforts are naturally called for, and the beginnings of these are visible in several directions. Such are increased emphasis on the particular basis in biology which preconditions culture, on the nature of our ancient and seemingly deathless friend "human nature," and on the problem of "progress" or whatever we may wish to name the counterpart of "direction" in biological level.

The first of these possibilities is exemplified by Weston LaBarre's recent book *The Human Animal,* 1954. The initial half-dozen chapters of this, with fervid conviction and real eloquence, deal with "the human animal" in the most literal sense of the phrase—at more length and with greater concentration than a somewhat corresponding chapter on "Man's Place in Nature" (the title consciously borrowed from Thomas Henry Huxley) in Kroeber's 1948 *Anthropology.* Two others of LaBarre's chapters (8 and 9) portray not only the limitations, but also the genuine significance of human race, genetics, and domestication—this last term used outright, without qualification by the prefix "self." Their special importance is in moving in the direction of maintaining "physical" anthropology in rapport with

"cultural." The thirteenth chapter develops the thesis that a psychosis and a culture differ only quantitatively—one being individual, the other social. Throughout, the volume remains true to its title in viewing culture as something unique developed *in* an animal.

HUMAN NATURE

Human nature, or "the natural," also once known as the "psychic unity of mankind," into which so many nineteenth-century anthropologists dipped to draw up inspirational buckets of speculation, was thereafter long shunned as an unknown and unknowable, but is once more being nibbled at. It was the subject of a symposium at the 1952 national meeting of the American Anthropological Association, from which at least one paper has appeared, by Spiro (1953) on "Human Nature in its Psychological Dimensions." One point Spiro develops probably will be generally accepted, that the distinction formerly often made, between man's innate "basic" drives and his socially acquired ones, cannot properly be maintained, or at least is fruitless. However, when Spiro finds that because acquired drives are as "natural" to man as his biological ones they therefore constitute another psychic dimension of his unique nature, this appears to be essentially a restatement of man's unique symbolizing capacity rather than another distinct "dimension." Spiro's final conclusion that it is personality that constitutes human nature seems again to reduce to, or at least derive from, faculty for symbolization; if there is more than that in the conclusion, it eludes me—perhaps from the compression of the article. Spiro sees needs, values, ego processes, and defense mechanisms as prerequisites of culture. As a universal need he cites a world view. I would see a world view as part of culture itself. If a world view is universal in cultures we may infer that it springs from a corresponding psychological need, but I cannot see that such an inference adds anything that is more than verbal. We do know a good deal that is specific about world views, but the need remains quite vague. Similarly for values; are they not definitely again *in* culture? That there is "an imperative dimension in human behavior" is true enough; but to the individual his value imperatives come mainly from his culture, and the culture has them because human beings symbolize.

I have ready for publication an article which tries to reopen the problem of human nature without recourse to personality, but by a double approach from biological behavior and back from cultural manifestations without reference to the enumerative "universal pattern." The proposal is to review and reinterpret the nearest subhuman approaches to what man does in and through culture, and to plot the perimeters or extremities of total known culture as an indication of how far human nature can go, or at least has gone, and therefrom infer its area and "content." What this approach may yield remains to be seen; but at least it is offered as a counter balance to the approach through personality, which seems to me much more likely to be the product of human nature plus culture, than its prerequisite or basis.

We may expect increased attention to this subject in the coming years. After all we can hardly forever leave the psychic equipment of man a blank except for a few reflexes, no instincts, and a faculty for symbolization; at least not without a try.

As to progress in culture, Huxley accepts it as unhesitatingly as he accepts progress in living matter; and Redfield (1953) agrees in *The Primitive World and Its Transformations* (especially chapter 6). Redfield (1953, p. 159) finds that when anthropologists threw out the nineteenth-century bath water of "progress" as a mere assumption of faith, they also threw out a tangible baby of undeniable progress, and threw it far enough for its cry not to reach their ears.

It is by now clear that Redfield is right; the problem is not whether there is progress, but of what it consists and what has been its precise if fluctuating route. We can admit progress and still remain wholehearted, non-weaseling cultural relativists. To become aware of ethnocentrism is to begin to discount it intellectually. We do

not have to flop from the absolutism of ethnocentricity to the equally absolute paralysis of relativism blown up into a total negation. Genuine relativism is a safeguard against ethnocentrism, not an indiscriminate enshrinement of all values as untouchably sacrosanct. If values are to be dealt with in culture study—as it is pleasant to note that Huxley (1953, p. 150) takes for granted—they have to be characterized, defined, "weighed" to be compared; and it is of their nature that "measurement" of them, at least at first and possibly always, will be more effective qualitatively than quantitatively. If that means that value judgments can not be wholly kept out of organized value study, so be it: better to err a little than to renounce all understanding for a taboo. We are not physicists. And is it not time to realize that for students of culture to fear that *they* may lapse into ethnocentricity is almost as belatedly pedantic as it would be for chemists to be on their guard against becoming Rosicrucianly anthropomorphic?

TIME DEPTHS AND BASIC TYPES OF LANGUAGES

In linguistics there are two developments to chronicle, both of definite interest to cultural anthropologists in their results, and both using quantitative expression.

The first is Swadesh's glottochronological method, which is simple in principle, being lexical comparison, though sound and exact data are needed and judgments must be critical. To this comparison there is brought a hypothetical assumption that the rate of inner or automatic change of all languages tends to be closely similar. There is some preliminary evidence from languages with known history that this assumption is approximately correct. Basing from these cases, Swadesh converts percentages of remaining similarity of vocabularies into centuries elapsed since separation of two languages, with results running up into millennia and on the whole conforming to extant impressions as to classification of language groups. The strict constancy of rate of change remains unproved; but it can be disproved or corrected only by testing more cases, so that further prosecution of the method is urgently desirable, whether one's faith in it be positive or negative. Mine is definitely affirmative, on the basis of internal consistency of results within groups universally accepted as related; but as a full weighing of evidence is lengthy, I refer to an article on the subject I have in press in *International Journal of American Linguistics*. Swadesh's method bids fair to rival dendrochronology and carbon 14 as a time indicator. Ranges above 8000 still seem uncertain, but from 2000 to 5000 years fairly precise determinations appear reliably attainable if not already in hand.

Greenberg (1954) has reviewed the old problem of types of language, which took shape with normative and ethnocentric classifications by nineteenth-century German idealists from Schlegel to Schleicher and Max Mueller ("agglutinative, isolating, inflectional"), and which since then has lain fallow except for Sapir's 1921 morphological classification, which some anthropologists have shown an interest in, but nearly all linguists have tended to walk around. Greenberg sets up ten morphological indices, these expressing scale-frequencies of occurrence of the structural features of synthesis, agglutination, compounding, derivation, gross inflection, prefixing, suffixing, isolation, pure inflection, and concord in eight selected languages. The statistical results check very interestingly against the relationships and what is known of changes in the languages. Four of the eight languages are pairs of earlier and later stages in two Indo-European lineages: Anglo-Saxon and English, Sanskrit and modern Persian. Both definitely go down in "synthesis"—from 2.12 to 1.08 and from 2.59 to 1.59—up in agglutination, and run similarly parallel in seven of the eight other traits. Annamese, the one "isolating" language of the eight, comes out extreme in nearly all indices: lowest seven times, highest once: it seems to stand at one end of the total range of structural possibilities. Eskimo, on the contrary, scores four maxima and four minima in ten features, which suggests strong characterization in different morphological directions. Bantu stands sec-

ond in this regard. But the four Indo-European languages rate highest or lowest only twice in 20 times as against a chance probability of 10 in 20. They thus seem generalized rather than specialized in structure. These samples show the interest which results from the method promise to have. The construction of the indices and application of data to them can no doubt be improved with more experience, but seem simple, practical, and inspire faith. Linguists, in virtue of being perfectionists by profession, will presumably shake their heads and pick flaws for a time. But it looks as if Greenberg has set up a milestone—and one of an interest to non-linguists comparable to Whorf's metalinguistic essays but more open to proof.

CULTURE HISTORY

A line of thought related to the Tönnies community-society distinction (Gemeinschaft versus Gesellschaft) began to be worked on by Redfield as far back as the Tepoztlán days (tontos and correctos) and was later (1941–1947) developed by him into a folk-sophisticate and folk-urban polarity or continuum. In his 1953 volume, *The Primitive World and Its Transformations,* he elasticizes the idea by adding the peasant as a "human type." The influence of Childe's vast material and restated interpretations is evident in this increment. Perhaps also there was a reaction to Sjoberg's attempt (1952) to inject the not wholly apropos concept of a "feudal" type. To Redfield (1953, p. 31 and chapter 2) a peasantry is brought into existence by the city. Peasants are long-indigenous rural natives whose order of life takes important account of the city—economically, politically, and morally. They are part of a larger society, religion, and state, use its money, are affected by its writing and law. The concept of course is old in common knowledge and in history, especially in long-settled stable regions such as Europe and China, but has been rather outside the experience of most Americans, and our anthropologists and sociologists have tended not to think in terms of it.[2] In Europe, on the contrary, peasant "culture" (as distinct from economy) has been called folk culture and folk lore; whereas to Americans "folk" tends to denote the rural illiterate proletariat, or Mexican Indians, or sometimes our own Indians. The concept of peasant is certainly needed in any wider comparative overview, and is likely to stay with us.

Of genuine interest is a brief book now available in English translation, *Farewell to European History,* 1948, by the historically-minded sociologist Alfred Weber, brother of Max. The relation between the two is illustrated by Alfred reacting productively against the irritant of Spengler much as Max reacted to Marxian doctrine. Weber wrote this "sketch" during the closing months of the collapse of Germany in 1945. It is concerned largely with the "Nihilism" which he pictures as overtaking the West, with its focal point in Germany. It ends with a chapter on "Intimations of Transcendence in the Realms of the Inanimate, Animate, and Spirit" written in a language of the past. Yet the introduction and first chapter present a vivid view of Western Europe as a unique phenomenon in human history, with its extraordinarily strong and varied dynamism expressed in a rapid succession of economic and sociopolitical phases, and tensely charged with impulses toward inner revolution or outward explosion. The changes sought in this culture were in idealistic rather than material ends; no other civilization, Weber finds, was "shot through with Absolutes" to the same degree as the Occidental, due to the flooding of the immature but vigorous peoples of the West by both Christianity and developed classic intellectualism. The "Homeric period" of Europe is set by Weber from 1000 to 1250. After this there follow loosening and break-up of dogma, redogmatization, nineteenth-century consumation, and destruction. Judgments may vary about the main body of the book and about its value in comparison with

[2] Somewhat as in the political sphere we are only incipiently aware of the real resemblance of native high-Mexican political units to the Old World city states, from Sumer to the Netherlands.

other interpretations; but the comparative delineation of Western civilization in its youth has much originality.

For a dozen, in fact twenty years now, Gordon Childe's transformative interpretation of Old World pre-history as history, based equally on vast control of knowledge and extraordinary integrative ability, and riveted tighter in successive books, has dominated our thinking about some five millennia of the story of man. Thematically central have been his major revolutions, the Neolithic and the Urban. I acknowledge as much personal influence as anyone. However, a dozen years are a long time for an ideology as precise as this one to hold unchallenged sway. The first indications of challenge seem at hand.

For instance, Redfield in his just-cited *The Primitive World and Its Transformations* makes minor emendations on the relative importance of the two revolutions (1953, p. 6) and on the moral order of the Paleolithic communities (1953, p. 16). Carleton Coon's *The Story of Man,* whose range is from the earliest men to 1954 and its outlooks, differs not at specific points, but in attempting a new mold. It is in no sense antithetical—Childe is mentioned once—but it starts from the same facts to chart its own course. It is a fresh, spontaneous, vivid retelling of the human story, original in choice of materials, approach, and illustrations. It is more narrative than LaBarre's, but similar in fervor and versatility of phrasing.

Howells' *Back of History,* 1954, written with the pleasing skill to which he has accustomed us, departs less from the Childe pattern, though it does include the surviving ethnographic primitives and native America.

GENERAL THEORY AND METHOD

Bidney's important *Theoretical Anthropology* represents something of a reversion from the current anthropological trend, in that values are considered primarily as categories with reference to aesthetic, moral, and ideological norms, and that "normative science" is set up as something that "does make for absolute standards and is also compatible with freedom of inquiry and cultural progress" (1953, p. 432, summing up chapter 14). Propositions like these are large and difficult, and I do not believe they can be settled or even weighed wholly within anthropology. I suspect that Bidney is enunciating them from the framework of philosophy from which he came as a welcome recruit to anthropology. He evidently sees cultural relativism as a nihilistic principle and destructive near-illusion. I admit that it can become so to the fearful and defeatist, to those without aesthetic sensitivity, or to the moralist who knows his norm. I doubt that relativism *must* become nihilistic in its effects. I abhor negativism, and yet live with satisfaction in a plural, fluctuating, probing human world. That is an individual attitude; but I set it against Bidney's attitude which seems to me at bottom equally personal, though he has reenforced it with argument which I am not enough trained philosophically to refute with skill.

I do think if Bidney wants to convert anthropologists to the "absolute standards of normative science," he will have to begin with more tolerance for the relativistic viewpoint that we have adjusted to, and for the rich variety of the cultural and natural values we experience under it. Certainly many of us would not know how to proceed with the anthropology which is our life work if we had to spend our time henceforth measuring how far the many imperfect values of the human cultures we know fall short of an absolute norm. Perhaps, as first step toward a rapprochement, he can rephrase his portrayal of this norm in a manner less shocking to some of us.

Another point that Bidney touches on in his book is "creativity" (1953, pp. 148, 177–178). It is evident that one meaning which this term has is the discovery or achievement of new values. It is also clear that individuals as well as cultures and periods differ in kind as well as degree of their creativity; and that in concerning itself with values, anthropology is also concerning itself with creativity. Bidney is aware of this, but he skirts the subject with references to freedom and intelligence, hu-

manism, voluntary effort. In my *Configurations,* in using genius as my principal index of comparative value achievements, I was certainly implying individual creativity, though, as I was concerned with historic profiles of cultures, I abstracted from the personalities of the geniuses dealt with. I took for granted that they possessed enough force and freedom to exercise creativity, and I then used the products of this creativity as a measure of the cultural growth or historical configuration of which they formed a part. It is therefore not because I wish to deny creativity that I raise the point of what Bidney means with his use of the term. Along with it he speaks of humanism, personalistic approach, freedom and intelligence, determination of cultural destiny, until one wonders whether he is not excepting free creativity as something outside the realm of nature. Such a view was once traditional in the humanities, and is no doubt still often maintained in spots in their isolation. If there are any anthropologists or other scientists that hold this position, they are few. I think Bidney owes us an answer to the question: Is his free humanistic creativity in nature or outside it? [3]

Ackerknecht has written an important paper "On the Comparative Method" in the volume in honor of Wallis, *Method and Perspective in Anthropology,* 1954. He points out how comparative anatomy underlay Darwinism and made its swift decisive triumph possible, and how when formal anthropology was launched it availed itself of an analogous approach for culture, which continued unquestioned until Boas's 1896 challenge. Ackerknecht holds that in modified form comparison has remained in use wherever the approach was historically oriented—which is true; and he believes it will be revived increasingly. He also points out that the pre-evolutionary idea of progress was well established in the cultural field before 1800, nearly a century before evolution broke through in biology.

[3] Since this passage was written, Spencer has reviewed Bidney's book in the December 1954 number of the *American Anthropologist,* making much the same point.

This fact suggests another: namely that through its Hellenic as well as Judaic element our Western civilization was long committed to a static world view and imposed this on its science. Only the history of human beings and nations was allowed as unstable, though their changes consisted of accidentals and was meaningless as against the fixed master plan of the world. It was not until the later eighteenth century that the improvement of telescopes allowed astronomy to begin to become the historical science it is now, to be followed by geology and then biology, with universal human history being at least envisaged and sketched about contemporaneously with the rise of historical astronomy. One need only review the status of total Occidental thought and knowledge by 50-year periods since 1700 to realize that historicism in the wider sense consistently has made gains and is still gaining. Its spread and accumulations, while less showy than those of experimental science, have been equally consistent and great.

The early evolutionistic anthropologists failed because they possessed no analyzed and classified corpus of comparative knowledge of culture similar to that which biology had accumulated ready for reinterpretation by 1859. It was this corpus that enabled biology rapidly to transform the generic concept of evolution into a solidly-firmed history of life. Without counterpart of this, the "classic" anthropologists could only guess at over-all formulae and try to support them with partisanly selected evidence. Robert Spencer in the same 1954 volume as Ackerknecht discusses "The Humanities in Cultural Anthropology," following farther Ruth Benedict's presidential address of 1947 and a passage in Evans-Pritchard's *Social Anthropology,* 1951. Spencer accepts the Benedict contention that, point for point, problems discussed in the humanities are closer to those in anthropology than are most investigations in social science. This is precisely the position elaborated—from another premise—farther on in the present essay (p. 307). Other points of corroboration or extension of Spencer's position can be found on

pp. 282-283 of my "Summary" to the volume.

VALUES

The subject of values is one that has been consciously faced in anthropology in the last ten years, and increasingly so. Values were long regarded as unscientific and as improper to introduce into scientific context. Actual reference of course was mainly to value judgments; that is, ratings of values as better or worse. Gradually it dawned on anthropologists that we were actually describing, defining, and analyzing out characteristic values in every broader or integrative picture of a culture—in every ethnographic account that was more than an atomistic enumeration. Cultural content, I said in 1946, falls into patterns as regularities of form and style and significance, and it embodies values which may be formulated or felt by the society, and which it is part of our business as anthropologists to characterize and define.[4] This was stated not programmatically but as descriptive of established practice in history as well as anthropology. The one restriction specified was that recognition of values must be physiognomic and comparative, not ethnocentrically normative. These dicta made no particular stir but aroused no particular contradiction.

In short, anthropologists have long recognized that there are cultural values and have occasionally referred to them more or less specifically, mostly without examining the concept abstractly. Endeavors to deal deliberately both with particular values and with a theoretic formulation of values in general have characterized the last decade and especially quinquennium.

The largest forward lunge was the establishment in 1949 at Harvard University of a six-year program for "Comparative Studies of Values in Five Cultures" by the Laboratory of Social Relations. The five cultures are represented by Zuñi, Navaho, Spanish-American, Mormon, and Texan communities in the "Rimrock" area of New Mexico. The instigating spirit was Kluckhohn's; the field workers, associates, coordinators, and other participants have been numerous and, besides members of the four groups in the Department of Social Relations, have included philosophers, economists, political scientists, musicologists, etc. Monographs and articles have been issued since 1951; several large-scale ones are now in proofs and should be issued before the present lines appear. It will be a year or two more before the findings as a whole are available and the results appraisable—presumably by the next issue of this *Yearbook*. The activity has been concerted and great; it has already drawn the subject out from its long limbo.

Theoretically, the basic paper is Kluckhohn's "Values and Value-Orientations . . .," 1951, subtitled "An Exploration in Definition and Classification." Kluckhohn defines values as conceptions of desirables. The conceptions may be explicit or implicit, characteristic of individuals or of groups. The desirables influence selection from available modes, means, and ends of action. Values are abstracted not from neurological properties but from behavioral events, verbal and non-verbal. They are consistently connected with approvals and disapprovals. Value concepts, being pointed at desirables, are emancipated from immediate physiological stresses and from ephemeral, merely specific situations.

Verbalizability is said to be a necessary test of value. Accordingly, instinctual behavior and needs, being below the level of abstraction, are not part of the realm of value.

Values are mostly cultural products, but they are given private interpretations. In fact, idiosyncratic values account for changes in group values. In cultural systems, values give consistence and congruence; in personalities, dependability and regularity. Above all, they add a necessary element of predictability to social life. Values always have an affective as well as cognitive dimension; wish and appraisal are united in them.

Kluckhohn then proceeds toward a classi-

[4] Slightly condensed from *The Nature of Culture* (1952), No. 11, pp. 104–105.

fication of values by their *dimensions* as follows:

Modality: positive, negative.
Content: aesthetic, cognative, moral.
Intent: mode, instrumental, goal.
Generality: specific (including role), thematic.
Intensity or Incidence: categorical, preferential, hypothetical (Utopian traditionalistic); central, peripheral; dominant, variant, deviant.
Explicitness: explicit, implicit.
Extent: idiosyncratic, personal (private), group, universal.
Organization: isolated, integrated.

Finally Kluckhohn reviews the relation of values to attitudes, motivation, cathexis, needs, goals, acquired drives, utility, functions, sanctions, ideals, belief, and ideology.

It is obvious that we have here the notable groundwork for a systematic theory of values and a segregation and sharpening of the conceptual tools for their empirical study.

If I dissent, it is at one particular point only so that I may not be thought to assent now where I have differed before: in regard to universal values. I believe the probability is high that there are universal human values; I distrust the motivation of seeking them; I do not believe they can be established by random enumeration. Witness the haphazard and tattered list compiled by so sharp a mind as Linton's in his posthumous paper of 1954. What we need is an approach that is conceptually more adequate.

Another and distinct facet of the interest in values was first worked out by the sociologists Alfred Weber (1920, already mentioned above), MacIver (1931, pp. 225–236; 1942, pp. 272–288), Merton (1936). This was the tripartite segmentation, by Weber, of the sociocultural stream of phenomena into non-cumulative "cultural movement," accumulative "civilizational" process, and "social" process. Merton distinguished the two former ingredients as subjective and objective; MacIver, as social ends and social means. Subsequently, MacIver recognized three "orders": the cultural, technological, and social. This is close to Weber's formulation, except that Weber includes economic-political activity in his social process, and science in his civilizational, whereas MacIver is inclined to transfer economics and politics to his "technological" order, but fails to place science in it.[5] Kroeber (1952, pp. 152–166) subsequently suggested renaming the first two segments "value culture" and "reality culture,"—to which "social culture" would correspond for the third segment when the approach was primarily cultural, or "society" or "social action" when the weighting rather was sociological. He inclines to separate pure science from technology and place it at least partly in the value segment on the operational ground that historically science has generally behaved like philosophy, religion, and the arts in developing in intermittent spurts. He was non-committal on the question of assignment of economic and political behavior, where Weber and MacIver differed. He would now tend to see political structure and function as an extension of social, but on the other hand to construe economic activities as predominantly in the reality angle, again on the operational ground that wealth tends to accumulate through history—though subsistence economy tends to go on repetitively like society. Moreover he has pointed out that actually it is not so much a matter of segments into which the total range of culture can be subdivided as of positions on a three-cornered scale. He cites a continuum from technology to science to philosophy to religion to the arts and back to aspects of technology.

Sorokin (1947, p. 317; 1950, p. 197) touched the problem tangentially in his classification of culture into "pure systems" and "mixed or derivative" ones. His pure systems number six: language, science, philosophy, religion, fine arts, ethics. It is obvious that the last five all relate to or contain values, just as they are all ideological. Technology, economy, and politics Sorokin includes among his "mixed or de-

[5] The old Cooley and Park dichotomy of "moral order" and "technical order" referred perhaps more to two kinds of societies than to two kinds of culture, but Redfield (1953, pp. 20–22) has brought it into appropriate relation to his primitive-folk and urban-civilized distinction discussed above.

rivative" systems. He does not recognize a "social" system within culture because he has previously separated the societal from the cultural aspect of the sociocultural world.

Thurnwald (1950, pp. 38, 104, 107) had construed technological "civilization" as an irreversible accumulative process with which "culture" operates as a means; culture is defined enumeratively but without explicit reference to values.

These distinctions are likely to be followed further in the next few years. As of the turn of 1954, they are beginning to appear in program titles. Their main concern is not so much the topological classification of culture by application of obvious common sense, as it is to advance its qualitative analysis. It is something to realize that values are not uniformly diffused through culture but concentrated in some of its activities. The same is true as regards the quality of accumulativeness, which is now visible as a variable within culture rather than a constant criterion distinguishing all cultural from all organic evolution. This area of thought thus is one in which several important concepts intersect: values, accumulation, progress, cultural repetition of parallelism, and the role of culture in evolution. If in addition to classification of any of these concepts, there results a more meaningful classification of the areas or segments of culture—language for instance still is not fitted in with the rest very satisfactorily—that would be so much additional profit. Moreover, the problem can be attacked both historically and dynamic-analytically, which is not true of all fields of anthropology. Finally, the subject is essentially interdisciplinary. It was sociology that really broke the way, but comparative and culture history will undoubtedly be equally interested.

CULTURE AND PERSONALITY

We have at last a systematic, eclectic, and well-rounded book on culture and personality—John Honigmann's 1954 volume of that title. It will make relatively easy the teaching of courses in the field. Just the bibliography of 500 titles will help. It is fine to have available a balanced summary.

At the same time, the very fact of the condensation of the total subject matter into the range of a text-book makes evident certain limitations of field which have not yet been transcended, and which obtrude more nakedly than in a collection of forty or fifty papers by specialists such as the basic assemblage by Kluckhohn and Murray. Honigmann defines as he goes along: such as, community versus society, and adaptive survival versus adjustment. But a statement like "Suicide is a means of overcoming perplexing problems and anxieties: it reduces a variety of tensions, but in doing so it also kills the person," manifests a quaint naiveté lacking in the original passage in Kluckhohn and Murray that suicide is more or less explained by having an adjustive though not an adaptive survival value.

Kluckhohn and Murray named their famous anthology PERSONALITY IN *Nature, Society, and Culture*. Honigmann begins his book with this sentence: "The student of culture and personality studies what happens to personality by virtue of an individual's membership in enduring groups whose members follow socially standardized ways of acting, thinking, and feeling." In other words, the subject matter *is personality* in such and such situation. Now if personality falls primarily into some one division of science, it falls into psychology rather than into physiology, anthropology, or sociology. A possible alternative would be to assert that personality does not fall into any one territory but is wholly a crossroads or transfer point between anthropology, psychology, sociology, and possibly still other scientific subjects. However this extreme position has not been outrightly maintained, so far as I know. We return, accordingly, to the definition of "culture and personality" as being the study of the psychological topic of personality not in abstraction but under certain conditions of social and cultural influence.

Honigmann goes on: "In the main, however, culture and personality remains largely a pursuit of cultural anthropologists who

are familiar with psychological methods and principles." This characterization seems fair factually and would presumably be accepted by most of those familiar with the subject. In short, the field is the study of a psychological subject mainly by anthropological specialists more or less familiar with psychology. This finding is supported by the ratio of anthropological to psychological authors and titles in Honigmann's bibliography: 58 to 42, with sociology barely one-third as numerous as anthropology.

It is evident from Honigmann's volume that what culture and personality pre-eminently yet lacks is a large corpus of cohering informational fact. But I do not sense that there exists within the subject much feeling that there is need for such a corpus. Each investigator picks his problem and field independently, hoping to make an experiment or discovery that will be crucial. Such a result can indeed sometimes be achieved in a developed science like physics or chemistry or genetics—just because of the coherent body of knowledge and system of interpretation already established. The betting will be that only one of a thousand inquiries will produce anything revolutionary of Galilean scope; but also that nine hundred of a thousand will produce something—minute, modest, or considerable—that will be of significance just because it ties up with a going system and extends or modifies it. Culture and personality studies are being pursued with intensity and devotion, but one feels that they are popping off in diverse and unaccountable directions much like a string of fire-crackers. One inquirer is interested in tensions, another in Rorschachs, another wants to experiment on frustration; but in effect, each starts off on his own—except when a string of them go in for an exaggerated fad like toilet training. I am certainly not an active participant in the field; but, simply on the basis of experience in related ones, I feel that one might plan an overall attack that would be more effective. Let me suggest.

Culture is one component of the culture-and-personality field, and most of what we know of human culture has been organized by classifications on a spatial basis. The characteristics of the native cultures of areas like the American Southwest, Northwest, Plains, and Mexico are well recognized, and it would be a relatively economical and presumably productive procedure to define systematically the corresponding ethoses or modal personalities, from which as a body of systematized findings it would be profitable to take off both to more extended comparisons and to further "testing" of principles revealed. In fact, a beginning had been made in this very direction by Benedict in her first comparison of Pueblo and Plains as "Apollonian" and "Dionysian" respectively, although by 1934 in *Patterns of Culture* she had narrowed her approach, in the direction of highlighting sharper contrasts, by focusing on the selected single tribes of Zuñi and Kwakiutl. However, Devereux (1951) as Honigmann points out, has emphasized a "Plains area ethos" which embodies and historically underlies the ethos of any one Plains tribe. Honigmann himself recognizes that a "relatively homogeneous personality" can be discerned throughout the subarctic coniferous forest belt of native America—in fact the names of Cooper, Landes, and Saindon can be added from his own text to those of Barnouw, Caudill, Hallowell, and himself whom he cites as contributors to this finding. But why then not match this discernment against that of an ethos of the Plains, or of the agricultural woodland which contains ethnic relatives of the Cree, Chippewa, and Naskapi of the subarctic? Or above all against the ethos of the adjacent Eskimo who contrast so vividly to ethnologist and layman? With the perspective derivable from characterizations of two or more such ethoses, it would then be possible to go on to look for definite correlations with environment, food supply, population density, settlement pattern. Not that any of these would presumably turn out to be the sole or even the predominant cause of the differing ethoses, but they might well be contributing factors and thus put us in the way of having in hand not only descriptions but reliable partial explanations.

While teaching a graduate course at

Columbia University a few years ago, I compared the ethoses of eight tribes inhabiting a continuous arc of more than a thousand miles—Yurok, Yuki, Yokuts, Mohave, Walapai, Navaho, Zuñi, and Arapaho —for all of which there are adequate ethnographic data and with all of which I had had personal contact (least with the Navaho). It became evident that an unproductive habitat, which enforced nearly constant but scattering food quest, tended strongly to be accompanied by meager and undifferentiated institutions as well as personalities. But where there was a chance of surplus food, or high-value food secured rapidly, institutional life developed, without serious setback even in the face of occasional famines. Thus the culture achieved a degree of richness and specialization, and with these the representative personality also became specialized as well as, above all, definite. It seems clear that Yurok, Mohave, Zuñi, Arapaho personalities are about as differentiated from one another as are the cultures, and that while their "hues" are distinctive, they roughly agree in the *measure* of their "colorfulness" or saturation as against the drab personality of the poor Walapai scattered over their desert in which they never starved, yet could never forge ahead. All this perhaps was expectable, but it was satisfying to see the personality formulations consistently falling into patterns correlative with the known ethnography and ecology.

In fact, my orally presented findings seemed in concord with the famous ones of Benedict, except that I chose my material for geographical continuity and near-contiguity, whereas she spaced hers widely to attain striking contrast. She was justified in this because twenty years ago it was still important to impress a belated or sluggish world with the *fact* of variety of patterning of culture and of personality. But that principle is now long established and accepted; the present need is for a steady, step-by-step extension of observations over geographically (or historically) coherent areas.

"National Character," by Inkeles and Levinson (1954) is a formal theoretical and methodological review, whose intrinsic importance is enhanced by a judicial quality due to the authors being a sociologist and a clinical psychologist. They equate national character with the "structure" of modal personality, and insist that the latter be formulated from psychological study of an adequate sample of persons studied individually; which in general has not been the case, its place having been taken by psychological analysis of "collective policies and products" (which apparently means sociocultural manifestations). The characterizing features are enduring personality features—high level abstractions of generic dispositions in adults. National character cannot be equated with culture, and must be defined as a determinant rather than a form of behavior. Mead's approach is defined as psychocultural, that is, supported mainly by non-individualized, collective facts of culture; as was Benedict's to an even greater degree.

It is evident that national character is here reviewed as a specifically psychological problem. It is therefore dependent on a theory of personality. Such a theory, however, psychology still lacks, except for psychoanalysis; and psychoanalysis remains selective and partial in its coverage, besides being even today stubbornly resisted among large contingents in psychology. To which I would add that there is no perceptible rush of psychologists to secure studies of representative samples of individuals from a representative number of nations or cultures.

Anthropologists of course possess even less personality theory of their own, and have accordingly too often tended to operate with discrete fragments of psychoanalysis that were easily broken off from the whole and easily operated with, and at the same time held out hope of large, easy rewards, as long as one assumed that adult character might be largely determined by childhood experiences like swaddling, weaning, and toilet training. On the other side, when anthropologists feel impelled themselves to secure the psychological test samples that they are interested in but psychologists are not getting, they protec-

tively fall back on techniques specialized enough to look fool-proof. My fundamental criticism would be not that Rorschachs or explanations from swaddling are necessarily untrue or wrong, but that at best they can give insights into only limited and free-floating patches of the total area of phenomena.

In view of the foregoing, perhaps the best thing we anthropologists can do is to consciously limit our efforts to "psychocultural" studies of Mead's type. Not only has she led in initiating these, but she has piled up an impressive mass of observations and formulations on half a dozen cultures—much the largest body of data we possess, sometimes richly evidenced and always perceptive. If only she would refrain from pushing on beyond to where we cannot defend her!

One constructive suggestion may be in order. LaBarre (1945, 1946) has contrasted Chinese and Japanese character as differing consistently in respective slackness and tension, in spite of one culture being mainly derived from the other and probably the bulk of their content being the same. He also uses other terms like orality and anality, but I pass these over as being explanatory more than descriptive. Now degree of tension is one of a series of polarities which Jakobson and associated modern linguists have recently set up as a frame within which to define the variety of phonemes of human language—the other being duration, volume, tonality, voicing, etc. The possible character axes or "dimensions" of course mostly would be quite different for personality than from those of speech, but, for descriptive and organizing purposes, might not a series of them be useful? I think for instance of polar qualities like order and organization, or cleanliness and finish (both of which might prove to bracket with tension, or again might not); or competition; or retractility; time-mindedness; verbalization; and so forth. This suggestion rests on the assumption that organized, analytic description ordinarily must precede causal-functional determination, and that we have had a premature excess of attempts at the latter in this and related fields of psychic and cultural inter-impingement.

SOCIAL SCIENCE INFLUENCES

Two recent general books by J. S. Slotkin deserve comment, partly because it is not too overtly patent of what they are symptomatic. They are *Social Anthropology,* 1950, and *Personality Development,* 1952. The latter is an endeavor at a systematic theory of personality development, with emphasis on the social and cultural factors involved. A natural question is why an anthropologist should want to write systematically on personality while there are thousands of psychologists around. A natural answer would be the already discussed statement by Honigmann that in the field of culture and personality one studies what happens to personality viewed societally. The two aims certainly are close together; just as the two authors are of the same age group and presumably similar intellectual bent and antecedents.

Slotkin's *Social Anthropology* is more completely novel in American anthropology. The subtitle is *The Science of Human Society and Culture.* It is a remarkable book in the precise definition of its aim, method, and technique, and in the consistent rigor with which these are adhered to. It has evoked little reaction from our profession. The one principal review—by an approximate age-mate—handled the book roughly. The private comments I have heard were unsympathetic. Older anthropologists have generally ignored it. They are busy with work they have developed for themselves and which the book mostly ignores, so they have reciprocated. Yet any book so thoroughly different as this is from the usual general work on anthropology, and so competently carried out, challenges attention. It may be a sterile deviation, or it may be a fertile seed.

As nearly as I can make out, Slotkin is a system-maker and a deductivist. He begins with propositions and he works down from the most general to the more and more particular. Last come the concrete illustrations. These are literally only exemplifica-

tions of general propositions. Therefore they never constitute an extended and coherent body of fact, but are torn out of their context of occurrence so as to widen their illustrative range by contrast. They are selected with much originality for their vividness, and many of them are exceedingly interesting, apart from the point they illustrate. But they are always marshalled toward an objective, like ranks of privates that are there to make Gen. Principle win a campaign. To be sure, this was also the method of Boas in many of his "theoretical" papers and passages. But Boas made particular theoretical points; he never wove a larger theoretical system. This has of late been charged against him as a defect; but it may have been part of his strength. Certainly he himself would have felt that with a wide-embracing, close-knit system he would have impaired his integrity as a scientist. Skotkin evidently believes that the most important thing he has to present is his theoretical system, else he would not protrude it so. His preface says that he is offering "a systematic introduction to social anthropology," which hitherto has mainly "developed as an empirical and comparative study." The book "includes a systematic body of . . . fundamental theory concerning the nature and effects of human society and culture." The "propositions" he makes are then "demonstrated" by comparative data. "Concepts are analyzed and defined as rigorously as possible."

Here is a sample of the procedure. Chapter 9 is on the Esthetic World View as differentiated from the Naturalistic, Supernaturalistic, and Mystical World Views. It begins: "Estheticism is the environmental approach which achieves adjustment by finding situations to which one's responses are themselves satisfying, i.e., are an end in themselves rather than a means." Play is "the esthetic practices of a society which embrace customarily and intrinsically satisfying behavior"; art, those practices through which society "changes parts of the environment into the kinds of situations which elicit intrinsically satisfying responses." Representational art (condensed from pp. 287–298) "(a) harmonizes the universe . . . (b) socializes the universe . . . (c) acts as a social control . . . (d) strengthens group solidarity . . . (e) enriches the observer's perception . . . (f) may provide a certain amount of wish-fulfillment." These citations fairly illustrate the type and framework of Slotkin's procedure.

It is evident how drastically different this procedure is from that hitherto prevalent in general, theoretical, or text books of anthropology. The aim is a wholly theoretical system, built up by formal definition and reflection on common knowledge, carried through deductively, and with data admitted only as exemplary illustration of general propositions. I do not know how far manuals of physics may have served as a conscious or unconscious model for Slotkin's presentation. But, if so, it is a misapplication, since, however physics may be represented to the beginning student as a finished product, physics has come into existence through a vast body of highly technical, non-common-sense knowledge; and while it has attained to many rigorous definitions, it did not begin with them. Perhaps Slotkin's motivation is not imitation of physics, but is essentially an urge toward dialectic, toward logical construction, and toward conceptual systematizing as such.

Let me be clear: I am not attacking Slotkin's system. So far as I can see it is sound, and I know I could not evolve a better one, nor probably even propose an equally coherent one. I am pointing out how wholly different it is from previous anthropological presentations. Since the beginning, anthropologists have been either empirical, working slowly point by point toward generalizations, or they have been particularly speculative for particular hypotheses. With Slotkin we are even in a new atmosphere of language: "environmental," "approach," "achieve," "adjustment," "situations," "responses," "practices," "behavior," "elicit," "satisfying"—it is in such pale-gray, depersonalized words that the findings are deliberately clothed. Life and color remain only in the quoted excerpts which humbly

serve to validate the propositions that make the system.

What is it that we have here? Has Slotkin made the first stab at presenting anthropology in more scientific form than the rest of us? Or has an obsessive urge toward system at all cost driven him to manufacture a largely verbal one before anthropological knowledge and thinking are ready for thorough abstract systematization? I will not presume to give the answer since I am aware of partiality for the concrete and pluralistic tradition which I have grown up in and love. But the question is important and not to be dismissed too offhandedly. Quite likely both kinds of answer are partly true. The future will tell. But what we can see fairly clearly now, as of 1954, is a trend of which Slotkin's book is symptomatic. This trend I shall now try to analyze and characterize.

Essentially it means the entry into anthropology of an overtly "social science" orientation. This entry was imperceptibly gradual at first, and thus is difficult to date exactly; but its influence is recognizable in the rise of acculturation as a subject of interest, of culture and personality, of applied anthropology. Slotkin is trying to organize a formal anthropological theory corresponding to economic, sociological, and psychological formal theory. The older anthropology saw some broad problems and made generalizations—Tylor alone would establish that. But it contained also a strong sensory, aesthetic, and experiential interest. It liked artifacts and it established museums; it was interested in the land and scenes in which peoples functioned; it liked to experience—at first vicariously and then in the flesh—how these peoples looked and behaved and what they had to say. It was part natural history in character, part humanities; but the humanities-like ingredient was non-normative, comparative, and broad-ranging instead of intensely particularistic, and therefore somewhat more prone than most humanists were to generalize, though its generalizations mostly remained fairly humble, step-by-step, "low-level."

Anthropology was often respected in its early days, but it was also a "queer" pursuit mainly of odd things. It was only slowly introduced into mass education, and the colleges had difficulty fitting it into a curricular compartment. They finally settled pretty generally on classing it as a social science; almost inevitably so where sociology was already well established with the collegiate public, so that it was administratively convenient to add anthropology as an annex. Being easily the most picturesque, concrete, and least formalized of the social sciences, anthropology exercised an appeal on many social science students, and some of these even came over into it. But they usually came with social science antecedents and interests in place of the natural history or humanistic ones that had been customary among the earlier anthropologists.

The enforced association with sociologists over most the central area of the United States further accustomed both anthropological teachers and students to an impersonal, non-face-to-face approach, to dealing with familiar rather than remote or unusual experience, to formalism and order, to definition, to seeking abstractness as an end in itself, to worrying about quantification and its validation, to being "socially conscious." Psychology, starting just as far from social science as had we, escaped from philosophy to throw itself into experimental science, then underwent the shock of Freudianism, and entered the social science fold at least half willingly. There, reciprocal influence with anthropology seems to have been what largely generated culture and personality as a subject.

In short, a considerable part of the present-day population of American anthropologists has antecedents and generic orientation pretty drastically different from the remainder as well as from the whole anthropological population of thirty or forty years ago. Slotkin's book expresses in the most extreme form the attitudes and interests of the growing minority. It is also no mere accident of idiosyncracy that his second book, on personality development, is essentially outright psychology. Nor is it accident that Honigmann's book is basically about what happens to per-

sonality under culture, and that even its style and manner—the formal abstractness, muting of vividness, and the rest—are similar even though perhaps less extreme than in Slotkin.

With two intellectual ancestries and motivations now represented among anthropologists, we are de facto having two streams of thought flowing. This is perhaps the major development in anthropological thought of the past generation, and it seems to me by now to be incontrovertible.

What lies ahead? Prediction in matters like this is uncertain, and in a sense sterile, even if the future happens to vindicate it. It is more important to realize to the full what the forces at work are and how they are impinging. If thus we push our examination farther, it becomes evident that the several strains in the older, natural history-humanistic kind of anthropology, diverse as they are—biological, prehistoric, ethnographic and culture-historical, archeological, and linguistic—are not falling apart under social science impact. In spite of their growing specialization, they seem as much determined as ever to stick together. That means that if there is a split, the secession is likely to be of the social science or "behavioral" group—social, personality, acculturation, and applied anthropology—from the remainder. And at that I am more doubtful that such a budding off will take place. The vast majority of anthropologists whose compelling interests lie on that side would apparently be grievously distressed over a split. I do not believe that Slotkin and Honigmann are even dreaming of leading a secession. Any strains that arise therefore bid fair to be not professional, but intellectual.

We have indeed an actual case to observe—the formation of Social Relations at Harvard University in 1946 by the withdrawal of Social Anthropology and Social and "Clinical" (read Personality) Psychology from their old departments and their union with Sociology. This was a step very difficult for other universities with lesser resources to follow; and it has not been followed, in spite of the many existing sociology-anthropology departments that superficially look as if they already constituted half the makings of a Social Relations group. The straight, or old-fashioned, anthropology department at Harvard has not suffered, but has flourished and grown. The anthropologists in social relations have none of them renounced their professional affiliation; in fact, except for some shuttling back and forth of courses and students, they seem to stand much where they would have stood if there had been no new combination department—except that there are more of them. And intellectually the greatest increment due to social anthropology within Social Relations has been the Values Study—a project that would have been difficult of initiation by an anthropological department that was founded on and around a museum. So the net record to anthropology to date is some definite gains and no loss.

The influence of the Harvard example on other universities is not reflected in the departmental organization of these universities but in their "general education" teaching. Since such teaching is intended normally to be terminal in its subject, and comes at the lower undergraduate level, it may affect the thinking of the students reached but will not ordinarily affect the thinking done in connection with anthropological research.

The foregoing applies to the United States. It does not hold for Britain, where social anthropology is in a way dominant, because sociology is so little developed in Britain that anthropology has to care for its interests also and is therefore pulled more to the social side. And on the continent of Europe there is of course nothing corresponding to American anthropology: prehistory, ethnology, and (physical) anthropology have different roots and affiliations, remain and mostly want to remain distinct, and linguistics feels itself wholly and only a humanity. This European disjunctive separatism is undoubtedly causing the European streams of thought in what we call anthropology to flow quite differently from ours. But it would be rash to predict what the outcome of the difference will be.

How about an ultimate reintegration of the social anthropological group of interests with the other and longer established ones?

I do not expect that if there is such a reintegration it can be at all near at hand. It is in the unconscious or subconscious bents that the differences largely originate, and it takes time to reach these. The socially conscious are in the nature of things radar or other-directed; old line anthropologists are notoriously inner-directed, and they like to experience directly, not vicariously. They also like to observe, and have trained themselves to observe; the social science type, to be articulate. There will be rapprochements, but we must not expect these to come fast. Nor should they be one-sided. Perhaps we of the older anthropological tradition can begin, or here and there have already begun, to learn from our social scientist colleagues greater precision in formulation, the need not to let the fondling of information delay generalization unduly long, and such like virtues in which we have not always shone.

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The Integration of Anthropology

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THE PROBLEM

Primates
Style
Structural Linguistics
Human Ecology
Cultural Values
Growth and Constitution

THESE six titles, selected from the fifty which appeared on the program of the Wenner-Gren Foundation's 1952 International Symposium on Anthropology (Kroeber and others, 1953), suggest the variety of subjects in the discipline in 1955, and raise some questions. Can such heterogeneity be maintained in a single discipline? What do techniques in linguistics have to do with primates, or primates with style or cultural values? The problems of the integration of modern anthropology loomed importantly in the discussions at the Symposium (Tax *et al.*, 1953). They plague a faculty of anthropology charged with building a curriculum which is defensible as rational and which also includes such diverse subjects as the sequence and chemistry of potsherds uncovered in Indian graves, personality characteristics of Russian peasants, the teeth of Sinanthropus, and the phonemic pattern of the Hottentot language. A graduate student impatient to get on with his archeological digging chafes through courses in linguistics, culture-and-personality, and folklore, less convinced of the logic of the enterprise than of the perverseness of the older generation. The anthropometry required of the student preparing for his study of comparative value patterns or kinship structures makes him wonder at the strength of tradition and of vested interests. The student working part-time in an assembly line for a dissertation on the factory work-group protests the need to understand the evidence for the time of the first peopling of America.

Is such a congeries of subject matters held together only by tradition and the interest of those who, having had to learn all this themselves, are determined that others will too? Is anthropology then destined to dissolve into its constituent problem fields? Or rather is there good enough reason for the continuing association of linguistics, physical anthropology, archeology, and ethnology to expect anthropology to maintain or even increase its integration, in the United States and elsewhere?

In 1955 the variety of subject matters in anthropology is felt to be a problem mainly among professionals (and students). I have examined twenty-six reviews of the publications resulting from the Wenner-Gren Foundation's International Symposium. Those by non-anthropologists (Lewis, 1953, p. 174) accept without question the variety:

"Since anthropology is the scientific study of man and all his works, the symposium contains papers on human biology and humanistic sub-

jects, as well as on a variety of aspects of systematic social science."

Or, if they do not simply take the variety for granted, they praise it (Malkin, 1954, p. 28):

"Perhaps more than anything else, this volume shows that the study of human society cannot be left to a narrowly specialized discipline and that new knowledge in one may be essential to the development of others and vice versa."

"The coverage is broad, but the outstanding concept around which this work has been developed is culture, as applicable to archaeological findings or in the study of contemporary primitive and advanced societies. Anthropology, considered as a "science of man" has tended to become more comprehensive . . . (J. E. N., 1953, pp. 347–348)."

Reviewers who are professional anthropologists more often see the variety as a problem, either factually as in the case of Daryll Forde (1953, p. 1016):

". . . the interconnexions between the various branches of anthropology have been more effectively maintained in the U. S. than in Britain and the rest of Europe. This is reflected in both the wide coverage and the conscious efforts at integration which are apparent in this inventory."

or of William A. Lessa (1953, p. 357):

"Their scope is, of course, enormous and can be justified and understood only by bearing in mind that the *raison d'être* of anthropology is its special way of looking at man-study. That way is the comparative method . . ."

or proudly and defensively, as in the case of Wilson D. Wallis (1954, p. 99):

"It seems a long cry from archeology to language; yet it was the use of carbon 14 diagnoses adopted by archeologists from physical chemists that suggested to a linguist, Swadesh, the possibility that words which drop out of separated languages that stemmed from a common parentage might be lost at an ascertainable rate."

In only one case is there outright criticism of the pretense to the integration of so wide a variety of subjects, by John W. Bennett, who (1953, p. 222) refers to

"the so-called 'integration' of anthropology which has in fact been absent."

The fact that most American anthropologists defend anthropology as a single discipline may mean only that (as Forde points out) this is characteristic of American anthropology. It does not make anthropology more logical.

Similarly, the International Symposium itself was organized essentially in the American tradition. It may be argued that this strong influence in the direction of welding the sub-disciplines into one—many of the specialized scholars from abroad may well have been aware for the first time of anthropology as a unified discipline, and at least some were strongly impressed—was an aspect of the influence of American anthropology in imposing on others an *ersatz* unity. It does not prove the efficacy of the unity.

The questions that need to be examined are whether the integration is genuine or spurious; what the forces are that pull anthropology apart or together; and whether, in a worldwide view, anthropology is losing, gaining, or maintaining its integrity as a discipline?

It becomes clear at the outset that the kind of question with which this paper opens is not relevant to the problem of the integrity of anthropology. Kwakiutl grammar probably has nothing to do with a South African fossil primate. Anthropology cannot be justified on the slim basis that some day a connection may turn up, as happened when carbon 14 dating suggested the technique of glottochronology. The latter hardly depends on the former; but in any case expectation of such incidents is not the adhesive which for over a century has kept linguists and archeologists together as anthropologists—indeed, the linguists might otherwise have better joined the chemists! To ask what Rorschachs have to do with phonemes or potsherds is like asking what the big toe has to do with the appendix; whether removal of the appendix will particularly affect the toe misses the point of their connection, which is that the fate of either will affect the organism of which both are parts. Kwakiutl grammar, if important, is important to the study of language, which in turn is part of anthro-

pology just as human paleontology is part of anthropology. Anthropology itself would be a different animal without either one. The question is not whether sets of data or techniques of different fields of anthropology are or are not usefully related, but whether anthropology as a historical organic continuum, with a traditional organization related to a broad interest in man, has been and remains a generally useful animal.

This statement of the problem, and the analysis to follow, are based on the view that (as anthropologists at least will recognize) a scientific discipline is both more than and less than a rationally organized system of thought and operations. It is a cultural tradition carried by a society; like any culture it transcends the individuals, but like all of them its character is formed also by accidents of personalities and of contacts through people with other traditions. A demand that anthropology be justified by showing the logical interrelations of all its ideas and operations is understandable, since the tradition of science demands rationality; but it has little to do with the problem of whether anthropology will maintain itself as a subculture. Indeed, incongruences and logical inconsistencies are necessary characteristics of a living branch of a science. It is therefore quite realistic, anthropological, and useful to treat anthropology as a society of people with their usual problems of organization and disorganization (of which this article is a symptom) and with their changing inherited tradition beset with contradictions, but valued and lived with as the most satisfactory alternative available. From this point of view, the training of students involves the usual problems of enculturation; interdisciplinary research involves the usual problems of cross-cultural communication, diplomatic relations, acculturation through marginal individuals, and the like; and understanding of the ways in which anthropology does or does not, or will or will not, maintain its integrity depends upon general theories of social and cultural integration and change.

THE NATURE OF THE INTEGRATION

The present review both of current tendencies and of the nature of anthropology in historical perspective leads with surprising forcefulness to the view that the pieces of anthropology are now and always have been joined together in a unique and functioning whole. The basis of the integrity of anthropology was established at the outset 115 years ago, and has not changed substantially from then to now. Nor is there reason to predict a substantial change to come.

The conclusions of the present study most briefly are that:

Anthropology may be viewed as a tradition (or a subculture) founded by scholars with interests as diverse as those today.

The founders shared a common passion for understanding and explaining the nature and origin of man and his works in all their rich variety.

They self-consciously and explicitly joined together as a group of intercommunicating scholars and almost at once established a body of values and traditions which have remained characteristic and which have set apart anthropology from other disciplines.

One of the valued characteristics has always been the freedom and obligation to draw upon knowledge from any source that might be relevant to problems of anthropology.

Scholars of any discipline have always been free to join the anthropologists if they share the common values sufficiently to be comfortable in a company of colleagues pursuing a very wide variety of subject matters and methods which they are interested in communicating.

Each anthropologist has characteristically been part of another company of scholars pursuing a specialized discipline, most of whom are not anthropologists.

Anthropology is always heterogeneous and appears to have a "problem" of bringing disparate interests together until it is realized that anthropology exists only because it has already "solved" this "problem."

Finally, anthropology is likely to exist as a discipline as long as linguists, folklorists, archeologists, biologists, geographers, historians, *and any other specialists* find meaning enough in the whole study of man to maintain their intercommunication.

These propositions are in the following pages only expanded and documented.

The Present Heterogeneity of Subject matter Is Part of the Original Tradition of Anthropology

"Les principaux éléments qui servent à distinguer les races humaines sont: *l'organisation physique, le caractère intellectuel et moral, les langues et les traditions historiques;* ces éléments divers n'ont pas encore été étudiés de manière à constituer sur ses vèritables bases la science de l'Ethnologie. C'est afin d'y parvenir par une suite d'observations, et d'établir quelles sont en réalité les différentes races humaines, que s'est formée à Paris la *Société Ethnologique.*" [1]

The men who met in Paris in 1839 to form the first anthropological (then called ethnological) society with the purpose stated above included persons interested in what we call today ethnology, folklore, linguistics, physical anthropology, and archeology. Papers on all of these subjects were read. The society also prepared the first "Instructions for travellers" which is directly antecedent to the later (British) "Notes and Queries," including the following main headings:

I.—Des Caractères Physiques.
II.—De la Linguistique.
III.—De la Vie Individuelle et de Famille.
IV.—De la Vie Sociale.
V.—Des Rapports des Naturels avec les Peuples Étrangers.
VI.—De la Religion.
VII.—Des Rapports des Naturels avec les Conditions Extérieures.
VIII.—Traditions Historiques, Révolutions Politiques et Antiquités.[2]

The London Ethnological Society, organized in 1843, followed the same pattern—indeed, translated the above "Manual of Ethnological Inquiry"[3]—and as years passed maintained this variety of interest. Thus among papers read before this society in 1854 were the following:

On the Demigods, Daemonia, Superstitions, and Languages of Australia. By W. A. Miles, Esq.

Observations on the Stature, Weight, &c., of the New Zealanders. By A. S. Thomson, M. D., Surgeon 58th Regiment.

Observations on the History of the Incas of Peru, and on the Indians of South Peru. By W. Bollaert, F.R.G.S.

On the Romanish Languages of Switzerland and the Tyrol. By Dr. William Freund.

On a Reported Infecundity of the Gins of Australia. By T. R. Heywood Thomson, M. D.

On the Phonology and Orthography of the Zulu Language and its Kindred Dialects. By Rev. Lewis Grout.[4]

The same variety can be found in the journals of the anthropological societies in London and Paris in the early 1860's.[5] The following articles, for example, are among those appearing in volume I (1863) of the *Anthropological Review* (London):

Wild Men and Beast Children. By E. Burnet Tylor, F.A.S.L.

On the Tribes of Loreto, in Northern Peru. By Professor Raimondi. Translated from the Spanish by William Bollaert, F.A.S.L.

On the Science of Language. By Richard Stephen Charnock, Esq., F.S.A., F.R.G.S., F.A.S.L.

On the Deformations of the Human Cranium, Supposed to be Produced by Mechanical Means. By the late Robert Knox, M. D.

The Abbeville Jaw. By M. de Quatrefages. Translated by George Frederick Rolph, Esq.[6]

The study of "humanity, considered not only in itself but in its relation to the rest of nature" from its very inception thus conceived its scope to include, in the words of Broca (1863, pp. 278–279), the "aptitudes

[1] Mémoires de la Société Ethnologique, 1841, p. iii.

[2] *Ibid.*, pp. vii-xiv.

[3] *Journal of the Ethnological Society of London,* 1854, pp. 193–208.

[4] *Ibid.*, pp. 4–247.

[5] *Memoirs read before the Anthropological Society of London,* 1863, pp. 1–524.

[6] *Anthropological Review,* 1863, pp. 21–491.

and manners . . . blood and language" of the human races, as well as "the first traces of man's appearance on the earth," and "the most ancient remains of his industry."

Anthropologists Have Always Tended to Be "Self-Selected" from among Their Fellows in Special Disciplines Which Themselves Continue Independent of Anthropology

"As the solid foundations of geology could not be laid until some other sciences were well advanced, so the solid foundations of ethnology required an advanced state at least of anatomy, physiology, philology, and archaeology."

"The distinction of races being admitted, an immense field for investigation opened at once . . . it was first necessary to study the influence of external conditions, such as climate, alimentation, mode of life, etc., on the human organism; to inquire how far these different agents were capable of modifying the individual or the race; and within what limits the laws of heredity and atavism maintained these varieties. It was then requisite to determine the filiation of the peoples, to trace the course of their migrations and intermixture, to interrogate their monuments, history, and traditions; to follow them up beyond the historical period, so as to arrive at their cradle. All these were entirely new questions and new problems, which until then had not been put to science; and these multiplied and unlimited investigations, which require the simultaneous concurrence of zoology, anatomy, physiology, philology, and palaeontology, must converge to constitute the science of man, or anthropology.

"Such is the mission bequeathed by the eighteenth century to our own. But who, sixty years ago, would have tried to carry out this programme would have spent his life in useless efforts. . . . Comparative philology just made its *début;* archaeology had as yet not extended its domain beyond the limits of Western Europe; and palaeontology and geology, these twin sisters, were as yet scarcely able to walk. . . .

"To found anthropology upon its veritable basis was then impossible, . . .

"In this incomparable half century, which has seen so many discoveries, which has explained so many enigmas, which has transmitted to us precious documents, as to the past of humanity; the study of human races has become enriched with an enormous mass of facts. . . . These isolated researches in the various branches of the science of man, have, no doubt, been fruitful. Many particular questions have been better fathomed by being treated exclusively, and the number of demonstrated facts was considerably increased thereby; but this was not sufficient for the formation of a fascicle of methodically connected branches, which alone in the present day can constitute a science. The various branches of anthropology were already in existence, but anthropology itself, towards which they were to converge, did not yet exist, and to give it organization and life, more was required than individual efforts."

The first statement was made by Richard Cull to the Ethnological Society of London (1854, p. 111), the second by Paul Broca (1863, pp. 275–277) to the Anthropological Society of Paris in 1862, and they tell a story which must have a more personal side.

In 1839 in Paris and in London alike thrived geographic, philological, antiquarian, and medical societies. Geographers were meeting among themselves to exchange information and ideas, and were publishing a journal. Likewise philologists, and antiquarians, and anatomists. Some small number of persons from each of these groups came together (with others who were generally interested in customs and folklore and the like) to form the ethnological societies, and later the anthropological societies, in the two capitals. They wished to communicate not only with fellow specialists in their own disciplines of geography, archeology, philology, and anatomy; but also with one another. Anatomists mutually shared anatomical interests; philologists philological interests; etc. The particular anatomists and philologists (and others) who organized the anthropological societies clearly had in addition a more general interest in pursuit of which they entered into communication. This was the origin and *raison d'être* of anthropology. The specialized societies did not of course become absorbed; most anatomists, philologists, and archeologists did not become anthropologists, and even those who did usually continued to meet

with and publish for their special colleagues as well.

The specialized societies and journals thus grew and flourished even as the anthropological societies did. The original pattern has characterized anthropology through all the years. Some but not all anatomists or physiologists, linguists, folklorists, and archeologists have always been, or became, anthropologists as well as anatomists, physiologists, linguists, etc. Thus today as always most anthropologists look two ways; thus also all of the special societies have minority groups of anthropologists—"anthropological" linguists, or folklorists, or anatomists. In some cases these anthropological minorities have organized special societies, like the American Association of Physical Anthropologists, or the Society for American Archaeology. But the pattern of attraction of persons to anthropology from other disciplines—including the widest variety in the social and biological sciences and the humanities, as well as the original and traditional ones—continues always. Anthropology for at least half its life has also been producing its own anthropologists, most of whom (in the tradition, but with labor pains) are also specialists in one of the related fields; but anthropologists continue also to be self-selected from other fields, and naturalized.

The Attraction to Anthropology Is to the Breadth of its Charge to Study Man in All His Manifold Aspects

"To describe and classify the actual races, to point out their analogies and differences, to study their aptitudes and manners, to determine their filiation by blood and language, is no doubt to run over much ground in the field of anthropology; but there remain higher and more general questions. All the human races, in spite of their diversity, form a great whole, a great harmonic group, and it is important to examine the group in its *ensemble,* to determine its position in the series of beings, its relations with other groups of nature, its common characters, whether in the anatomical and physiological, or in the intellectual order. It is not less necessary to study the laws which preside in maintaining or changing these characters, . . . Finally, in a more elevated sphere, and without venturing to attain the regions which conceal the problem of origin (a fascinating and, perhaps, insoluble problem), our science eagerly searches for the first traces of man's appearance on earth, it studies the most ancient remains of his industry, and gradually descending from incalculably remote epochs towards the historical period, it follows humanity in its slow evolution, in the successive stages of its progress, in its inventions, in its struggles with the organic world, and its conquests over nature. . . .

"Henceforth general anthropology and ethnology form but one science,—the most noble of all sciences, since it has for its object humanity, considered not only in itself but in its relations to the rest of nature."

This statement, again from Broca's speech (1863, pp. 278–279) to the Paris anthropologists (it was the occasion of the Society's fourth anniversary), was translated for the journal of the London society and clearly spoke for all anthropologists of the breadth of their discipline. It has become no less comprehensive with the passage of time. In a review (1953, p. 38) of the Symposium volumes, Ralph Linton describes the problem for anthropology as nothing less than "man, in all his manifold aspects." What less could have brought and kept together so great a variety of interests? Man as an animal, as a population, as a species; his behavior and his culture, and the behavior of his culture; the origin, characteristics, and distribution of the varieties of man, his language, social forms, ideas; the genetics, prehistory and history, and the laws of history, which explain all of these in all time over the whole earth; comparative anatomy, personality, religion and ethics, law, sociology, and science; national characteristics, acculturation, socialization. All these and whatever else may become relevant is the problem anthropologists have chosen.

The original anatomists, philologists, geographers, antiquarians came evenings to listen each to the others. It was their interest in the all-inclusive problem that drew them, and that made all-inclusiveness a virtue to be felt and extolled. The anatomists (for example) came to read papers on craniometry to philologists and to students

of customs, and to listen to papers on chipped-stone industries and grammar and folklore. The first anthropologists must have contributed breadth and a high threshold of tolerance for a variety of subjects and of techniques for studying them. They established these as values for which anthropology ever since has tended to select. The integration of anthropology inheres both in the general concern for the problem of man and in the continuing intercommunication of persons who share and value the inclusiveness of this interest.

Anthropology Continues to Attract Others Partly by Reaching Out to New Sources of Knowledge, Method, and Theory

"We look upon Anthropology as the Science of Mankind. We shall therefore treat of every thing that will throw light on the physical or psychological history of Man. It will be essentially our object to trace the primitive history of Man. But in doing this we require the aid of the geologist, archaeologist, anatomist, physiologist, psychologist, and philologist. It is, therefore, nearly impossible in the present imperfect state of our science to be master of all these subjects. The time also has, perhaps, not yet come when the different sciences can all be brought to bear on the history of mankind."

Before and after James Hunt (1863, p. 11) proclaimed in these words the program of the new Anthropological Society of London, anthropology has characteristically assumed that its working tools would come from wherever they happen to be developed. Whether a "law of uniformity" from geology, a Freudian model, or a dating technique from chemistry, anthropologists have freely adopted, reinterpreted, and made their own whatever appeared useful to their varied problems.

It is because they are wanted and needed that people are drawn into anthropology. But if they are not so drawn in, their ideas still are. The eclecticism of anthropology appears to add to its heterogeneity, frequently by adding whole fields (like culture-and-personality), but of course all that are added are new answers to the heterogeneity already residing in the questions. Anthropology always has been as broad in conception as it is possible to be; in wandering correspondingly widely for its data and tools, it absorbs in the tradition of the discipline those new men with special ideas who accept the breadth of anthropology. Thus is provided the growth in resources to cope with the always deepening questions.

Anthropology Is Bounded Only by the Limits of What Anthropologists Do and Use; and Anthropologists Are Those Who Intercommunicate in the Continuum Founded in 1839.

With subject matter nearly unlimited, and high value placed on open horizons, is it possible to speak of anthropology as a "discipline" at all? Can one speak of the "integration" of a boundless universe? It would appear to be a perplexing problem that on the one hand the broad study of man includes all science and knowledge that may be or may become pertinent, and that on the other the community of anthropologists always has been small. The solution is in the difference between the *ology* and the *ologist*. Any scholar may make a contribution to anthropology; any discovery which illuminates our understanding about man is used by, adopted into anthropology. These discoveries come from any field of knowledge. The discoverer need not be an anthropologist, although he may become one. Thus Willard Libby, the chemist who developed the carbon 14 method of dating archeological material, is not an anthropologist; but he could become one if he were to develop his interest in early man and civilization to the point where he should wish to come into further communication with the archeologists, physical anthropologists, linguists, and ethnologists who share that general interest.

On the other hand, *anything* that an anthropologist does must, in the tradition of the field, be considered anthropology. The anthropologist *is* in intercommunication and *does* share interest in the common problem; but even if he is not and does not, there is no definition that might bar his work. It may turn out that his col-

leagues in anthropology will not attend or use his work, thus excluding it from the functioning body of "anthropology"; but, since nobody can predict outcomes, this is not an operationally useful test of anthropology. The spirit of the discipline prefers error on the side of expansion to constriction. Hence anthropology is whatever anthropologists do or whatever they use. "An anthropologist" in turn is (again in the tradition of the discipline) anybody who enters into scholarly intercommunication with the community that has existed continuously since the Ethnological Society was formed in Paris in 1839. Anthropologists "born" into the group by a generally recognized course of training are more easily identified but—in the tradition—not more rightfully "anthropologists" than those who are adopted.

The Characteristic Unity of Anthropology Is Demonstrated and Made Manifest within the Context of Areal Studies and Museums

Analysis of a particular geographical area involves besides geographical, botanical, zoological, and other knowledge, the whole complex of anthropological interests. Ethnologists, archeologists, physical anthropologists, and linguists all make complementary contributions to our knowledge of man within the context of any geographic area. Exploration and travel, national interests, and other factors early led to interests in regions. Anthropogeographic theory and field work maintained it among anthropologists. Societies of Americanists, Oceanists, Africanists, etc., have long existed for intercommunication about the anthropology of these areas. Membership of these societies is representative of the whole range of anthropological concern: questions of prehistory, race, social organization, language, culture, are all studied within an area. Such studies have, throughout the history of anthropology, afforded unity and integration to the "science of man." Similarly with museums which use a geographical and natural history base and bring all branches of knowledge to bear on the problems of man (Kroeber, 1953).

Anthropologists Generally Share a Particular Set of Intellectual Preferences and Habits Which Have Historic Roots, Which Distinguish Them from Most "Social Scientists" and Which Are a Basis of Self-Selection to the Group

Among these are, first, the values already referred to as associated with the breadth of the enterprise of studying man from all points of view: the eclecticism; the openness of boundaries to both men and ideas; high tolerance for a variety of subjects and tools. Out of these grows also a tolerance for a certain amount of ambiguity and vagueness. It is not possible to take all aspects of a problem into account at once if one also demands a clear structure.

Perhaps even more important is the desire of anthropologists to stay close to the real world. Having at heart a real problem, anthropologists (like geographers and geologists, historians and zoologists, etc.) from the start implicitly demanded real answers rather than abstract models. They were far indeed from the economists who next door to them in both Paris and London developed elaborate theories based on a model of a non-existent man! Given the choice between trying in vain to solve a real problem for which tools are not available, and abstracting parts for which tools are at hand, the anthropologist generally prefers to worry a whole problem without success than to operate successfully with good tools on something not really there. In this he differs from not only most economists but from most sociologists and psychologists as well. It is a characteristic probably related both to the natural science and natural history background of most early anthropologists and to their deliberate selection of a large and complex problem which they insisted must be attacked from all sides at once. It is also related to the necessities of the field situation in which a lone anthropologist typically faces the wholeness of a society and culture in their ecological setting, where most obviously all things are interdependent and very real.

It is probably an incident and an accident that anthropology became particularly associated (notably in North America) with the social sciences (Kroeber, 1953). Economics, politics, and jurisprudence had developed concurrently with the subjects that came together to form anthropology. None of the anthropological subjects was closely related to these original social sciences, and it appears that, with respect to both people and ideas, anthropology—unlike sociology—was formed quite independently of them. Hume, Mill, and Marx are names common to all the others but not to anthropology; Comte and Spencer are markedly absent from contemporary anthropological journals. The connections between anthropology on the one hand and the central social sciences on the other, however important they may be, are late and different in different countries. Some anthropologists of course always have been close to sociologists, as others have been close to historians or physiologists. Theoretical studies of the evolution of the family —by Bachhofen, McLennan, Morgan—have been a special link; another has been the French group (led by Durkheim) who identify with sociology and social anthropology alike. But although in the 1880's men like Lester Ward and J. W. Powell both were active in the Washington Anthropological Society, the two disciplines generally have been farther apart than university organization leads one to believe.

There were departments of anthropology in American universities as early as departments of sociology, sometimes earlier; but a sociology department where there was no anthropology department often sought an anthropologist to teach its "social origins" material; and eventually there came to be combined departments of sociology and anthropology. Similarly many universities in grouping subjects into larger divisions classified anthropology among the social sciences rather than with the biological sciences or the humanities where the roots of anthropology are at least as strong.

This has led occasionally to an identification (even by anthropologists) that needs correction. In tradition, spirit, and method anthropology is not particularly a social science, and neither administrative convenience nor the need to classify is likely to make it one. Anthropology has a contribution to make to the social sciences—and in the tradition of anthropology it also uses what knowledge and tools they develop—but its best contributions will presumably be "anthropological," stemming from its uniqueness.

Anthropologists Also Share a "Liberal" View of Other Peoples and Cultures Which Puts Them on the Side of the "Underdog" Generally and of Native Peoples Particularly

The original interest in "exotic peoples" is both a cause and a result of the anthropologists' abiding concern with man through all of time and space. Knowing mankind is to know all its varieties. Knowing people means seeing them as people. It happens that anthropology grew up in an age when the moral basis of slavery was being argued hotly and when the colonization of Africa and Asia made the governing of native peoples a public issue. Some of the earliest anthropologists were or had been missionaries; they were particularly concerned with the welfare of the native peoples. The original Société Ethnologique de Paris was formed through the efforts of persons who were members of an anti-slavery, native welfare group known as the Aborigines Protection Association. The Ethnological Society of London later grew out of the same organization. It is therefore not surprising that anthropologists have generally taken the side of the oppressed, hence of native peoples. In turn, interest in the welfare of native peoples doubtless contributed to their becoming and remaining a subject of anthropological study. At the same time, this sort of bias has been a binding philosophic tie among anthropologists and one of the factors in their selection.

The "liberal" unity of anthropology was solidified by an early test, in England. The Ethnological Society of London had been

founded in 1843; anatomists, ethnographers, philologists, archeologists, etc., attended the meetings of the society and published articles in its journal. In 1863, however, the Ethnological Society split apart, and the "study of man" in England proceeded for a number of years divided between two bitterly contesting groups, ethnologists and "anthropologists." A superficial examination of their proceedings reveals that the two groups treated the same problems, had similarly diverse compositions, and published similar journals. But the "ethnologists" were anti-slavery; the "anthropologists" split away from them because they were pro-slavery racists! The guiding spirit and first president of the new society was Dr. James Hunt, who wrote (1863b, pp. 10–17), in the first article in the first volume of the memoirs of the society, entitled "On the Negro's Place in Nature":

". . . It appears that in the Negro the growth of the brain is sooner arrested than in the European. This premature union of the bones of the skull may give a clue to much of the mental inferiority which is seen in the Negro race. . . . There is no doubt that the Negro brain bears a great resemblance to a European female or child's brain, and thus approaches the ape far more than the European."

Proceeding from "anatomy" to "culture," Hunt quotes (p. 42) one William Bosman to the effect that

"The Negros are all, without exception, crafty, villainous, and fraudulent, and very seldom to be trusted."

Hunt concludes (p. 52) with the assertion that "the negro belongs to a distinct type," which is "intellectually inferior to the European." Consequently, slavery is perfectly justified (p. 55):

"Scientific men . . . dare not close their eyes (!) to the clear facts, as to the improvement in mind and body, as well as the general happiness, which is seen in those parts of the world in which the Negro is working in his natural subordination to the European."

Hunt's article (which was reprinted and distributed by pro-slavery groups in America) is only one of many: the "anthropologists" took a polygenist, anti-negro, racist position, in clear contrast to the "ethnologists." The enmity between the groups was bitter: Hunt once termed Thomas Huxley, then the president of the London Ethnological Society, a person suffering from "negromania." The comment of the Manchester *Examiner and Times* probably is an accurate reflection of the general public's conception of "anthropologists":

"The science is only seven years old, yet its conclusions are already imported into politics. . . . The anthropologists have already arrived at the conclusion that an impassable gulf divides certain races of men; that it is the right of the superior race to do as they want with the inferior." [7]

The rift between "ethnologists" and "anthropologists" was soon healed. The combined societies took the general name anthropology (as later in France where the anthropological society had been founded evidently without respect to a difference in politics); but it rejected the political philosophy of the "anthropologists." Racism, an issue near the origins of anthropology, appears now to have been a short-term aberration from the anthropological tradition, the first of several that have in different localities and times tested the anti-racist "liberalism" that has unified anthropology.

Anthropologists probably also have always been unusually international in their outlook and associations, whether because of the general outlook or because travel is part of the occupation. The members of local anthropological societies were frequently "corresponding fellows" of foreign groups. Translation was an important function of the early societies:

"It affords me much gratification . . . to announce that . . . the publication of translations of foreign works, is to be followed by our fellow students of Moscow. We must all rejoice that such is to be the case. Let us never forget that there is but one science of anthropology, although there are many languages in which that science is enunciated . . . Our Madrid Associates, although they have only just commenced

[7] *Manchester Examiner and Times*, November 3, 1866. Quoted in "The Manchester Anthropological Society," 1867, p. 27.

their sittings, have already three hundred members enrolled. The first number of their journal is shortly expected to appear; and altogether there is an amount of activity and zeal in this young society, which is both gratifying and encouraging to us.

"Our fellow students across the Channel acknowledge and remind us of the fact, that our opportunities for the study of anthropology are far greater than their own. The large colonial possessions of this country bring us into close contact with nearly every existing race of man. This has been going on for generations, yet to our national shame let it be said, our anthropological museums are far inferior to those of the French, or even of the Danes." [8]

This was spoken in London in 1866. But intimate international communication began with the formation of the first three ethnological societies in Paris, New York, and London between 1839 and 1843. All the records evidence warm and frequent mutual intercourse among anthropologists all over the world, which has continued over the years through International Congresses, in the organization of which anthropologists have always led, and personal visits, as well as through the literature. Recent years have added international committees and exchange scholarships, fellowships, and professorships.

MEASURES OF INTEGRATION

It follows from the thesis developed here that the question of whether anthropology is becoming more or less integrated resolves into three:

1. Among scholars interested in one or another branch of the anthropological study of man, is the proportion increasing or decreasing of those who identify with the traditional scope of anthropology as first enunciated in 1839?

2. Among those who do so identify, is intercommunication increasing or decreasing relative to ties with scholars outside anthropology?

3. Are the traditional values of the identifying group being held with increased or decreased firmness?

Development and application of means to answer these questions is rendered more difficult by differences in terminology and organization from country to country. If we take the single term "anthropology" to stand for the whole of the tradition that was founded in Paris in 1839, may we assume that anthropology exists everywhere and only where the term is used in this sense, and where academic institutions are organized around it? The best available source for data on terminology and organization is the recent *International Directory of Anthropological Institutions* (Thomas and Pikelis, eds., 1953), and this discussion is based in large part on data it supplies.

The information in the *Directory* is not easily interpreted, and the situation is complex. If we are not too far wrong, anthropology is generally used to include physical anthropology and at least some branches of cultural anthropology in England and Ireland and all the nations of the commonwealth, and the colonies; the United States; Latin America; Indonesia; Southeast Asia; the Philippines; China; and the Netherlands and Belgium.

On the other hand the term anthropology means physical anthropology (and there is no inclusive term) in all the continent of Europe except Holland, Belgium, and France; in the Near East, and in Japan.

France appears to be variable in the usage of its terms.

One cannot assume that an over-all term for the various anthropological fields means that they are integrated, or that lack of a term means they are not. In Scandinavia it appears that the separate fields are individually well developed, but institutionally very separate with little direct communication between their practitioners. It appears that anthropology in the present definition neither *started* in Scandinavia of its own accord, nor did Scandinavians accept the pattern of the French, English, and Americans. In this case the lack of a word does mean something: that the separate sciences never entered into union. "Integration" of anthropology does not exist, and never has, because there is no "anthropology."

On the other hand, it is certain that many of the places that use the term "an-

[8] *Anthropological Review*, 1866, p. lxxv.

thropology" do not in fact practice anthropology, only because the separate fields are not sufficiently staffed to make intercommunication meaningful. The term and the ideal have diffused, and they await the anthropologists.

Germany is a case like Scandinavia in which all fields of anthropology developed well—some earlier than elsewhere—but, unlike Scandinavia, most of them always have been in close intercommunication. Yet there is no common term.

France and England, the centers of the original integration, today present a curious contrast. In France the terminology evidently never became as fixed as in England; both meanings of the term "anthropology" seem to have been competing. But anthropology appears to have stayed together rather firmly. In England, on the other hand, there appears to be no doubt about the terminology: "anthropology" subsumes physical anthropology, archeology, ethnology, etc., but the bonds show more signs of dissolving there than anywhere else. In France (as in the United States) the unity of anthropology seems to be valued; in England some descendants of Tylor speak and write as though there has already been a happy divorce.

Japan appears to have had a unitary anthropology once, to have lost it (though the specialties continue strong) and to be making attempts to bring it back. Here the *value* of general anthropology seems to exist, with developed specialties which are not joined into anthropology.

Differences in terms thus not only confuse issues, but may not mean what they seem to. The integration of anthropology is probably greater over the world than would appear to be the case if one judged only by the presence or absence of a general term. And *to the degree* that the term may be important one would have to conclude that integration is increasing rather than decreasing, since there is nowhere that the word anthropology is being restricted in meaning, while the contrary continually occurs with international communication.

Nor can the development of new specialisms, like culture-and-personality in the United States or an organized social anthropology in England, be counted a sign of disintegration. Indeed one may reason that as long as the new specialists remain in communication with other anthropologists they strengthen anthropology. One can argue that if a constituent element—linguistics, for example—should drop out of anthropology it would be a sign of disintegration; but not then that if some psychology attaches itself *to* anthropology it is also a sign of distintegration (although of course any change is a disturbance that may *threaten* the integration). The question with a new addition is whether it will *become* integrated into anthropology; and if it does, anthropology becomes in some sense more rather than less integrated.

Nor can one argue that added specialties reduce the possibility of necessary intercommunication unless one assumes that the necessary communication must be on a specialized or technical level, or that each kind of anthropologist must communicate with every other kind. Neither assumption is in the tradition of anthropology. There is no reason to believe that physical anthropologists ever troubled to learn how to manipulate morphemes properly, or archeologists to interpret kinship structures. A division of labor is not only appropriate but helpful in integrating an organism or society! What is required as a minimum is enough general understanding to engender respect, and perhaps to help learn how what that is new may relate to something known. Each anthropologist will be in technical communication with some others, but hardly with all. But if A understands B and C; and B understands C and D; and C understands A and D; and D understands A and B, surely a firm functional integration is established. At some point in his career, a student should have the opportunity to learn more about more specialties than his teachers (by that time) are expert in, to give him both a wide basis of selection and (perhaps) a respect for the techniques of other anthropologists. Another genuine function may be to permit him to see if, in the anthropological tradition, he

can tolerate the variety of specialties—and specialists!

But neither the fact that there is far more knowledge than any anthropologist can master, nor that additions at the border add new varieties is a relevant measure of integration.

To see if integration is increasing or decreasing it is necessary first to ask whether (for example) more prehistorians are communicating more than before with other anthropologists and less with other prehistorians or geologists (for example), or the reverse. Intercommunication is exceedingly difficult to document. While it is sometimes clear that it is taking place—as in anthropological congresses and symposia—it is difficult to assert with certainty when meaningful relations are *not* taking place. Surely no single measure of communication will be adequate. Some of the following may prove useful:

(a) The publication of journals inclusive of many anthropological interests. "General" publications indicate both harmony of interest and concern with the problems and progress of the several major anthropological areas, and also are direct measures of communication. Presumably, linguists and archeologists both subscribe to a general journal for some reason other than to read articles on linguistics or archeology respectively. In the United States and Britain there flourish journals that cover the field: the *American Anthropologist, Southwestern Journal of Anthropology,* the *Anthropological Quarterly,* the *Journal of the Royal Anthropological Institute,* and *Man.* In view of the negative value expressed by some British anthropologists, it is interesting that the *J.R.A.I.,* which most of them evidently support, publishes at least as wide a variety as does the *American Anthropologist.* During the years 1943–53 the following proportions of articles appeared:

Ethnology—39%
Linguistics—4%
Physical anthropology—18%
Archeology—12%
Other—26%

(b) The prevalence of subscribers or readers of specialized journals in other specialties, whether or not there is a unified journal. In countries where no unified journal exists, it is particularly important to know the range of subscriptions to the various journals, since the absence of a general journal does not in itself indicate any lack of intercommunication. Although there is no unified journal in Germany, for example, it may be that as many German anthropologists read as many or more articles relating to all fields as in the United States.

(c) Membership in different societies, and particularly attendance at meetings. How many social anthropologists belong to linguistic societies? How many linguists attend meetings of archeological groups? And so on.

(d) The degree of international exchange of journals. While no "general" publication may be issued in a particular country, scholars may be reading the general and specialized publications of other countries. A Swedish archeologist reading the *J.R.A.I.* may not only read articles on other aspects of anthropology, but the archeological articles he reads will bear the imprint of the traditional integration of English anthropology.

(e) Area interests. Growth of journals and societies on areas—Africa, Oceania, America, etc.—since these cover the whole range of anthropology, measure increase in intercommunication. Since these journals and societies are international, their presence mitigates the disparateness of fields in countries (like Scandinavia) where anthropology is not locally integrated. Indeed the indirect effects of international communications are all necessarily in the direction of the integration of anthropology.

(f) Similar ties of anthropologists to groups outside the anthropological tradition. The number of anthropologists who read sociological journals, and who attend the meetings of sociologists—and similarly at other borders—measure the relative ties of anthropologists within and outside the traditionally intercommunicating group.

(g) The organization of university departments which teach subjects relating to "man and his works." The number and influence of general as compared with spe-

cialized courses; the generality of the requirements, the varying influences on anthropology students, etc., are all relevant to trends toward or away from the integration of anthropology. Presumably, students who learn a variety of subject matter will maintain an interest in the whole field; departments of anthropology which possess the full range of inquiry presumably interrelate the various specialists within the department itself.

(h) The publication of general, inclusive texts in anthropology. Integration may not explain increased publication of general books, especially textbooks, but they nevertheless promote it. It is interesting to note that within a few months one publisher has produced three books in anthropology all of which cover the several fields.[9] However one looks at the increase in number of textbooks, they and the courses in general anthropology are clear indications that anthropology as a single discipline shows every sign of increasing its followers.

[9] C. S. Coon's *The Story of Man* was published November 8, 1954, by Alfred A. Knopf; Ralph Linton's *The Tree of Culture* and M. J. Herskovits' *Cultural Anthropology* were published in January, 1955, by the same publisher.

CONCLUSION

These few measures and others applied over a span of time and in different countries, might give a basis for calculation and prediction. Meanwhile, thoughtful consideration of what is happening leads to the suggestion that, except possibly in Britain (where the contrary is far from definite), anthropology is becoming more rather than less integrated.

The danger is not in increasing numbers, or adding specialisms, or permitting free access to our ranks; but rather the contrary is true. If anthropology in the United States disintegrates it will most likely be because increasing professionalization leads to restrictive definitions of anthropology or anthropologists, and to the counting out of some activities—scientific, applied, or action-oriented. For the survival of a society and culture depends upon the maintenance and expression of the set of values around which it is organized. An essential value in the case of anthropology is its historic reaching for new ideas, tools, and subject matters that may further the study of man.

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Toward Communication between Sociology and Anthropology

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THE purpose of this chapter is to explore the intellectual and professional relationships between anthropology and sociology, so that the chances of their reciprocal communication can better be estimated. The distinction between intellectual and professional relations is often overlooked. While intellectually sociology and anthropology are commonly viewed as "sister" sciences, it is equally common to find anthropologists and sociologists making large claims for the professional distinctness of their fields: the fields are close or far apart, according to the aspects of their relationships which are perceived. Furthermore, intellectual divisions within each of them may be as deep and bitter as between them. Some social anthropologists and rural sociologists are far closer to one another than either is to other branches of his discipline, and some archeologists have much more in common with geologists than with cultural anthropologists.

On the whole, however, sociologists and anthropologists maintain considerable separate unity. They behave somewhat like political parties: they possess professionalized bodies and ideologies, are organized for the protection of their members and prerogatives, and carry on propaganda to please the voters.

In this chapter, we first will review some aspects of the histories of sociology and anthropology in an effort, secondly, to understand certain differences between the two fields. Thirdly, we will note the emergence of an area of rapprochement—structural-functional research and theory. The fourth and final section is a pilot study of the professional relations between sociolo-

[1] The chapter was originally assigned to the senior author alone. Since its topic, however, has for several years been an intimate concern to both writers, and has figured in their conversations and teaching, they have seized the opportunity to speak jointly. They share the responsibility for the first three sections; the senior author alone is responsible for the fourth. The writers' collaboration on the problem has a certain fitness because of their professional experiences and intellectual convictions. Bennett, while trained as an anthropologist, has done research in fields and subjects ordinarily viewed as "sociological"; Wolff, though identified as a sociologist, has done research and writing of an "anthropological" character. Both writers wish to thank David L. Sills, of the Bureau of Applied Social Research, for valuable criticisms.

gists and anthropologists in the "joint" departments.

HISTORICAL BACKGROUNDS OF THE RELATIONS OF SOCIOLOGY AND ANTHROPOLOGY

Anthropology and sociology, though both "social sciences" in the broad sense, have had different histories, objectives, and approaches. Sociology[2] arose in the seventeenth century in opposition to the inextricable mixture of ethical and legal principles in the doctrine of Natural Law. This expression of an empirical attitude was an attempt, ultimately successful in certain respects, to distinguish between important elements of social behavior and outlook characteristic of Western society. The preoccupation with Western society constitutes the major unifying theme for problem, research, and theory of sociology throughout its history. It is reflected in many otherwise heterogeneous instances: in Hobbes' psychological approach to European politics; in Montesquieu's "structural-functional" examination of laws; in Comte's "positivism" set against the "negative" lingering-on of the French Revolution; in Spencer's elaborate doctrine of progress with its apologia for Victorian England; in Marx's concern with the redemption of industrial society; in Durkheim's preoccupation with its anomie; in Weber's puzzlement over its essential features—capitalism, rationalization, bureaucracy; or in the involvement of American sociology with "social problems" such as racism, immigration, and urbanization.

The rise of "scientific sociology" in the present century—a signal expression of it is Pareto—has modified somewhat this major concern with the West. Emphasis has shifted toward general laws of social relationships, processes, and forms, and away from involvement with the nature of Western society. But objectives have exceeded accomplishments, for sociologists have continued to focus, as a source of both data and motivation, on Western society or portions of it. The injection of "science" contains an element of disguise and confusion: while professing to search for general laws, the sociologist continues indulging his concern with his own society, but as a "scientist," does not admit it. The positivistic phase of sociology thus belies the historical mission of the field: an empirical analysis of the nature and future of the Western world.

Anthropology,[3] on the other hand, arises from travel, exploration, missionary work, and the pan-human doctrines of biological evolution and cultural history. From the very inception, anthropologists have been preoccupied with the exotic, the different, with an inventory of non-Western societies. Examples are the great ethnological compilations of Klemm and Waitz; Tylor's evolutionary portrayals of human customs; the broad sweep of Frazer's study of ceremonial practices; the universalistic historical approach of Viennese ethnology; or the world-wide operations of the British colonial anthropologists. In American anthropology, the study of communities and culture patterns in the United States is relatively new; for generations the word "Americans" meant North- and South-American Indians and their Asian antecedents.

This world perspective also has extended to anthropology's professional organization. American anthropologists are more nearly members of a world community of scholars than are their colleagues in sociology, although the recent establishment of the International Sociological Association may lead to some change. Communication and exchange between them and European and Asian men in the field have been fluent; the knowledge of different national "schools" has been an intimate part of the equipment of every graduate. While the sociologists, more than they, have been concerned with current Western problems and events—racism, depressions, mass communication, immigration—it was the anthropologists who pioneered a formal manifesto on "human rights" in the postwar world.[4]

[2] Salomon, n.d., esp. Abstract I, p. 1; Mannheim, 1952, pp. 139 ff.

[3] Haddon, 1934; Lowie, 1937; Penniman, 1952; Honigsheim, 1942; Dieserud, 1908; Mitra, 1933.

[4] Kluckhohn, C. *et al.*, 1947. Note also Linton, 1945, title of book and introduction.

But anthropologists, like sociologists, have been caught up in the scientific movement of the twentieth century. With the rigorous classificatory emphases of Boas, the elevation of the idea of culture in the 1920's to a "scientific" concept (Murdock, 1932), and the insistence of theorists like Radcliffe-Brown on a "systematic science" of anthropology (borrowed from Durkheim), the discipline has sought to clothe its findings in the language of scientific method. This—more consistently perhaps than in the case of modern sociology, because anthropology has been concerned with many societies—has meant a renewed emphasis upon general statements or laws, upon concepts applicable to human phenomena everywhere. Yet, "scientific" rigor of a descriptive variety has to some extent been paid for by loss in color and texture. The concentration on "facts"—the belief that by taking a resolutely objective view of man one merely had to wait until materials sorted themselves into theoretical generalizations—has produced much "aimless and enthusiastic botanizing."[5] Many ethnologists have done for primitive cultures what many statistics-conscious sociologists have done for American society: produced materials without much sense of problem.

The principal saving grace from this empiricist threat to anthropology has been the technique of direct communication and interaction with the people under study (Richards, 1939). Recent and contemporary sociologists, studying a more familiar world of "self-evident" attitudes, have typically found less need to interact with their subjects. Moreover, the anthropologist, conscious of his task to interpret the exotic to his Western audience, has ordinarily been less concerned with large theoretical schemes than with detailed portrayals of his topics. To some extent, such portrayals must be made, not in Western terms, but in terms of the cultures studied. Anthropology has excelled in grasping those aspects of human existence which set men off from one another and are meaningful because of their particular quality or uniqueness. From a patchwork of such revelations of the unique, it has hoped to piece together a universal picture of man; and a set of concepts, like "culture pattern," which it has evolved, promise well as tools for constructing such an image. In this particular sense, anthropology has been more "scientific" than sociology. In Murdock's terms (1954, p. 22), it studies patterned behavior; sociology, the unpatterned. The Yale cross-cultural studies represent a signal attempt at a systematic comparative ordering of data on the societies of the world (Murdock, 1949, 1950), although some sociologists would not accept this particular approach as "scientific," preferring to see it as "descriptive" or accumulative. A "scientific" approach in their eyes would consist of the analysis of dynamic situations of human relations, anywhere, anytime. It is all a matter of how one defines "scientific."

From an institutional standpoint, American anthropology has lagged behind sociology in establishing itself as an academic subject, even though it found very early acceptance in museums and research institutes, and the beginnings of the two disciplines are roughly contemporaneous.[6] (The reverse is true for England, where sociology is largely replaced by social anthropology.) Today, sociology is much more widely taught, and has many more departments and periodical outlets, than anthropology. Perhaps, after all, sociology is the study of our own society, and this may be more appealing than research into the Bongo-Bongo. The different foci of the two fields are reflected in their course offerings: aside from introductory courses, anthropology most frequently teaches areal ethnology, while sociology concentrates on "social problems."[7]

Communication between the two disci-

[5] Shils, 1948, p. 64—although Shils uses the phrase. in reference to sociology.

[6] Small, 1924, Chap. XIX; Bernard, L. L. and J., 1943, Part IX; House, 1936, Chap. XVIII; Becker, 1954, esp. pp. 142 ff.

[7] For anthropological courses, see Erminie Voegelin, 1950, Table 5; for sociology, see Kennedy and Kennedy, 1942, esp. Tables 3 and 4. See also Bernard, L. L., 1945.

plines with respect to subject matter appears to be more common in research than in teaching. "Structural-functional" studies of world areas are engaged in by sociologists often in company with anthropologists (Steward, 1950), and the latter are busily beginning to study modern societies and American communities.[8] Methodologically, there seems to be less of a tendency toward rapprochement. In 1927, Edward Sapir expected sociology to be enriched by anthropology now that the two had rejected unilinear evolution, thus permitting a more empirical and functional approach to cultural differences and cultural diffusion. Anthropology, he felt, offered sociology a sense of the ubiquity of what now would be called ethnocentrism, and directed sociology's attention to the importance of symbolism and of "rhythmic configurations" in society. The structural-functional, rather than the cultural-historical, suggestions in Sapir's remarks have since appeared as realistic predictions of subsequent developments in sociology: the study of ethnocentrism,[9] the cultivation of functionalism,[10] and the preoccupation with values (symbolism)[11] have come to be among its prominent characteristics and concerns, while the study of diffusion and formal configurations of culture and cultures has hardly taken hold. Although sociologists have borrowed and used the anthropological notion of cultural diversity and have relied upon anthropological materials to provide a kind of comparative color, they have shown little inclination to engage in comparative studies themselves.

The volume to which Sapir contributed contains no corresponding chapter on the benefits which might accrue to anthropology from sociology, and this may reflect anthropology's more recent academic standing. In 1927, it was still a small field with only a few departments, and the majority of its professional staff engaged in museum work. However, in the latest symposium on the relations among the behavior sciences, the volume edited by John Gillin, the situation has changed: Murdock (1954) reports on what anthropology might learn from sociology, and Becker (1954) on the inverse opportunity. The latter presents a most useful survey of the interaction between the two disciplines throughout their developments in France, Germany, England, and the United States. But in his recommendations for the present and future, Becker limits himself merely to urging more interdisciplinary research, particularly in "area studies." Here, the anthropologist can contribute the "description of the relatively unique, or idiography," thereby providing "a firm empirical base for whatever conclusions may be reached," while "the sociologist, with his long, albeit neglected, comparative tradition" (Becker, 1954, p. 158), can work together with him. Murdock's chapter in the same volume makes a similar recommendation. He points out (1954, p. 29) that while anthropology "holds most of the resources" of knowledge about human social life, sociology has "most of the tools with which to exploit it," namely methodology; and anthropology is urged to acquire it.

Thus it would appear that neither author has found it possible, in the light of the contemporary relations between the two fields, to describe any very definite points of rapprochement. Their recommendations for collaborative efforts stress the adoption, by both sides, of a more or less "interdisciplinary" outlook. But this means that sociology and anthropology must give up something: their sense of

[8] Powdermaker, 1939, 1950; Warner, 1941; Mead, 1951; West, 1945; and others. Courses on American culture are increasing in number among the offerings of anthropology curricula (Erminie Voegelin, 1950).

[9] See the warnings against ethnocentrism in introductory sociology texts, e.g., Cuber, 1951, Chap. 7; or the influential study by Adorno *et al.*, 1950, which, however, makes no explicit reference to the body of anthropological studies of social groups and their centripetal bonds, but relates itself to developments in sociology and social psychology. For a critique of ethnocentrism in anthropology itself, see Embree, 1950.

[10] Merton, 1949, Chap. I; Parsons, 1951. Both authors acknowledge their relationship to Malinowski and other anthropologists.

[11] Esp. Parsons, 1951, particularly Chaps. VIII, IX; also the many sociological efforts to construct scales and other instruments for the measurement of values.

separateness, their distinct and unique problems and concerns. Such a view follows from the assumption, apparently held by Becker and Murdock (and other writers), that the two are distinctly different fields. Those who make this assumption accept the *professional* definitions of the disciplines as "given" and then proceed to discuss possibilities of cooperation.

The channels of communication within and between the two disciplines thus appear very mixed at this time. At the risk of considerable error, it would seem reasonable to say that both anthropology and sociology contain within themselves divisions into what one might call, without derogatory implication, the "traditionalists" and the "avant-garde." In anthropology, the "traditionalists" are those who see the field as committed to the classic program of four or five sub-fields, with the heart or nucleus of the science residing in (1) the study of primitive cultures and (2) historical research. This group of anthropologists (who often stress "science" in the nineteenth-century context of classification and description), regardless of their specialization—physical anthropology, ethnology, cultural anthropology, or whatever—see little point in communicating with sociologists; and well they might, since, with their views, there is little need for rapprochement. They are also alarmed at the apparent fragmentation of anthropology in its pursuit of new problems and methods (Howells, 1952).

The "avant-garde" see anthropology in the midst of a transformation in which "dynamic" research, whether social biology, the analysis of "whole cultures," dynamic linguistics, or what, will draw apart from the historical-classificatory tradition. They take what is valuable and true, such as time perspective, a cross-cultural emphasis, sophisticated "depictive integration,"[12] but strike out toward cooperation with other disciplines, including sociology, on the problem of the human condition. Most of the "structural-functionalists" and many cultural psychologists in modern anthropology belong in the "avant-garde," although theoretical and research trends are not always easily placed in terms of our dichotomy. For once more, professional identifications often result in mixed allegiances, and our distinction refers to diffuse movements in outlook, group identification, and attitude, and is not necessarily descriptive of the views of individuals.

In sociology, the number of standardized fields is larger than in anthropology: family, race, urban, rural, criminology, population, etc.; and there is probably less agreement on their number and classification. "Traditionalism" here means clinging to them, however classified and designated; "avant-gardism" means cultivating new fields with little concern that the picture of sociology is changing thereby. Much of what we said about the "avant-garde" anthropologist also applies to the sociologist, since one of the significant features of "avant-gardism" is focus on problem rather than discipline. In addition to subjects found to be of common interest to sociologists and anthropologists, the former have been particularly concerned with organization, bureaucracy, power, stratification, and communication (Bendix and Lipset, 1953). Since these and similar areas appear to be crucial for the understanding of mass society, the sociological "avant-gardists" turn out to be conservative: they have rediscovered the earlier mission of sociology, the study of the society of which it is a part. Perhaps, also, fewer of them than the "traditionalists" are plagued by scientism, and their respect for theory, especially the Weberian tradition, is great.

The major force affecting the changes sketched may well be the use of social scientists, including anthropologists and sociologists, by government and business during and since World War II. Many of them have been in and out of government service, and have benefited from government and private research contracts. The great majority of these have been practical; that is, anthropologists and sociologists have been used for the purpose of solving particular problems of human relations in

[12] Kroeber, 1952, esp. Part I; Redfield and others in Tax, Sol *et al.*, 1953, esp. pp. 151–156. The phrase is sometimes rendered as "descriptive integration."

different social settings. At one stroke, this objective has forced a certain unity of outlook on the participants: (1) they must become concerned with contemporary phenomena (this principally affects anthropology); and (2) they must take a multi-cultural point of view (this affects sociology). Studies of the human problems of industry, of relationships between Americans and the residents of foreign countries, research into psychological warfare, or into the problems of introducing modern technology to "underdeveloped areas," or of military government, and many others, have been attacked by "teams" of social scientists. The government and business organizations here adopt the role of an "encoding apparatus": professional sociologists and anthropologists might not talk to one another in the university, but they are brought into contact through the services of an intermediary, who simply puts them to work on questions he wants answered.

In this area of business and government, acceptance of both sociology and anthropology as contributors to the solution of problems of our complex, world society, and in consequence of this acceptance, much communication and cross-fertilization is probably taking place. But this does not and need not lead to a fusion of the *professional* bodies of the two disciplines, or even to a growing similarity in their language. On the contrary, competition for contracts and recognition could even intensify professional distinctions.

INTELLECTUAL DIFFERENCES BETWEEN ANTHROPOLOGY AND SOCIOLOGY

Abandoning the historical approach, we now wish to contrast anthropology and sociology in general terms. The "anthropology" described here is the common-denominator "cultural anthropology" of the Americans; likewise the "sociology" is the standard or common "American" brand found in perhaps a majority of the teaching profession. We are conscious of difficulties in characterization and contrast; we view this section as exploratory and hope to revise it in later papers.

(1) Sociologists and anthropologists approach and perceive man differently; they have different *images of man.* In his search for laws and his interest in the abstract, the sociologist tends to view man as a technically "non-human" item, subject to many forces (including the sociologist's impersonal measurements).[13] In this view, man is an element of nature, immersed in his environment; and the sociological student stands apart, observing and measuring man-in-environment.

For the anthropologist, man is not a figure within a ground, but rather a figure against that ground: he is a *human* phenomenon, everlastingly variable, predictable only within broad limits if at all, and knowable only on a series of virtually infinite levels of understanding. For while the sociologist possesses or strives to possess measuring instruments which obtain precisely defined and selected data, the cultural anthropologist possesses a technically unlimited "understanding." While the sociologist proposes to stand away, to perceive man "objectively," not to involve his own feelings and reactions, the cultural anthropologist has often striven to know man *through* his own feelings and reactions, to view the human beings he studies as "fellow men," not as "subjects."[14]

(2) This suggests a difference in *philosophies of method.* The sociologist is expected to be able to use statistical techniques and a battery of specific concepts. His imagination and creativity are disciplined and held within bounds, and his individual qualities often are seen more in skillful combinations of old elements than in "original" inventions of new ones. The anthropologist, particularly the student of whole cultures, has more frequently encouraged the cultivation of individual intelligence, imagination, and other qualities believed to foster the "grasp" of the unique.[15] Anthropolo-

[13] Voegelin, Eric, 1948; Salomon, 1949; Bendix, 1951a, b; Strauss, 1953, Chap. 11; Wolff, 1946; *The American Journal of Sociology,* 1955, esp. Schwartz and Schwartz.

[14] Bateson, 1936, Chaps. I, VIII, XVI, 1941; Kluckhohn, F. R., 1940; Wolff, 1952b, Introduction.

[15] Mead and Métraux, 1953, esp. Chap. I; McCown, T. D. *et al.,* 1952; Wolff, 1948.

gists are sometimes pleased when others notice that they have assumed the gestures and attitudes of their "tribe": their own behavior has sensitively changed in accordance with the culture they have understood. Thus the anthropologist, in order to obtain an "objective" view of culture, strongly identifies and empathizes with the behavior of its carriers. This is quite at variance with the standard sociological approach, which instead stresses distance. The ramifications of this difference are considerable. Among other things, it points to a quite different meaning of "ethnocentrism" in the two disciplines. The anthropologist invites experimentation in contrasting interpretations of the same phenomenon (Lewis, 1951; Bennett, 1946), while the sociologist often strives after the opposite: the standardization of methods so that all observers will obtain the same results. Never again will the interpretation of the Iatmul culture be precisely as Bateson perceived and described it in 1936: never again will Bateson, as an individual, have the same experiences of interaction and understanding. It is such individual insights and portraits which are often valued by anthropologists.

This points to a crucial area of misunderstanding between the two fields. Many sociologists have great difficulty seeing this individualistic, creative approach as even remotely approximating "science," for, perhaps more than any other aspect of cultural anthropology, it offends or threatens their loyalty to objectivity and freedom from bias.[16] Their criticism, on the other hand, is often difficult for the cultural anthropologist to see, because his definition of "science" emphasizes "depictive integration" for which the observer's own abilities and views, in all awareness, are essential, rather than threatening, and to be excluded.

(3) The two fields differ with respect to their *structuring of problems.* The sociologist characteristically works with small-scale problems, often with a patchwork of them, all logically connected in such a manner as to permit the testing of a major hypothesis or theory. He generally constructs the dimensions of the problem in advance, often taking his cue from specific data-gathering techniques. The anthropologist, too, usually begins with generalized theoretical interests or hypotheses, but he typically casts them in much broader terms, attempting to obtain data on all relevant levels of analysis. He approaches the subject of research as a "glob," a totality to be comprehended both as a whole and as a system of parts. He often views the modest choices of the sociologist, who tries to limit his inquiry only to those phenomena for which he can acquire maximally controllable data, with considerable impatience. The anthropologist's approach can lead to large, comprehensive portrayals of total socio-cultural situations or to more carefully delimited analyses but, in either event, his choice is more often than not made *after* he has attempted to perceive and understand the totality. The choice is largely his; it is not directly determined by a pre-existing corpus of hypotheses, theories, or methodological techniques. Thus, Kluckhohn's investigation (1944) of the problem of Navaho hostility projection followed his attempt to understand a wider subject, Navaho witchcraft—itself a product of a prior, and even larger study: the nature of Navaho culture and society.[17]

The sociologists' difficulties with this approach show in the critical appraisal by some of them of the "ethos" school of whole-cultural studies, particularly of "national character" research.[18] While cultural anthropology generally is characterized by

[16] E.g., Bernard, J., 1949, against Redfield, 1948. But note Thomas and Znaniecki, 1927, as well as Sumner, 1906, and Thomas, 1909, 1937, and their great influence in sociology.

[17] And this larger study was itself the culmination of several generations of research by many anthropologists on Navaho life and culture. Anthropologists have done comparable collective studies on other peoples: Malinowski's work on the Trobrianders; the fifty years of Americanist research on Hopi society; the British studies of Sudan peoples; and many others. Sociologists rarely read anthropological literature in an effort to comprehend one of these great collective studies of a people or a culture area; instead they sample individual studies.

[18] E.g., Tomars, 1943; Bierstedt, 1948; and various critiques and reviews of the "ethos" monographs in sociological journals, e.g., Bernard, J., 1945.

the "natural history" monograph, with its focus on a whole culture, the "ethos" variety has stressed specific elements of culture, and in its "national character" phase has applied "ethos" and related concepts to studies of large national societies. It is this latter attempt which has obviously appalled numbers of sociologists, and well it might, since their view of modern society has emphasized its heterogeneity, and has hardly prepared them to entertain the notion that a complex society might be argued to have a homogeneous culture. Their dissection of "ethos anthropology" sometimes verges on the sophomoric, and while it has pointed up basic problems connected with the analysis of whole cultures, it also has ignored many of its accomplishments (Bennett, 1954b). On this issue the cultural anthropologist generally would be inclined to agree with the sociologist Herbert Blumer, who points out (1954, pp. 9–10) that sociology has recently tended to substitute "specialized abstractions" for the "concrete and distinctive" instances of the "natural world." The whole-culture analyst, preoccupied with the concrete world of culture, may wonder at the vehemence of the critical attack and view it as a harping on "abstractions."

(4) In consequence of their divergent views of man and the study of man, anthropology and sociology differ with respect to the *selection of phenomena investigated.* Sociology has performed its best work, perhaps, upon structural systems and sociodemographic patterns, while cultural anthropology has made its signal contributions in the study of subtle and involved problems in such fields as magic and religion, sexual behavior, social configurations of emotion, or the valuational aspects of food-getting techniques. Like sociology, *social* anthropology has studied structure, but unlike sociology, it has done so in the field and with reference to a particular culture and to functional interpretations of linkages with symbolic patterns. Such phenomena are less easily subjected to the predictive generalizations sought by the sociologist and social psychologist. Whereas the latter might launch an investigation in order to demonstrate the "social framework of perception," the anthropologist, taking this social framework for granted, explores its consequences, and he is more concerned with "pattern" than "law." His materials, therefore, frequently represent instances of human behavior which he seizes and organizes, rather than statistical frequencies which prove or disprove a particular hypothesis.

The sociologist finds it difficult to see how the cultural anthropologist "proves" anything, while the anthropologist feels that "proof" is irrelevant in the sense that man is man wherever found: the grasp of a single instance of the "unique" itself is knowledge; no more than for the humanist does its relevance exclusively lie in its candidacy as a "case" in a required multiplicity of cases, as is demanded by the sociologist before he licenses it as knowledge.

The poverty of efforts by each field to articulate its basic postulates for the other, and thus to bridge differences in conception, is striking. Here, anthropology has probably been more remiss than sociology: anthropologists are notoriously disinclined to read the abundant documents on sociological method and theory.

(5) The two disciplines differ with respect to their *fundamental attitudes toward research.* The sociologist stresses non-emotionality, the exclusion of passion from the research enterprise. The anthropologist, on the contrary, expresses fervor and curiosity about his subject matter and proclaims the wonder of man and his works. Nor has his more recent interest in American and Western culture resulted in his assuming the sociologist's attitude of non-involvement; rather, he has discovered that the familiar, too, can be exotic. His imagination, curiosity, and enthusiasm have not dwindled, although neither, in the sociologist's opinion perhaps, has his disorderliness.

In addition to differences in the historical roots of anthropology and sociology, as were sketched previously, the different settings of the research activities in the two fields help to account for this divergence in attitude—above all, the importance of field work. Field work—a research habit of

personal movement, of detaching oneself from routine surroundings—has led to a special self-image which permits the anthropologist to consider himself apart from "ordinary" social scientists (and, sometimes, entitled to behave differently).[19] Though the sociological "avant-garde," particularly in studies of the professions and organizational structure, uses participant observation and informal interviewing (e.g., Gouldner, 1954, appendix on "team" research), the majority, perhaps, of American sociologists find intensive field work alien to their tastes. The sociologist rarely leaves the familiar: even when he conducts community studies he does so less in the sense of exploration than in that of a temporary extension of his office or laboratory. He finds the anthropologist's sense of the exotic, and his occasional preoccupation with his own uniqueness, somehow offensive and "unscientific." He replaces fervor with concentration; flamboyant and individualistic inquiry, with anonymous pursuit of phenomena and problems in familiar settings. To the anthropologist, inversely, these sociological attitudes often appear dispiriting and commonplace; and he often forgets that they, too, can lead to the accumulation of knowledge.

(6) There exist differences between the American sociologist's and anthropologist's *conception of temporal sequence and history*. For the sociologist, as we said, history has most often meant Western history, which is documented. Hence his attention has been concentrated on specific sequences within a time span of the past few hundred years, and his view of temporal dynamics has been couched in terms of Western categories of time. For instance, Ogburn's "cultural lag"[20] is based on the Western notion of progress. In related fashion, the nineteenth-century "stage builders," such as Westermarck, Morgan, and Spencer, represent sociological projections of Western ideologies upon a universal plane mixed, however, with the anthropological attempt at discovering features by the comparative method which are applicable to all societies. By contrast, the more nearly "philosophical" stage builders, with equal historical significance for sociology—whether Condorcet, Turgot, Saint-Simon, Comte, Hegel, or Marx—clearly attempt to illuminate the writer's society through an interpretation of Western, rather than universal, history, even though they claimed to search for universal historical laws.

For the anthropologist, on the other hand, history and temporal sequence have meant either human history as a whole, or the history of any particular society studied —hence very often the history of societies lacking written history. The anthropologist thus is at home in non-Western time perspectives, which means that his time dimension, too, is deeper than the sociologist's—thousands of years instead of hundreds—and that his sense of historical reality is oriented toward larger and more diffuse phenomena: the development of technology, the growth of the division of labor, of religion, etc.

These differences in the conception of time in turn feed back into differences in the image of man. Despite occasional lapses into cultural determinism, on the whole, anthropological man is the carrier, vehicle, or creator of Civilization or Culture—history is human; man is historical. Sociological man, on the other hand, illustrates social (Western) laws of which he is not so much the creator as the creature.

Nevertheless, anthropology and sociology coincide in several areas of historical inquiry. One is the similarity between sociological historians of civilization, such as Sorokin, and anthropological depicters of universal culture, such as Kroeber. Another

[19] Anthropologists have often seen field work as the essential factor of unity among people of great diversity of interests: "One cannot be too ethnological or too sociological or too anything else after the first six weeks of living with and trying to understand a tribe. Our behavior conforms to the common reality of a whole community of whole individuals; the differences in our professions of faith seem more important than they are just because we try by them to burst these bonds, for the most part in vain." (Tax, 1952, p. 390).

[20] Ogburn, 1950, Part IV; Mueller, 1938; Schneider, 1945.

is the theoretical scheme of history of a more nearly "pan-human" kind. A third area of rapprochement lies in the studies of folk societies, pursued by Redfield (1953a; Foster, 1953) in anthropology and by Becker (1950, chapter 5) and the Southern folk sociologists, above all Odum, in sociology.[21] V. Gordon Childe (1946), in archeology, provides related insights and interpretations.

Though concerned with colonialism, "Westernization," and kindred topics, the anthropologist, owing to his particular approach to history, has shown considerable detachment from the actuality of twentieth-century world society. He has indicated little interest in handling the complex data of documented historical periods, which require insights and methodologies different from those characteristic of ethnological or archeological reconstructions of history. On the other hand, the sociologist, with his predominantly a-historical orientation to the concrete present, has tackled the socio-political forces and attitudes which move men and determine policies. Anthropologists have much to learn from historical sociologists like Weber (1951, 1952), Barnes (1948), and Becker (1940) or sociologists of history like Tawney (1947), and sociologists can profit from the anthropological sense of historical perspective and proportion.

(7) Finally, we may note that anthropology and sociology differ with respect to *the larger aims of their sciences.* Anthropology has been concerned with issues more or less directly related to the question, "What is the nature of man?" To the more empirical sociologist, this (quite correctly) smacks of philosophy. The anthropologist shares with the philosopher and other "humanists"[22] the concern with such "non-objective" questions as the fate of civilization, man's moral integrity, the reality of culture, and other problems sometimes compartmentalized as "meta-anthropological"[23] —and there is the whole tradition of philosophical anthropology the discussion of which would far exceed the scope of this chapter. While the sociologist has shown interest in the anthropologists' data—for example, in materials on cultural relativity, like Hallowell's classic paper (1937) on civilized and nonliterate differences in temporal orientation—on the whole he tends to use such material mainly as illustrations of rather elementary points (see any introductory sociology text) and does not appear to be inclined to build the questions into his own approaches and theories (again with the important exception of some of the "avant-garde" sociologists with "structural-functional" theoretical interests). Yet even in anthropology itself, there are strong trends away from these preoccupations, beginning with Boas' insistence on facts, and continuing in many different forms in the modern "scientific" period. Whether one hopes to retain anthropology's peculiar heterogeneity, or prefers to find a narrower focus, it would seem dangerous to give up this interest in the burning questions concerning the nature of man.

RAPPROCHEMENT: THE STRUCTURAL-FUNCTIONAL APPROACH

As hinted earlier in our discussion of the "avant-garde," one of the most promising areas of rapprochement between the two fields is the growing interest of anthropologists in what sociologists call the "structural-functional" approach. Modern socio-cultural anthropology may perhaps be viewed as enclosed in a triangle, with one apex indicating historical studies; another, studies of whole cultures; and the third, structural-functional research and theory.

A plea for more comprehensive participation in the structural-functional approach by anthropologists has been made elsewhere (Bennett, 1954a; Beals, 1951). This approach is flexible within an "interdisci-

[21] *Social Forces,* 1952, esp. Odum.

[22] Redfield, 1950, 1953b; Benedict, 1948; Bennett, 1948; Kroeber, 1954; Erich, 1954; Wolff, 1952a. Here also belong Riesman's humanistic position (Riesman, 1954, esp. Chaps. 1 and 28) and Mills' critical position (esp. Mills, 1954). On the other hand it should also be noted that statistics has a well-established function in historical anthropology. See Driver, 1953.

[23] Bidney, 1949. For a more general statement on relations between anthropology and philosophy, see Edel, 1953.

plinary" analysis which centers around such key concepts as "status," "role," "goal," "value." Structural-functional studies tend to be portrayals of structural systems in which behavior is explored in respect to its meaning or "function." These studies contribute to an ever more comprehensive and detailed map of characteristics of human phenomena and their interrelations. The publications of The Free Press—most of those in anthropology and many in sociology—provide a convenient single source of illustrations of this "map" and its "cartographers." (See, also, Wilson and Kolb, 1949.)

Among prominent structural-functional theoreticians in sociology are Talcott Parsons, Robert K. Merton, and Kingsley Davis.[24] "Small group" research in social psychology and sociology for the most part utilizes a structural-functional approach, and often shows appreciation of and liaison with anthropological studies.[25] In anthropology, structural-functional studies were foreshadowed by Malinowskian functionalism (Malinowski, 1948) and by the long synchronic-structuralist tradition, with its "sociological" ancestor, Durkheim (Radcliffe-Brown, 1952), now represented most notably by the British social anthropologists (Evans-Pritchard, 1951). Linton's status and role concepts also have been most influential (Linton, 1936). Manifestations of contemporary and more explicit trends are Nadel's recent book, *Foundations of Social Anthropology* (1950); Kluckhohn's "structural dynamics," as exemplified in his study of Navaho witchcraft and in the follow-up analyses of similar phenomena by Honigmann and others; the Harvard, particularly E. Z. Vogt's, studies of values (Vogt and O'Dea, 1953); the newer acculturation research like that of Useem (1952) and a group of researchers working with Sol Tax (Bruner, 1953); and studies which seek to place kinship behavior in a larger context of institutional patterns (Ishino, 1953). "Applied anthropology" almost universally uses structural-functional schemes (Anonymous, 1952). It may be noted that we have grouped together a number of research trends which anthropologists conventionally divide between such categories as "functionalism," "structural studies," "culture-pattern research," "culture and personality," and "applied anthropology." This is a deliberate effort toward a theoretical categorization more commensurate with tendencies inherent in present approaches. Another example of such categorization is the overdue distinction between, on the one hand, "culture and personality" studies which emphasize ethos and whole-culture (and placed by implication at the corresponding apex of the triangle, where they contrast with sociology) and, on the other, structural-functional studies which include personality data (and classified in the "rapprochement" apex).

Perhaps this apex now signals the chief area of communication between sociology and anthropology. A sociologist can read one of the Harvard "values" monographs (Rapaport, 1952) and immediately comprehend its method and results, because of a common language and common analytical operations. Theoretical statements, like Nadel's volume, or from sociology, a book like Davis' *Human Society*, are viewed by adherents of the approach as broadly representative of their shared aims and conceptual schemes; the misunderstandings and polemic tendencies between sociology and anthropology are much reduced here.

For anthropology, the chief advantage of the structural-functional approach is that it permits it to borrow from (and to co-develop with) sociology a greater rigor and orderliness of concept and method. This is a desired and desirable remedy for the major defect of the method of "depictive integration": its frequent non-communicability, its often excessive individualism. In fact, the extent to which a cultural-anthropological monograph is comprehensible by many, as against few, is a rough measure of the extent to which some version of the "structural-functional" scheme has been adopted.

Among many specific approaches in anthropology which are undergoing a needed modification through structural-functional

[24] Parsons, 1951; Merton, 1949; Davis, 1949.

[25] Strodtbeck, F. L. *et al.*, 1954, esp. Olmsted.

thinking is that which we may call "the fallacy of the microcosm." This concerns the use of single communities or tribes as representative units for larger entities: national cultures, culture areas, and the like. The concept of culture has grown up in the atmosphere of small communal units; its extension to larger social units which lack face-to-face patterns of social relations has been done by simply making existing face-to-face units stand for the larger, and *socially* different, whole. This operation betrays a lack of adequate comprehension of the dimensions of social relationships and group structure in the larger societies, which a structural-functional scheme does much to correct.[26] (See Jahoda *et al.*, 1951, for a comprehensive study of methods.)

This scheme does not necessarily—and must not be allowed to—obviate the continuation of the most characteristic product of anthropology: the monograph on a total socio-cultural phenomenon. There is no inherent conflict between the use of a conceptual scheme which differentiates among levels of meaning and an orientation toward the multi-level analysis of a single society, community, sub-culture, or institutional system. Moreover, the use of such a scheme requires greater precision in the formulation of problems, greater attention to the relationship between hypothesis and theory, and correspondingly, improved communicability to the reader. In turn, the sociologist may benefit from the more distinctly anthropological utilization of the structural-functional approach with its larger, cultural frame of reference in which "roles," "values," and other analytical elements are seen in the context of shared understandings and modes of behavior.

We may note in passing another potential area of rapprochement, the use of formal models of social behavior (Lazarsfeld, 1954; esp. Simon, 1954). This requires special treatment, which cannot be given it here. We refer to the development, in the past decade, of mathematical models which are used for purposes of both prediction and "understanding." Formal models unquestionably are part of the objective, "scientizing" trend mentioned somewhat critically in this chapter, but on the other hand, the participation of anthropologists like Bateson in discussions of formal models and their applications is perhaps indicative of their appeal to humanistically-inclined social scientists.

THE PROFESSIONAL RELATIONS OF ANTHROPOLOGISTS AND SOCIOLOGISTS: A PILOT STUDY

We noted previously that American sociology was accepted as an academic discipline considerably earlier than anthropology. With a few outstanding exceptions, like Harvard, anthropologists were introduced into American universities by non-anthropological departments, principally sociology. At the present time,[27] anthropology is taught in about 300 departments of American universities. About 50 of these are independent departments; the remainder, departments of sociology (and a sprinkling of others). Out of these 250-odd departments, about 25 are true "joint departments"; that is, anthropology and sociology both operate rather extensive programs, although the latter is almost always larger in number of staff and students. In the remaining, anthropology is a decidedly smaller factor than sociology; most of these "joint" departments are essentially departments of sociology which have hired an anthropologist, or list a course or two in the field. Although it is rather difficult

[26] An extremely pertinent discussion has been provided by Goldschmidt, who points out that anthropological studies of class phenomena in the United States have often ignored the question of representativeness of the communities they have used as units (Goldschmidt, 1950, esp. pp. 484–488). See also Bennett, 1954a. For the phrase, "fallacy of the microcosm," we are indebted to Bernard Rosenberg of Brandeis University.

[27] The analysis is based on the listings for American anthropology in Thomas, W. L. and Pikelis, A. (eds.), *International Directory of Anthropological Institutions,* 1953, and in Erminie Voegelin's 1950 account of anthropology in American universities. Theological schools and "institutes" were excluded from the count because their programs are so highly specialized. The definition of "joint department" is rather difficult, and more work needs to be done on the problem of anthropology's teaching program and academic representation.

to estimate, probably about 70 per cent of all academic anthropologists work in these 250-odd joint departments.

Therefore, in a large number of American universities, particularly in the Midwest, anthropology is recognized academically as a kind of "junior partner" of the "senior" field, sociology. The sociologist can say justifiably that it was through his effort and interest that anthropology came to the campus, and hence the anthropologist owes him a debt of gratitude. The sociologist can say further that anthropology was brought to the department to provide something the sociologist needed; consequently, anthropology legitimately can be defined as a "service area," in part at the direction and disposal of the sociologist. This partially subordinate-superordinate status relationship has resulted in the formation of some very complex attitudes and patterns of relations.

In keeping with the exploratory character of the chapter, I (J.W.B.) decided to study mainly the relations of sociologists and anthropologists in the larger joint departments, where, presumably, the two fields sustain maximum contact and interaction. Of the total of 25 "true joint departments" described previously, we selected 16; of the departments where anthropology is decidedly a junior partner, we chose four cases. We made no attempt at a random selection, but rather picked departments and people who, in our best judgment, represented important trends in all directions, and who could be relied upon to provide full, accurate, and thoughtful answers.

A member of each department selected was sent a four-page questionnaire; all of these were returned, although two could be used only in a limited manner, because of insufficient information. (For reasons of space, the questionnaire will not be reproduced here, but a copy will be sent upon request. It is "open-ended," that is, in effect, a set of questions and topics intended to serve as a guide to thinking, rather than as an instrument designed for careful quantitative analysis.) Of the 20 recipients, 13 were professional anthropologists; 4, professional sociologists (two of whom were the authors of the deficient questionnaires); and 3, persons with mixed identity—"two-field men."

The questions asked concerned the history of the two fields in the department; the present division of personnel and subfields; the status of the instructional and research program; and the relationships between sociologists and anthropologists, including "images" of the respective fields, barriers to communication, and the like. Judgments concerning the desirability or undesirability of the situation, and recommendations of improvements, etc., were requested for each of the items.

The great majority of respondents answered fully and in detail, and six included a separate letter clarifying the answers and adding further information. I have considerable confidence in the accuracy of the general picture presented. And since the departments were selected from a group constituting the majority of anthropological installations in American universities, the results may apply beyond the special case of the joint department. I have, of course, used my own knowledge and observations derived from several years of working in one of the larger of these joint departments and from discussing problems with other midwestern anthropologists in similar situations.

Objective Positions of the Two Fields

In 18 of the 20 cases surveyed, the anthropologists were in a minority in the department, being outnumbered by sociologists on an average of almost two to one. In a plurality of cases, the respondents also reported that enrollment in anthropology courses was substantially lower than in sociology (averaging around one-half the sociology enrollment). At least five respondents volunteered the information that anthropology was weaker than sociology with respect to political power and prestige in the department and on the campus, although about half the questionnaires contained indications of change toward a more equal position.

The general picture of the relations between anthropologists and sociologists in

the departments investigated was one of loose ties and few cross-professional affiliations in teaching and research. This tendency toward academic separation was evidenced by the listing of departmental courses under either "anthropology" or "sociology" in all but two of the departments. In general, academic distance and professional separation were greatest where anthropology was represented primarily by archeologists, ethnographers, and/or physical anthropologists; and sociology, by professional (criminology, family, etc.) or strong quantitative-empirical interests.

Collaboration in graduate seminars was more frequent than research, but in most cases the seminars were not given regularly and were the results of individual sociologists and anthropologists deciding to get together. Collaboration by members of the two fields on research projects was infrequent; in only six departments such collaboration was reported to have taken place in the last few years, and in most of these cases, the research was done on problems of an applied nature, where the researchers functioned as individual social scientists, and only rarely as specialized professionals. Finally, the majority of respondents indicated that they found greater collaboration in research and teaching desirable, but that they felt no strong needs to do anything about it.

Relations and Attitudes

If anthropology still is subordinate to sociology, but at the same time feels itself to be a distinct and co-ordinate professional field, the potentiality for social-emotional stress exists. In extreme cases, the self-esteem of the anthropologist is severely injured, and he develops an attitude of defensive resentment, as illustrated by the following situations described by anthropologists:

After answering "No" to a question concerning intellectual collaboration between the two fields, the respondent was asked to present his judgment as to whether the record was good or bad. He answered: "*Bad*—sociologists direct their papers to other sociologists and make no allowance for anthropologists present."

To a question asking how relations between the two fields could be improved, the same respondent answered: "Bring in more anthropologists so that the sociologists will become aware of the diverse branches of anthropology and recognize it as a fully independent discipline—not a *group of service courses*" (original italics).

To a question asking for "problems" in the relationships of sociologists and anthropologists, another respondent answered: "Primarily a feeling of anthropologists at times that they have a subordinate rather than a coordinate status . . . [should] maintain equal numbers and statuses of sociologists and anthropologists. Sociologists have tended to be more numerous and more powerful."

A typical issue out of which these defensive reactions may arise is described by a third respondent in his letter accompanying the questionnaire. In connection with his discussion of the one-year "introductory sociology" course which "attracts about 400 students each semester," he says: "The course is listed as a sociology course, but the first semester deals almost exclusively with anthropological materials and uses anthropology texts. . . . In effect, the sociology section gets credit for this large enrollment, and when we ask for another anthropologist we are told that our registration is too low. I presume this is a familiar situation to you!"

The sociologist respondents do appear to view anthropology as a "service" area, which can "add color and variety," to quote one, to the sociological offerings. But when the anthropologist asserts his professional rights—especially when he wishes to introduce courses not in line with the sociologist's conception of anthropology—the sociologist is likely to develop an attitude of injured paternalism, which, too, may accumulate noticeable bitterness:

"Anthropologists seem to be engaged in a kind of power drive to take over all the social sciences. They are difficult to satisfy. They want more enrollment, even though everywhere they are a small, specialized field."

In some cases where this conflict of attitudes becomes a prominent feature of the departmental atmosphere, the mutual understanding of the two fields seems markedly asymmetrical. Witness the following passage from an anthropologist:

"In my opinion many anthropologists have learned a lot from sociology and have begun to utilize many techniques used by them, i.e.,

attention to sampling, quantification, intensive study of a small problem, etc. I don't believe the sociologists at X University have as much an understanding of what anthropology is and does, primarily because they have to learn this second-hand from their readings rather than first-hand in field work as we do."

This situation seems to hold whether the anthropology represented in the department is socio-cultural or historical-physical. In the latter case, even though the sociologist *approves* of the specialization, he often shows little willingness to develop intimate familiarity with the goals of the archeologist, ethnologist, or physical anthropologist, instead preferring to keep him around, to quote one anthropological respondent, "as a kind of interesting pet." However, in general, social relations and academic communication do seem to improve somewhat when anthropology is represented by the socio-cultural variety.

Several respondents suggested that one of the causes for poor relations and poor communication was the failure of members of each side to read the literature of the other. Specific mention was made by one respondent of the tendency for sociological journals, in recent years, to publish "slanted" book reviews of "ethos" anthropology, the image of which, as held by sociologists in his department, conformed to these reviews. (Since anthropological journals rarely publish long reviews of sociological books, the anthropologist is hardly exposed to a complementary type of "poisoning." And note also that the excessively critical reviews aside, sociological journals do a remarkably faithful job of reviewing the better anthropology.)

Aside from these tendencies toward poor comprehension of the methods and objectives of the other field, protective and conflicting attitudes on the part of sociologists and anthropologists also reflect professional rivalries over such questions as which discipline is the more adequate or important. One respondent, in explaining why so little collaborative teaching and research existed in his department, commented:

"Interpersonal relationships are excellent but we have found difficulty in working professionally in the same harness. In research relationships there is strain over failure to see and to utilize the method and the point of view of the other. . . . There is no basic readiness to work together . . . it is complicated by an underlying feeling on both sides that apart from a few concepts, the method of one discipline or another is inadequate or unnecessary,"

Another form of this view, indicating professional distinctness with an eye to wider professional horizons, is expressed by the following comment: "I feel personally that anthropology and sociology can perhaps just as often seek meaningful relationships with other disciplines —viz., economics, history, psychology, etc.—as they can with each other . . . simply putting them together administratively should not signify either assimilation or channeling of interests or problems in only those directions congenial to the two fields."

Another respondent viewed the problem as a conflict between, not *all* members of the two fields, but between "a fringe of individuals in both disciplines." He pointed out that "there are as many communication gaps or barriers between sociologists as between anthropologists and sociologists"—he might have added "and as between anthropologists." But these problems of communication differ from those based on the professional distinctions between the two fields. A professional anthropologist who thinks and works like a structural-functional sociologist apparently is just as likely to battle with the sociologists on professional issues in the joint department as is an archeologist. He may, under the pressures that drive him back into strong "anthropological" professional identifications, even shift his interests in theory and research in non-sociological directions.

Contrasting Imagery

These stresses also find expression in the images each field holds of the other. The sketches of such images offered by the respondents were remarkably similar in content, but heterogeneous in the degree of derogation and hostility, which depended upon the actual extent of frictions, professional hostilities, and defensive responses that varied from department to department.

The following selection of quotations

represents the respondent's opinion of the *anthropologist's images of the sociologist* in his department. Quotations 2 and 4 come from professional sociologists; the others, from anthropologists.

1. "Pedantic. Unimaginative. Reformer. Manipulator of concepts and research designs—but not active in empirical research."

2. ". . . some stereotyping of sociologists as technical gadgeteers obsessed with statistics, etc. On the other hand, appreciation for analytic skills and sophistication."

3. "The anthropologist thinks the sociologist has better data on Western culture, but thinks he does not always take the broad, pan-human view in his theorizing."

4. "In general . . . I would say that the anthropologist is inclined to find the sociologist to be rather narrow in his professional problem interests and to be less adventuresome in striking out. This is doubtless related to an anxiety [on the part of the anthropologist] about methods and techniques of collating and analyzing evidence."

5. "Sociologists spend a disproportionate amount of time with methodology and with seeking quantifiable data about isolated phenomena in isolated societies that they presume to treat as universal samples. They do, however, possess the makings of a rich theory that is already productive of many theorems suitable for empirical testing."

6. "The anthropologist is critical because the sociologist is too ready to generalize on the basis of data from only one culture."

7. ". . . the sociologist is viewed as a scientist whose main interests are in the field of social work."

8. "[The sociologist is viewed as] a functionalist without adequate training in anthropology and no appreciation of the value of time perspective."

A noticeable difference in attitude can be seen in these remarks, which correlates with the social situation in the department: considered as tense (1, 7, and 8), and as more relaxed (2–6).

Now for the same respondents' definitions of the *sociologist's image of the anthropologist:*

1. "Antiquarian. Nature lover. Non-scientific."

2. "Generally as another sociologist interested in preliterates. Also that he seems to have a foot in the sciences, the social studies, and the humanities."

3. ". . . the knowledge of the anthropologist is respected, the methodological sophistication is less admired. But not much 'pot hunter' stereotyping."

4. "The sociologist admires anthropology for its description, but thinks it is weak in theory."

5. "He [the sociologist] has no one view—more like two or three views based on his knowledge of department members and reading in the field. By and large, however, he has great respect for the anthropologist's empiricism geared to broad range in problem."

6. "The sociologist probably conceives of the model anthropologist as preoccupied with description of minutiae which he does not systematically relate to any developed theory. He has also expressed himself as saying that the anthropologist is quite unable to study well the complex organizations of the modern world."

7. "Favorable indeed." [Meaning, apparently, a naive impression of a collector of curious customs, with "color" value to the department.]

8. [An anthropologist is] a person who has to *camp out,* to do field work—often confuses the means with the end. No interest *or* background in history [modern history]."

The hostility of 1, 7, and 8 and the greater objectivity of the others are retained in these images. It is noteworthy that the anthropologist respondents tended to be more articulate concerning the sociologist's image of *them* than was the sociologist on the anthropologist's view of *him.* Clearly, the situation at this time is not symmetrical: the anthropologists seem uniformly more aware of the conflict situation.

Conditions of Good Social Relations and Communication

The foregoing sections present a seemingly pessimistic picture with a lack of integration and a tendency toward defensiveness and hostility. However, we have also noted that this is a matter of degree: that it is more apparent in some departments than in others. Which factors, according to the questionnaire data, appear to lead toward better social relations and more effective communication between sociology and anthropology in these joint departments?

(1) Social relations (apart from intellec-

tual relations) were good when professional differences between sociologists and anthropologists were minimized, and the representatives of the two fields behaved toward one another as social scientists rather than as representatives of professional bodies. Relations were particularly congenial, and mutual images more favorable, when important departmental decisions were made on the basis of issues common to the interests of both fields or of the department as a unit.

(2) Some respondents suggested that both social and intellectual relations between sociology and anthropology appear to improve when they officially separate into two departments. This implies that so long as the two fields remain together, relations are improved when professional distinctions are played down; but if professional distinctions are to be preserved, it is best to establish separate departments.

(3) Social relations—and, in this case, intellectual communication also—appear to improve, and mutual images to be less contrasting, when the department possesses one or more "two-field men" who are permitted to take a hand in important decisions affecting academic and research policy.

(4) Much depends on the chairman. Almost universally, chairmen of joint departments are sociologists. If the chairman is relatively uninformed, naive, or defensively hostile toward anthropology, relations and communication are worsened.

(5) Both social relations and communication appear to be more effective in departments where sociology and anthropology are not exclusively represented by extremes or opposites: historical-physical anthropology on the one hand, and "professional" or quantitative sociology on the other. In general, and ignoring personal frictions, sociologists and anthropologists who share interest in broader theoretical questions (the "avant-garde"?) common to all the social sciences appear to communicate more effectively. It is remarkable that in all cases where relations are good, theoretical allegiance is given to scholars like Merton, Weber, Parsons, Malinowski, and Kluckhohn.

(6) The mean age of departmental members seems to have some influence upon social relations and communication. In general, departments composed of younger men tend to communicate more freely and get along more congenially than do those with a preponderance of older persons, particularly when these hold the senior faculty statuses. Younger people (especially if "avant-garde"?) are probably less strongly professionally committed and identified, and thus are more willing to engage in social and intellectual relationships.

To summarize, while social relations and intellectual communication are not generally correlated, there does appear to be some connection between the two. When professional distinctions are played down, both sides given a stake in important departmental decisions, and where anthropologists and sociologists possess more similar theoretical and subject interests, there exists less hostility and derogation in mutual images, and consequently social relations are better. Although this is less apparent, more effective communication, manifested in research, teaching, and discussions, also seems to follow. But it remains true that no strong case can be made, on the basis of this particular set of data from the joint departments, for close intellectual and communicative bonds between anthropology-in-general and sociology-in-general. And professional rivalries and hostilities seem to lurk beneath the surface everywhere, aggravated by the prevailing structure of inequality between the two fields.

The poignancy of the entire situation may perhaps be conveyed by this quotation from a statement submitted by an anthropologist:

"Those of us in these joint departments who have had to contend with a highly organized sociological profession have found ourselves in a series of frustrating and contradictory situations. For example, we may decide that the goal of the department should be integration; that is, eliminate professional distinctions in courses, and meet the sociologists half way—after all, they

seem to complain a good deal of the time about those high-hat anthropologists who will have nothing to do with them. But as soon as we recommend such integration, the sociologist loses interest, or worse, says that anthropology is trying to take over sociology. I know that we behave sometimes like eager beavers, and we do offend people in a more settled discipline, and certainly plan courses infringing their interests. But whatever the causes and blame, it seems clear that the problems which arise from a joint administrative framework are insuperable and make the game not worth the playing. We would be better off as separate departments."

Toward Communication: The Intellectual Atmosphere of Larger Joint Departments

Despite all strictures, there does appear to exist considerable ferment in the theoretical and methodological outlooks of both anthropologists and sociologists. This is apparent in some of the questionnaires and letters, as well as in the experiences of the writers of this chapter.

We now refer specifically to the larger and better balanced joint departments, which in general meet the criteria noted previously for "good" relations. Whether the growing similarity in the "avant-garde" views of sociologists and anthropologists in these departments is a result of deliberate selection of personnel, or whether it is a symptom of change through association, we do not know. But it is apparent that their converging perspectives move toward some approximation of the "structural-functional" viewpoint in certain types of cultural studies, institutional and organizational analysis, and social psychological research.

This suggests two "contradictory" trends. On the one hand, the professions are growing farther apart *as professions;* on the other, there may be an increasing *intellectual rapprochement.* Apparently, while anthropologists and sociologists wish to be separate and equal, they are also becoming somewhat more inclined toward, or rather prepared for, intellectual communication and collaboration. One respondent comments:

> "I, for one, have never known the solution of any problem to be aided by deciding whether the problem fell within the field of anthropology or sociology, or economics or politics, etc., for that matter. In short, I think we waste an inordinate amount of time talking about such field distinctions. If we must have a label for our work, I would prefer some mutual and unpretentious term such as social analysis. None of us [in this department] hesitate to cut across ordinary field lines."

Where this will lead is not clear at the present time. Certainly, the rapprochement sets up important stresses in both anthropology and sociology; perhaps more so in the former, because of the distance between the "avant-garde" viewpoint and that held by the representatives of "traditionalism" in archeology and physical anthropology. The "traditionalists" perhaps have good reason to feel that anthropology is "losing its soul," because they have little to say to devotees of structural-functionalism and their explorations into clinical psychology, Parsonian institutional analysis, and the like. But the traits common to all of anthropology and which give it its *raison d'être*—perennial curiosity, the sense of the exotic, the universal image of man, and the method of "depictive integration"—can survive regardless of subjects and problems in its sub-fields. This ought to be understood by the "traditionalists" lest they confuse particular concerns and methods with the spirit of anthropology; and by the same token, the "avant-garde" ought to remember that the historical and classificatory disciplines are important in signalling anthropology's humanistic orientation. For a humanistic orientation is not and should not be a divisive factor; on the contrary, it is the bridge between the "historical" and the "scientific" components of anthropology, as well as among all of the social sciences.

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Introductory

THIS series of essays is a counterpoint to the previous section which dealt with some considerations of theory. Part Four considers anthropology in practice, what anthropologists do and have done, and the extent to which their methods, points of view, and knowledge have become part of the public domain, or part of the working equipment of other fields of knowledge.

VOGT breaks new ground with his examination of the image held by the general public of the nature of anthropological knowledge and of the activities of anthropologists. Aided by letters and comments from his colleagues, he has explored the anthropological offerings to the American public by way of the mass media: national magazines and newspapers, paperback books, comic strips, radio and television programs, and motion pictures. The anthropological content, during 1952–1954, of a dozen national magazines has increased over that of the years 1938–1940. Both local and national newspaper coverage has given most space to archeological and fossil man expeditions and discoveries. Sales figures for anthropology books published in paperback editions are astonishingly large. Vogt believes much more could be done to effectively present anthropological materials to millions of children by way of comic books and strips. The various radio and television programs, both national and regional, featuring anthropologists and anthropological materials, are described. It is a considerable list that reaches a wide audience. A brief comparison of the United States with Mexico and England with regard to the degree of public consciousness of anthropology points up the need for further articles dealing with the problem in other areas of the world.

INVERARITY deals with only one aspect of the relation of anthropology and the arts. Similar chapters could, and should, be prepared on graphic art, plastic art, music, dance, drama, architecture, photography, literature, and other creative art forms. Primitive art was selected as the area which had received the most widespread recent attention, and the major events of interest during 1952–1954 reviewed. Inverarity presents the characteristics applicable to primitive art, then examines the development of the acceptance of indigenous art by the art world, leading to the present great interest. Splendid exhibitions and catalogues with intelligent texts are now appearing. Primitive art is being understood and presented as part of a culture rather than an activity removed from context. But, Inverarity asks, "Is it important to understand the relationship and meanings of this art in the culture which produced it, in order to *like* and *enjoy* it?"

HOEBEL considers the relations of anthropology to education in the institutionalized sense. He looks at the anthropological content of subject matter taught in elementary and secondary schools; he examines the impact of anthropological theory and method on educational theory and practice; he considers the place of

anthropology in higher education; and, further, he mentions the use of anthropological knowledge and methods in organized programs of folk education and of social and cultural change.

RICHARDSON provides a detailed analysis of anthropology and human relations in business and industry. He considers the study of work organizations to provide a most favorable setting for the testing of anthropological theories and methods. A survey of the hundred or so articles and books comprising the recent "human relations" literature is organized under such topics as: Small Work Groups, Committees and Conferences, Individuals in Organizations, Face to Face Communication, Social Systems in Relation to Technical Systems, Labor Unions (as organizations), Organizations and Their Functioning, and miscellaneous problems. Richardson holds that applied anthropology, like medicine, public health, and engineering, is evolving from common sense to science, shifting emphasis from curing social stresses and strains, or signs and symptoms, to controlling and preventing the stresses responsible.

MACGREGOR examines the history of anthropological research and guidance in the United States Government, and reports that the last several years have seen a decline in the application of anthropology in planning and in the employment of anthropologists in government service. Among the activities discussed are those of the Bureau of Indian Affairs, the Indian Claims Commission, the economic and technical assistance programs, the Foreign Service Institute, the Trust Territory of the Pacific Islands, the administration of American Samoa, the Bureau of American Ethnology, and the River Basin Surveys.

JOHNSON considers the problems of organizations of which the significant nucleus was established by, and is maintained by, anthropologists. A categorization of organizations is provided and the objectives and accomplishments of each group examined. There are the international congresses, councils, conferences, commissions, and the like. There is the national professional organization, as well as groups which concentrate upon selected subject matters, or specific regions, or both. Organizations probably providing the most effective liaison between the professional and non-professional are those concentrating on specific subject matter. On the other hand, the present trend among scientists appears to be toward the organization of professional associations to assist members in all phases of their work.

Anthropology in the Public Consciousness

EVON Z. VOGT

Dr. Vogt is Associate Professor of Anthropology at Harvard University, Cambridge, Massachusetts. He is author of Navaho Veterans: A Study of Changing Values, 1951; (with Leonard McCombe and Clyde Kluckhohn) Navaho Means People, 1951; and The Homesteaders: A Study of Values in a 20th Century Frontier Community, 1955.

ALTHOUGH each professional discipline of higher learning in our society seeks to accumulate knowledge for its own sake, there is always the problem of communicating this knowledge to the general public in a meaningful way. The purpose of such communication may be merely to enrich the experience and broaden the horizons of the intelligent layman, or it may be directed hopefully toward the solution of pressing practical problems. In either case, the extent to which the general public develops sympathetic understanding of the work of the discipline is necessarily a matter of serious concern to the professionals.

During the years 1952–1954, there is good evidence that the members of the anthropological profession have continued, and have increased, their efforts to deepen and clarify the image which the general public has of the nature of anthropological knowledge and the activities of anthropologists. It is the impression of many anthropologists, including myself, that larger segments of the public are less frequently asking the question, "What is anthropology, anyway?" and are increasingly asking penetrating questions about, and maintaining a lively interest in, the whole range of our professional activities: linguistics, physical anthropology, archeology, our ethnological and social anthropological studies of both primitive and modern cultures, etc.

In attempting to assess the evidence somewhat more systematically for this impression of greater awareness of anthropology in the public consciousness, we have had to limit the scope largely to the United States. It is to be hoped that later articles will deal with the problem in other areas of the world. Within the United States we have concentrated our efforts upon discovering what the American public has been offered in the way of anthropology through various mass media: national magazines and newspapers, paperback books, comic strips, radio and television programs, and motion pictures.[1] In each case we have

[1] Since there were virtually no published materials covering the subject matter of this article, the data had to be collected almost entirely by preliminary correspondence with a number of my professional colleagues and by later circulation of a rough draft of the article to a still larger number of colleagues. These letters and the comments on the preliminary draft were extraordinarily rich and detailed and were all that enabled us to write the article. We therefore are deeply indebted to the following people for suggestions, comments, and information: David F. Aberle, John C. Arey, M. F. Ashley Montagu, Wilfred C. Bailey, June N. Barnes, Richard K. Beardsley, Robert N. Bellah, J. O. Brew, Willena D. Cartwright, Joseph B. Casagrande, E. Mott Davis, Munro S. Edmonson, Walter Goldschmidt, Erna Gunther, Prunella Hall, Emil W. Haury, W. W. Howells, Iwao Ishino, Jesse D. Jennings, William H. Kelly, Alfred Kidder II, Marvin F. Kivett, Clyde Kluckhohn, A. L. Kroeber, William A. Lessa, Barbara Mickey, Arminta Neal, Lyle M. Nelson, John M. Roberts, Irving Rouse, Iva O. Schmitt, Clarissa Schnebli, David M.

limited the coverage to matters that definitely involved professional anthropology. For example, there has long been a deep public interest in American Indians. Although anthropologists regard the Indians as their special subject matter, it is evident that much publicity about them does not in any way involve professional anthropology, and this type of publicity has been excluded.

The transmission of anthropological subjects to both adults and the young also is being carried on in an increasingly impressive manner by the school systems of the United States via improved textbooks and classroom teaching, and by public lectures given by anthropological teachers to a great variety of groups.[2] But, again, although this kind of information certainly should be included in an article on anthropology in the public consciousness, we have excluded it for lack of time and space.

It would be desirable to have data on the "audience reaction" to the anthropological materials that are presented to the American public, but this information is difficult to obtain. We did not undertake to administer questionnaires, or to walk across Boston Common asking every tenth person what he thought about anthropology or whether he tunes in on the "What in the World?" television program. Rather, the assumption was made that there is some connection between what is offered via the mass media and what the American public finds interesting or important.

It is evident that anthropology profits enormously in its public relations by three important features of our discipline. The wide-ranging diversity of our field from Paleolithic archeology to modern community studies, from the study of fossil man to applied anthropology in Indian Service affairs, or from the interest in primitive art to the concern with the social organization of a shoe factory in New England, has the effect of interesting different segments of the American public in anthropology. The anthropological concern with the exotic cultures of today and the prehistoric cultures of the past clearly awakens a lively intellectual curiosity in the average American who never may have traveled beyond the borders of his own state. And we have the impression that most Americans would agree that what anthropologists do is often intensely interesting, even if it isn't always relevant for the solution of more pressing practical problems. Finally, the fact that anthropologists deal with concrete objects—prehistoric skeletal material from New Mexico, pottery and gold ornaments from Peru, or outrigger canoes from Polynesia—and that these can be placed on public display in museums (and utilized in television programs) to excite the imagination of children and adults alike, is a public relations advantage of enormous importance which we share with the natural sciences such as geology and comparative zoology or with the humanities with their art museums.

NATIONAL MAGAZINES

For the purposes of this article, the following national magazines were selected for special treatment: *Life, Reader's Digest, Ladies' Home Journal, Saturday Evening Post, McCall's, Woman's Home Companion, Look, Collier's, Coronet, National Geographic, Harper's,* and the *New Yorker.* The selection was made by choosing the seven magazines with the largest circulations that also are indexed in the *Readers' Guide to Periodical Literature* and adding three (*Collier's, Coronet,* and *National Geographic*) of different types and two (*Harper's* and *New Yorker*) which have

Schneider, Thomas A. Sebeok, Elmer R. Smith, Sol Tax, William L. Thomas, Jr., Harry Tschopik, Jr., Fred Wendorf, Gordon R. Willey, Perry Wolff, Richard B. Woodbury, and H. Marie Wormington. Obviously, it was impossible to cover systematically the entire United States in this brief article, but it is hoped that the major facts have been located and the most important trends described.

[2] We are told that the state of New Mexico has just added a requirement that public school teachers must take courses in anthropology in order to acquire their teaching certificates (Jesse D. Jennings, Personal Communication, December 28, 1954).

much smaller but important distributions in educated circles.[3]

Using these magazines as a basic list, the *Readers' Guide to Periodical Literature* was checked for the years 1952–1954, and the years 1938–1940, and a complete card file made of all articles that involved the subject matter of anthropology, and related sub-headings.[4] A study of the *New Yorker* cartoons was made by going through each issue between January 1, 1938 and December 31, 1940 and between January 1, 1952 and December 1, 1954.

The 1938–1940 period was selected to provide an earlier time check and to see if any trends could be detected. It was thought that 1938–1940 was a relatively "normal" period in American culture, i.e., it was after the Depression of the 1930's and before the United States became involved in World War II.

The check of the listings in the *Readers' Guide* yielded fourteen clearly anthropological articles during 1938–1940, and thirty-eight during 1952–1954, in the magazines included in the sample. These articles are listed under "References" at the end of this chapter (p. 372).

Note that in the earlier period five of the articles concerned problems of physical anthropology, four were archeological in content, three were on the Eskimo (including two that could be classified as ethnological) and one was a poem. They were published in only five of the twelve magazines in our sample: *National Geographic* (five), *Reader's Digest* (three), *Collier's* (two), *Life* (two), *Harper's* (one), *New Yorker* (one).

During the 1952–1954 period, twelve of the articles concerned Old World archeology (with a heavy concentration on the Eastern Mediterranean area); ten concerned New World archeology; five were on North American ethnology; three concerned the Piltdown hoax; two appeared on Inca art and artifacts; two on evolution and human races; three were social anthropological; and one was a general picture story on the development of man. These thirty-eight articles were published in only nine of the twelve magazines in our sample: *Life* (thirteen), *National Geographic* (six), *New Yorker* (six), *Saturday Evening Post* (four), *Harper's* (three) *Reader's Digest* (two), *Collier's* (two), *McCall's* (one), and *Coronet* (one).

Although the total yield of fifty-two items from the *Readers' Guide* was too small to draw very firm conclusions, a few tentative comments might be made. There was an evident increase in the total number of anthropological articles in the magazine sample from the earlier to the later period, but about one-third (seven articles) of this increase can be attributed to *Life* magazine's interest in the Classical Archeology of the Eastern Mediterranean area, an area of interest that does not as directly concern American anthropologists as most of the other topics written about. It is apparent also that the national magazines concentrate on archeological and physical anthropological subject matter, with less attention devoted to ethnological matters, and even less on social anthropology. Of the fifty-two articles, only four could be classified as being social anthropological in nature.

The special analysis of cartoons appearing in the *New Yorker* yielded eight cartoons involving anthropology in the period 1938 to 1940, and twelve in the period 1952 to 1954. In the earlier period seven

[3] Circulation of national magazines: *Life*—5,524,954, *Reader's Digest*—5,155,000, *Ladies' Home Journal*—4,871,174, *Saturday Evening Post*—4,577,727, *McCall's*—4,526,129, *Woman's Home Companion*—4,161,941, *Look*—3,859,353, *Collier's*—3,793,345, *Coronet*—2,799,379, *National Geographic*—2,125,365, *New Yorker*—382,906, *Harper's*—169,162. Circulation figures are taken from *Consumer Magazine Rates and Data* (1954), and are based on a six-months' average, January–June 1954, of publishers' sworn statements as compiled by the Audit Bureau of Circulations, except for *Reader's Digest* which is an estimate drawn from Ayer, 1954.

[4] It is realized that the *Readers' Guide to Periodical Literature* provides only an approximate index of anthropological articles during these years, because (a) the headings under which articles are classified do not cover the full range of anthropology in the same manner that we do in the profession; and (b) not all magazines on our list were fully covered during the two time periods under analysis—*Life* and the *New Yorker* were not indexed from January 1938 to June 1939; *Coronet* was not indexed during 1938–1940; and coverage of *McCall's* and *Look* began only in April 1953.

of the eight concerned archeological and museum-collecting expeditions, while one pictured ethnologists on a field trip. During the 1952–1954 period six cartoons concerned archeological expeditions; five had ethnological field trips as settings; one was a paleontological expedition involving mention of anthropologists. It is significant that the word "anthropology" appeared in two of the captions during 1952–1954: one by Richter on May 3, 1952, in which two men are traveling through a native village in the jungle; one stops to leer at a shapely native female and the other reprimands him with "Damn it, Gregg, we're not anthropologists—we're paleontologists!" The second, by Charles Addams on January 31, 1953, pictures a native housewife cooking for the family. She looks up as her husband approaches and says, "Now don't tell me you had anthropologist for lunch." It is apparent that the general image of anthropology presented by the cartoons stresses the anthropological explorer on an expedition in exotic settings in faraway lands.

In its "The Talk of the Town" section, the *New Yorker* for November 20, 1954, also carried an interesting piece, subtitled "Dollars and Skulls," on a recent visit which a reporter paid the Wenner-Gren Foundation headquarters in New York. The piece was compact, but provided a sympathetic, lively, and accurate account of the origin and development of the Foundation and a description of its various activities. Special mention was made of the important fact that it is the only foundation in the country devoted entirely to anthropology.

Finally, mention should be made of the fact that various aspects of anthropology were featured in *Time* magazine (which was not included in my sample) during the fall of 1954. The September 27 issue carried a portrait of "Social Scientist David Riesman" on the cover and a feature article on Professor Riesman's studies on American culture. This was an important issue for the subject of anthropology in the public consciousness, because to the best of my knowledge Riesman is the first social scientist to appear on the cover of *Time* since Franz Boas had this distinction in the 1930's. Although Riesman is only partly an anthropologist (he holds a law degree from the Harvard Law School, and the sociologists also claim him), he has been strongly influenced by anthropological concepts and theories. And it was significant that the *Time* article not only mentioned this anthropological influence, but went on to use the concept of culture and to discuss the Pueblo Indians, the Dobu Islanders, and the Kwakiutl as characterized by Ruth Benedict. In the November 29 issue of *Time* a feature story on "Discoveries of the Past," in the Science section, covered the recent Midland, Texas, skull discovery, the work of Gordon Willey on prehistoric Maya village life in British Honduras, and the research of the University of Pennsylvania on Dorset culture.

Among the more semi-professional scientific magazines of somewhat more limited circulation, it should be added that *Scientific American* has carried several excellent anthropological articles each year during 1952–1954.

NEWSPAPERS

Time and resources did not permit a systematic check of newspapers during 1952–1954, and the following comments are necessarily impressionistic. It is evident over the past three years that both local and national newspaper coverage of anthropology gave impressive space to archeological expeditions and discoveries, and that the "biggest stories" during this period were on the "Piltdown Hoax," the "Egyptian Solar Ship," the "Palenque Tomb," "Inca Child Sacrifice in Chile," "Midland Man" (discovered by Keith Glasscock in a site that was later excavated and examined under the direction of Dr. Fred Wendorf), and the Von Hagen field expeditions in Peru. Impressive news coverage also was given Oliver LaFarge, President of the Association on American Indian Affairs, on his views regarding current Indian problems. The Association's publication *The American Indian* (with a circulation of over 9,000, mostly to the general public), has also carried many articles by anthro-

pologists over the past three years. Anthropological research going on in particular areas with American Indian groups also has been given substantial news coverage by local or regional newspapers as illustrated by the Iowa newspaper stories on the Mesquakie Project of The University of Chicago (directed by Sol Tax), the Arizona newspaper stories on the Bureau of Ethnic Research of the University of Arizona (directed by William H. Kelly), and the New Mexico newspaper stories on the Cornell Southwest Project at Fruitland (supervised by Alexander Leighton, John Adair, and Tom Sasaki).

PAPERBACK BOOKS

In recent years the vast publication program undertaken in the production of paperback editions of books which are sold in almost every corner drugstore and newsstand in America has placed directly before the public a range of scholarly knowledge in many fields. Anthropology books have been prominently represented in this paperbound publication program and the total sales to date are astonishingly large. The publishers could not provide specific figures for the years 1952–1954, but kindly provided the rounded total sales figures which are given in Table 1.

Other paperback editions of anthropology books which have been published recently by Penguin Books, Ltd. (but on which we do not have sales figures) include: Leonhard Adam, *Primitive Art;* W. F. Albright, *Archeology of Palestine;* Sonia Cole, *Prehistory of East Africa;* I. E. S. Edwards, *The Pyramids of Egypt;* R. Ghirshman, *Iran;* O. R. Gurney, *The Hittites;* Jacquetta Hawkes, *Prehistoric Britain;* Stuart Piggott, *Prehistoric India;* Sir Leonard Wooley, *Digging up the Past; A Forgotten Kingdom;* and *Ur of the Chaldees.*

The publishers of Mentor books have indicated that during 1955 they are issuing Margaret Mead's *Male and Female* in a paperback edition.

Mention also should be made of the fact that David Riesman's *The Lonely Crowd,* which deals in part with anthropological concepts, was issued in paperback (Anchor) edition by Doubleday in 1953 and has sold 75,000 copies to date.

It is also evident that anthropological characters, settings, and data were much used in various paperback books of general fiction, science fiction, and in mystery stories during 1952–1954. For example, Chad Oliver's *Shadow in the Sun* (Ballantine Books, 1954) has been published in paperback edition. Oliver is a graduate student of anthropology at UCLA, and his book concerns an anthropologist doing a

TABLE 1

TOTAL SALES OF PAPERBACK ANTHROPOLOGY BOOKS AS OF NOVEMBER 1954

Author & Title	Series	Date of Publication	Total Sales
R. Benedict, *Patterns of Culture*	*Mentor Book	January 1946	600,000
T. Heyerdahl, *Kon-Tiki*	†Permabook	September 1953	500,000
V. G. Childe, *What Happened in History*	‡Pelican Book	December 1942	270,000
M. Mead, *Coming of Age in Samoa*	Mentor Book	October 1949	250,000
M. Mead, *Sex and Temperament in Three Primitive Societies*	Mentor Book	November 1950	190,000
M. Mead, *Growing up in New Guinea*	Mentor Book	August 1953	150,000
J. Collier, *Indians of the Americas*	Mentor Book	November 1948	135,000
G. Vaillant, *Aztecs of Mexico*	Pelican Book	November 1950	105,000
V. G. Childe, *Man Makes Himself*	Mentor Book	August 1951	100,000
B. Malinowski, *Magic, Science and Religion*	§Anchor Book	March 1954	25,000

* Published by The New American Library of World Literature, New York.
† Published by Doubleday and Company, Garden City.
‡ Published by Penguin Books Ltd., Harmondsworth.
§ Published by Doubleday and Company, Garden City.

community study in a Texas town. Recent mysteries involving anthropology have been written by Agatha Christie, Frederica de Laguna, and Ruth Sawtell Wallis. Time did not permit a systematic check on these or on the science-fiction items.

No attempt was made to collect sales figures on hard-cover, semi-popular anthropology books, except for three which were written explicitly for the intelligent layman: Clyde Kluckhohn's *Mirror for Man,* William Howells' *Back of History,* and Carleton Coon's *The Story of Man.* Of these, *Mirror for Man* (1949) has sold just over 21,000 copies to date, and 3,000 during the past three years; *Back of History* (1954) had sold over 8,000 copies by November 1954; and *The Story of Man* (which was issued only this autumn) was Number 11 on *The New York Times'* "Best Seller List" for December 5, 1954.

A hard-cover book, not by an anthropologist, but featuring anthropological subject matter and especially the concept of culture, that might be mentioned is Stuart Chase's *The Proper Study of Mankind* (1948) which had sold over 50,000 copies by December, 1954. Two other recent hard-cover books involving anthropological material have also had impressive sales: C. W. Ceram's *Gods, Graves, and Scholars* (1951) has sold approximately 78,000 copies; Ruth Moore's *Man, Time, and Fossils* (1953) has sold 22,000 copies.

COMIC BOOKS AND STRIPS

An attempt was made to discover whether or not anthropology is presented to the American public in comic books and strips—a mass medium that has a great following in the United States not only among children, but also among adults. By and large, little was turned up in the comics in the way of anthropological material, and for the most part it would not be unfair to say that the comic book industry is perpetuating the familiar stereotypes of the American Indian with too little attention to ethnographic fact. There are some exceptions; for example, in the July 1953 issue of *Roy Rogers* there was a story involving an adventure with Navaho Indians in a canyon in Arizona in which some of the Navahos were pictured as "goodies" rather than "badies" (in the words of our child readers these days) and Roy was speaking passable Navaho, even to the extent of using certain kinship terms properly! The *Donald Duck* series also sometimes comes close to depicting early historical periods and American Indians in reasonably accurate terms. But these are rare examples from the total range of material that is published in the comic book line.

In the newspaper comic strips, the only one discovered which involved anthropology recently was the story in Al Capp's *Li'l Abner* Sunday strip which ran from late August into October 1954. The story opens with two citizens of Dogpatch, Lonesome Polecat and Hairless Joe, being granted American war veteran scholarships to study at Harvard. As they leave for Cambridge on a travois loaded with Kickapoo Joy Juice and a baby lizard (which later grows into a dinosaur), they are met by Ondine Onusual, "the beautiful and brilliant anthropologist" who is writing a book on "the early, or sub-human, stone-age man" and finds Hairless Joe to be "a perfect specimen." Miss Ondine Onusual regards both Hairless Joe and the rapidly growing lizard to be "throwbacks." She goes along with them to study their behavior and take field notes on what happens. Although the image of anthropology presented in this Al Capp story leaves much to be desired, it was to the best of my knowledge the only time that anthropology as such was treated in a nationally read Sunday comic strip during the past three years.

In my judgment, much more could be done by way of presenting anthropological materials in comic books and strips in a manner that would effectively reach millions of young Americans at a formative age. A small amount of anthropological advice to the large Walt Disney comic book productions, for example, would accomplish wonders in the direction of presenting the concept of culture and a more accurate picture of the American Indians and other peoples to the general public.

RADIO PROGRAMS

The most important anthropological radio series produced during the past three years were the twenty-six half-hour shows of the *Ways of Mankind* project. This project was made possible by a grant from the Fund for Adult Education, an independent organization established by the Ford Foundation. The grant was made to the National Association of Educational Broadcasters, and administered by a committee of five consisting of George E. Probst (chairman), Richard Hull, Harold B. McCarty, Seymour Siegel, and Parker Wheatley.

Professor Robert Redfield was instrumental in planning for the show at the outset and served with A. L. Kroeber, Ralph L. Beals, Cora DuBois, and Margaret Mead on a Board of Consultants. Technical and administrative assistance was rendered by C. Scott Fletcher (President of the Fund for Adult Education) and by Mr. Ralph Lowell and Miss Ruth Perkins (of the Lowell Institute of Boston). The programs were produced by Andrew Allan (with the assistance of Eugene Hallman) in the studios of the Canadian Broadcasting Corporation in Toronto and were enacted by professional actors associated with that organization.

Dr. Walter Goldschmidt served as Director of the Project. He planned the series of programs, with the advice of the Board of Consultants and others, set forth the detailed plans for each show, edited the manuscripts, advised in the studio production, and wrote and spoke the final commentaries.

The project produced two series of thirteen each. The first series endeavored to present basic concepts in anthropology and sociology by means of a play or dramatized dialogue. The concepts, titles, and writers of these shows are given in Table 2.

The second series was divided into three parts. The first six shows were concerned with the way in which different peoples handle the problems of adjudication. Five of these treat with five different tribes as follows: 1. "The Case of the Borrowed Wife" (Eskimo), 2. "The Case of the Bamboo Sized Pigs" (Ifugao), 3. "The Repentant Horse Thief" (Cheyenne), 4. "Lion Bites Man" (Ba-Ila), and 5. "The Forbidden Name of Wednesday" (Ashanti). The sixth show was summary in nature and was entitled "Laying Down the Law." All six shows were written by Lister Sinclair, with advice and help from E. Adamson Hoebel, and a brief commentary, written and spoken by Walter Goldschmidt, closed each program. The second part of the second series consisted of four plays, each dealing with an aspect of Yurok culture, the principle being to communicate the nature of a primitive people's way of life. The plays were entitled "The Life of a Yurok," "The Sea Monster and the Bride," "The Re-

TABLE 2

RADIO PLAYS PRODUCED IN THE FIRST SERIES OF THE *Ways of Mankind* PROJECT

Concept Presented	Title of Play	Writer
Culture	Stand-in for a Murderer	Len Peterson
Language	A Word in Your Ear	Lister Sinclair
Technology	Survival	Eugene S. Hallman
Education	Desert Soliloquy	Len Peterson
Values	When Greek Meets Greek	Lister Sinclair
Groups	You Are Not Alone	George Salverson
Family	Home, Sweet Home	Len Peterson
Ethics	The Case of the Sea-Lion Flippers	Lister Sinclair
Authority	Legend of the Long House	Lister Sinclair
Status and Role	All the World's a Stage	Lister Sinclair
Arts	But I Know What I Like	Lister Sinclair
Religion	Sticks and Stones	Len Peterson
Society: A Summing Up	Museum of Man	Lister Sinclair

luctant Shaman," and "World Renewal." They were written by Charles E. Israel. The third part of the second series did the same for Bali in three plays. They were entitled "The Coming Out," "The Fighting Cock Refrain," and "The Isle Is Full of Voices." The first two were written by Walter Newman, the third by Lister Sinclair.

Each series of thirteen programs is available in an album ($25 each) issued by the National Association of Educational Broadcasters and distributed from the Radio Office, University of Illinois, Urbana, Illinois. The first series has been printed under the title of *Ways of Mankind* by the Beacon Press, edited and with a commentary by Walter Goldschmidt. The commentary discusses the meaning of the concepts and serves as an introduction to social anthropology.

The transcriptions have been played over educational stations throughout the United States and over the Canadian Broadcasting network in Canada. Dr. Goldschmidt reports:

"They have met with enthusiastic response from the limited clientele of intellectual radio listeners. I am told, for instance that in Hawaii they were repeated by popular demand, and in places like New York, Chicago, and Wisconsin have been repeated over the air several times. Both *The New York Times* and *Variety* gave very enthusiastic reviews when they were first released. Many anthropologists, sociologists, and educators have written me for information about obtaining them for classroom use. The Fund for Adult Education has sponsored adult discussion groups using selections from the first series, and using the series on Law and Justice, both with considerable success. Special essays and educational guides have been prepared by me for these and are being printed in two separate pamphlets by that organization. Other educational institutions are making similar use of them. It is doubtful if further recordings will be made. However, the Educational and Radio Center at Ann Arbor, Michigan, is contemplating revamping them for television." (Personal Communication, October 25, 1954.)

The period of 1952–1954 also has been marked by the initiation or continuation of anthropological participation in radio programs over local radio stations in various parts of the United States. A few examples follow. The University of Oklahoma station (WNAD) has been sponsoring anthropological programs since 1948. In 1952, Professors Robert E. Bell and Karl Schmitt cooperated with members of other departments in a series of programs entitled "Materials upon which Man Depends." In the Fall of 1954, Professor Bittle participated in a program on "Race and Desegregation in the Schools." Iva O. Schmitt reports that "the general audience reaction to all of these programs has been most favorable. There was no negative reaction even in the case of programs on race." (Personal communication, November 3, 1954).

The Ohio State University radio station (WOSU) presents an educational program on which many of the local anthropologists have appeared. In September 1954, Dr. Leo Estel presented a series of four one-half hour programs covering the general field of anthropology; in October 1954, Dr. Erika Bourguignon presented two lectures on African music. Drs. John W. Bennett and Iwao Ishino have also appeared recently on a program on Japan and Okinawa, and Bennett is frequently called upon to take part in programs on international relations.

The University of Chicago Round Table program frequently includes anthropologists. During the 1952 annual meeting in Philadelphia of the American Anthropological Association, a Round Table was broadcast from the meeting on "Anthropologists Look at the World Conflict" with Professors Sol Tax, Wendell C. Bennett, Fred R. Eggan, and Froelich Rainey as the participants.

The University of California has a weekly radio program called "The University Explorer" which puts on occasional 15-minute programs of anthropological interest. The material is obtained by interviewing anthropologists at the Berkeley and Los Angeles campuses and presenting their findings and comments.

Recently Dr. Harry Tschopik, Jr. of the American Museum of Natural History, presented four radio broadcasts on NBC's pro-

gram "Collector's Item." Three dealt with primitive music from a cultural anthropologist's point of view; the fourth with the use of game calls by primitive and modern people.

The Denver Museum of Natural History is called upon about every three months to present a 15-minute radio program over a Denver station. Some of their programs have involved tracing the customs of Christmas, Thanksgiving, Halloween, etc.; others consist of interviewing visiting anthropologists.

At Northwestern University, Professor Melville J. Herskovits recently presented a program on "Africa" on the University's "Reviewing Stand" series; Professor Richard Waterman presented two series of programs on "Primitive Music" during 1953, one series of seven programs over WMAQ in Chicago, and one series of thirteen programs sponsored by the National Association of Educational Broadcasters. Waterman has also appeared on FM programs in Chicago on "Australian Music."

In 1952 the Directors of the Inter-Tribal Indian Ceremonial instituted a Forum on Indian Problems which now is held each summer during the Ceremonial and broadcast over the local Gallup, New Mexico station. In August 1952, the participants included three anthropologists: Alexander Leighton, Evon Z. Vogt, and John Adair. In 1953 one of the principal speakers was William H. Kelly, and in 1954, Dr. Vogt introduced Mr. Glenn Emmons, the Commissioner of Indian Affairs, who gave the principal address during the forum.

TELEVISION PROGRAMS

While anthropologists have long been noted for active participation in radio programs, they have also made genuine and impressive strides over the past three years in utilizing television as a medium for presenting anthropological knowledge to the American public. The television medium undoubtedly will become one of anthropology's best opportunities for mass education if the proper kind of financing and arrangements with the professional television producers can be worked out.

The first anthropological television program to be placed on a network was "What in the World?" The program began experimentally and locally in 1949 and took its present form in 1951 when it went on the nation-wide CBS network. The official sponsors are the University Museum of the University of Pennsylvania, WCAU-TV Philadelphia, and the Columbia Broadcasting System. The managers of the program are Professors Froelich Rainey and Alfred Kidder II and Mr. Robert Forrest, Program Director at WCAU. The program has never been commercially sponsored.

The format of the program is very simple. It takes the form of a "quiz show" in which various specimens from the University Museum (or from other museums on loan) are introduced and a three-man panel of anthropological experts are asked to identify and locate the specimen in time and place. At least one person on the panel always is drawn from another university or museum. The moderator presents brief opening and closing comments that are prepared in advance, but the members of the panel operate on an ad-lib basis. This procedure has the enormous advantage of not requiring advance preparation by the participants on the panel.

According to the latest lists, the number of stations carrying the program is eighty-two. Dr. Kidder adds that, "As far as we can determine, audience reaction has been very favorable. That is to say, among the hundreds of letters and postcards I have seen, there has only been one that said the program is a bore." (Personal communication, October 15, 1954).

More recently the Columbia Broadcasting System has initiated another network program, "Adventure," which is produced and directed by Mr. Perry Wolff of CBS Television for the American Museum of Natural History in New York. This program began on May 10, 1953, after eight months of research by Mr. Wolff to discover how the American Museum could best be presented on television. It ran sixty-two weeks until June 27, 1954, when it left the air until September 26. About half the

programs have been one hour long, the balance have been half-hour shows.

In addition to Mr. Wolff, the program maintains a CBS Television staff of thirteen people. The American Museum of Natural History provides office space and scientific direction, as well as artifacts used on the program. There has not been a commercial sponsor, which means that the CBS network has absorbed the cost—approximately $750,000 to sustain the program up to October, 1954.

Some ninety-four half-hours have been televised, of which at least one-third to one-half have been programs that can be defined as anthropological. These have ranged from evolution and physical anthropology through cultural history and ethnology, and have included five programs on archeology. Anthropologists from the Museum staff (Harry L. Shapiro, Margaret Mead, Harry Tschopik, Junius Bird, Gordon Ekholm, and Bella Weitzner) have appeared on the program, as well as a number from other institutions. One of the main subjects featured in the Fall of 1954 was genetics, with Harry L. Shapiro dealing with various aspects of the topic in some six shows.

The average weekly audience is estimated to be approximately 2,000,000 people in some 40 cities. Mr. Wolff adds:

"The audience reaction, measured quantitatively, shows that the program had larger audiences than dramatic programs placed against it by NBC. Mail response is not particularly heavy, although our experience is that programs of this sort will not receive much mail. The audience composition divides at roughly one-third men, women, and children. Its qualitative index is best measured by the regard professional broadcasters have for the program. . . . A number of local stations have made out-of-the-ordinary efforts to keep the program on the air even in the face of commercial commitments. The ratings, however, have not been high enough to attract an advertiser for either purposes of direct selling of merchandise or general public relations. . . . It is the purpose of the Columbia Broadcasting System to maintain the program on the air so long as its ratings are commensurate with the programming demands of a mass media, and so long as it functions as efficiently as it is now." (Personal Communication, October 20, 1954.)

Other television shows on networks, involving anthropology or anthropological participation, that have come to my attention include: "Camera Three," "Home," and "Omnibus." Dr. M. F. Ashley Montagu first appeared on "Camera Three" in June 1953 when he spoke on the origin and evolution of man; since that time he has appeared about a dozen times in the role of an anthropologist. Dr. John Landgraf also appeared occasionally. The official sponsor of the program is the New York State Board of Education, and the viewers are estimated at about 500,000. *This Week Magazine* of the *New York Herald Tribune* (and other papers) for September 20, 1953, carried an article on Ashley Montagu entitled "The Anthropologist and the Ladies" which provides an indication of the enthusiastic audience reaction to these performances.

Ashley Montagu also began to appear on the "Home" show in April, 1954, and after two programs on infant-maternal relationships, was appointed Family Affairs Editor for the show. He now appears once a week for an average of six minutes on the program. For the first five months of 1954 he discussed various aspects of child-family relationships under the general title of "Criteria for Mental Health"; in the fall he discussed the origin and evolution of the human body under the title of "How We Got To Be the Way We Are." The show has an estimated 2,000,000 viewers (M. F. Ashley Montagu, Personal Communication, December 6, 1954). The third show in this category, "Omnibus," produced under Ford Foundation auspices, also occasionally features anthropology.

At various points in the United States there are also television programs involving anthropology on local stations. Some of these have featured regular series of programs (such as those at the Universities of Utah, Michigan, Arizona, Washington, Nebraska, New York University, and the Heard Museum in Phoenix); others have as yet only involved anthropologists in occasional appearances (such as those at

Johns Hopkins, Tulane, Yale, Oklahoma, Denver, and Chicago). Undoubtedly there are others which are just beginning, or have not come to our attention; therefore, the following discussion should be regarded as a sample of what is going on in anthropological television shows across the nation.

In the Spring of 1952, Professor Jesse D. Jennings of the University of Utah was invited to organize and present a ten-session television course in introductory anthropology which was placed on the air by KSL-TV in Salt Lake City. The course was entitled "People: How They Act"; a syllabus was written and issued by the Extension Division of the University. The program consisted of ten lectures of one-half hour each: "Introduction," "1,000,000 Years of Human History," "Culture—An Idea and a Tool," "Kinship Is the Key," "Marriage and the Family," "Status, Role, Rank and Position," "Religion and Magic," "Social Control," "Culture and Personality," and "Anthropology Today and Tomorrow." Two production sets were used—seven of the programs were set informally in a "study" and three in a simulated class-room situation. In the study setting, Dr. Robert P. Crawford, then of the University's Radio-TV committee, was present in the role of interviewer; for two programs a member of the Department of Anthropology served as a guest expert: Professor E. Adamson Hoebel on "Social Control" and Professor Elmer R. Smith on the final session. Further details on this program can be found in Jennings, 1953.

During 1952–1953 the University of Michigan Extension Service also presented a television course in anthropology with Professor Richard K. Beardsley as the principal instructor and master of ceremonies. Weekly printed materials to accompany the course were prepared and circulated. The course consisted of fifteen half-hour programs on the following subjects: "The Development of Man" (Frederick Thieme), "Symbols, Speech, and Culture" (Leslie White), "The Conquest of Energy" (Leslie White), "How Archeologists Work" (Albert Spaulding), "Old Stone Age Food-Gatherers" (Beardsley). "The Heritage of Inventions" (Beardsley), "New Stone Age Farmers and Herdsmen" (Beardsley), "The American Indian in Prehistoric Times" (James Griffin), "The American Indians as of 1492 and Later" (Volney Jones), "Primitive Society" (Leslie White), "Magic and the Spirit World" (Beardsley), "Ancient Cities and States" (Beardsley), "Governments of Men" (Beardsley), "The Great Religions of the World" (Beardsley), and "Slaves and Freemen: The Birth of the Industrial Revolution (Beardsley).

In 1953–1954 the Arizona State Museum at the University of Arizona put on a series of thirty-one weekly, panel-type television programs entitled "What Is It?" Dr. Emil W. Haury served as moderator for the programs, broadcast over KVOA-TV Tucson, Arizona. The panels of experts were drawn from historians, anthropologists, and graduate students at the University of Arizona. The programs differed from "What In the World?" in that all of the objects used on the shows were selected as vehicles to develop a certain theme, e.g., masks, aboriginal mining techniques, etc.

At the University of Washington, Professor Erna Gunther recently has presented several series of television programs, of six, twelve, and thirteen shows each, using museum specimens to illustrate primitive art, economics, ceremonialism, etc. The specimens are then placed in a labeled case at the museum and changed weekly after the television show. Professor Gunther reports that museum attendance increased markedly during the time these shows were running and visitors frequently asked to see the "television pieces" (Personal Communication, December 14, 1954).

During 1954, University of Nebraska Television completed production of a thirty-nine-program film series for TV use called "The Great Plains Trilogy." The production was made possible by a grant-in-aid from the National Association of Educational Broadcasters through the Educational Television and Radio Center at Ann Arbor, Michigan. The making of each film was preceded by a live TV presentation on KOLN-TV in Lincoln, Nebraska. The programs run in roughly chronological

order, each lasting one-half hour, and they present the Great Plains from the beginning of the earth to the present development of modern cities.

Series I of the Trilogy is entitled "In the Beginning: The Primitive Earth" and deals with the geology and paleontology of the Great Plains in thirteen programs, with Dr. C. Bertrand Schultz, Director of the University of Nebraska State Museum, as the principal speaker. Series II is entitled "Nomad and Indian: Early Man on the Plains" and deals with the anthropology of the area in thirteen programs presented by Dr. E. Mott Davis, Curator of Anthropology in the University of Nebraska State Museum, and Dr. Marvin F. Kivett, Director of the Nebraska State Historical Society Museum. Both Davis and Kivett are archeologists, but the programs present archeological, and ethnohistorical materials. Series III of thirteen programs, entitled "Explorer and Settler: The White Man Arrives," is on the history of white men on the plains, and is presented by Dr. James C. Olson, Superintendent of the Nebraska State Historical Society. The Educational Television and Radio Center at Ann Arbor is now distributing prints of each program to educational TV outlets and also has individual program descriptions for circulation. The programs of the Trilogy are already being shown by educational TV stations in Houston, St. Louis, Cincinnati, San Francisco, Pittsburgh, Madison, East Lansing, and by one commercial outlet (KMTV) in Omaha.

At New York University, Dr. Casper R. Kraemer, Jr. produced during 1954 a thirteen-week series of films for TV use, entitled "Here Is the Past." These are now being distributed by the Educational Television and Radio Center in Ann Arbor to educational TV stations (Anonymous, 1954a). The Heard Museum at Phoenix, Arizona, has just started a new series of television programs that are being presented by H. Thomas Cain, Curator of Anthropology.

Many other television series do not as yet have regular anthropological programs but do include anthropologists from time to time. In April 1952, Clifford Evans of the U.S. National Museum, and his wife, Betty Meggers, appeared on the weekly half-hour program, the "Johns Hopkins Science Review," and reported on their recent archeological expedition in Brazil. At Tulane University in New Orleans, anthropologists have participated about once each year in the TV show called "Tulane Close-Ups." The 1952 anthropological show was on "Indians of the United States"; the 1953 program was on "Primitive Art," done by Robert Wauchope, Arden King, and Munro Edmonson. At Yale University, Albert E. Burke, of the Conservation Program, for several years has been conducting a weekly half-hour evening program on WNHC-TV entitled "This Is Your World." Although primarily geographical, it has included lectures (and some display of specimens from the museum) on peoples in different parts of the world, on problems of race, on cultural values, and on human and cultural evolution. Dr. Irving Rouse participated on the program several times during 1953–1954. The University of Oklahoma has sponsored a television program called "The Open Window," under the directorship of Professor Sherman P. Lawton. These programs have emanated from WKY-TV, Oklahoma City, and have featured Karl Schmitt in a program on "And the Indians Came" (May 1952), William E. Bittle on "Peyote Grail" (February 1953), and Robert E. Bell on "Tree Rings" (Fall 1953). In Denver, Dr. Marie Wormington reports that one TV program was presented recently showing the planning, construction, and art work involved in the forthcoming "Hall of Man" at the Denver Museum of Natural History; Mrs. Willena Cartwright appeared on one of the women's programs on KOA-TV and presented specimens from the Denver Art Museum showing American Indian styles of dress. In Chicago, Dr. Robert Braidwood recently participated in a program on the origin of agriculture; Dr. Sherwood Washburn in a program on Piltdown Man; Drs. Paul Martin, Donald Collier, and others at the Chicago Museum of Natural History also appear on occasional TV programs; and Dr. Edward Dozier of Northwestern Uni-

versity recently has presented a program on American Indians.

MOTION PICTURES

During 1952–1954 there were a few Hollywood films which featured anthropologists in leading roles. "Mogambo" with an African setting (MGM, 1953) presented Clark Gable as a rugged, efficient collector of wild animals for zoos and circuses. Gable was persuaded to become the guide and hunter for an ineffective anthropologist accompanied by his wife who wished to study gorillas. A triangle developed involving Gable, the anthropologist, and his wife, in which in the end Gable got the wife. In the "Secret of the Incas" (Paramount, 1954), Robert Young was presented as a retiring "academic-type" archeologist who became involved with people who were searching for Inca treasure. The presence of the archeologist in the film was of no consequence in spite of the brief threat he presented as the loser in a triangle. "Valley of the Kings" (MGM, 1954) with an Egyptian setting, also featured an ex-grave robber who walked into a museum one day and was inspired to become an archeologist. In the end he knocked another grave robber off a high ledge and got his wife. In the "Golden Mask" (United Artists, 1954), an archeologist and his daughter traced the legend of a golden mask. The mask was believed to have brought bad luck to its owner, an officer in the Roman army, who was killed and buried with the mask. They found the mask and also overcame a mercenary treasure-seeker, thereby saving the mask for mankind and posterity.

The last three years were also marked by the release of a number of films which represented some genuine advances in the portrayal of primitive cultures, although they seldom directly involved professional anthropological advice. In this category are "The Alaskan Eskimo" (Walt Disney, 1953), "The Navajo" (Hall Bartlett, 1952), "Latuko" (filmed by Edgar M. Queeny for the American Museum of Natural History, 1952), "Seminole" (Universal, 1953), and "Return to Paradise" (United Artists, 1953). Although there were some historical inaccuracies and cultural emphases that were somewhat out of focus in some of these films, they were all worth seeing from an anthropological point of view. There was also "His Majesty O'Keefe" (Warner Bros., 1954) which was filmed on Yap using Fijian natives, houses, dances, etc., and, though something of an ethnographic scramble, was good entertainment.

Special mention also should be made of the "Peoples of the World" series (later called "The Earth and Its People") by Louis de Rochemont and distributed by Universal during 1952–1953. This series of twenty-six half-hour films is certainly one of the best ever released from an anthropological point of view.

Finally, it should be noted that various commercial groups are using anthropology in films to promote tourist travel. An example was "Trail to Tucson" produced in 1953 by the Tucson Sunshine Climate Club. The first few minutes of the film cover the archeology and early history of the region and are narrated by Emil W. Haury.

An excellent source for information on the anthropological content of movies is the section in *Natural History Magazine* which carries reviews of films dealing with natural history subjects, including anthropology.

MUSEUMS

The role of the museum in bringing anthropology into the public consciousness hardly can be stressed enough in this brief article. Thousands of Americans annually visit the museums of anthropology located at our universities, or the natural history museums which have staffs that interlock with university departments of anthropology. Many more visit the National Park Service museums located in parks and monuments that are concerned with American archeology and ethnology, especially in the Southwest.

Perhaps the most important development on anthropology in museums during the past three years was the Wenner-Gren Foundation Supper-Conference held at the

University Museum in Philadelphia on April 23, 1954. The participants were H. M. Wormington (Chairman), J. Lawrence Angel, Schuyler Cammann, Donald Collier, John Ewers, Alfred Kidder II, J. Alden Mason, Frederick Pleasants, Froelich Rainey, Linton Satterthwaite, Jr., Harry Tschopik, Jr., and Rodney Young. The purpose was to consider the problems faced by museums in both their professional and their public relations aspects. Papers and comments were on four topics: "The Role and Function of Museums," "Problems of Exhibition," "Problems of Exhibition in the Explanation of Physical Anthropology," and "The Potentialities of Television." The results are available in mimeographed form, and the first article by Collier and Tschopik (1954) has been published in the *American Anthropologist.*

Members of the various museum staffs have been active during 1952–1954 in bringing exhibits for the general public up to date, in continuing the publication of popular and semi-popular anthropological series, and in pioneering on the various television programs in which museum specimens can be used to such good advantage.

The various art museums also have been active in utilizing anthropological materials in exhibits and special shows. For example, the Museum of Modern Art's exhibit on Peruvian art in the Spring of 1954 was very successful; Frederic H. Douglas, Curator of Native Art at the Denver Art Museum has been presenting a "Fashion Show" utilizing native American Indian dresses to excellent advantage in showing both the artistic and cultural aspects of native dress. A number of recent books on "primitive art" also have been important in bringing anthropology before the public, the most recent being Miguel Covarrubias' *The Eagle, the Jaguar, and the Serpent: Indian Art of the Americas* (Knopf, 1954).

OTHER

Other aspects of anthropology in the public consciousness that only can be mentioned at this point are the growing sales of "folk music," such as the recordings published by Ethnic Folkways, Inc.; the continuing growth of amateur archeological societies in various states that have been active during 1952–1954; and the interest in "salvage archeology" not only in the case of the river basin surveys but extensions of the same idea to salvaging archeological sites that are found along the routes of highways and pipelines. Dr. Fred Wendorf of the Museum of New Mexico has an arrangement with the state highway department to do this type of salvage archeology; the El Paso Natural Gas Company has also sponsored a number of salvage projects that have given it much favorable publicity in newspapers and trade journals.

COMPARISONS WITH MEXICO AND ENGLAND

While we make no pretense at being an expert on anthropology in the public consciousness in Mexico and England, perhaps there may be permitted a few impressionistic comments. Mexico differs profoundly from the United States in the proportion of its population that is Indian and the extent to which Indian culture has a place in the national life. In the United States the vast majority of the remaining Indian populations are located far from the centers of power in Washington, New York, Chicago, etc.; the Indians are registered upon the public consciousness mainly via the press, motion pictures, comic strips, and books; and most Americans probably have never seen an Indian in person nor visited an archeological site. By contrast, the Indian populations of Mexico continue to exist in and near the very centers of power in Mexico City; and the pyramids of Teotihuacan (and other archeological sites) stand at the edge of the city as reminders of its rich Indian cultural heritage. It follows from these facts that anthropology occupies a place in the public image of Mexico that it may be impossible to achieve in the United States. One only has to recall that the leading Mexican anthropologist, Dr. Alfonso Caso, now occupies a position of cabinet rank as the Director of the Instituto Nacional Indigenista to realize the importance that anthropology is accorded in

Mexican national life. In addition, it is our impression that anthropology has achieved a much firmer place in the consciousness of the average citizen (at least in the cities) than it has in the United States. Two small bits of evidence can be cited. We have noted time and again that taxi drivers in Mexico City know what the field of anthropology is all about and can discuss it intelligently—I have never had this experience with taxi drivers in New York City! Ordinary bookstores in Mexico City almost always have anthropology books prominently displayed in their front windows. New York City bookstores may carry similar volumes, but we have yet to see them displayed in the front windows, unless they are very recent, semi-popular publications in the field. Only in the Southwest (also with its large Indian populations and pressing Indian problems) does one see anthropology books displayed prominently in the front windows of ordinary bookstores in Santa Fe, Albuquerque, or Phoenix.

In England, the situation is entirely different. The subject matter associated with social anthropology in the public mind—the non-Western cultures—is located even farther from the centers of power than is the case in the United States. The average citizen has little expectation of ever seeing first-hand any of the peoples of Africa, Asia, or Oceania which the anthropologists study, except when occasional "Colonials" visit in England. Yet it is evident that the average citizen maintains a lively interest in the work of the anthropologist. This interest probably is due in part to the problems which England has faced in the administration of non-Western peoples and in part to the long tradition of travelers, missionaries, and the armed forces going out from England to various parts of the world and bringing back information about "exotic" cultures. The most important British effort to promote social anthropology in the public consciousness during the past three years, that has come to my attention, is the series of BBC radio talks given by E. E. Evans-Pritchard on "Religion," Raymond Firth on "Orientations in Economic Life," E. R. Leach on "Aesthetics," J. G. Peristiany on "Law," John Layard on "The Family and Kinship," Max Gluckman on "Political Institutions," Meyer Fortes on "Mind," and Godfrey Lienhardt on "Modes of Thought." These talks were published recently by the Free Press under the title of *The Institutions of Primitive Society* (1954). An earlier series of six lectures given by Evans-Pritchard on the Third Programme of the BBC in the winter of 1950 were published under the title of *Social Anthropology* (1951).

On the archeological side, it is evident that the English have a deep interest in prehistory as evidenced by the large number of paperback books that have been published in recent years on the subject, by the frequent articles in the *London Illustrated News,* and by the prominent place which the exhibit of prehistoric archeology occupied in the recent Festival of Britain.

The English also now have a television program, inspired by "What In the World?" as a regular feature of the BBC. It is called "Animal, Vegetable or Mineral," and a measure of its popularity is the fact that Sir Mortimer Wheeler was proclaimed the television personality of the year in England in 1953. The program is moderated by Glyn Daniel, and a number of British anthropologists and archeologists have appeared with Wheeler on the panel (Alfred Kidder II, Personal Communication, December 4, 1954).

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Not all reproductions of primitive art appear in exhibition catalogues, books, and shops. Many countries have used native life, archeology, and primitive art as subject matter for their postage stamps. Through the courtesy of Gimbel's Department Store, in New York, which maintains the world's largest stamp and coin center, it is possible to reproduce a few of the many stamps which picture primitive art.

Anthropology in Primitive Art

ROBERT BRUCE INVERARITY

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THE field of anthropology in the arts is vast if, on a world-wide basis, one considers the stimulus given to graphic art, plastic art, music, drama, architecture, photography, dance, literature, radio, television, and motion pictures, directly or indirectly by some facet of primitive cultures. There is no doubt that contemporary, or so-called "civilized," man has become increasingly aware of native peoples and has found them a rich source to draw upon for his artistic activities. To some extent the reverse is true: so-called contemporary "primitive" peoples, who are still engaged in producing art, have found the encroaching outlanders an attractive subject for their aesthetic activities. Our thought was that if the area which had received the most widespread interest, in the arts, was the subject of a simple paper others later might consider variant aspects. For this reason we are concerned here only with the arts of native peoples and their interest and stimulation to the plastic and graphic arts and their collectors. This is commonly called "primitive" art and is an accepted segment of the Western world's artistic milieu.

Just what is meant by primitive art is extremely difficult to determine. Similar art works are written about, exhibited, and collected by museums, galleries, and art dealers under such titles as: Primitive Art, Exotic Art, Ancient Art, Tribal Art, Archeological Art, Aboriginal Art, Pre-Columbian Art, Negro Sculpture, Indigenous Art, Native Art, Folk Art, Indian Art, Ethnic Art, and Curios. Or works may be exhibited under geographical titles such as: Melanesian Art, African Art, Mexican and Central American Art, Art of the South Seas, Primitive Art of the Pacific, American Indian Art, Northwest Coast Indian Art, and so forth. In other instances the actual group represented is used in the title as: Chibcha Gold, Eskimo Carvings, or Tarascan Sculpture. Yet all the above titles, when the occasion demands, are readily grouped as primitive art by those concerned primarily with the fine arts. One would have little difficulty in being understood by an art student if he discussed a current exhibition as "that show of primitive art" rather than under its correct title of "Ashanti Gold Weights."

It will be noted that Egyptian art, classical archeology, formalized religious art, Oriental art, and so on, are not included as they represent either a very specialized field, a highly developed culture, or both. Attempting to indicate what may fall within the realm of archeology, classical archeology, ethnology, ethnography, and so forth has been carefully avoided as a Gordian knot. For the purposes of this paper the word anthropology includes them all. It will become apparent that discussions of aesthetic qualities or values in primitive art are too complex to be discussed here.

From the above, one is aware that the art world thinks of primitive art as having several meanings. In the above exhibition

titles two things stand out: the art emphasis generally referring to plastic and graphic expressions or closely related art, and the fact that this work was, or is, produced by indigenous people whose art tradition is unlike that produced by Western cultures.

The recent Webster's *New World Dictionary of the American Language* includes as one of the definitions of primitive: "an artist or work of art that belongs to or is suggestive of an early period," as well as the more usual, "ancient; original" and "characteristic or imitative of the earliest ages; crude; simple; rough; uncivilized."

The common use of the word is to apply it to work which is crudely executed, particularly when the production is below the standards of the craftsman's own culture, or the cultural standards of the particular observer. In the latter case the use of the word may not be correct as the observer himself may not be sufficiently informed, or sensitive enough, to reflect the true standards of his culture and time.

Many "popular" artists are called primitives and the recent publicity given to the American painter, Grandma Moses, has helped popularize the word "primitive." In these cases lack of accepted technical skill and provincialism has been sufficient reason for writers on the subject of art to classify these paintings as "primitives."

The art works of native peoples, however, cannot be generally classified as works lacking in technical skill. It is true that within a culture there will be work produced which is below the standards of the group. In this case it does show lack of technical skill in relation to other similar productions of the culture. Nevertheless, the vast majority of art works exhibited as primitive art evidence an extremely high development of technical skill, both in the execution and, in many cases, in the processes involved.

Most observers of primitive art in our culture judge it from our frame of reference and with Western art values. It is only in recent years that standards and concepts of art other than those based on the faithful reproduction of nature have developed in Western thinking.

Western art criticism has observed several simple characteristics which seem to apply to primitive art both ancient and modern. Of course these elements are variable, often overlap, and may be—but are not necessarily—found in all primitive art or all in any one work. It is also important that these points often can be appropriately applied to contemporary Western works of art. We have written about this elsewhere, and it also has been dealt with by others, but we should like to include here the most important of these characteristics, realizing they are in no way criteria but only elements which may help explain the unfamiliar.

1. *Lack of perspective.* Perspective itself is an artificial concept created for the convenience of portraying a scene, or objects, from one point of view so that objects appear to be in the same relationship as when seen by the eye. The "popular" painter will often show objects or parts of objects which could not be seen by the eye from one position. Portraying one object in a scene from one angle and the remaining objects from other angles is not uncommon. A house may be depicted with a front and one or both sides, a condition not visible to the eye from one point of view of a normally constructed house. The famous painting by the American primitive painter Joseph Pickett, owned by the Museum of Modern Art in New York, illustrates this point perfectly.

2. *Conciseness.* In developing a work of art most Western artists do not depict objects in the greatest detail. This tendency, if carried to an extreme, produces conventionalization and abstraction rather than realism. Although many native artists have produced work of great realism—in fact their works run the gamut from extraordinary realism to abstraction—the typical Western approach of maintaining realism is not a basic premise of native art. Art functions as an important part of the culture itself and not just for the production of "beautiful" objects.

3. *Depicting the concealed.* In this case the artist knows certain things about the object he is depicting and in spite of the

fact that he actually cannot see them, they still are included in his work. In "popular" painting this may take the form of indicating buttons on the coat of a man who is obviously so far away from the painter that the buttons would not be discernible. In native arts a classic example is the X-ray technique used by Australian natives, Northwest Coast Indians, and others, wherein a kangaroo or a whale may be drawn, and yet part of the internal organs will be depicted, as if the artist had X-ray vision.

4. *Fear of empty space.* There appears to be a psychological need in certain people to fill space in their works with sometimes meaningless and at other times meaningful designs. In much popular art this quality is obvious. This desire is evidently a need, to some degree, in all people and is often satisfied by the surface texture produced in the fabrication of the work or the production of geometric design as an ornamental element. In addition to popular art the same feature is found in native works such as the famed Chilkat blankets of the North Pacific Coast Indians and some productions by the Greenland Eskimo.

5. *Distortion and emphasis.* In native arts what appears as distortion, to Western thinking, is common in sculpture and is exemplified in oversized heads, hands, and feet, or what often intrigues the uninitiated gallery viewer—oversized breasts and genitalia. Such emphasis can indicate greater interest or knowledge of the particular part, as a child when beginning to draw will portray a large head and hands with a small body. At this stage of development the child is more aware of, and concerned with, heads and hands and so draws them in larger scale, giving them greater importance than the body. Similar emphasis is occasionally given to parts of an object which seem more important to the craftsman, such as the carving of a dog's head on the handle of a cane, while the remainder of the cane is undecorated. However, in the art of native peoples elements may appear as distorted but in actuality this emphasis is intentioned and often has a meaning within the framework of the particular culture.

As an example—in Egyptian bas-reliefs one finds figures with the head in profile, the eye as if seen from the front, the shoulders also with a frontal view, the hips, legs, and feet in profile. To many people all of this is distortion and shows inadequate ability. Instead of being the work of inferior sculptors, in actuality, these parts were intentionally arranged in this manner so that the observer would quickly perceive the figure, and each element was, therefore, portrayed from the point of view which would give the greatest optical impact.

These then appear to be some of the elements which are found in primitive art, including native or indigenous art, some contemporary Western approaches to art, work of a crude type, art of the insane, and the art of "popular" artists, sometimes called primitives. It would seem that general usage of the term primitive art for those works also called tribal art, aboriginal art, ethnic art, and so on, might well be discontinued. We know that we are not alone in thinking some better term might be found; however, due to the present wide acceptance, usage, and understanding of the term primitive art, it probably will continue to be the most commonly used general label.

The acceptance of indigenous art by the art world was by no means a sudden development. Why is it that sculpture from West Africa, for instance, was for years exhibited only by ethnographical museums or left to gather dust in museum storerooms? This neglect has been true of most indigenous art. Today these same works are dusted off and are highly prized pieces in exhibitions and museum collections. Obviously the work has not changed; the Bambara antelope, the Yoruba mask, and so on are the same now as when they were in dusty storage. Perhaps André Malraux's evaluation of native art as "art with an undying life of its own" is the answer, but more likely it is the whole growth in recent years of new concepts in the arts and sciences.

The present great interest in this art

form had its beginnings in the eighteenth century when the European countries were acquiring and developing colonies, populated by unfamiliar natives, whose material culture provided unusual objects to carry home as trophies. The strange and unfamiliar cultures certainly intrigued the intellectuals of the time and influenced writers who wrote of the glamour of these far away places. An early popular name for some of the natives was "Noble Savages" and at this time the writings of François René de Chateaubriand and James Fenimore Cooper created interest in the American Indian. Later Pierre Loti through his writings and Paul Gauguin with his paintings focused attention on the South Seas. Slowly a group of European artists became aware of the art of these indigenous peoples and, at one time or other near the turn of this century, through collecting or studying, were somewhat influenced by native arts.

The actual beginnings of the modern art movement are obscure. The early artists recognized as modernists, such as Braque, Picasso, Gris, Duchamp, Kandinsky, Klee, and others, were in essence explorers. Their desire to break with the static traditional realistic approach to art must have been influenced by the discovery of photography, other scientific developments, and subsequently photographic color reproduction. The advent of primitive art in their midst presented a new strange art and the appeal of this unknown and mysterious work undoubtedly was great.

Perhaps the most famous contemporary painter who appeared to be influenced by these arts, although he has denied it, was Pablo Picasso. In his famous "Les Demoiselles d'Avignon," painted in 1907, certain writers have suggested that the style in parts of the painting was influenced by Picasso's study of West African sculpture. Other artists such as Paul Klee, Amedeo Modigliani, Henry Moore, Ernst Barlach, and some of the German expressionists are known either to have collected or studied the works of their fellow "native" artists. Although early anthropologists did discover and study these arts, we think it is safe to say that the modern painters, art dealers, writers, and collectors were the ones who should receive credit for starting and fostering the trend which has now developed. The exhibiting of modern paintings with primitive art has now become a common arrangement.

Fashion and taste also enter into the whole picture of the present position of indigenous arts. If fashion is a prevailing belief established by a dominant section of society, we readily can recognize fashion as a recent strong influence in the acceptance of primitive art on the part of Western art culture. However, as taste is a personal evaluation, it would seem that the individuals of the society either had little opportunity to see native art works and express their taste at an early time, or their tastes changed and became sharpened and more receptive to new values as they first began to see primitive art. Most likely both of these things happened, but fads and fashion are extremely prevalent in the world of art. The fetish for antiquity is fostered by the commercial side of the art world. The psychological assurance given one who admires an antique by virtue of its past acceptance and age should not be underestimated. It is much easier to be sure in one's taste by collecting the antique than to express a taste perhaps at variance with the majority. The European artists who first accepted and collected primitive art certainly expressed their courage and leadership.

As these works have become collectors' pieces, many dealers have emphasized their antiquity and rarity rather than their aesthetic values. The scarcity of primitive art has in turn given impetus to the production of spurious works as a present-day profession. It is well known that the flourishing business of producing African and pre-Columbian works has been most lucrative in recent years. Yet, in defense of the dealers, we must add that, from our own knowledge of reputable European and American dealers, they themselves decry this practice and make every effort to authenticate their wares before offering them for sale. The increase in commercial value of genuine primitive art can be demonstrated by the

following example: Bena-Lulua figures from the Belgian Congo sold twenty years ago for five and ten dollars; today a well known dealer is happy to purchase them for sixty and eighty dollars. A similar increase, in the same percentage, seems to hold true for most primitive art from other areas of the world.

A prominent American dealer in primitive art, lately returned from Europe with his purchases, reported an unusual change in conditions. Before this trip he had always found a sufficient number of fine primitive art pieces available for his selection. This is no longer true as Swiss, Dutch, and German collectors are now buying the majority of superior works that appear for sale. Where material is still being found and brought to the art market, such as in Mexico and Peru, the above does not hold true.

It is only natural that the artist and his name become important, as he cannot be disassociated from his works. Many paintings have been collected, not always for their aesthetic qualities but because the work was produced by a particular artist who had achieved success and position. The accent on names and personalities is justified, as one logically would assume that if the artist had produced at a high aesthetic level in the past a continuance of this production could be expected and the investment in his painting would be safe. Until recently the reverse was true of the primitive arts, as the objects, having passed through many hands before the immediate sale, lost any connection with the artists that produced them. In isolated cases, when gathering for an ethnographical museum, the collector has recorded the artist. This information has been used by anthropologists but rarely by art historians. The usual anonymity of the primitive artist has been helpful in focusing attention on aesthetic qualities rather than the artist's name. Today a change is taking place with the names of native artists being important and their styles of work recognized.

The status of the native artist has not been stable but has varied in time and culture. In one culture the artist may have been considered merely a skilled person while in another he was a person of rank and prestige. The native artist, in most instances, produced to fill a definite immediate need and use for his work in his culture. This is in great contrast with the Western world of today where the artist usually has little knowledge of who will buy his work or if it can be sold.

The influx of Western thinking slowly is changing native art concepts. Native educators are endeavoring to reintroduce or stimulate native arts. In some cases this approach can be compared to "putting new wine in old bottles" as the need, within the culture, for such work has frequently diminished due to the shattering impact of Western industrialization and thinking. But the widely accepted belief is not always true that the breakdown of native religion, social systems, and arts immediately follows this encroachment. The danger of these revivals becoming a stimulus for the production of items for the tourist trade on a low artistic level cannot be emphasized too strongly. In West Africa at Achimota, University College, an effort is made to discourage students from reproducing traditional work, or work with Western art standards, but rather to encourage them to utilize their own artistic ability in producing a new form which will have an essentially African native approach. This method will not necessarily produce primitive art but will produce native African art. William Bascom (1953) has convincingly demonstrated, in his text for a *Handbook of West African Art,* that native African art still is being produced. Not only has African religion survived, but a good deal of work from the Ashanti, Ibo, and Yoruba is utilitarian and not religious in function. It sometimes is falsely assumed that most productions of native art, regardless of locale, are in some way allied to religion. Professor Bascom further states that small Yoruba carvings made for tourists have not become inferior in quality but maintain artistic merit. In Nigeria, Uganda, and Zanzibar, local educators also are fostering a native African art movement, while in the French Cameroons, at

Douala, a new museum with examples of African primitive art is a reference center for native African artists.

Australia has developed interesting native painters, but in the Western tradition. Professional Australian artists have successfully adapted native designs to commercial products, as have artists in other countries. True or not, we have heard it rumored that Belgian department stores have offered for sale kits which include materials, diagrams, and photographs so that one may reproduce African sculpture at home!

The Baffin Land Eskimo are now producing soapstone sculpture with subject matter stemming directly from their daily life. This sudden burst of artistic activity has produced so many fine pieces, in a short time, that the Canadian government found it would be expedient to develop a market for them. They are sold in Canada by the Handicraft Guild and in the United States a special non-profit corporation, Eskimo Art Inc., has been formed to exhibit and sell with the profits returning directly to the natives. Great care is being exercised to keep this art form from being commercialized or influenced by Western art standards.

The southwestern part of the United States has produced many fine contemporary native painters under the guidance of the government. Individual artists are known, collected, and even have one-man exhibitions in various art centers. Though other American Indian groups have also produced painters, the largest concentration is in the Southwest. The awareness of the traditional art and culture, and the teaching of techniques, not styles, by the sponsors has helped maintain a typically native quality in the work.

Numerous American, and at least one European museum, as well as several individual companies are producing casts of outstanding examples of primitive art, which are then sold by museums, decorators, and even by mail-order. These inexpensive reproductions enable interested people, with small incomes, to have examples of primitive art in their homes.

The ordinary art gallery and museum seem more concerned with primitive art from the unusual, art history, or aesthetic point of view than from that of ethnography or archeology. Broader interests occasionally are shown by briefly explaining the culture which produced the work, but no common approach is found. Regardless of this condition, museums at times have produced exhibitions involving primitive art, in one context or other, which have had great influence on the artist and the art world. Such exhibitions have been made dramatic and exciting by utilizing new approaches and methods of presentation which have caught and held the public's interest. It would be useless to attempt to list all the institutions which fall in this category but those in the United States which come readily to mind would include: The American Museum of Natural History, Brooklyn Museum, California Palace of the Legion of Honor, Cleveland Museum of Art, Cranbrook Institute of Science, Dallas Museum of Fine Arts, Detroit Institute of Art, Denver Art Museum, Los Angeles County Museum, Metropolitan Museum of Art, Mills College Art Gallery, Museum of Modern Art, Newark Museum, San Francisco Museum of Art, Pasadena Art Institute, San Diego Museum of Man, and the University Museum in Philadelphia.

Similar approaches have been used equally well in other countries but they have not been so widely publicized and for that reason are not so well known to some of us in America. The great Festival of Britain had throughout an abundance of new exhibition ideas adaptable to museums, and in the section "The People of Britain" displayed fine handling of archeological material. A minimal listing of these institutions should include: The Nordiska Museet, Stavanger Museum, and the Historiska Museet, all in Scandinavia; Musée National d'Art Moderne and some of the temporary exhibitions at the Musée de l'Homme, both of these in Paris; Oudheidkundig Museum and Rijksmuseum voor Volkenkunde in Leiden; Deutsches Museum in München; Victoria and Albert in London; Museo Nacional de Antropología in Mexico City; Museo Nacional de An-

tropología y Arqueología in Lima, Peru; and from other places in Europe, the Near East, and South America come echoes of other exhibitions or reinstallations using modern techniques.

Concurrent with the above, an important change has taken place in the alliance of the art world with primitive art. A voluminous amount of vague and cryptic writings about art have appeared, and primitive art has not escaped. Exhibition catalogues have been printed with excellent illustrations, which are of importance, and texts which appear to have little validity. These publications have worth in creating public interest and the desire to learn about native arts. However, instead of exhibitions and catalogues with tentative aesthetic interpretations, we now are seeing splendid exhibitions and catalogues with intelligent texts. The Museum of Modern Art in New York has produced for each of its major exhibitions a catalogue which is a reference work of value. These particular catalogues, including, for example, *Indian Art of the United States, Arts of the South Seas,* and *Ancient Art of the Andes,* not only represent great exhibitions but in themselves are important handbooks. Not all museums have the facilities for producing such exhibitions or catalogues, and it is the change which has occurred in these other publications which we find significant. Instead of the casual catalogue we find those such as the Brooklyn Museum's publication, *Masterpieces of African Art,* for its splendid exhibition held from October 21, 1954 to January 2, 1955. Here, not a new, but a definite stand has been taken as the curator states in his introduction, "In *Masterpieces of African Art* are presented sculpture, ivory, gold work, and textiles of Negro Africa from the French Sudan to the Belgian Congo, selected on an aesthetic basis and exhibited as works of art. The exhibition has been assembled primarily to stimulate the taste of collectors and students and cannot properly be considered an ethnographical exhibit." The apparent increase in the public's knowledge, or at least interest, is reflected in the texts, which refer to ethnographical literature and tribes concerned in a manner which could well be found in the literature of anthropology, although the exhibition is pure art.

It is this "wedding" of art and anthropology, in which today we find dealers, museum personnel, students, and collectors consulting anthropologists and their writings in order to understand and present primitive art as part of a culture rather than an activity removed from context, that is notable. In addition, primitive art has truly "arrived" when today particular works are designated as masterpieces. Aside from the above, and in no way intended to disparage the wonderful Brooklyn Museum exhibition, one point might be made about masterpieces. What is labeled a masterpiece today often is forgotten tomorrow, as demonstrated by the history of taste. We agree with many who feel that great numbers of masterpieces of art have been seen by the laymen, and some of the intelligentsia, not through their eyes but through their ears.

In tracing this growth of interest in primitive art two routes appear: one beginning in ignorance and ending in knowledge, the other beginning with the exotic and mysterious and ending still with the lure of the unusual. Let me briefly retrace the journey. Explorers, civil servants, anthropologists, and others collected native art and placed it in museums. Here it was discovered, around 1900, by European intellectuals, writers, and artists. Certainly the exotic strangeness possibly was the first attraction to the artists, who in their thinking and work were themselves in revolt against tradition and were exploring new concepts and realities. However, we cannot believe that, as these people began to collect native art with practically no knowledge of the relationship of the work to its culture, only the exotic appeal was involved.

Slowly, primitive art began to have a place in galleries as art and often was exhibited with modern paintings. As time went by, exhibitions of native art were held with consideration given to its background, so the layman would know, for instance, that a particular mask was used in a certain ceremony for a specific purpose. Most recently, primitive art has been

selected and exhibited on an aesthetic basis but with collateral scientific information regarding environment, use, and other relationships.

During this passage of time a larger segment of the populace has become aware of primitive art, and a growing set of well informed students and collectors has developed. Very likely the mythical man in the street has changed little, in his reactions toward native art, as a result of all this activity. The casual exhibition viewer may express the same type of interest, repugnance, liking, or amusement toward what he finds exotic, as was expressed by the casual visitor to the ethnographic museums fifty years ago. It is also true that a great many art students and collectors have, as a result of this activity, become far more interested in anthropology.

To contrast the two approaches indicated above brings me to what may be thought of, by anthropologists, as a heretical conclusion: Is it important to understand the relationships and meanings of this art in the culture which produced it, in order to *like* and *enjoy* it? We hold that *enjoy* is to "get pleasure from: relish" and *like* is to "be pleased with." For those who have knowledge regarding the work it may have greater interest, and they have greater understanding of the work, but it does not necessarily follow that it gives them greater pleasure. At this point Malraux's "art with an undying life of its own" attains greater validity.

When the layman likes a work of primitive art it is for reasons inherent in the work which are, to him, non-verbal and to which he responds. This is not to say that art, primitive or otherwise, is created independently of a culture and its forces but rather that many viewers are not interested in, or aware of, these cultural relationships in existence at the time of creation, but are concerned with how the work affects them existing in their own culture with its own particular forces.

At this point put aside all concern with beauty, social import, use, need, religious connotations, moral values, and other conscious value-judgments of art. Is it not possible that a configuration of autonomous qualities in a work of art, when in the right relationship, may in some way affect the observer to give him enjoyment? Could not this "gestalt" be a universal unaffected by time or place? A necessary adjunct to this experience must be that the observer would need to bring in his totality some structuralization which, when experiencing the catalyst of meeting the work of art, would allow the spectator the experience of liking and enjoying to come into his being. More simply, unless the observer had certain qualities which he brought to the work of art, almost as a key, the qualities inherent in the work would still remain locked within it, as far as he was concerned. Naturally his response may be favorable to what others may classify as a poor work, rather than a fine work, but this is not finally important to his receiving enjoyment. Otherwise, we would all like the same things, and in certain instances this may be true to the degree that our inner structuralizations were the same. This theory has been written about by the gestalt psychologists.

An over-simplification would be to say, "He likes it and it gives him pleasure." Such a simple hedonistic type of approach is perhaps old-fashioned and too general for many people. Disregarding the fact that the work of primitive art was not created to produce pleasure *per se,* the individual outside the culture is bound by his own frame of reference when viewing the work and cannot react, or the object have the connotations for him, as it has for one who is culture-bound to the society that produced the work of primitive art. Although not produced from a hedonistic point of view, the primitive work of art can appeal to people of other cultures and times on this basis. The early modern painters in Europe may have been excited by the exotic primitive works they saw, but the very qualities and new realities they were discovering and applying in their own works must have been seen also and recognized in primitive art.

The development of these two approaches: one in which the aesthetic aspect

is paramount or the other in which the scientific approach of systematically accumulating knowledge regarding primitive art is foremost, brings us back to the joint interests of art and anthropology. Many anthropologists are extremely intelligent regarding art and particularly primitive art. Likewise, many in the art world have knowledge of anthropology. Over the years this mutual interest has developed a group of workers from each field or with training in both fields. It will be interesting to see in which direction this activity will grow. If material culture and technology were not so out of fashion, at least in the United States, this would seem to be an area where both forces might join for future activity. Will the study of primitive art become formally allied with aesthetics, art history, archeology, anthropology, develop its own independent status, or vacillate among them all?

Art may be discussed from such a variety of approaches that one becomes lost in the complex of words. Many publications in the field of art are concerned with primitive art. Writings by art historians, aestheticians, artists, and others can be found in any large art library. They will certainly give the reader a much firmer and more complete background than what has been attempted here. However, we find it interesting that two of the most popular works in this field, in English, are by anthropologists. These are: *Primitive Art,* by Franz Boas (1952), and *Primitive Art,* by Leonhard Adam (1954). The first was published in 1927 and unavailable until recently reprinted; the second volume was first published in 1940 and reprinted in 1942, then revised and enlarged in 1949 and 1954. The volume by Professor Boas is the one more often found on the anthropologist's bookshelf, but the second volume, perhaps partially due to it's being an inexpensive Penguin Book, is widely found on the bookshelves of anthropologists, artists, art historians, and the interested public.

Granted that primitive art is of importance to many in the art world, it appears occasionally to have only peripheral interest. Some art journals rarely mention this art form and when they do it is relegated to the category of the decorative or antique. One journal which carefully surveys the major world trends and happenings in the field of art does not mention primitive art in their annual edition for the year 1952.

Those publications which appear under "References" below (not in the least all that recently have been published) range from handsome expensive productions with many illustrations and a page or two of text to very complete books, or exhibition catalogues, devoted to a culture or area, with illustrations selected to complement the text.

Let us now indicate some of the other events which have taken place since 1951.

1952

In this year there was more evidence of activity with primitive art than in the years to follow. The outstanding event of the year would seem to be the enormous exhibition of thirty centuries of art from Mexico, assembled by the Mexican government for showing in Europe. This panoramic exhibition included approximately 1,300 objects of all types and periods, and contained an outstanding collection of anthropological material. In 1952 it was shown in Paris and Stockholm and in 1953 in London and Rome, meeting with much enthusiasm and approval.

The Mexican Instituto Nacional de Antropología e Historia organized educational traveling exhibitions for use in schools. The pressure of a group of art teachers for material to promote appreciation of art culminated in this program, which includes information on the visual arts in pre-Columbian times and culture and art in the Colonial Period. Also there is the use of pre-Hispanic design motifs, as well as Aztec building techniques, in the new National Mexican university in Mexico City.

African native sculpture, which depicted a relationship to Western religion, was exhibited at the Vatican in Rome. In Zürich the Kunstgewerbemuseum der Stadt held an exhibit, titled "Bildwerke aus

Africa, Ozeanien und Indonesien." The Musée du Congo Belge at Tervuren displayed "Some Masterpieces of African Art." In England the Department of History of Art of the University of Manchester, in cooperation with the Manchester Museum, arranged a special exhibition of primitive art for the Whitworth Gallery.

The opening of a new museum, devoted to the peaceful conquest of the Congo, was an important event in Algiers. The Musée de Brazzo contains over a hundred pieces of African Negro Art arranged to show the main trends and influences on Western art.

The largest exhibition of North American Indian material ever exhibited south of Mexico, titled "Los Indios de los America del Norte," was held during this year at the Museo Nacional, San Jose, Costa Rica. The American Museum of Natural History lent the material from their collections and sent Dr. Harry Tschopik to Costa Rica to arrange the exhibition and write the catalogue.

In the United States, one exhibition which opened in 1951 still is displayed at the American Museum of Natural History: "Men of the Montaña: A Story of Life in the Peruvian Rain Forest." This exhibit utilizes fine exhibition techniques, intelligently approaches the problem of visually interpreting a culture, and also has an analysis of art from the region.

The Brooklyn Museum exhibited "American Indian Rock Drawings"; the Chicago Art Institute had "African Sculpture from the Collection of E. Elisofen"; the Denver Art Museum displayed pre-Columbian material in its exhibit "Old Gold," had its "Annual Exhibition of Contemporary American Indian Painting," and permanently installed "Native Arts—World Wide"; Gallup established an Indian Arts Museum; the University of California at Los Angeles exhibited "North West Coast Indian Art"; the Newark Museum displayed "Concepts of Man in Sculpture" and announced the acquisition of a Chibcha gold piece; in New York, the Museum of Modern Art began circulating its exhibition, "Understanding African Negro Sculpture," and the Metropolitan Museum of Art had "Old Santos from New Mexico"; the Reitz Folk Art Center at Mills College in Oakland received and exhibited a gift of fifty-eight Peruvian textiles; "Mexican and Central American Art" was elaborately shown at the Pasadena Art Institute; the University Museum in Philadelphia asked seven artists to choose their favorites for "Fourteen Eyes in a Museum Storeroom"; the Portland Art Museum displayed "Early Stone Sculpture of the Northwest Coast Indians"; the Los Angeles County Fair at Pomona had a survey exhibition, titled "Clay"; the California Palace of the Legion of Honor produced "Flight of the Image" and "Civilization and Style"; the University Museum and Art Gallery at Tallahassee, Florida, announced a generous gift of Peruvian material; and the Worcester Museum of Massachusetts made known the acquisition of objects from Costa Rica.

1953

The first exhibition prepared by a member state of the United Nations was offered through UNESCO for circulation to other member states. This exhibition, "Australian Aboriginal Culture," began a two-year tour of the United States.

The Kunstaller in Bern exhibited "Kunst der Neger"; the Rautenstrauch-Joest-Museum für Völkerkunde in Cologne showed "Art of the Black Continent"; "The Webster Plass Collection of African Art" was exhibited at the British Museum; the National Museum at Bezalel in Jerusalem exhibited "Masks of Primitive Peoples from the Collection of Dr. Alex Rafaeli."

In the United States the Akron Art Institute displayed "American Indian Sculpture"; the Baltimore Museum of Art received a gift of Peruvian ceramics; "Santos and Kachinas" were on display at the Colorado Springs Fine Arts Center; in Milwaukee the Art Institute exhibited "Peruvian Gold" and the Public Museum revealed "West African Art"; "It's a Small World" was on view at the Newark Museum; the Metropolitan Museum of Art unveiled a most extensive display of material from prehistory to Christianity in

"From the Land of the Bible"; in Philadelphia the Museum of Art displayed 175 pieces from the important Arensburg collection in "Before Columbus," and the University Museum included primitive art objects in its "Story of Man"; the Palm Beach Society of Four Arts exhibited pre-Columbian material; the M. H. De Young Memorial Museum arrayed "Indian Arts and Crafts from All of the United States and Alaska" as well as a selected collection from twenty museums and a dozen private collections, titled "Art of the South Pacific Islands"; "African Negro Art" was shown at the Howard University Gallery of Art.

1954

Although this year may not have had as many activities related to primitive art as 1952, it certainly included, at least in America, ones of import. In London the Arts Council Gallery had "Cave Drawings: Copies by the Abbé Breuil," and the Imperial Institute showed "Arts and Crafts of the British Columbia Indians"; also, in England the Corporation Art Gallery at Huddersfield exhibited "Cyrene-African Native Art"; in Utrecht was displayed "De Schatten von Peru."

The great exhibition assembled by the Mexican government and sent to Europe for showing in Paris, Stockholm, London, and Rome in 1952 and 1953 returned to its homeland in 1954. Using this exhibition as a nucleus, the government augmented the collection with loans from leading institutions and private collections in the United States and Mexico. This comprehensive survey of 3,000 years of art in Mexico was placed on display in Mexico City's Palace of Fine Arts. Occupying twenty galleries it demonstrated its popularity by the 1,500 residents and tourists who attended it daily.

In the United States, the Baltimore Museum of Art exhibited and received the gift of "The Wurtzburger Collection of African Sculpture"; the Brooklyn Museum brought together material from thirty-nine important public and private collections including objects from The Webster Plass Collection, on loan to the British Museum, the Rubinstein Collection in Paris, and the Basel Museum für Völkerkunde, to create one of the important exhibitions of African art. This exhibition, titled "Masterpieces of African Art," was supplemented by a well illustrated catalogue.

In Chicago, the Art Institute displayed an important collection in "The Nathan Cummings Collection of Ancient Peruvian Art." This was previously the Wasserman-San Blas collection formed by B. J. Wasserman of Buenos Aires. The Columbus, Georgia, Museum of Arts and Crafts installed its Indian collection in their Bradley Museum building; the University of California at Los Angeles exhibited "The Pueblo," composed of material from the American Southwest; "Rites and Revelry: An Exhibition of Masks" was held at the Montclair Art Museum; The Yale University Art Gallery exhibited "The Linton Collection of African Sculpture," formed by the late Professor Ralph Linton whose recent death was such a great loss to the anthropological profession.

This year also witnessed a superior exhibition devoted to "Ancient Arts of the Andes." This presentation, exhibited by the Museum of Modern Art and its collaborating institutions, the California Palace of the Legion of Honor and the Minneapolis Institute of Arts, brought together material from Europe and North and South America. The usual fine installation, material, and handbook gave the viewer a superb opportunity to become acquainted with art from this area. The concise catalogue, of an area which is still in a state of anthropological flux, was written by the late Professor Wendell C. Bennett, in whose recent death anthropology again lost an outstanding scholar.

Another prominent event was the permanent installation of the "Arensburg Collection of Twentieth Century Painting and Sculpture and Primitive Art" in the new wing of the Philadelphia Museum of Art. The late Walter and Louise Arensburg began their serious collecting in 1913 and amassed one of the great coherent collections of paintings, drawings, and sculpture

which show the precursors and subsequent developers of modern art. Also in the collection are over 200 pieces of pre-Columbian and other indigenous art works.

Both the Metropolitan Museum of Art and the National Gallery of Art exhibited Colombian primitive art in "Eighty Masterpieces from the Gold Museum of the Banco de la Republica, Bogotá"; indigenous art from Oceania, the Americas, Japan, and Africa was exhibited with modern art, and supplemented by a film and lecture review, in the extensive program given by the San Francisco Museum of Art in "Primitivism and Modern Art"; the Archeological Survey Association of Southern California made available for circuit exhibition "Reproductions of California Pictographs"; at the end of the year a new museum was announced, to be founded in New York City by Nelson A. Rockefeller and named Museum of Indigenous Art.

Many journals publish articles on the arts of indigenous peoples. We cannot list them all but a perusal of the following should prove of value to the student of primitive art. Published in Europe are: *Cahier d'Art, Minotaure, Le Musée Vivant, UNESCO's Museum, Beaux-Arts, Das Kunstwerk, Werk,* and *Formes et Couleurs.* In England are produced: *Studio* and, of great interest for timely events, the *Illustrated London News.* In Mexico a new bi-monthly has just appeared titled *Artes de Mexico.* The United States has such a variety of publications that articles are apt to appear in almost any journal; however, *Art Digest, Art News, Magazine of Art,* and *Life* magazine have all carried well illustrated articles concerning primitive art.

The "References" contain publications primarily from the art field, or listed there, as no attempt was made to search the literature of anthropology. Undoubtedly we have not included all the publications and events which have occurred that would be of interest to the reader; for this unintended oversight, we offer our apologies.

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Anthropology in Education

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EDUCATION, for the purposes of this account, is treated as the process of transmission of knowledge and skills through the medium of schools and, secondarily, through auxiliary programs such as those concerned with dissemination of knowledge and techniques in such areas as public health, agriculture, and technological advancement, and general literacy. Less institutionalized activities, such as child training and informal learning, important as they may be in the total educative process, are not the subject of this survey of developments for the triennium, 1952–1954, except as they have influenced concepts of education in the narrower sense.

Anthropology is treated as the systematized discipline consisting of a body of knowledge concerning the physical nature of man, his social behavior, the products of his activities, and the theories, methods, and techniques developed by anthropologists for acquisition and processing of such knowledge.

The relationship of anthropology to education, as delimited above, may be considered on four levels: (1) with respect to the anthropological content of subject matter taught in elementary and secondary schools; (2) with respect to the effect of anthropological theory, methods, and techniques on educational theory and practice, and also with respect to their uses in improvement of understanding of school and society as socio-cultural phenomena; (3) with respect to the role and place of anthropology in higher education; (4) with respect to the utilization of anthropological knowledge and methods in organized programs of folk education and the initiation of social and technical change.

ANTHROPOLOGY IN ELEMENTARY AND SECONDARY SCHOOL CURRICULA

Anthropology has been until recently almost exclusively a university and museum subject exercising but limited influence on the content of elementary subjects. Anthropological museums, however, for many years have been visited regularly by classes of elementary school children under the guidance of their teachers. Large museums, such as the American Museum of Natural History in New York, maintain active educational divisions with portable anthropological exhibits on special subjects that may

be obtained on temporary loan for school purposes, thus making it possible to reach into the classroom with authentic materials where schools are too far removed conveniently to bring the children to the museum. The development and promotion of film libraries by museum and university extension divisions offering rental of anthropologically-sound talking-films have contributed greatly to the displacement of fancy by fact in the understanding of primitive life by young school children during the past two decades.

The most significant trend of the present in this area, however, is the emerging use of anthropologists as consultants in content determination for standard social studies curricula. In 1953, for example, Professor Elmer R. Smith of the Department of Anthropology, University of Utah, was invited to join the Utah State Department of Education Committee for the Revision of the State School Course of Study in Human Relations (Social Studies). In an attempt to assist Utah schools in coping with the important problems of ethnic, racial, and group relations, the committee's emphasis has centered upon the changing patterns of human relations in the state and the schools' responsibility in this connection. One phase of its activities has been the revision and improvement of the Department of Education curriculum guides in social studies; in this, many hoary misconceptions about the aboriginal peoples of the Intermountain area of the United States are being corrected through the anthropologist's guidance (Jennings, 1953, p. 9). A somewhat similar service is being provided for the schools of Minnesota by Professor Lloyd Wilford, of the Department of Anthropology of the University of Minnesota. Current trends indicate that there are probably a number of similar instances in other cities and states.

There is little evidence that anthropology as a special topic of study is penetrating the secondary schools to take its place along side of history, chemistry, and physics—or commercial law, typewriting, and cooking. However, at least one private, preparatory school, The Brown-Nichols School, in Cambridge, Massachusetts, experimented with the innovation of a twelfth-grade option in anthropology in its curriculum of 1952, using a college textbook along with other readings. Sufficient success was achieved to warrant continuation of the course in 1953.

THE IMPACT OF ANTHROPOLOGICAL THEORY AND METHOD ON EDUCATION

The rapidly expanding horizons of society, combined with our increasing interest in group relations and a growing awareness of the fruitfulness of anthropology for understanding the dynamics of human relations have opened quite suddenly a new area for the application of anthropology in educational practice.

As long as a decade ago the Schools of Education of Harvard and New York Universities appointed an anthropologist to their faculties. Stanford followed suit in 1951, while in 1953 Professor Solon T. Kimball was appointed to the faculty of Teacher's College, Columbia University, in the capacity of anthropologist. Dr. Dorothy Lee holds the position of Consultant in Teaching at the Merrill-Palmer School, Detroit, Michigan, while Professor Jules Henry, on leave from Washington University, is serving as a Research Associate of the Sonia Shankman Orthogenic School, The University of Chicago.

Additional informal consultation between schools of education faculty members and anthropologists within the walls of their own universities definitely is becoming steadily more frequent, but without a broad mail survey, which has not been done, it is impossible to report on its nature or frequency.

It is evident, however, that departments of anthropology as such have to date taken little formal interest in education *per se* as a cultural phenomenon for course study. The *International Directory of Anthropological Institutions* (Thomas and Pikelis, 1953), lists only two anthropology offerings on Primitive Education (University of California, University of Texas). Likewise, only two departments of anthropology are recorded as offering courses on education not

limited to primitive society. At Washington University Professor Jules Henry teaches "Education as a Social Process," and, at the University of Utah, Professor Elmer Smith offers "Anthropology and Education." Our survey has not indicated what specific courses with anthropological orientation are currently offered in the curricula of schools of education.

It is notable that education *per se* was not a subject for investigation by the Wenner-Gren Foundation 1952 international symposium on recent developments in anthropology, nor is it even indexed in the report of the proceedings (Kroeber and others, 1953).

Nevertheless the trend and the potential of cooperative thinking between educators and anthropologists has become sufficiently strong to receive formal support from the Carnegie Corporation. Under the leadership of Professor George Spindler, aided by a Carnegie grant, June, 1954 saw the convening of a selected group of educators and anthropologists at Stanford University for the purpose of exploring the question of the application of anthropological concepts to the problems of professional education. Present were: Professors Theodore Brameld, Robert N. Bush, Arthur P. Coladarci, W. H. Cowley, Lawrence K. Frank, P. R. Hanna, W. C. Martin, James Quillen, Fannie R. Shaftel, Hilda Taba, and L. G. Thomas, representing the field of education. The anthropologists were: Cora Du Bois, John Gillin, C. W. M. Hart, Jules Henry, Felix M. Keesing, Solon T. Kimball, A. L. Kroeber, Dorothy Lee, Margaret Mead, Bernard J. Spiegel, and George D. Spindler. Nine prepared papers on the following subjects were offered and thrown open to extensive and free exploratory discussion: "Anthropology and Education: An Overview"; "Models for the Analysis of the Educative Process in America"; "The School in the Context of the Community"; "The Method of Natural History and Educational Research"; "Some Notions on Learning Intercultural Understanding"; "Contrasts Between Pre-pubertal and Post-pubertal Education"; "Discrepancies in the Teaching of American Culture"; "Culture, Education, and Communications Theory"; and "The Meeting of Educational and Anthropological Theory."

The tenor of the Stanford conference indicates that there will not be an effort to develop an "educational anthropology" as the previous generation saw the proliferation of "educational psychology" and "educational sociology," but rather, in keeping with the shift of emphasis within the schools of education toward a more generalized and at the same time more fundamental focus called "Social Foundations," anthropology's contribution will be in the means to analyze and understand school and society holistically.

In contrast to the apparent tenor of the Stanford conference and the disposition of those who are shaping developments in the field of education, Dr. Annette Rosenstiel, in one of the rare published articles on the subject of education and anthropology issued a call in *The Harvard Educational Review* for an "educational anthropology" on the ground that it will be fruitful for anthropologists "to use educational concepts in their integrative sense for the benefits that might accrue to anthropology and education alike." (Rosenstiel, 1954, p. 29.)

ANTHROPOLOGY IN HIGHER EDUCATION

In 1953, the July–September issue of the *American Anthropologist* was largely devoted to the publication of the proceedings of a symposium on "The Training of the Professional Anthropologist" which had been presented as a part of the program of the 1952 annual meeting of the American Anthropological Association. This was the first occasion at which the major professional association undertook formally to assess its methods for the training of new recruits in anthropology in the traditions and skills of the profession. The cursory nature of the papers presented and the lack of interest in following up the subject that has been manifest among anthropologists in this country reveal an absence of concern for exchange of views on the question of how anthropologists may best be educated. Each institution continues to do the job

in its own way according to the interests and predilections of its staff and facilities.

None of the major anthropological journals has ever carried a discussion of matters pertaining to the content and goals of anthropological teaching on the college level, nor, to the best of my knowledge, has a paper on this subject ever been read at a professional meeting. By and large, university anthropologists seem to be content to teach "anthropology" each according to his own lights (and those of the textbook writers), letting it go at that.

The new position of anthropology in the general education programs of American colleges, however (see Voegelin, 1950), is gradually awakening teachers of anthropology to a greater awareness of the question of the role of their subject in the total undergraduate training program. Just prior to the period covered by this *Yearbook,* Occidental College convened a conference on the "Status of Research and Teaching in Anthropology of the Southwest." Although regional in its emphasis, the Occidental conference was fruitful for those who attended it. A mimeographed copy of the proceedings was distributed in 1951, but it is unlikely that more than a few anthropologists have had the opportunity to benefit from a reading of it.

Recent anthologies for use in social science and general education courses in liberal arts programs, like recent basic textbooks in education, nevertheless show a marked tendency to increase the inclusion of anthropological selections—especially those conveying or exemplifying the concept of culture. There is much evidence that Ruth Benedict's *Patterns of Culture* is widely used, in whole or in part, as a reading selection in general education courses in a number of colleges. Certainly, anthropology is being widely recognized as peculiarly appropriate to collegiate general education programs. Further, in a number of institutions selected courses in anthropology are becoming required in special programs for majors in education, area studies, public health, law, journalism, American studies, and sociology. The limited professional opportunities for trained anthropologists, combined with the growing demand for non-professionally oriented anthropological offerings, make the present lack of organized interest for consideration of the place of anthropology in the college curriculum seem most myopic (Ehrich, 1954).

ANTHROPOLOGY IN ORGANIZED PROGRAMS OF COMBATING ILLITERACY AND IN THE INTRODUCTION OF SOCIAL AND CULTURAL CHANGE

Particularly significant in this area is the participation of anthropologists in the formation of Fundamental Education programs by UNESCO (UNESCO, 1947). Fundamental Education is aimed at covering "the whole of living," not just elimination of illiteracy; and its emphasis is on learning for change and how to cope with changing techniques while working out successful institutional and personal adjustments. The most notable specific contribution to this field of education in the current period is the manual prepared by The World Federation for Mental Health and edited by Margaret Mead, entitled, *Cultural Patterns and Technical Change* (1953). The manual emphasizes the whole approach to cultures; it presents specific examples of change with reference to whole cultures—Burma, Greece, Tiv, Palau, and New Mexican Spanish-Americans; it enunciates a number of clear-cut working principles for effective educative steps to be taken in conjunction with technical aid programs as guides for professional personnel.

This survey of anthropology and education, except for its brief reference to UNESCO activities, necessarily has been limited to developments in the United States. As the reader may readily discern, little or nothing on the subject finds expression in publication—even less, apparently, in other lands than here. Consequently, the writer in this field is forced to rely to a considerable extent on what he knows to have been taking place from personal observation. The *lacunae* with reference to what may be happening in the

field of education and anthropology in Europe, South America, Asia, and elsewhere is in no sense to be taken as indicating that nothing is to be written about those areas. It simply has not been possible to do so on the basis of available information.

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1953 *International Directory of Anthropological Institutions.* New York: Wenner-Gren Foundation for Anthropological Research, Incorporated. 468 pp.

Anthropology and Human Relations in Business and Industry

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ANTHROPOLOGY AND HUMAN RELATIONS

AS is now well known, anthropology formed one leg in the tripod serving as a foundation for the human relations approach to a study of business and industry. Psychology provided a second leg, and the third was that non-professional body of uncodified knowledge, sometimes referred to as common sense, though it might often be more appropriately referred to as "uncommon sense." Such uncodified knowledge, not infrequently more accurate than codified professional knowledge, represents a semiconscious intuitive understanding often developed to a high order only among inarticulate men of experience. As such, it is passed on in a sort of apprentice system from senior to junior leaders, both by example and word of mouth, but less often set forth in writing, so that in the professional literature it has often gone unrecognized.

The late Elton Mayo of the Harvard Business School, who combined in one person both codified professional knowledge and the intuitive understanding of men of experience, was the person mainly responsible for building this foundation from which a sound theoretical and practical approach to an understanding of the human problems in business and industry could be built. In his person he combined in varying degrees of expertness all three legs of this tripod. One, he had a professional knowledge of psychology, in part directly acquired from Janet. Two, he had an uncommon awareness of the human problems in business and industry based in part on a considerable experience as counselor and psychotherapist to industrial leaders and workers in this country and abroad. And third, through personal association with Malinowski and Radcliffe-Brown in Australia, his home-land, he acquired a valuable understanding of anthropology. Thus, many years later, when at the Harvard Business School, Mayo called upon the services and counsel of W. Lloyd

Warner, who also at the time was at Harvard but in the Department of Anthropology. With the three legs of this tripod serving as a foundation, Roethlisberger and Dickson conducted their now-famous five years of study and experiment in Western Electric's Hawthorne Plant in Chicago, from 1927 to 1932.

The main contribution of their extensive and intensive study (1939) was the providing of a substantial and experimental basis for claiming that the productivity and satisfaction of workers were to a large extent determined by their human relationships. Among the principal anthropological contributions was the method of participant, objective observation and the concept of the importance of social groups as determinants of human behavior.

The study of businesses and industries, or *work organizations* as henceforth they will be most often referred to here, provides in many ways a most favorable setting for the testing of anthropological theories and methods. Similarly as a primitive group with minimal external relations provides a relatively self-contained field laboratory for studying whole societies, so work organizations in our more complex society approximate this concept of relatively self-contained groups in a natural setting. What is lost by not including the family, religious, and other aspects of the lives of these individuals is offset by the wealth of general and detailed record evidence of many kinds. But perhaps of overriding importance is the excellent opportunity afforded to observe change—for change is rapid and continual, what with the introduction of new technologies, new products, reorganizations, layoffs, and one thing or another. And to make the study of work organizations more enticing for the student of human society, there is always the possibility that management, union, and workers can be persuaded to cooperate in conducting semi-controlled field experiments for the study of change.

In studies of work organizations in their natural settings, the anthropological field technique of participant observation has tended to develop an increasing awareness of what elements are *relevant* for detailed investigation. Too often, studies are undertaken by persons having prematurely decided what information to gather, for instance, by questionnaire. Then, having administered the questionnaire, they have insufficient direct intimate experience to judge whether important relevant factors have been omitted. However anthropologists may err in failing to concentrate on detailed quantitative methods, they tend not to err in quantifying irrelevancies.

Likewise, some of the basic theoretical points of view of anthropology have helped in guiding and interpreting studies of modern work organizations. As just mentioned, the concept of the social group being a major determinant of the behavior of its constituent members has provided one of the principal contributions to a clearer understanding of productivity and morale. Although the emphasis on the study of work organizations has been on the small work group, there is in the literature beginning to be an increasing awareness that a person's relationships and satisfactions not only are determined by his personality and small work group, but also, for example, by technology, by other groups, and numerous key individuals throughout an entire organization, not to mention factors outside the organization. Thus, the more inclusive concept of culture as a determinant of work performance and morale both by diffusion and convergence is beginning to emerge in the writings of non-anthropologists, though the term "culture" is rarely used.

THE HUMAN RELATIONS MOVEMENT

This development of a sober and scholarly human relations approach to the study of work organizations has coincided with several other less sober trends that have helped transform this scholarly approach into a dynamic management movement. First and foremost, of course, is the rapid rise of unionism which has confronted management with a major, continuing crisis. No longer does management have the freedom of action, the power to be arbitrary, to dictate to employees as it wishes—the

unions have put a stop to this. With government backing, unions have successfully challenged management's long standing personnel and supervisory practices. For example, management can no longer lay off nor fire union members at will, nor can it any more assign one arbitrarily to any job, nor work union members overtime at usual wage rates.

Governmental regulations have further restricted the freedom of action of many companies as to prices, profits, minimum wages, maximum work hours, etc. In addition, technological change, relocation of industries, company mergers, and the like have tended to increase company competition for customers, resulting often in "squeezing out" marginal firms. Under these changed conditions, management has lost its much valued freedom of action, and, for many firms their survival as institutions has become increasingly precarious. Confronted with such a convergence of crises, many managements have had no other choice but to seek new solutions. Thus there has grown in management an increasing felt need to try something new—new machines, new products, better organization, anything that works. And swept along with this surge toward innovation, the human relations approach, which twenty-five years ago began as a scholarly undertaking, also has now become an important management movement.

In addition to the original core of anthropologists, psychologists, and their followers who entered this field in the early stages, many social scientists from other disciplines have been drawn to it, including, for example, sociologists and psychiatrists. But numerically even more important, "lay practitioners" have been swept along by the current of this human relations and related movements until the business and industrial world is flooded by consultants of one kind or another, who represent no formal discipline other than the "discipline" to be derived from practical experience and common sense. Many of these persons have been personnel men or executives of one kind or another. Thus professionals and "lay practitioners" flood the field, each contributing something different, and, to boot, one should not lose sight of the fact that the individual *subjects*—the workers, members of management, and union members themselves—may develop a profound interest in such investigations and undertake one on their own, or participate in, such studies. Thus in the study of work organizations in our society, the usual distinctions between anthropologist and subject or "native" become blurred, for the two may switch roles—the anthropologist "going native" in the factory, and the "native" turning up in the graduate school. Through such switching of roles, common sense understanding and professional knowledge become merged with the felicitous result of further accelerating development toward a human science of organization.

This focusing of numerous professional disciplines, non-professional "natives," and lay practitioners on the human problems of work organizations has resulted in a burst of published studies and opinions in the last few years. The volume of such writings began to increase noticeably soon after World War II, and it has continued ever since. The stimulation from and competition for different points of view is naturally intense, though for some a process of cross fertilization has been mellowing and fruitful. With all the inherent complexities of human organizations, no one individual or group is liable to encompass the total understanding of all the others—there is much to learn particularly when considering the detailed understanding required for practical solutions to specific problems. Thus those who study work organizations in our society today, whether non-professionals or professionals, often are most obviously in the dual roles not only of teacher but of learner as well.

EVOLUTION TOWARD AN APPLIED SCIENCE

There is little doubt that in the past three years, 1952–1954 inclusive, the period covered by this review, much progress has been made contributing toward the development of a science of social institutions, more particularly to an understanding of

the social organization and human problems of work organizations. The progress has been in two directions: one outward, exploratory and general; the other inward, becoming more specific or quantitative.

The progress outward refers to studies that have uncovered or corroborated the existence of factors that previously have been largely overlooked in most writings on this subject, but promise to be highly relevant for any full or realistic understanding. In the last three years, for example, several studies indicate the importance of not restricting consideration to one small group, but to include related groups as well, and in fact to consider the larger organization of which the small group is a part. However obvious this may be to anthropologists, it is a discovery for many.

A second "discovery" that again corroborates anthropological theory is the proven relevance of technology and material culture for a proper understanding of the human problems and functioning of work organizations. Several studies have contributed valuable new *specific* evidence of the interrelations between technology and human relations.

Finally there appears to be a meager but nevertheless beginning awareness of a new relevant area, namely man's physiological limitations. Regarding workers, this has been "discovered" in some studies reporting the boring repetitive nature of assembly-line work, and in the area of human communication between any two persons, one study stresses the neurophysiological processes within a person that only inadequately perceive and often misrepresent messages received from another.

Thus in the recent publications on work organizations, there is progress outward, i.e., the uncovering of new relevant areas for consideration. From this there emerges specific evidence for the basic anthropological dictum that man should be considered from a comprehensive point of view. There is man's relationship to other men, his relationship to material culture, in fact to his entire environment, not forgetting his behavior as limited by his own biological make-up.

The progress inward, toward becoming either more specific or more quantitative in describing factors well recognized as relevant, is likewise considerable. For example, small work groups have been described in increasing detail, spelling out, for example, the specific behaviors of constituent members. Similar care and concern have been devoted to becoming more specific or quantitative in describing the bewildering complexities in the most basic of all social units, namely the communication that transpires between a pair of interacting persons. The literature has not been combed for such studies but only for those carried on by persons known to be active in the study of work organizations or carried by journals largely devoted to a consideration of the human problems of work organizations. These attempts to become more specific or to quantify are concerned largely on the one hand with observing interactions or tracing the flow of communications and on the other hand with interpreting or measuring the "emotional tone" of verbal and other responses.

In the opinion of the reviewer, the progress outward in discovering an increasing number of relevant considerations in the study of work organizations, and the progress inward in quantifying or becoming more specific about factors known to be relevant, suggests that a *science* of human organizations is around the corner. The dual trend of encompassing more and more relevancies and quantifying those already known has characterized the evolution of such applied sciences as engineering and medicine. In a book in preparation by the reviewer, the point at which the evolution of engineering and of medicine turned from being largely an art to being substantially a science has been pointed out. The turning point occurs when specific remedies can be predicted to solve specific problems with a considerable degree of accuracy. It is there claimed that our present-day understanding of applying anthropology to cure and to prevent the human problems that arise in work organizations is homologous to the understanding achieved by engineering and medicine shortly before, if not

during the period when the practicing of an art was giving away to the practice of an applied science.

A SURVEY OF THE RECENT LITERATURE

The hundred or more articles and books consulted, of which about seventy were read with varying degrees of thoroughness, lend themselves to treatment under eight headings or general topics. Four of these general topics are of long-standing interest, i.e., ones that have been investigated and reported on frequently in the past, whereas four are newer topics that have received relatively little consideration in the so-called "human relations" literature. The four topics of long standing interest are studies and discussions of (1) Small Work Groups, (2) Committees and Conferences, (3) Individuals in Organizations, and (4) Face to Face Communication. The four newer topics discussed are (5) Social Systems in Relation to Technical Systems, (6) Labor Unions (as organizations), (7) Organizations, and their overall Functioning, and, finally, miscellaneous topics are mentioned briefly such as problems in establishing rapport, problems of consulting, and cultural and class differences among employees.

TOPICS OF LONG-STANDING INTEREST

1. Small Work Groups

Almost all the studies of small work groups are focused on attempting to discover the human factors, particularly social relationships, that determine the productivity and morale of group members. After all, this is of prime concern to management, and the importance of the small work group in this regard is one of the well established generalizations in the human relations literature on work organizations. The problem is a highly complex one because of the difficulty of attempting to show precise connections between three different kinds of phenomena: productivity, sentiments (for which the terms satisfactions, attitudes, or morale can be substituted), and social relationships. The description and accurate measurement of any one of these three is difficult at best, and the possibility of being misled by spurious accuracy is great. To measure fairly, for example, what often appears simple, such as the productivity of a group, can turn out to be a most frustrating experience, particularly when the group is not producing a standard product or service but, from week to week for example, producing different kinds of products and services in varying proportions.

In tackling this problem, some investigators continue to approach it in a general sort of way, describing, for example, social relationships and sentiments in fairly general terms though usually in greater detail than formerly. Others have set out deliberately on a more specialized task to introduce an innovation or two, such as more controlled experimentation or concentrating in greater detail principally on one of the three phenomena—either on morale, or on social relationships, or on productivity. The most ambitious of all are two studies that attempt to consider and describe all three phenomena simultaneously in considerably greater detail than customary.

The most useful study describing the general connections between the productivity, sentiments, and social relationships of small work groups is a summary by Kahn and Katz (1953) of the studies conducted under the human relations program of the Survey Research Center, University of Michigan. As to method, they attempt to overcome the limitations they see in the more conventional anthropological studies in which observations are unquantified, groups and individuals are unsystematically sampled, and the accounts of sentiments and morale are impressionistic. To this end, they administer questionnaires and standardized interviews to a carefully defined sample of respondents. They do not attempt observation. Based on a number of comparative studies, they try to isolate the factors associated, for example, with high producing groups. They have gathered evidence showing that in groups having high productivity and high morale the immediate supervisor in charge spends

more time in supportive functions such as training and giving information; he refrains from too close supervision (i.e., too frequent checking, handling all details, not delegating, and so forth) and he is more employee-oriented than production-oriented, i.e., he takes a personal interest in his employees, understands their mistakes, and sides with them. Also, the relationships among the group members themselves are mutually more helpful—there is more team spirit and cohesiveness.

Blau (1954b) corroborates and enlarges on some of these findings in comparing (1) groups whose members cooperate as a team with (2) groups whose individual members compete against one another. It is not surprising that he confirms the findings of Kahn and Katz by pointing out that the groups whose members display greater teamwork are more productive. He points out, however, that individuals within the competing groups are the highest producers of all. Such observations suggest how misleading individual productivity records may sometimes be.

Kahn and Katz conclude their summary with the observation that the behavior of the immediate supervisor, in whom they naturally place much of the credit for the group's performance, is in turn affected by his relationship to the supervisors above him. Thus it becomes important to look beyond the immediate small group for reasons affecting the group's productivity and morale. This point will be discussed further. They also point out that the productivity and morale of a group can vary independently of each other. It is not at all uncommon, for example, to have a high producing group but one with relatively low morale.

The Survey Research Center also plays a prominent part in conducting more specialized studies, in particular one by Morse (1953) concentrating on the connections between job satisfactions and social relationships. The study follows the Center's usual method of comparing many similar kinds of groups and gathering information by questionnaire and interview (presumably by standardized interview) but omitting observation. Great care was taken not only to consider general over-all morale or job satisfaction but to subdivide it into some of its constituent elements, and to assess each independently. For instance, respondents were judged (1) as to their degree of intrinsic job satisfaction and (2) as to their involvement in the company. It was found that a large number of those with high intrinsic job satisfaction liked the variety and opportunity afforded them to use their skills and abilities. But it was by no means true of all, for there were some, highly satisfied with the intrinsic job, who were performing repetitive clerical work involving little if any decisions. The study is full of such discriminations, some of them contrary to often-held common sense assumptions. It is therefore highly stimulating and suggestive, but leaves one wishing for more information, for the kind of fuller understanding that derives from observation and intimate first-hand knowledge of a situation.

One of the most intriguing findings is the contrast in conclusions arrived at by dividing the entire 742 employees in the sample into three *statistical categories* (low, medium, and high satisfaction) compared to contrasting nineteen *work groups*—the nine most satisfied against the ten least satisfied. (There were apparently forty-five work groups in all, each presumably under a different front-line supervisor.) In the comparison, only general over-all morale was considered, or the degree of satisfaction toward the total job environment. In the first instance, comparing the three statistical groupings (with no regard to work group membership) the high morale employees have a different perception of their supervisors, whom they view more favorably in a number of respects. But when comparing the nine work groups with highest general morale against the ten with the lowest, there is surprisingly little difference in the employees' attitudes toward their supervisors. Upon closer examination it was found that an employee's attitude toward all his supervisors, particularly front-line and second-line supervisors, was more related to general over-all morale than his

attitude toward his particular front-line or immediate supervisor only. Furthermore, the high and low morale work groups cluster in different divisions of the company. Thus there is again evidence of the importance of looking outside the small work group for explanations of what transpires within.

A number of other studies point out the importance to a small group of their relationships to other groups and individuals outside. Roy (1954) discusses the importance of intergroup relations in determining the collusive practices within a small group devised to satisfy the quota requirements or work output demanded by management. Mann and Dent (1954) and also Pelz (1952) point out the important role of the supervisor as the small group's "foreign respresentative" or ambassador. Pelz makes the keen observation that "helpful" behavior on the part of a front-line supervisor or a warm personal interest in the members of his work group may in fact worsen the morale of his group if he lacks influence with key persons and groups throughout the organization.

Another study specializing on morale (Jackson, 1953) introduces an experimental innovation. Nine telephone work groups are compared for their responses toward their immediate supervisor. Two attitude questionnaires were administered four months apart, before and after a switch in the immediate supervisors, whereby each of the supervisors was reassigned to one of the other nine groups. In this experiment, Jackson found first within each group a consensus, but a change in consensus following the switch in supervisors. Second, between pairs of groups having the same supervisor but at different periods he also found they shared similar sentiments toward the supervisor. Thus Jackson infers that the changes in supervisors produced changes in leadership behavior which changed the verbal responses of the groups toward their immediate supervisor.

A different kind of specialized study by Blau (1954a) is focused on observing and systematically recording the *social relationships* of a small work group in a government agency. Blau recorded the interaction frequency between the group members and points out *general* connections between interaction, morale, and work performance. The frequency of interaction and the persons with whom members interact are closely associated both with the feelings they have about one another and with their output of work.

As a "specialist" concentrating on social relationships, Blau shows connections between different kinds of interactions. For example, he makes the observation that the greater the number of persons with whom an individual has a frequent pair relation, the more likely he will be to interact with these persons in a group relationship. Similarly, Morse (1953), a "specialist" discussed above on morale or job satisfaction, shows interconnections between different sentiments, as for example the close correlation between those satisfied with their immediate supervisor and those having a high involvement in the company.

This will conclude a review of the more specialized studies usually concentrating systematically on only one of the three phenomena—either on morale, on productivity, or on social relationships. Of the two more ambitious or comprehensive studies, Homans (1954) and Westerlund (1952), both attempting a detailed and systematic analysis of the interconnections among all three, the latter will be reviewed in some detail as it is the more fully reported.

This study by Westerlund represents a noteworthy advance toward a more specific understanding of the interconnections between morale, productivity, and social relationships. It is a Swedish study, further adding to the list of superior work recently coming out of Europe. And, as with the classic Western Electric experiment, the management of this Swedish company gave much time and attention to the conduct of a controlled field experiment, which in this instance was specifically designed to provide them with evidence for a major policy decision. Outside financial assistance also was forthcoming, in this instance provided by the Swedish Social Science Research Council.

The company in question is the government-owned Telegraph Company, in particular a department of the Stockholm Telephone District that handles outgoing toll calls. The practical problem with which management was concerned was whether or not to revamp the entire organizational and supervisory structure of the company, referred to by the author as functional supervision. This designation refers to a type of organization whereby departments are large, apparently one hundred or more operators, with the supervisory functions for the entire department divided among five or more supervisory specialists, one primarily concerned, for example, with training, another with assigning jobs, a third with inspecting the handling of calls, and so forth. There was a belief in management that many human problems could be traced to this split system of supervision, and that a new system should be installed whereby small work groups of fifteen or twenty operators would be supervised by one person only, a so-called group leader, who would perform all supervisory functions.

To test the belief, an experiment was carried out whereby two experimental groups were set up, each with its own group leader and working on different shifts. An approximately equal number of girls on the same two shifts, still working under the functional system of supervision, served as two control groups. Two months after the decision by top management to conduct the experiment, the two group leaders began working with the experimental groups. Soon thereafter one observer was assigned to each of the four groups (two experimental and two control groups) mainly to record the interactions between the operators and their group leaders or other supervisors. These observations continued for two months and were followed by a questionnaire and an apparently non-directive type of interview of all persons excepting a handful who had in the meantime left the company or were otherwise unavailable. In addition, during the course of the experiment, all sorts of productivity and performance measures were recorded to contrast the productivity and performance of the experimental to the control groups.

Presumably to focus attention on those areas which management wished improved, a list of thirty-two hypotheses was selected for their supposed testability. About half were considered confirmed in part or in whole by information forthcoming from the experiment, and none were disproved.[1] Among the hypotheses concerned with predicting that the productivity and performance of the operators would improve, one was confirmed in part, namely the number of calls handled per operator, and a second was confirmed in full, namely a significant decrease in the number of "breaks" or times a girl left her work station for various personal reasons. Interestingly enough this decrease in the number of "breaks" was not perceived by the operators, for they thought they still took as many as before.

Several of the hypotheses concerned with morale—either an improvement, or at least no worsening—were confirmed. The operators, for example, reported no greater fatigue, monotony, or job pressure. And even though prior to the experiment, they were fearful of the innovation of having the group leader openly listen in to check up on their calls, they actually came to prefer it to the old system of not knowing when they were being checked up on. And even though in fact they were being more closely inspected, they considered it less. Similarly, despite strong prior objections against inaugurating the new supervisory system, the operators in the experimental groups came to prefer the new system with the group leaders.

Finally, there were a number of hypotheses confirmed regarding changes in social relationships. For example, operators contacted their group leader twelve times more often than those in the control group contacted their supervisors; and compared to the time spent in various super-

[1] It is not clear, however, to what extent these improvements reflect the "Hawthorne effect," or improvements resulting from special attention to the group given by observers, experimenters, and higher management. As each control and experimental group had an observer, distortions due to this factor at least can be presumed to be minimal.

visory activities in the control groups, the group leaders in the experimental groups spent far more time training, inspecting calls, caring for customers' special problems, and handling personnel questions. Although the contacts between operators presented too many problems to record accurately, there is evidence that in the experimental groups there developed a greater intimacy among the operators as indicated by the fact that more of them knew one another's name.

This then concludes a review of this important advance in simultaneously describing in some detail the morale, performance, and social relationships of a work group, and demonstrating more specific connections among all three.

2. Committees and Conferences

The interest in committees, conferences, and group discussion continues apace. This includes, on the one hand, interest in assortments of people convened for laboratory experiment and, on the other, "natural" committees functioning in real-life situations. Bales (1954), Maier (1953), and Maier and Zerfoss (1952) report on the former—the laboratory groups—stressing the importance of permissive leadership in training or problem-solving as well as the need for full member participation. As is well known, there has accumulated a wealth of material on this theme, a large proportion of which has stemmed from the works of many professionals participating in or influenced by the Group Dynamics movement inaugurated by the late Kurt Lewin and now centered at the University of Michigan, and the summer sessions at Bethel, Maine. Among most of these professional studies of committees, it is tempting to infer the presence of a tacit assumption, explicitly stated by Bales, that most decisions are made in conferences, thus imputing to committees and conferences a dominant position in the power structure of work organizations.

In contrast to the "value" placed by these *professionals* on decisions by committees and on permissiveness among leaders, there emerges a minority opinion apparently voiced by non-professionals, on the one hand by Berwitz (1952) who appears to be a "native subject," an old hand at chairing committees, and on the other by Patton (1954), an apparent "lay practitioner," a management consultant. Among the conclusions of the former is that the key to the success of a working committee lies in the adaptability of the chairman who, in the first few sessions, must feel out the situation to determine whether he should assume the role of leader, moderator, or dominator, and to what extent he should resort to working with individual members in a pair relationship outside the formal committee meetings. The latter—the lay practitioner—points out that committees have greatly increased recently in response to the need to integrate the large increase in staff personnel that has occurred over the last decade or two. He deplores the trend away from committees as discussion groups to committees as decision-making bodies, because (1) it tends to remove responsibility from the executive responsible, and (2) it conceals the identity of the one or two executives who in large part determine most decisions anyway. As a result he recommends, particularly for an organization in a highly competitive field, that they de-emphasize committees, reraise the importance of the responsible line executive, restore individual initiative, but decentralize this responsibility so as to place major decision-making on line executives lower in the hierarchy, who are more familiar with operating details.

The contrast in emphasis between these two points of view, one held largely by a group of professionals and the other by non-professionals, provides the basis for a stimulating controversy, one that can lead to a fuller understanding of this seeming contradiction. One approach toward a fuller understanding, of course, is a thorough examination of "natural" committees actually functioning in work organizations. A step in this direction has been taken in at least two studies, one by Guetzkow and Gyr (1954), the other by W. H. Scott (1952). From these two studies a more factual and comprehensive view emerges.

With regard to the importance of committees as decision-making bodies in work organization, the latter study by W. H. Scott demonstrates that committees, at least joint labor-management committees in three English firms, play a distinctly minor role. As regards the internal functioning within committees, the former study by Guetzkow and Gyr lays emphasis on what transpires within committees, providing evidence for the importance of permissive leadership and member participation. But Scott emphasizes informal relationships outside the committee, stressing their prior importance as determinants of behavior inside.

As we have already seen, a small work group cannot be fully comprehended apart from its position in a total organization, so the functioning of a committee should be similarly appraised. As a result of this more comprehensive view, Scott's study emphasizes the secondary importance of behavior inside committees and the primary importance of informal relationships outside, at least as regards particular kinds of committees in particular organizations. This study, however, provides little evidence to support or refute the importance inside committees of permissive leadership and member participation; it enlarges the relevant relationships requiring consideration. However, neither study is addressed toward discovering the appropriateness and limitations of decision by committees vs. decisions taken on individual initiative, and on the appropriateness and limitations of permissive leadership in or outside of committees. More investigation focused on the optimum and limiting conditions suitable for each is long overdue.

3. Individuals in Organizations

The writings on this topic fall mainly into two categories, one concerned with relating the needs of individuals to the demands of the organization, and the other with organizational leaders and the problem of describing their behavior.

As regards the needs of individuals in relation to the demands of an organization, Whyte (1952) considers the problem of economic incentives. He points out that to be effective, economic incentives must encourage behavior rewarding to the members of a group. This can be facilitated if such incentives are planned and integrated with a human relations program. Specifically he points out that setting rates or quotas as a basis for incentive pay never can be accomplished even by the most meticulous attention to details and *facts* if worker sentiments are neglected. Thus setting rates, quotas, or standards of any kind as a basis for financial incentives should be a cooperative endeavour—it must be shared with the employees, probably through their union stewards. Failing this joint participation, management can expect their productive employees and those who set standards, output, or pay, to reach a condition of distrust, each trying to outsmart the other, with resultant ill effects on both productivity and morale.

However, even though employees may not have participated in the determination of output quotas, Roy (1953) points to certain human incentives that tend to encourage piece-rate workers to meet, anyway, these established quotas. These human satisfactions in reaching the quota derive in the first instance from a desire to play a kind of game to escape monotony, for actually a fast, rhythmical work pace seems less fatiguing and boring to many, possibly due to certain fundamental physiological demands. Second, by keeping up with or a little ahead of the established quota, one can then enjoy free time to mix with friends, not to mention, third, the joy of getting back at the supervisor by flaunting in front of him this inattentiveness to work. Fourth, this behavior is almost sure to win approbation from fellow workers; but if carried too far, and the quota exceeded too much, then this worker approbation rapidly disappears.

In showing connections between the needs of individuals and the demands of organizations, Argyris (1954a) reports a most interesting "experiment" in an article entitled "Fusion of an Individual with the Organization." This study was designed to

test the theory that if an individual is to derive satisfaction from a work organization, his own needs for self-expression must find an outlet and be fused with the demands of the organization. To this end Argyris devised a method of interviewing individuals in a work organization to determine their personal needs and the extent to which these needs were being met. Next, he rated these individuals, devising a measure of the degree of fusion, so to speak, for each. He then predicted that those with the lowest scores would soon leave the organization and those with the highest would not, and to his credit these predictions turned out to be substantially correct.

In addition to discussions focused on the needs of individuals, there are as usual a number of articles on leaders, their characteristics, attributes, and functions in a work organization. Two consulting psychologists, Janney (1952) and McMurry (1952), present their views, one considering company presidents, the other singling out the type of executive who is driving, technically competent, fast rising, but one with an obsessive devotion to his work, who fails however to develop subordinates or build team work among them. For this pathological type of behavior, he affixes the label, executive neurosis.

In contrast to these generalized verbal descriptions of organizational leaders, two other studies are primarily concerned with developing new, objective methods for describing and quantifying the activities and interactions of supervisors. One by Burns (1954), for example, describes a self-recording technique whereby four executives in a British engineering factory recorded with whom they interacted and for how long. The second study, by Atteslander (1954), describes a method for recording both the interactions and activities of foremen. As both of these studies principally are concerned with forging new tools, neither can claim important conclusions resulting from their initial use. But from the results of other studies using similar methods, such as that of Westerlund discussed above in the section on small work groups, the demonstrated importance of these methods is only a matter of time. They represent the natural evolution of human inquiry from the general to the specific, from establishing relationships between phenomena first qualitatively and then quantitatively. In this case, there has arisen an increasing concern with examining the behavior that takes place between persons in face-to-face relationships. Not content with hearsay descriptions—a mixture of fact, fancy, and sentiment—the influence of anthropology here is felt again in the need for first-hand, direct observations.

4. Face to Face Communication

For some time it has been realized that focusing attention both on groups and on individuals is still not enough—something is liable to be left out. For those professionally engaged in problems of practical application, the existence of a no-man's land becomes distressingly obvious. This lack perhaps becomes most obvious when unsuccessfully trying to communicate to particular individuals and groups their obvious need to change. Despite all logical argument pointing to greater risks in not changing, such persons or groups persist in traditional practices sometimes long after the threat to their very survival becomes all too obvious to others. From numerous experiences of this kind, there has become distilled out for consideration a concern for the enormous difficulties that impede effective communication starting with the simplest of face-to-face relationships between two persons, and, of course, ending with the mammoth problems of relationships between nations and population masses.

Frustrated by this resistance to change, by such widespread ineffectiveness in human communication, the applied anthropologist professionally is confronted with the same problem that confronts all other applied social and psychological scientists, not to mention the world of parents, teachers, administrators, and leaders of every sort and description—in fact, everyone. The simplest approach to this problem, and that is bewildering enough, is restricting consideration to communication between a

pair of interacting persons. Incidentally, in building toward a science of human relations, it would appear to be perhaps the first order of business to concentrate on pair relationships, as they no doubt form the most basic of all social units. They probably represent the seeds of social organization from which small groups, complex institutions, and whole societies can be assumed to have evolved.

Of the one hundred or so articles and books consulted, the writings of four persons are primarily focused on the nuances and communication problems in pair relationships.[2] All four investigators, interestingly enough, are in varying degrees concerned with practical application, either therapy with individuals, retaining, selection, or bringing about change in individuals and work groups—Rogers, Roethlisberger, Chapple, and Johnson, the latter a professor of speech pathology and psychology. Among these, it is interesting to note that Roethlisberger, perhaps best known for removing the spotlight from the *individual* worker and beaming it on the entire work *group,* has since turned the beam on *pairs* of interacting persons as a unit for consideration. It is no less noteworthy that Chapple, trained as an anthropologist, should similarly have turned to concentrate much of his effort on examining the elusive processes in pair relationships, what he has actually been doing for about fifteen years.

As mentioned earlier, no attempt has been made to "cover" the literature on the problems confronting a communicating pair. However, the writings of persons known to be primarily concerned with the human problems of business and industry have been consulted, as well as articles carried in journals devoted to the same.

The article by Johnson (1953), descriptively entitled "The Fateful Process of Mr. A Talking to Mr. B," admirably sets forth the problem. He traces the processes by which an external stimulus, or let us say a message, from one person to another is only partly perceived through the senses of the other. This partial perception of a message is then scrambled by the neurophysiological processes inside the recipient, and instead of being accurately decoded, the final translation of the original message into words, actions, tone of voice, mannerisms, and miscellaneous symbolic forms is often misleading, sometimes even bearing no more than the vaguest resemblance to the original. This all goes to point up the fact that human communication is as much an internal biological phenomenon as it is social interaction. What one sees is social interaction, but social interaction resulting from stimuli partially perceived in the first instance, thence internally scrambled and often poorly decoded. Not much is known about these internal processes. They are therefore largely inferred from observable external behavior and verbal responses, and, according to Johnson, these internal processes involved in decoding the messages and transforming them into new symbolic forms appear to be variously referred to, for example, as the unconscious, cultural distortions, or learning processes.

In analyzing these difficulties in pair communication, progress has been made even within the span of the three-year period, 1952 through 1954, with which this review is concerned. In their 1952 article, Rogers and Roethlisberger point out that the barriers to communication between one person and another were due to such factors as the tendency of each to evaluate the other without comprehending either his sentiments or the true meaning of his statements and actions. In 1954 Roethlisberger in his interim, book-length report "Training for Human Relations" (not restricted to pair relationships) does not contradict the earlier statements; they become incorporated instead within a far more comprehensive formulation.

The report discusses an actual training experiment designed to have trainees simultaneously (1) learn about people, (2) practice talking with people more understandingly, and (3) become more aware about themselves, their own preoccupations, and feelings. Such a training is designed mainly

[2] It is of course outside the scope of this chapter to review all the writings of psychiatrists and others on face-to-face communication.

to help responsible staff personnel acquire a greater skill in communicating with others in work organizations, so as "to promote congenial participation in a common task." The interesting point to the reviewer is the expansion of the concept of human communication from emphasizing an intellectual failure in comprehending other persons to the development both of an actual behavioral skill in communicating and of greater self-awareness. In short, there emerges the concept of a totality of stimulus-response between the persons communicating—stimuli and responses that have simultaneous internal and external manifestations, that are neither just "psychological," just "intellectual," or just "behavioral," but all three simultaneously, with perhaps other related aspects as well.

An entirely different approach to the problem of communicating in face-to-face relationships is that of Chapple and Gordon (1947), of Chapple (1949), and, as more recently reported in brief, by Norman (1954), the general sales manager of an industrial concern. This approach ignores all consideration of sentiments, emotions, meanings of words spoken, and such "internal" aspects in human relationships. Solely and entirely it is concerned with external behavior—timing the refinements of interactions between pairs, with no attempt at interpreting the "meaning" of these interactions. Interactions are recorded on a device called an interaction chronograph which registers to split-second accuracy all visible and audible stimuli and responses displayed by two or more interacting persons. The remarkable fact about this device is that, with no regard to "internal" emotions, sentiments, and meaning, it still can differentiate perhaps more accurately than by any other means, persons skilled from those unskilled at communicating under certain conditions. For example, Norman points out that the predictions by this method as to the selling performance of his salesmen have been uncanny, in fact 100 per cent correct. It should be pointed out that selling ability is to a large extent a process of properly being in rapport with the customer, or in other words, effectively communicating with him.

It is a major if not uncanny contradiction that this gadget, though ignoring "internal" factors generally conceded fundamental to human communication, nevertheless should be pre-eminent in screening skilled communicators from unskilled. That this is not just a freak coincidence is well attested by the continued, high-grade performance of this technique for many years. Apparent contradictions are bound to occur in any advancing field and in fact should be welcomed, for they forcibly point up the need for new understanding. In this case, could it be that there is a very high correlation, for example, between the internal and external stimuli and responses of skilled communicators so that the identification of one facet, e.g., the external or behavioral aspects, automatically insures that the internal aspects of these skilled communicators will likewise be similar? If such a close correlation does exist, between internal and external stimuli and responses, then for all practical purposes it would be inefficient to attempt diagnosing the elusive internal aspects whenever the external behavioral manifestations could be recorded so easily and interpreted with uncanny accuracy.

NEWER CONSIDERATIONS

To judge from the number of articles and books, four areas, formerly much neglected by human relations investigators, have in the last few years been receiving increasing attention. The first of these considers social systems in relation to technical systems, or the interconnections between the social organization and the technology or material culture of work organizations. The second new area receiving attention, and long overdue, concerns labor unions as organizations; and the third is the over-all functioning of an entire business organization or a large segment thereof, and the fourth is a collection of miscellaneous topics.

It here should be made clear that these topics, as for example labor unions and the functioning of business organizations, have

for some time been discussed in the writings of other social scientists, lay practitioners, and even "native subjects" themselves. Thus the human relations fraternity, in entering these areas new to them, is finding an already existing and useful body of knowledge and opinion. In this regard, a 1953 editorial in *Human Organization* is highly pertinent. Entitled "The Challenge of the Science of Organizations," the editorial makes the point that anthropologists are entering this field, concerned with the functioning of modern, highly organized institutions, although not all of them comprehend the field as an entire problem. Whereas those long concerned with discovering and writing about organizational principles are familiar, in many cases, with the contributions of anthropology and human relations, those representing the latter disciplines are more often than not unfamiliar with contributions of the former. As do all, so do we anthropologists have much to learn from the knowledge and understanding of others.

The fourth new area, or miscellaneous topics, will only be referred to in passing, as each of these miscellaneous topics is discussed only in one or at most two articles. For example, two papers are concerned with connections between business organizations and cultural and class segments in the larger society. In one, Drucker (1952) discusses the serious difficulties management faces in effectively incorporating large segments of professionals, mainly engineers, into business and industrial organizations. In the other, Hope (1952) discusses the process by which the status of Negroes in our South is changing due to promotions and upgrading effected by union-management agreements. Another topic is presented by Cook (1953), who investigated why certain groups failed to patronize a company cafeteria in an Australian firm. Miller (1954) ably discusses some problems in establishing rapport in a work organization and comments on the strategy of investigation. Finally to complete the view of miscellaneous topics, there is a 1952 editorial in *Human Organization,* entitled "Informant of Professional," which raises some ethical and professional problems regarding the conduct of consulting relationships with client organizations. We turn now to discussion of the three other newer topics, or the ones about which numerous articles have appeared.

5. Social Systems in Relation to Technical Systems

A staggering amount of detail presents itself to the uninitiated social scientist faced with the complexities of technical processes, accounting, paper work, the routine and special handling of all financial, as well as miscellaneous material considerations. There is a natural enough temptation, therefore, to overlook many of these processes and things, and to give almost entire consideration to people, who, with their satisfactions, performances, and interpersonal relations, are the social scientist's special interest anyway. But given time and greater familiarity with the material, uniformities emerge relating the organization of processes and things to the organization of people. These uniformities have begun to be increasingly perceived, for in the last three years, a number of studies have pointed out some of the more important and striking interconnections. The writings point out disturbances in human relationships caused, for example, by introducing a new product, or assembly-line operations, or other "efficient" types of productive techniques. Interestingly enough, there is an article on the human problems of budgets (Argyris, 1953), pointing to evidence that such "efficient" methods of control actually may result in lowering efficiency.

Among the more important contributions, there is the book by Ronken and Lawrence (1952) which traces in considerable detail the impact of a new product on the social system of an entire organization. From the start of its journey among the engineering headwaters to its eventual flow into quantity production, this new product experienced a much interrupted and uncertain journey. Bumping into one barrier after another and slipping off the main

stream for seemingly endless periods into side eddies, the journey was more hazardous and took far longer than logically necessary. Rather than technical matters, the hazards confronted were much more frequently log jams in interpersonal relationships associated with the introduction of this new product. And normally, in each instance, not until these interpersonal relationships had been at least partially untangled was the downstream journey resumed. And for untangling them, an administrator with skill and understanding was crucial, as he facilitated the bringing about of new and satisfactory relationships.

Friedmann, a professor in Paris, provides an excellent general discussion (1954) of the assembly line. He points out its presumed historical position transitional between the artisan and the automatic factory. He further makes the point that assembly lines are not as humanly undesirable, or need not be, as sometimes is assumed. For example, he shows how work groups can improve their adjustment to the demands of machine pacing, the monotony of repetitiveness, and minimum skill requirements by participating in decisions on pace, on job subdivisions, and rotation of jobs. Widening the breadth of his discussion still further, he points out the biological or biopsychological importance of work rhythms, and the variation between individuals in this regard.

Walker and Guest (1952) concentrate in some detail on an automobile assembly line and its accompanying human problems. They discovered, for example, that the most highly repetitive jobs were the least liked, and that workers with such jobs most often quit or were most often absent. They further point out (pp. 156–157):

"Most commonly it (a moving belt technology) permits, as indicated, a loose work group of five or six operators who can make brief remarks to one another during the working day. Each individual is part of a group with a slightly different membership from the group of every other operator, because each successive operator along the line loses one member on one side as he gains one on the other. It denies to all but a few operators a functional or team relationship with other workers. Ability to interact is also heavily conditioned on some jobs by such factors as noise, speed of the line, and amount of physical energy demanded."

Furthermore, they trace the impact of the automobile assembly line on the relationships between supervisors and workers, on the wage structure, and on the promotion system or rather lack of it. By simplifying jobs and obliterating many of the gradations in skill, in pay, and in prestige, the assembly line strikes at the very core of American democratic ideals. Within the walls of his factory world, the assembly line worker no longer has much opportunity of progressing upward—his chances lie elsewhere, probably in other departments, in other companies, or in his union.

Perhaps the neatest of all the studies is one by Rice, an Englishman, who reports (1953) on a successful solution to the problem of organizing work groups in a textile firm in India. First, he diagnosed the major cause for an apparently poorly-functioning work group; second, he came up with a practical solution that appealed to top management (an accomplishment not to be too lightly dismissed); third, top management proposed the solution to the operating management who immediately saw its advantages; fourth, from then on, the latter worked out the details with the work force, and in a matter of days the reorganization commenced; and, finally, at the time of writing a few months later, improvements already were noticeable.

The change consisted in a better adjustment of the human organization to the technical organization. The group comprised twenty-nine local Indian employees manning 224 looms, and representing fifteen different job classifications. Previous to the change, few workers belonged to stable work groups. Each loom was worked and serviced by a number of specialists, but each specialist was responsible for a different number of looms. Thus no group responsibility toward a given set of looms could develop as almost everyone tended or serviced a different set. The reorganization remedied the situation by dividing the so-called shed into four sections and assign-

ing particular workers to a particular section where as a group they worked only on the looms of that section. Thus four work groups with some permanence became established, and an environment created in which teamwork and a sense of belonging could develop. Apparently this is precisely what occurred.

It can be assumed that to man any technical system of organized work processes, there exist several possible alternative social systems. Due, however, to situations often long-since forgotten (management inertia and the like), it is not uncommon to find a technical system manned by an ill-adapted social system that everyone just accepts as "natural." To make our present-day complex technological society function more effectively, we need far more imaginative designing of social systems to meet the conditions imposed by technical systems. Conversely, technical systems profitably could be designed with greater regard for social systems.

This miracle cure in the weaving shed (at least up to the time of reporting) is the kind of success story every applied anthropologist is hoping will come his way. But to achieve such success, not only must rapport be good, the diagnosis correct, and the remedy adequate, but, and here is the rub, the *timing* must be right. Apparently in the example just cited, the entire organization, from top to bottom was ripe for the change. One wonders whether they were possibly on the verge of changing themselves anyway. Such a consideration is only raised in passing, but it opens up one of the most fundamental of questions in human organizations, and that is the question of change and subtle degrees in readiness for change. Not only is this of extreme practical importance to applied anthropology, but it would appear of equal basic theoretical importance for a more profound understanding of human society.

6. Labor Unions

The new human relations literature on labor unions stems largely from several papers, and one book (Sayles and Strauss, 1953, not yet seen by this reviewer) written by investigators at Cornell who recently have turned their attention to the organizational problems and characteristics of labor unions. The papers treat similar areas of concern as have been described for business and industrial organizations. For example, Sayles (1954) describes the function of small groups within a union. He points out they can become nuclei of power sometimes used for "spontaneously generating" wildcat strikes in protest against either management or their own union leadership. Sayles (1952) and Strauss (1953) each separately discuss the connections between technical and social systems—in the first instance concentrating on union leadership, and in the second, union organizing. Then there are studies on union leaders and on the problems of organizing particular class and minority groups. Finally there is one joint article by Sayles and Strauss (1952) dealing with more general problems concerning the internal functioning of an entire local. Specifically between groups within union organizations, they point out the conflicts with which union leaders must reckon and which result in some of their actions, such as the handling of grievances, at times being aimed at an internal group rather than at management. It is hoped that the human relations literature on union organizations will in a few years warrant a special and prolonged treatment of its own.

7. Organizations

The final topic for consideration concerns the more inclusive concept of a *total organization* or a relatively independent, self-contained, and autonomous social system. The importance of this larger social unit was indicated previously in the discussion of small groups and of committees and conferences, where it was pointed out that such sub-units could not be understood without reference to the *total organization* of which they were a part.

There fortunately have been a number of studies considering an entire work organization or a large segment thereof. Several have set out to describe the functioning and development of an entire man-

ufacturing firm. One book, for example, by Ellsworth (1952), examines a small Yankee manufacturing company largely according to Malinowski's six elements of institutions: charter, norms and rules, material apparatus, personnel, activities, and functions. Interestingly enough the author was an insider or "native subject," a former member of management, since turned sociologist. Another book, by Scott and Lynton (1952a), examines three British firms in order to discover the necessary skills of management required for adapting an entire organization to the changes that weaken its competitive position or threaten its survival. This interest in management's skills is an encouraging sign of maturity in light of past tendencies among some social scientists to idealize employees while imputing management with wholesale Machiavellian motives. Further indications of growing interest in total organizations are studies of turnover, absences, and accidents in organizations, and in one instance (Davis 1953), the extent to which information is diffused into various levels and groupings. Of note also is a statement by Kahn, in the preface to Morse (1953), discussed above under small groups, that the Human Relations Program of the Survey Research Center, University of Michigan, is primarily concerned with the effectiveness of organizations. Specifically those in this program have concentrated on productivity and satisfactions, but more recently have also begun to concern themselves with flexibility or the capacity of an organization "to make rapid and appropriate changes in response to some new situation."

Two of the studies are concerned with various means of retaining in large organizations certain qualities and strengths characteristic of some smaller organizations. Emch, a management consultant, suggests (1954) decentralizing various controls such as financial information so that each divisional or departmental line executive has information presented to him in a fashion useful for appraising his own operation. In contrast, Villers (1954) recommends centralizing services and information but decentralizing authority and responsibility for productive activities. Thus line supervisors would have authority over fewer functions and so could spend more time making those they do control work more satisfactorily.

Two other studies describe new modes of communicating brought on by the failure of previous methods. Cross (1953) provides an example of the growth of informal cliques when formal communication was ineffective. Ellsworth (1952) shows how, over a long period of time, worker contacts with the top echelon of a company greatly decreased not so much due to increased size as to the increase in executive functions. Executives had increasingly to concern themselves, for example, with a wider variety of products, stricter specifications required by customers, cost accounting; in addition, they indulged more in outside activities, and lived farther away from the plant. Apparently to compensate at least in part for the greatly diminishing give and take communication with the top echelon, the workers affiliated into a union and reestablished direct contact with "the boys at the top."

Harbison and Burgess (1954) and Argyris (1954b) concentrate on two relatively unchanging, or slowly changing, types of organizations. The former considers European firms in which authority is centralized in a managerial class preoccupied with its own security, and the latter describes an American bank and the particular type of security-minded employee it attracts. Finally, both Gouldner (1954) and Scott and Lynton (1952a) focus their attention on change in organizations. They contrast situations resulting in restrictive, bureaucratic control apparently leading to lowered output, poor adaptation, and lowered morale, compared to situations apparently resulting in more successful adaptations associated with a more free give and take environment in which line supervisors and groups are allowed some individual freedom in their adaptation to changing conditions. Regarding the latter, Scott and Lynton have the following to say (pp. 182–183):

"Change grew cumulatively in importance and gathered momentum with remarkable re-

sults. Of greatest importance was the waxing strong of relationships and the growth of effective means of continued adaptation. . . . The changing circumstances of an organization's environment are the 'law of the situation' for that organization. The function of management is not to create the consequent need for adaptation—the forces of nature and society at large do that—but to help the organization as a whole to perceive the need and to adapt accordingly."

With the great interest in "democratic" versus autocratic controls and procedures, evidence is rapidly accumulating that will soon make it possible to differentiate various kinds and degrees of democratic methods and to state with some assurance the conditions most suitable for each type. A note of caution is here in order, for we of the Western democratic tradition must not be so culture-bound that we fail to recognize that certain autocratic procedures may have their place in the scheme of things. Common-sense experience leads many less articulate persons to the conclusion that under particular conditions with particular controls and for specified periods of time, firm and arbitrary leadership has its place. In the meantime, the present understanding is insufficient to detract from the pleasures of controversy and the plausibility of conflicting assertions.

THE EMERGENCE OF A NEW APPLIED SCIENCE

As a contribution to the total science of Man, the study of work organizations provides a particularly fruitful field for understanding social processes. Work organizations are relatively autonomous units and normally not too big for intensive investigation. But most important of all, present day work organizations in our Western World are undergoing extraordinarily rapid change with numerous examples of both good and bad adaptations to environment. Such a wealth of comparative "societies" distributed throughout the gamut from excellent to poor adaptation is difficult to reproduce.

The rapid evolution of our knowledge about work organizations over the last twenty-five years reflects a strong desire on the part of many to apply this knowledge (or sometimes prejudice) to curing and preventing the numerous human problems besetting labor and management in business and industry. It has already been stated that this knowledge is evolving in a way comparable to the evolution of engineering and medicine, whereby, for example, common sense prevention gives way to scientific prevention. The reviewer has already suggested that this breakthrough to scientific prevention is in process of taking place or is about to take place.

Because much work in this field has an applied slant, there is greater emphasis on the performance or effectiveness of groups, and to some extent on individuals, measured, for example, by their productivity, their verbal sentiments, and the degree to which they leave their groups, are absent, or show other indicators of withdrawal. There is thus emerging out of common sense understanding, a science of human organizations beginning to show inter-connections between (1) the effectiveness of groups or individuals, (2) their social organization, and (3) their material culture or technology.

In order to appreciate the evolution of this knowledge more fully and to apply it more effectively, certain other parallels with engineering and medicine or public health are pertinent. This forms the subject of a book in preparation by Richardson, some of whose main conclusions are as follows:

1. Medicine, public health, and engineering each is concerned with recognizing certain *signs* and *symptoms,* for example, medicine with dizziness and high temperatures in persons, and structural engineering with cracks in supporting beams.

2. These signs and symptoms reflect conditions known as *strain* in engineering and illness or *disease* in medicine and public health.

3. Both infectious disease in persons and strain in beams, in turn, reflect submission to a force, which when excessive, is known in medicine as *infection* (by micro-organisms) and whether excessive or not is known in engineering as *stress.*

Using the engineering terminology mainly, *stress* is the force applied, *strain*

is the resultant effect on any given unit, whereas signs and symptoms merely are the indicators of strain.

The same distinctions of stress, strain, and signs and symptoms are apparent in work organizations. Individuals manifest certain signs and symptoms such as poor productivity or over-complaining, which reflect a disturbed inner state or strain; the latter in turn often can be traced to certain interactional stresses in interpersonal relationships sometimes too great for a given individual to withstand with equanimity.

As the evolution from common sense to science becomes more complete, based on the experience of medicine, public health, and engineering, the emphasis shifts from focusing on a *cure* for overstrain to *controlling the stresses* responsible—thus leading to the *prevention* of overstrain. As applied anthropology evolves to greater scientific understanding of human organizations, we then can hope for a comparable shift in emphasis from cure to prevention, whereby the effort that goes into social action will become proportionately less preoccupied with temporary cure, and more with controlling social stress—thus, it is hoped, preventing many human problems from becoming *too* serious in the first place. That human problems ever could be completely prevented appears not only to be the wildest of impractical dreams, but also perhaps a questionable state of perfection. Without some human over-strain, how productive and creative would any of us be?

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Anthropology in Government: United States

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THE pursuit of anthropological studies and the application of anthropological principles and knowledge under the auspices of various departments of the government of the United States in recent years has fluctuated with the sense of need and the understanding by administrators of the contributions to be derived from the science and science advisors. The extensive utilization of the concepts and insights of modern anthropology began about twenty years ago and increased rapidly in the years preceding and during World War II. The last two years have seen a decline in the application of anthropology in planning and the employment of anthropologists in government service following shifts in political interests.

HISTORY OF ANTHROPOLOGY IN THE GOVERNMENT

The problems of settlement and administration of the American Indians in the last quarter of the nineteenth century brought the first request from the government for anthropological research and guidance. This led to the establishment of the most enduring center of anthropology in the American government—the Bureau of American Ethnology of the Smithsonian Institution. With this one exception, intensive anthropological research and the employment of anthropologists in full-time service was not an activity of the government until the early 1930's, when extreme economic distress and social upheavals created by the drought and economic depression among the agricultural populations of the country prompted the government, in seeking measures for new agricultural planning, to employ social scientists to analyze these social dislocations and advise on procedures for achieving social and economic readjustment. Anthropologists associated with the Soil Conservation Service studied patterns of land use, farming methods, food habits, and social organization derived from cul-

tures of the Indians and Old World ethnic groups and still practiced by their descendants in the American farm population. The strong persistence of traditional agricultural practices required special consideration, heretofore unrecognized, in any realistic plans for their economic and social readjustment. From the first employment of anthropologists in analyzing the problems of sections of the contemporary populations of the Southwest of the United States the use of anthropologists grew rapidly. The Applied Anthropology Unit within the Bureau of Indian Affairs, organized to assist in providing tribal self-government, and the Human Dependency Unit of the Technical Cooperation group of the Soil Conservation Service, to survey the economy of the Indian reservations, became the most active agencies to use anthropologists.

The second period of active utilization of anthropology by the Government was during World War II, when the sudden demand for special knowledge of cultures and peoples of areas which had been subjects of special interest to anthropological investigations brought all available anthropologists into government service. The work was directed primarily to the production of information for the military services and development of administration teams for military government of occupied areas. A detailed account of these two periods of development and application of anthropology in the government of the United States in the years before and during the war has been described in the article "Applied Anthropology in Government: United States" in *Anthropology Today* (1953).

BUREAU OF INDIAN AFFAIRS

Following the war years the use of anthropology in the administration of Indian affairs has decreased. The "Research in Indian Education" initiated before the war by the Bureau of Indian Affairs in cooperation with The University of Chicago, and in which a large group of anthropologists participated, was completed by 1945. Reports on five reservation studies and special problems subsequently were published. The extension of this project to interpret the research findings for their implications in administration and planning of Indian education was carried on almost singlehanded by Dr. Laura Thompson for the Indian Bureau and the Society of Applied Anthropology. The studies stemming from this research program, however, have been read widely by members of the Bureau of Indian Affairs and have been effective in providing wider understanding of the forces of Indian culture and characteristics of Indian personality to which government programs in the last resort have had to be adapted. The research showed the complexities that are faced in transferring technological advancements and concepts derived from the American economy into singularly different cultures, and the cultural impediments to the anticipated assimilation of Indians within American rural and urban societies. The opportunity for extensive application of this research to planning by the Indian Service was greatly limited, however, shortly after the completion of the project, by the change of emphasis in administration of Indian affairs under directives from the Congress. The policy of providing assistance to Indians to develop an American rural economy on their own land resources and giving support to their own social and cultural groupings has shifted to one of encouraging Indian assimilation into the general population.

INDIAN CLAIMS COMMISSION

In August 1946, Congress passed a jurisdictional act allowing all Indian groups of the United States and Alaska to sue for redress of any wrongs arising out of past actions with the government. This was an attempt to decide upon all past Indian claims and bring to an end the long pending expectation of Indian groups for huge payments. The hope of large cash payments has been a handicap to the economic progress of many Indian families. An Indian Claims Commission was established to re-

ceive these claims. The Department of Justice was given the responsibility of defending the government, with the tribes employing their own attorneys to prosecute the cases.

In preparation for the hearing of some 800 claims, the Commission and many tribes have found it necessary to employ or contract for anthropologists to undertake exhaustive research. The basic problems have been the identifications of the locations of Indian groups during the particular years in which treaties of cession were made, and the circumstances and cultural bases under which the different tribes lay claim to lands through occupancy or ownership. Several anthropologists of the Smithsonian Institution were first called to undertake the related research, and later John A. Jones was employed until 1954 as staff anthropologist to the Indian Claims Section of the Department of Justice. The increasing amount of required research has necessitated contracts with twenty or more anthropologists in individual cases. Through their attorneys, claimant Indian groups have employed another twenty or more anthropologists to provide pertinent information from the history and culture of the ancestral tribes. This research is by no means completed and may extend to other tribes.

As a by-product of this research much basic data in the history and culture of the claimant tribes will be re-evaluated. The areas under possession or use by these tribes during the nineteenth century will be defined more clearly. For the first time an integrated factual study of the Indians of the Great Lakes will be written under a three-year contract of the Indian Claims Commission with Indiana University and its Department of Anthropology.

ECONOMIC AND TECHNICAL ASSISTANCE PROGRAMS

In the first years of economic and technical assistance to the rehabilitation of foreign countries of Europe and in the development of economically distressed areas of the world, wide use was made of the contribution of anthropology. Anthropologists served in advisory capacities to the Mutual Security Administration to help explain to American businessmen the differences in cultures to be taken into consideration in planning aid and reorganization of foreign industries and their labor components, and for increasing food production. Two anthropologists were placed on the Washington headquarters staff of the Technical Cooperation Administration to assist in planning for and operating health, education, and agricultural programs with the underdeveloped areas of Asia, the Middle East, and Africa. They took part in preparing American technicians for living and working with foreign peoples and gaining an elementary knowledge of their languages, and in introducing the cultures of these areas. In 1953 the Technical Cooperation Administration (Point Four) added a rural sociologist as consultant to the administrator on rural development programs. Anthropologists were also placed on the country staffs of Iran, Iraq, and Jordan in positions of assistant planning officers, where they could be in direct contact with central program development and decision making. The social science support was expanded by the assignment of rural sociologists, one to serve as social science advisor and deputy director of the Lebanon program, and two as advisors and subsequently the agricultural director and a provincial administrator in Iran.

The Mutual Security Administration sent social scientists on reconnaissance of their field programs to make observations and recommendations for the guidance of country directors and technical staffs who were meeting resistance to the programs from peoples of some South Asian countries. A report (1953) commenting on the role of advisors in aiding the formulation of economic development projects, has been made by R. L. McNamara.

On the basis of the contributions provided by these temporary social science consultants the Mutual Security Administration became interested in the assignment of permanent social science members on their overseas staffs. A rural sociologist,

R. McMillan, was appointed advisor on rural programs to the country director of the Philippines. Arthur Raper, a sociologist, was attached temporarily to the MSA headquarters staff to implement the social science program, and later assigned to Taiwan, where he conducted a survey to establish the standards of living existing at the initiation of the joint Taiwan and American rural rehabilitation program. From these an evaluation of the effects can be made and achievements of the subsequent agricultural and industrial programs upon the rural and urban populations.

In 1953 the two programs of overseas economic and technical assistance previously conducted by the Technical Cooperation Administration of the Department of State and the Mutual Security Administration were combined into the Foreign Operations Administration, a new and independent executive agency to carry out the foreign economic program of the administration which had taken over the leadership of the government. At this time several factors affected anthropology and also sociology in the foreign programs of the government. Opposition to the strong social character of the previous political administration led to questioning and elimination of many activities and research being undertaken by social scientists. Economizing on costs of government, particularly through reduction in the number of government employees, was also the order of the day. The discontinuation of anthropologists and sociologists on the headquarters staffs of foreign technical assistance agencies was part of the general reduction of personnel.

Although the contribution of anthropology to policy formation, review of country programs, and methods of operations at the central headquarters ceased, applied social scientists continued to serve in various capacities on the field staffs. H. Naylor, R. Minges, and R. C. Alberts, anthropologists, served in planning and carrying out the program of the Iranian government for assisting its farmers who were recipients of crown lands to manage their new holdings, to develop the necessary credit and marketing organizations, and to promote the village development program. K. Orr, anthropologist, served as assistant program officer of the Point Four mission in Iraq, and subsequently as liaison officer to the range-resources division of the Jordan program. Here he worked with Bedouin tribesmen and villages in planning technical assistance activities to improve their livestock economy and use of natural resources. This cooperative venture served to transfer the emphasis of the program upon building water-spreading works for the intensive production of grass to the development of the more greatly needed wells. The water-spreading dikes, in producing limited areas of thick, new grass for grazing or haying in communally used desert ranges, created social problems over the rights to utilize these choice resources, which negated their benefit. The wells, however, provided a resource which could be widely shared and encouraged wider dissemination of Bedouin bands from crowded desert ranges to unused, grass-covered, but heretofore waterless, areas. The water resources were provided by earthen catchment tanks and by excavation and renovation of Roman cisterns.

For the South and East Asian programs Dr. Carl Taylor, former advisory rural sociologist to the Technical Cooperation Administration, was appointed to India in 1954 as regional consultant of the Foreign Operations Administration on community development. E. Neal, rural sociologist, became social science advisor to the Indian States on community development programs. R. McMillan, sociologist, continued as social science advisor on the rural programs of the Foreign Operations Administration mission in the Philippines and has become a pioneer with members of the Philippine government in creating a community-development program. He has reported (1953) on the effects of American technical change in the progress of village-centered programs. David Russell, sociologist, has been assigned as community development specialist in Haiti both to plan action programs in relation to the local

social structure and dynamics and to execute the program.

The application of the anthropological and sociological sciences in the Foreign Operations Administration in the South Asia and Near East areas has been focused upon the development of rural communities. It is at this level that technical assistance programs attempt the direct transfer of technical skills and concepts from the donor culture to the peoples of the recipient culture and face the acid test of their capacity to make the necessary adaptations to the local social organization and value system. In order to have the necessary understanding of the local culture and to make the proper approach in terms of the local society and its basic needs, social scientists have been consulted. The anthropologists attached to community development teams, and who are rarely specialists in these cultures, are finding that previous general studies of culture patterns prove inadequate for basing plans for community programs. Intensive studies of the economic and social systems first must be made before the anthropologist can become of any great practical help. Also, anthropologists are finding that teaching American agriculturalists, public health officers or educators only the general principles of social science or community analysis is inadequate orientation for technical work overseas. The meaning and use of these principles comes clear only when they can be observed within the realistic context of the people of a village.

The most successful experience and employment of American anthropologists as interpreters of native customs and culture and social science advisors in a technical assistance program has occurred in Latin America. Under the program of the Institute of Inter-American Affairs of the Technical Cooperation Administration, anthropologists of the Institute of Social Anthropology, who had been teaching and conducting research in Mexico and South American countries, were requested to participate in the evaluation of medical centers. These centers were sponsored by local governments and TCA and staffed by both North and South American physicians. From previous cultural studies and from new investigations into the health concepts and observations of local health practices of the Indian peoples and into the attitudes and behavior of the physicians at the health centers, the anthropologists were able to explain cultural conflicts, failures of communication, and uncooperative responses. The explanation of the conflicts arising from different attitudes toward men's relationships with women, from different orientations in time and space, and from different concepts of causes of disease have stimulated a rapid improvement in physician-patient relationships.

This demonstration of the insights and assistance which anthropology can give to cross-cultural technical programs led to the subsequent assignment of these anthropologists as advisors to Divisions of Health, Education, and Welfare of various country programs of the Foreign Operations Administration. Their value in providing better understanding of the cultural problems facing technicians has led to frequent requests by other divisions for analyses of their activities in relation to the local culture and social organization of the people being assisted.

The procedure of preliminary research in the general culture, intensive study of the health aspects of the culture upon which a technical cooperation program is having direct impact, and observation and evaluation of the technical operation demonstrates how the knowledge of culture and the utilization of anthropologists in aid programs can be effectively achieved. This obvious point would not be made here if it were not for the fact that administrators and professional anthropologists and their organizations often have advised short-cut consultative work and evaluation studies which have proved unprofitable and sometimes brought unnecessary criticism upon the applicability of cultural anthropology in technical assistance activities. There is no substitute for intensive first-hand knowledge of the cultures involved and of the policies and procedures of technical assistance programs.

Time must be allowed for attaining this knowledge if it is not already a part of the anthropologist's information. The need for this preparation is equally true for those who undertake the preparation of manuals of culture descriptions, giving cues and approaches for Americans living and working in cross-cultural situations. Researchers and writers, who draw solely upon previously written materials and who have never observed the present character of the culture or the working relationships and operational plans of a foreign technical assistance program, can be widely misled as to actual conditions and appropriateness of the guidance they present.

FOREIGN SERVICE INSTITUTE

The Department of State through its Foreign Service Institute continues to employ anthropologists to participate in the training of a small corps of area and language specialists drawn from its diplomatic and consular personnel and other members of the Foreign Service and Federal departments to be assigned abroad. The training of these specialists is designed to provide an intensive introduction to the structure of cultural systems, regional cultures, and their economic, social, and political structures and languages. This is to prepare them for performing their official functions and interpreting local political and other events with increased facility and accuracy. However, with the general reduction of staff in the Executive branch of the government in 1954, the functions of the Foreign Service Institute as a training center for personnel of the Department of State have been correspondingly curtailed and the teaching of cultural anthropology minimized.

Curtailment of anthropological training also has been made in shortening the period of orientation given by the Foreign Service Institute for technicians preparing to go abroad for the Foreign Operations Administration. This program attempts to instill awareness of the existence and force of culture, and knowledge of the basic cultural configurations of underdeveloped areas and also of the United States and of their key cultural values that underlie characteristic social behavior. Stress also is laid upon explanation of cross-cultural processes and the characteristic problems that are likely to arise through lack of understanding of culture by persons introducing technical concepts and practices foreign to the recipient society.

The Institute maintains one general cultural anthropologist, Edward T. Hall, Jr., and a specialist in Latin American cultures, Glen Fisher, on its Washington staff as training officers. A special branch of the Foreign Service Institute was established in 1953 at the American Embassy in Lebanon, where a cultural anthropologist, Kepler Lewis, and a linguist, Charles Ferguson, form the permanent core staff. With the cooperation of local specialists in Asiatic studies resident in the area, this branch provides intensive training for younger foreign service officers preparing for a career in the Near East.

The Foreign Service Institute, since its inception in 1946, has served as a center for language training and linguistics. This has been allied closely with the training in the cultures of the world. Government personnel to be sent abroad are given lectures in the field of linguistic theory in preparation for language learning. Language teaching is accomplished by a supervisory linguistic scientist, a native speaker, and prepared materials. Training is designed to provide the techniques and first experiences of learning the means of communication in another society, and also to emphasize that language is one of the essential means of understanding another culture.

Training is provided at the introductory level for those who will learn a language overseas, and in short-term and long-term intensive courses for foreign service officials and area specialists. The work of the Foreign Service Institute in preparing materials and refining pedagogical techniques for language training has resulted in significant pioneering research in the field of linguistics. This has led to frequent demands upon the director and the eleven other specialists in linguistics and the staff

of the School of Languages to participate with other divisions of the Department of State and the federal government in the broad fields of communication and dissemination of information.

TRUST TERRITORY OF THE PACIFIC ISLANDS

The employment of anthropologists in the administration of the Marshall, Caroline, Ponape, and Palau Islands of Micronesia, which now compose the Trust Territory of the Pacific Islands, began with the supervision of the area by the United States Navy. The appointment of anthropologists has continued since 1951 under civil administration by the Department of the Interior. In the administrative organization a senior anthropologist is assigned to the staff of the High Commissioner, and five associate anthropologists work with administrators of island groups. This number was reduced in 1954 to three, one position being left vacant when the incumbent was promoted to island affairs officer and one position being abolished when the administration of Saipan was returned to the United States Navy. The administration of the Trust Territory also has the services of three other anthropologists who have been employed as school teachers. Their social science training is an asset in adapting formal educational teaching to the cultural background and educational requirements of the islanders.

The functions of the anthropologists assigned to administrative districts are: (1) to advise on the implementation of administrative projects and in the solution of problems subsequently arising from their implementation; (2) to evaluate the success or effectiveness of projects in terms of improved social welfare and harmony with the island pattern of living; and (3) to formulate research of theoretical interest to the anthropological profession and of practical importance to the administration.

The research and recommendations of the anthropological consultant staff have concentrated largely on special problems arising from the movements of islanders to new locations and from the process of acculturation. For example, many Palau people have moved to the administrative and commercial town of Koror, with social disorganization and intra- and inter-group tensions resulting from wage work and town life. A welfare center for these people, providing recreation and social activities, has been promoted at Koror by the South Pacific Commission, without previous examination of their internal relationships or recreational needs. An anthropologist has been assigned to unravel the complications arising from the introduction of American recreation into this disorganized, island, social group.

A second problem for the anthropologists was on Ponape Island, which has experienced difficulties from colonization by people from outlying islands. Here populations are rapidly increasing and land resources correspondingly diminishing. Another study has been proposed among the people from Bikini and Eniwetok, who were resettled on other atolls in the creation of the atomic proving grounds. This will continue investigations made by Leonard Mason (1953) of the first year's adaptation of these transplanted islanders. Another project in process is a comparative study of the acculturation of the islanders in different Micronesian groups. A summary of the research conducted in the Trust Territory from July 1, 1951, to July 1, 1953, has been reported in the *Clearing House Bulletin of Research in Human Organization.* Reports of 1954 research have yet to be published by the High Commissioner.

The day-to-day work of the field anthropologists frequently has involved them in the execution of administrative problems of the island affairs officer which often required the supervision of the island people and the making of minor administrative decisions. Thus the anthropologist frequently has been taken out of his basic role as research officer and interpreter of native life and placed in a managerial position over the islanders. Included among these are persons from whom he has elicited cultural information supposedly in their interest or persons whom he has represented

as cultural expert before the local administration. This change of role from liaison officer to administrator creates some mistrust among his native informants that the anthropologist may use his knowledge for the exploitation of the native population. The anthropologist placed as an administrator within the operations group finds his role as cultural advisor to other members of the staff complicated or endangered. Irregular changing of the relationships of the anthropologist to the groups of islanders and administrators which form his field of study has been detrimental to his primary function.

Although the anthropologists in the Trust Territory have been given opportunities to study the contemporary culture and society of the local people, there has been a tendency to assign them to special social problems requiring decisions by the administrator, before an adequate understanding of the pattern and dynamics of island life, in which the problems are set, can be acquired. There also has been less interest in allowing them to evaluate the operations, even those that are running smoothly on the surface, and to help the teachers, extension workers, court, and other officials to adapt their work more closely to the local attitudes and social institutions.

The staff anthropologist, Saul Reisenberg, was successful in the beginning of 1954 in obtaining a more neutral role for the anthropologists between the administration and the islanders and placing them in a broader advisory position. However, after a clearer function of cultural interpreter and analyst had been established, a change of top field administration took place and the whole question of the necessity and function of several anthropologists on the staff was raised. This has led to a redefinition of their role and explanation by the staff anthropologist of their contributions to more effective administration of and assistance to the people.

This experience brings out the difficulty of communication between the applied anthropologist and the administrator which appears so frequently in the work of applied anthropologists in government programs. In the Trust Territory the problem appears more complex than the basic one of interpreting social science findings. The government has accepted the fact that the people of the islands pursue a unique way of life unfamiliar to most Americans. The government whole-heartedly accepts the principle of United Nations trusteeships that the administered people may be permitted to pursue their native culture. However, the significance of this principle in the administration of public services for people of one culture by people of another, and the complexities of cross-cultural administration involving the imposition of changes in concepts and practices of economy, education, and health, are not always recognized in the specific objectives of the administrating agency. The understanding of the concept of culture also is usually lacking among the public administrators who are responsible for implementing objectives. Therefore, before real communication can take place between administrators and anthropologists, the anthropologists first should contribute to a policy that explicitly describes the manner in which native cultures are to be considered and fostered in a program of social progress. Clear-cut objectives will provide guides to the field administrators. Second, the anthropologist should contribute to the orientation and specific training of public administrators entering upon a cross-cultural program. The examples provided by the Trust Territory and also by the Foreign Operations Administration demonstrate the need for administrators to learn from anthropologists and also for the anthropologists to learn more of the organization and operations of government or public administration. Applied anthropology in the United States government still has a long road to travel to make its contributions known and become truly incorporated into administration involving cross-cultural relations.

AMERICAN SAMOA

With the transfer in 1951 of administration of American Samoa from the Department of the Navy to the Department of the

Interior, thus establishing a civilian government, a position of Samoan Affairs Officer was created for a professionally trained anthropologist. The duties of such an officer formerly had been carried out under the Navy regime by the government attorney, but his role as an administrator in the government and prosecutor in cases involving the government and upholding its laws had circumscribed his function as representative of Samoan interests and life. The Samoan Affairs Officer under the civilian government carries no executive responsibilities and functions entirely as an advisor on cultural and social matters to the executive and legislative branches and as liaison officer between the government and the leaders of the Samoan people. He is the interpreter of Samoan social custom and social organizations handling economic activities, and of the legal and moral principles of the Samoan code of behavior.

The Samoans have a strong and vital culture which they consciously are desirous of preserving. It is, however, rapidly undergoing change and some dissolution from the impact of American civilization in the islands, particularly through the acceptance by many Samoans and part-Samoans of the individualistic patterns of American wage work and family life. The Samoan way of life is not only giving way in some of its aspects to Western or modern cultural patterns and thus weakening its own stability, but also is adapting, if not exploiting, American culture at other levels for its own expansion and strengthening. This is particularly true at the political level, where Samoan leaders are employing American political forms and approaching the American government in American political terms for support of the Samoan social organization.

The American Samoans have been faced with the necessity of adopting a constitution and the probability of receiving an organic act from the Congress of the United States. The islands of Samoa in American possession are now in the status of an unorganized territory (ineligible for future statehood). Basic legislation and a statement of rights and powers are necessary for the management of their own affairs as part of the United States. A complex problem faces the Samoans and the American members of the territorial government in preparing a constitution acceptable to American law and at the same time providing for the customs and social institutions of Samoan life.

The Samoan Affairs Officer is analyzing and advising on the dynamics of acculturation, but, in company with other officers of the government and Samoan chiefs, is devoting most of his time to political problems. No reports of the anthropological work of the past year are available, but the results of adaptation on political, social, and economic levels of the two strong cultures that are meeting in Samoa are looked forward to by all interested in applied anthropology and the adjustment of living, simple cultures to the complex civilizations of the twentieth century.

BUREAU OF AMERICAN ETHNOLOGY

The Bureau of American Ethnology continues to conduct, independently and in cooperation with other research institutions, studies of the American Indians and other people native to lands under the jurisdiction or protection of the United States. Major emphasis has been placed in the past year on excavation in and preservation of archeological remains from the tropical and Arctic regions of the North American continent, and in areas of the United States where construction of dams and reservoirs and other engineering programs presents the possibility of future uncovering of known sites of early human history in America.

One long-term program of the Bureau has been a study of the cultures extending north and south from the Maya focus to ascertain the relationships and cultural continuities of the early peoples of Middle and South America. In 1953, Dr. Matthew W. Stirling, Director of the Bureau, excavated shell-midden sites on Taboga and Taboguilla Islands and investigated a rock shelter on Urabá Island, near the Pacific entrance to the Panama Canal. The Indian

materials unearthed on these islands of the Gulf of Panama, it is now tentatively held, have remote affiliations with the Coclé culture of the Panama mainland. This island culture was not as well developed, however, as its mainland parent.

Dr. Stirling also recently has made a reconnaissance, with some excavation, of cave sites along Almirante Bay in the Province of Bocas del Toro. This is the first known archeological work in this region of Panama. Analysis of the ceramic and other materials in the past year, in preparation for a report on the Almirante Bay expedition, reveals that the Indians who once inhabited these caves had cultural connections with the Chiriqui of the Panama highlands.

A second central interest of the Bureau also has been in the history and sequence of cultures of the people in Arctic regions of the North American continent. Under the direction of Dr. Henry B. Collins, archeological materials casting new light on the story of the Eskimo and proto-Eskimo occupations of the Alaskan and North Canadian coastlines recently have been collected. In the summer of 1953, Dr. Collins and his assistant, Mr. William B. Taylor, undertook excavations on Cornwallis Island on the Canadian Arctic Archipelago at sites belonging to the pre-historic Dorset and Thule cultures. This work, a joint project of the Smithsonian Institution and the National Museum of Canada, has shown that at a time when climatic conditions were more favorable, two distinct groups of Eskimos lived further north toward the polar region than previously had been realized. Cornwallis Island was uninhabited at the time of discovery in 1819 and no North American islands at or beyond this latitude have been occupied by Eskimos since that time. The expedition found surface ruins of houses of stone, whale-bone, and turf built by the Thule people. Within and below a significant strata of buried sod was found an earlier Dorset occupation. Deeper patination of the stone, bone, and ivory implements in this complex and weathering of animal bones indicate an abandonment of their occupation some centuries before the later Thule people settled in the same spot. A preliminary account of these excavations has been made in the *Annual Report* for 1953 of the National Museum of Canada.

Arctic archeological explorations were continued in 1954 in cooperation with the joint sponsorship of the National Museum of Canada and the National Geographic Society by Dr. Collins, Mr. William E. Taylor, Jr., Dr. J. Norman Emerson, and Mr. Eugene Ostroff. Flown to Hudson's Bay in June, the party for two months explored two prehistoric sites having Dorset and Thule cultural remains on Southhampton and Coats islands. Information expanding former knowledge of the Dorset culture was obtained from a prehistoric settlement covering about twenty acres.

Strata of animal refuse, evidently formed by successive tossing aside of bones during feasting, show that sea mammals and fish were almost exclusively the basis of the Dorset food economy. Caribou bones were exceptionally rare. This points to a lesser dependence upon inland animal life by the Dorset people of this region than formerly has been appreciated by scholars, and possibly to former climatic factors which might have kept the caribou from coming into the local hunting regions. It is also of extreme significance that no dog bones appear in the deposits, indicating the absence of dog teams among the people.

A second excavation on Southhampton Island uncovered a settlement of Sadlermiut aborigines, a strange variant of Eskimo, who were recorded as becoming extinct in 1902.

In 1953–1954, Dr. Collins was the author of several important publications on the Arctic. His booklet, *Arctic Area,* a summary of the ethnology, archeology, physical anthropology, and linguistics of the Eskimo and Northern Indians, was published by the Comision de Historia of Mexico as one of the unit studies in its Program of the History of America. The fourth volume of the *Arctic Bibliography,* for which Dr. Collins is the Chairman of the Directing Committee, was published in 1954. This bibliography lists, summarizes, and indexes

the contents of 20,000 of the more important publications in all fields of science relating to the Arctic and sub-Arctic areas of the world. Volume 4 contains more materials of interest to anthropologists and covers a greater number of papers on peoples of Siberia. Volume 5 should be published early in 1955.

During the latter part of 1953 and early 1954, Philip Drucker, anthropologist of the Bureau of American Ethnology, made a trip to the coast of British Columbia and Southeast Alaska to continue his study of modern inter-tribal Indian organization. His field work included a continuation of a study of the Alaska Native Brotherhood. Dr. Drucker reviewed the progress of the British Columbia Commission composed of White and Indian members to plan the future assumption of administration of Indian affairs by the province. British Columbia is making a thorough plan, examining all legal possibilities and barriers, and evaluating the range of assimilation and sophistication of its Indians before turning over full administrative responsibility.

John P. Harrington, for thirty-nine years ethnologist of the Bureau, retired on April 30, 1954. As Research Consultant, Dr. Harrington is continuing his linguistic studies of the American Indians. In 1953 and 1954 he made records of the language of Chumash Indians of the Santa Barbara region of California. He also made a special study of place names recorded by the Cabrillo expedition of 1542 to the West Coast, by the Portola expedition of 1769, and by the de Anza expedition of 1776.

During 1954 the Bureau of American Ethnology published the following anthropological articles, exclusive of the River Basin Surveys Papers:

"Index to Schoolcraft's 'Indian Tribes of the United States'," compiled by Francis S. Nichols. Bulletin 152.

"The Iroquois Eagle Dance, an Offshoot of the Calumet Dance," by William N. Fenton with Gertrude Prokosch Kurath. Bulletin 156.

"Stone Monuments of the Rio Chiquito, Veracruz, Mexico," by Matthew Stirling. Bulletin 157.

"The Cerro de las Miras Offering of Jade and Other Materials," by Philip Drucker. Bulletin 157.

"Archaeological Materials from the Vicinity of Mobridge, South Dakota," by Waldo R. Wedel. Bulletin 157.

"The Original Strachey Vocabulary of the Virginia Indian Language," by John P. Harrington. Bulletin 157.

"The Sun Dance of the Northern Ute," by J. A. Jones. Bulletin 157.

"Some Manifestations of Water in Meso-American Art," by Robert L. Rands. Bulletin 157.

RIVER BASIN SURVEYS

The River Basin Surveys commenced in 1945, as a unit of the Bureau of American Ethnology under a financial arrangement with the National Park Service, to provide for recovery of archeological and paleontological materials which otherwise would be submerged or destroyed by Federal construction programs in the major watersheds of the United States. Excavations for these materials have been carried on by the Bureau and many state, university, and private archeological groups since that time. In the period July 1, 1953 to June 30, 1954, on which a report by the Bureau soon will be available, the Survey's unit continued its reconnaissance of the construction areas to locate sites and excavate a few before they are covered by impounded waters. A reduction of appropriated funds has limited this salvage work. Some 243 surveys or excavations in 27 states have now been investigated and 4,345 archeological sites recorded. Eight hundred fifty-two of these sites have been recommended for further excavation or testing. A technical report of six papers on the Inter-Agency Archaeological Salvage Program was completed and published in 1953 as Bulletin 154 of the Bureau of American Ethnology Series. The *River Basin Surveys Paper No. 7*, "Archaeological Investigations in the Oahe Dam Area, South Dakota, 1950–1951," was published in 1954 as Bulletin 158.

In the fiscal year 1954, Carl Miller, of the River Basin Surveys Washington Office, completed a manuscript on the Siouan oc-

cupation of the Roanoke River area in southern Virginia. This study is related to his larger investigations of Indian sites in the John H. Kerr Reservoir.

In the Missouri River Basin six field parties were in operation during 1953–1954. Test excavations and pits were made in previously located sites of the Fort Randall and Oahe Reservoirs in South Dakota. By mid-1954 sites in the Fort Randall Reservoir were being covered by water and all salvage was terminated by the end of the year. However, excavation of an important earth lodge, occupied by at least two groups of prehistoric Indians and an adjacent site establishing evidence of a third group, was completed before the site was flooded. Occupations occurred in the period between 1500 and 1700 A. D.

At Garrison Reservoir in the Missouri River in North Dakota a River Basin Surveys party in cooperation with another sent out by the State Historical Society resumed excavations begun in 1952, of Fort Berthold II, the site of fur-trading enterprises and American military forces from about 1858 to 1890. Excavation of a nearby Indian village led to uncovering the underlying site of Fort Berthold I, an earlier fur-trading post that flourished from 1845 to 1862 until burned by Sioux Indians. The discovery of this site has yielded much previously unknown information about the fur trade of this period.

Another party of the River Basin Surveys made a reconnaissance of the upper end of the Jamestown Reservoir area locating new sites and completing the digging of an earth lodge village of early eighteenth-century Mandan culture.

In the summer of 1953, the River Basin Surveys conducted the excavation of one site threatened by the inundation of Cheatham Reservoir on the Cumberland River below Nashville, Tennessee. In this site a fluted point was found in an Archaic horizon, implying the Palaco-Indian occupied this region. In the basin of Old Hickory Reservoir, a second Cumberland River construction for flood control 25 miles above Nashville, other Archaic and Middle Mississippi sites were excavated. Carl Miller has made a brief report of the Cheatham Lock and Dam, Old Hickory and Carthage Reservoirs in Tennessee to the River Basin Surveys office at Washington, D. C.

The surveys and excavations of river valleys soon to be inundated by dam constructions have been extended by numerous state and local institutions cooperating in the Inter-Agency Salvage Program and in agreement with the National Park Service. The Indiana Historical Society, the Ohio State Archaeological and Historical Society, the Alabama Museum of Natural History, the Birmingham Anthropological Society, the Louisiana State University, Kansas State College, and the Laboratory of Anthropology of the University of Nebraska have undertaken significant excavations in their respective states.

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Anthropological Professional Associations

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THE *International Directory of Anthropological Institutions* listed a large number of organizations in many countries under the heading "Professional Associations." A survey of these reveals a wide diversity in form, constituency, objectives, and function. There are many organizations of several kinds in which anthropology is included with other fields, sometimes as a segregated unit and sometimes actually incorporated into the body. These no doubt are professional associations and are of service to the field in many important ways; however, consideration of them as such is omitted here in favor of organizations of which the significant nucleus was established by, and is maintained by, anthropologists.

Possibly because anthropology is a young science and also because the relatively small number of practicing anthropologists cannot support them, true professional associations may be said scarcely to exist. In their place segregated sections comprised of professional anthropologists are found, usually in organizations having the broadest of general objectives and a graduated system of membership categories. The segregation usually is by election and carries with it a title, such as fellow. Usually also, the professional anthropologists, though very much in the minority, determine the policies to be followed by such an organization and otherwise assume full responsibility for its management.

The administration of such an organization, regardless of the country in which it is located, is becoming complex. Among other things, the interests and needs of the several classes of membership are diverging, and it is increasingly difficult to include among the time-worn traditional activities of such an organization the features which satisfy professional and non-professional alike. One can glean from a study of such situations an impression that professional anthropologists, as a group, are very slowly beginning to recognize mutual professional problems. This, as yet, is by no means widespread; certainly the direction of any development leading to the solution of the problems cannot be seen clearly.

One group of organizations plays a limited but very significant role in the only slightly formalized organization of the field of anthropology. These are the international congresses, councils, conferences, commissions, and the like. The objectives of these organizations vary greatly from one to another. For example, the Congrès International des Sciences Anthropologiques et Ethnologiques covers all fields, but does

emphasize ethnology. The International Congress of Americanists is devoted to the New World. Other types of international organizations may be concerned principally with specific regions or subject matter, as, for instance, the Pan-African Congress of Prehistory. These congresses, though having separate charters, are loosely united by adherence, or some other device, to the international unions such as the Conseil International de la Philosophie et des Sciences Humaines (CIPSH) or the International Council of Scientific Unions. Also, UNESCO recognizes most of the organizations and in some instances supports their work.

The most important accomplishments of these several bodies are the meetings which they hold. At these affairs anthropologists from all over the world may gather freely to exchange information. Such meetings are periodic, occurring at two, three, four, five, or even ten-year intervals. Normally, the proceedings of these meetings are published, some by abstracts of papers, though usually in full. Though congresses have been held during the interval 1952–1954, no published proceedings have been released. The only such volumes published during this period as far as could be determined were the second and third volumes (Tax, Sol, ed., 1951, 1952) of the proceedings of the XXIX International Congress of Americanists held during 1949 in New York.

Meetings are not the sole function of all these organizations for there are some which publish useful periodicals, usually with the assistance of UNESCO. The Comision de Historia del Instituto Panamericano de Geografia e Historia, Mexico City, publishes *Boletin Bibliografico de Antropologia Americana.* This includes references to contemporary articles in numerous journals together with various essays which are bibliographic in nature. There are, also, reviews of important publications. Other essays review progress in anthropology, and some sections summarize accomplishments of national and international organizations. The Inter-American Institute, Mexico City, publishes *American Indigena,* which includes a wide selection of ethnographic papers and discussions. *Boletin Indigenista,* published by the same organization is similar in nature except that it emphasizes the need to solve the complex problems faced by all Indians in the hemisphere. *African Abstracts,* a quarterly review of ethnographic, social, and linguistic studies appearing in current periodicals, is published by the International African Institute which also publishes the journal, *Africa.*

The formation and development of international councils, unions, and similar organizations which weld together the international congresses and other bodies create a channel which, though as yet devious, provides liaison between national, nongovernmental organizations and UNESCO. This latter agency provides certain kinds of support. Theoretically, the structure can work toward the improvement of the international meetings. During the past few years numerous resolutions have been passed, agreements made, and memoranda of various types exchanged. These appear to be leading toward broader and more effective support for the international organizations and especially their meetings. To be sure, the present processes are cumbersome and sometimes perhaps contradictory, but eventually the administrative machinery probably can be streamlined so that it may become increasingly useful. There is promise that the international congresses, through their meetings, will exert an increasingly significant influence upon the development of anthropology.

An extremely important kind of anthropological association is the national organization which represents, in so far as conditions permit, all fields and interests of anthropology. One of these is to be found in every country where anthropology exists, as well as in most of the larger colonies, dominions, and similar political units. Such an association or society usually includes in its membership professional scientists in related or overlapping fields as well as professional and non-professional people who have varying degrees of interest in anthropology. Almost invariably this membership

is divided into several classes, the most important for the present purpose being the distinction between professional anthropologists and non-professionals. Only rarely is the hierarchy of professionals expanded to recognize and include groups of scientists from other fields, for example, as does the American Anthropological Association through its class of Liaison Fellow.

In most associations of this general type the number of professionals is increasing, with their interests expanding in direct proportion to developments in the field. This increase and expansion has created problems which probably are most noticeable in the United States, yet they exist, perhaps in different form, in many societies elsewhere in the world. During 1952–1954 the American Anthropological Association drastically revised its publication program, in response to demands from both the professional and non-professional members. In addition to increasing the amount and frequency of material published in the journal and memoir series, an attempt has been made to increase the coverage so that problems in all fields of anthropology may be discussed more fully. The Association also has set up a central office for the purpose of assisting in the solution of professional problems. In addition to services provided for individuals, the office has attempted to promote anthropology in general. Perhaps the major activity has been to seek new outlets for anthropological work. In the future, this could result in opening up more positions, especially non-traditional ones, for professional anthropologists.

Some of the activities of the American Anthropological Association, i.e., several business ventures in addition to the new publication policies, were intended to attract new members and thus bring about a much needed increase in revenue. From what can be gleaned from available records, all associations of this type are faced with financial problems, many of which are acute. Most organizations have been involved in one way or another with campaigns to raise funds. At this writing, it is not possible to judge the degree of success achieved. There is some indication, however, that these campaigns will permit only a precarious survival. There is to be seen in much of the support solicited a kind of good natured tolerance; this is not a stable foundation upon which to build. Also, one may deduce from somewhat controversial evidence that many of the problems and the varied attempts to solve them are indications that these anthropological organizations are somewhat obsolete and do not meet current demands. To achieve them it will be necessary to reorganize and revitalize practices and objectives which are, in some instances, more than half a century old. It is possible that the beginnings of such events can be seen in the stresses which have become apparent in recent years.

Among the anthropological professional societies there are groups which concentrate their interest upon selected subject matter or specified regions, sometimes a combination of both. There is wide variation in the character of such organizations. The American Ethnological Society at one time excluded all non-professionals except for recommended students and a few interested persons living on the Eastern Seaboard of the United States. Economic factors are chiefly responsible for the lifting of some of these restrictions. At the other extreme one may cite the Archaeological Institute of America which, by means of a complicated roster of membership categories, can actually welcome and in a sense classify anyone who wishes to join. The main purposes of all these organizations are the publication of the results of research and the holding of scientific meetings. Some of the societies working in Europe and the Near East, and, more rarely, societies concerned with the New World, do control or provide grants of money for research. Others administer research programs often including field work of various kinds. The large majority of organizations in this class are devoted to archeology, but others are concerned with ethnological, linguistic, or other subject matter.

Of particular current interest is the rise of societies devoted to applied anthropology. Practitioners of this very specialized

and as yet incompletely defined and somewhat unstable field have introduced to anthropology from the outside some ideas regarding professional organizations. For example, the Society for Applied Anthropology has developed a quarterly journal with a format and a general style of article closer to that more common in the world of business than in the sciences and humanities. The success of this venture has yet to be proved, but there is promise that, in the specific field of endeavor at least, the general scheme may become permanent. An interesting project launched by the same society is called "The Clearinghouse." This was organized for the purpose of recording research projects under way in the field together with the status and development of the results of such projects. The activities of the Clearinghouse are published in a bulletin separate from the journal of the Society.

Excepting the societies which have membership qualifications, organizations probably providing the most effective liaison between the professional and non-professional are those concentrating on specific subject matter. Much of this can well be due to the greater opportunity for non-professionals to participate at meetings and even in field work. The latter applies in the main to archeology which is more adaptable to this situation than any other subject. As a result of the opportunity to participate, greater potential support accrues to the society with easily definable, restricted objectives rather than to one more broadly based. Non-professionals, who outnumber the professionals and who in general are better situated economically, can be concerned with the welfare of a society. Furthermore, the combination of professional and non-professional support for a scientific program practically assures its success. This happy combination was active and productive, especially in the United States, previous to World War II. There is some evidence of a recent trend away from this condition. Professional work is increasing and anthropologists are becoming deeply absorbed in closely restricted areas of research. It may be that this weakens the interest of the professional in the affairs of an association which then suffers from lack of leadership. Whatever the reason, the activities and especially the resources of the specialized societies are diminishing, at least in relation to costs. It is difficult to anticipate what the future may have in store. Some kind of revitalization is necessary, but as yet in these societies no stirrings in this direction can be discerned. Whether or not this condition is due to lack of concern on the part of the professional is not known. It is of course possible that the relationship of the composition and the restricted objectives of these societies to present day economic and other conditions is incompatible.

This essay records a series of implications gained from a general survey of the available but rather scarce records. Of necessity, the emphasis is on the organizations in the United States, because much of the type of information touched upon is not available in print, and interviews with officials in foreign associations have not been possible. There are some important differences between American and European associations. These in part are reflections of certain differences in attitudes, practices, and support, particularly outside of academic circles. Nevertheless, the scientific accomplishments of professional associations throughout the world have a certain basic similarity, that is, they all publish and hold scientific meetings and often support lecture programs of various sorts. The subject matter of these is hardly comparable for it varies with the interests of the locality, the nation, and the anthropologists involved. However this may be, if the few available proceedings and other official records are correctly interpreted, there exist certain basic problems most of which appear to be traceable to the unprecedented expansion of the field which has not been paralleled by adequate adjustments in the organizations of the associations. Conditions vary greatly from country to country, however, and, where initiated, the methods of solving these problems are not at all similar. It appears that the American Anthropological Association has taken the most

drastic and forward looking action in recent years. A perusal of the records of this association brings to light considerable progress, even since 1952, and promise of success for the venture.

Anthropology suffers from a plethora of organizations having varying degrees of professional attributes. This is of course common to most fields both in the sciences and the humanities. What anthropology does not have, as do many other fields, is a number of basically professional organizations which have the support of the majority of anthropologists. There is need of such an association in anthropology both for use of the members and for uniting, but not submerging, the wide variety of specialized societies in order to form an organized whole. In the United States, the American Anthropological Association has assumed a certain amount of leadership. As yet, however, this has only the indifferent support of its professional membership. This condition is common to the field as a whole. Anthropologists as a group resist formal organization other than that barely necessary to permit restricted publication and some scientific meetings. The present trend in the scientific community at large appears to be toward the organization of professional associations whose main functions are to assist its members in all phases of their work. In some cases anthropological associations are attempting to adjust themselves to such trends. However, the general resistance of the majority of anthropologists affects adversely the speed and direction of what seem to be essential modifications.

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Part Five

Regional Round-Up: Europe and Southwest Asia

Anthropological Reviews for 1952-1954

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Introductory

PART FIVE comprises the largest section by far, more than one-third of the entire volume. It is the first in a series of summaries of anthropological activities in various countries and regions of the world as reported by scholars active within those countries and regions. Other such series, each reporting on a different area, are to appear in future issues of the Yearbook, so that in cycles of four to five years, world coverage will be achieved, and further reports on the same area again appear.

Our first "Regional Round-Up" considers Southwest Asia and Europe, which provide the content of the map used as end-papers to this volume. This map, which is but a portion of the map of "The World," published by the American Geographical Society, New York, is intended as a handy guide to readers encountering not yet familiar place-names.

One importance of these chapters organized by countries or regions is that they provide keys to the variety of emphases or interpretations placed upon anthropological research and other activities. These more localized views are a counterbalance to the generalized topical treatments of the previous chapters. Not only do they provide an account of local events and achievements which might be overlooked in a world-wide summary, but they also demonstrate excellently how much achievement is trapped or hidden behind the barriers of language differences and the limits of circulation of published materials.

Each author of a regional article was invited to report on the activities and achievements in anthropology as it is conceived within his area, either as a discipline or simply a body of subject matter which touches many related fields. The articles reveal the differences in how anthropology is defined and delimited. The authors of the chapters on France, Germany, and the Soviet Union limited themselves to the consideration only of ethnology. The chapters on France and Germany are published in French and German, respectively. No attempt here will be made to summarize the chapters that follow, for each, in itself, is a summary of the manifold activities during 1952–1954 of significance to anthropology.

Southwest Asia

An Anthropological Review for 1952–1954

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INTRODUCTION

Definition

THE geographical term Southwest Asia refers to a large portion of the Old World. There is a wide difference of opinion about the suitability of this term for the area to which it refers. American scholars favor the use of the term more than do scholars of other nationalities. The terms Vorderasien, Near East, Middle East, Asie Antérieure, Asie occidentale, Proche Orient, and Levant are used by German, British, and French scholars respectively. There is some similarity between the English and French terms, but the American term is entirely different. The differences of meaning among these terms and the fact that they refer to slightly different areas have subjected them to much criticism.

W. B. Fisher of Aberdeen University deals with this matter at length in his work *The Middle East* (1952, pp. 1–4), and in the introduction of another work by the same name (1953, pp. 1–11). After discussing various points of view, he explains the reason why he is in favor of the adoption of the term Middle East. George B. Cressey, on the other hand, is for the use of the term Southwest Asia, for the following reason (1952, p. 374):

"The terms 'Near East' and 'Middle East' are geographical expressions frequently used but seldom defined. To some they loosely refer to all the lands between Morocco and India; by others they are limited to the countries within Asia bordering the Mediterranean. To Europeans the closest part of Asia was 'Near,' while China was 'Far,' the intermediate areas were in the 'Middle.' During the Second World War the words became much confused when North Africa was designated as the Middle East theatre. For Americans the terms might be reversed, with China as the Near West and Turkey as the Far West. To those who live in these areas it is obvious that they are neither near nor far. Since none of these terms have precise meaning, it is well to use them sparingly."

Generalization

Short notes and a bibliography will be given about anthropological research in Southwest Asia during the period 1952–1954. We will try to give an outline of researches which have contributed to our knowledge of the physical characteristics, cultures, physical anthropology, prehistoric and protohistoric archeology and ethnology of the peoples and communities existing in various successive ages since the Pleistocene.

In our Introduction we review those works or researches which concern the anthropology of the whole of Southwest Asia, followed by separate sections on works or researches produced in the specific countries of the region.

As far as our present knowledge is concerned, we are faced in Southwest Asia not with the origin of mankind but with the birth and development of his civilizations.[1] On the other hand, conflicting views on the interpretations of the remains of Neanderthal man discovered in Palestine during the past twenty or twenty-five years have brought about the view that man on the Mousterian plane was subjected to a process of differentiation toward *Homo sapiens* (Vallois, H. and Boule, M., 1952, pp. 395–396):

"L'ideé d'un métissage entre Hommes de Neandertal et de Cro-Magnon pourrait venir à l'esprit. Keith et McCown éliminent cette explication. Pour qu'elle soit valable, il faudrait que les deux groupes qui auraient donné naissance aux Hommes de Palestine aient existé antérieurement à deux et dèja bien différenciés. La chose est difficile à concevoir. Les deux auteurs préférent considérer tous ces sujets comme des formes en voie de différenciation dans le sens *Homo sapiens.* Peut être ne sont-ils pas les ancêtres directs des Hommes du Palćolithique Supérieur que nous connaissons, du moins nous indiquent-ils que la transformation de l'Homme de Néandertal en Homme moderne, si elle ne s'est pas réalisée en Europe, avait pu se produire ailleurs. C'est une conclusion d'une extrême importance. Keith et McCown ont donné à ces Hommes de Palestine le nomme de *Palaeoanthropus palestinus,* ce qui ne saurait être approuvé. Le terme de *Palaeoanthropus* à été crée pour l'Homme de Mauer, dont nous ne connaissons qu'une mâchoire inférieure. Il ne peut être appliqué à l'Homme de Neandertal, à plus forte raison à un groupe qui se rapproche tant de l'Homme Sapiens. On peut considérer les Hommes de Palestine comme une variété très évoluée de l'Homme Néandertal, on ne saurait aller plus loin."

[1] Bengtson and Milojcic, 1954; Vallois and Boule, 1952; Braidwood, R. J.; 1947, 1952a, b; Braidwood and Braidwood, 1953; Childe, 1952; Curwen and Hatt, 1953; Dyson, 1953; Garrod, 1953; Hančar, 1953; Hanfmann, 1952; Kınal, 1953; Parrot, 1952; and Waechter, 1953.

Researches into the prehistory and protohistory of Southwest Asia have thrown considerable light on our knowledge of the early agricultural communities of Southwest Asia. R. J. and L. Braidwood's latest work (1953, pp. 278, 309–310) gives the following information in this respect:

"It is commonly understood that the earliest village communities of the Middle East were, in fact, the earliest such communities anywhere in the world. There is ever increasing documentary evidence, of a comparative nature, for this idea. Unfortunately, few radio-active carbon dates are yet available from the area. The world-wide carbon 14 dates in hand do, however, directly support the idea of earliest beginnings in established village life in Southwestern Asia.

"The foregoing account is an essay at putting together our personal understandings of the available primary archaeological evidence for the appearance of the earliest village communities in Southwestern Asia.

"The emphasis has been mainly descriptive, although we have in fact given relatively little detailed description of assemblages which are readily available in the general literature.

"The framework of the account has been in terms of three sub-stages or eras—the terminal era of the food-gathering stage, the era of incipient agriculture and animal domestication, and the era of primary village-farming efficiency. We have found these eras more provocative, in ordering our own thinking about the available materials, than the much used Grecisms 'mesolithic' and 'neolithic.' The evidence for each of these eras has been examined—when available—in each of nine natural sub-areas, which we take to make up what must be 'nuclear' western Asia from the point of view of the appearance of food-production. The ecological justification for this point of view is to be taken up in a further essay.

"Materials exhibiting our first two eras are woefully lacking save in Palestine and Southern Syria and Lebanon and the slighter exception of the Kurdish hill-flanks of Iraq. The third era, that of the established primary villages of farmers, is manifest in each sub-area, but in no case is there adequate evidence for the writing of a reliable culture-history.

"Unsatisfactory as the evidence may be, in terms of what one anticipates is potentially reclaimable, it is nevertheless far more adequate than one could have dreamed possible twenty-five years ago. Although we know we could not demonstrate the proposition, we have a very

strong hunch that the time and area for the appearance of the food-producing village economy is now roughly delimited. We ourselves would take it at least as an article of faith at the moment, that answers to questions as to how and why food production came about, are to be found within the time range and within the subareas suggested in this essay."

An article by Robert Dyson published in *American Anthropologist* (1953, pp. 669–670) deals with the domestication of animals in early village communities of Southwest Asia. Dyson says:

"The discussion of the origin of domestic animals is handicapped by fragmentary material and inadequate reporting by both archeologists and zoologists. Older identifications are badly in need of review by zoologists using current concepts and taxonomy. In recent reports these problems have been receiving increasing attention to the benefit of both fields of study.

"In the light of the current evidence, a Neolithic economy based in part on four domestic animals (cattle, sheep/goat, and pig) was first developed in the Near East by the fifth millennium B.C. From this area the practice of domestication spread through the Old World in two ways: 1) as an idea which was applied either (a) to the wild relatives of already domesticated animals (e.g. the European pig; Clark, 1952: 123), or (b) to entirely new species (e.g. reindeer; Jettmar, 1952); and (2) as a movement of the animals themselves (a) into areas formerly unoccupied by them (e.g. Southern Africa), or (b) into areas inhabited by their wild relatives (e.g. Europe)."

In connection with this problem we quote from Dr. Furuzan Kınal's (Ankara University) "History of the Domestic Horse in Southwest Asia" (1953, pp. 179, 192–193, 207):

"It is needless to dwell upon the importance of the horse in the history of civilization. Everybody knows that it was by means of the horse that man was able to overcome distance, and then establish a feudalism based on the horse. . . . Who were the people who domesticated the horse first? We consider the horse reliefs on monuments of the Sumerian Age as Hemion which is a kind of short wild horse. The oldest type of horse in Persia is a kind called Prezevalski, which is also a short-legged horse. Zoologists claim that the Anatolian type Tarpan was a tall animal. The reason why Hattusil III said: 'Send me tall horses, I have plenty of the short ones' to the Babylonian king is perhaps explained by a degeneration in the Anatolian horse. According to Hilzheimer the Tarpan type was brought to Anatolia by the Aryans by way of the Balkans."

There were some very interesting studies made on the racial history and the anthropology of the peoples of Southwest Asia. In this connection, we quote the following passage from Marc R. Sauter (1952, pp. 179–180):

"Pour l'anthropologiste les frontières que tracent le géographe et l'historien ne signifient pas grand chose. On s'en sera bien rendu compte en parcourant la première partie de notre ouvrage; malgré notre volonté délibérée de limiter notre présentation à la seule Europe, nous avons à de nombreuses reprises été obligé de chercher au dehors du territoire de celle-ci, en Asie occidentale et en Afrique du Nord. Et en fait, sur le plan anthropologique, l'Europe déborde largement les mers méridionales, la chaine du Caucase et les steppes russes pour englober toute une humanité. Racialement, l'Europe est partout où la peau de l'homme est blanche."

With regard to the sero-anthropology of the area under consideration, there is a new study on the sickle-cell trait by A. C. Allison (1953, pp. 23–24), who reports that:

"The people tested were Arabs in the Hashemite Kingdom of Jordan and Berbers in Algeria. The technique used was the chemical reduction of a small drop of fresh blood, using 2 per cent potassium metabisulphite. Provided that the whole area under the coverslip is examined systematically, true sickling is quite obvious on a single test with this method. . . . The individuals tested in Jordan were 308 supposedly pureblood Arabs from Jordan or Saudi Arabia, mostly of Bedouin stock, and 111 Arabs from Palestine, who are believed to represent a more mixed population. The blood of only one man showed the sickle cell trait; and he admitted on questioning that he had known Negro ancestry. . . . It is apparent that among the pureblood Arabs of Jordan and the Berbers of Algeria the sickle-cell trait is rare or absent."

We know that since the beginnings of historical time human society in a large part of Southwest Asia presented two different types: a) nomadic peoples called Badawin (singular, Beduin), and b) settled

cultivators or "Hadhar" in Arabic (Fisher, W. B., 1952, p. 113).[2]

Those who study the geography of Southwest Asia have often pointed out the unity the region presents from the point of view of its culture, history, and physical characteristics. Research into the prehistory and protohistory of the area leads certain authors to express this point of view. Claude Schaeffer says the following in his valuable work (1948, p. 89):

"L'interdépendance des pays du Proche Orient jadis, comme aujourd'hui, est très étroite. Il n'est donc pas surprenant de constater que la durée de la periode florissante de Chagar Bazar I(A) coincide avec celle de l'Ugarit Moyen 2 (1900–1750), periode qui à son tour, reflète la même prospérité en Syrie, depuis Ras Shamra jusqu'à Byblos, et en Egypte du Moyen Empire. D'un autre côté, le déclin de Chagar Bazar après le règne de Samsu-lluna correspond à la période d'instabilité entre le Bronze Moyen, et le Bronze Récent pendant laquelle des bouleversements avaient eu lieu dans tous les pays de Syrie et de l'Asie Occidentale en général, y compris l'Egypte."

Research carried out during the past fifty years has shown us that Southwest Asia possesses rich cultures of Paleolithic, Mesolithic, Neolithic, and protohistoric age from the beginning of the Pleistocene.[3] New research into this field is increasing our knowledge of this rich source for agriculture and animal domestication in Southwest Asia. We have learned that this area is very important since it was one of the centers of civilization where early town and city organizations came into being, with religious, cultural, social, and economic developments.

The following is a list of general works in anthropology and other subjects consulted in writing this article on Southwest Asia. The reader is reminded, too, of the work done by L. J. P. Gaskin, who twenty years ago gave us valuable bibliographical information (1934, pp. 122–125) concerning anthropological studies. We are indebted, also, to the work of Henry Field (1953). The *Old World Bibliography,* compiled by H. L. Movius and published, 1948–1954, by the American School of Prehistoric Research has been an invaluable contribution and an excellent guide for the researcher. Ettinghausen's bibliography (1952) also is worth mentioning. There follow separate accounts of anthropological activities for each of the countries of Southwest Asia.

[2] See the works of Coon, 1952a; Graf, 1952; Myres, 1953; and Oppenheim, 1939–1952. Coon's *Caravan* shows us the mosaic texture of the Middle East society, the physical compulsion of regional forces, and racial characteristics.

[3] The reader will find rich material on the cultural and social history, ethnology, and archeology of Southwest Asia in the works of the following researchers: Arnakis, 1953; Bricc, 1953; Cameron, 1952; Coon, 1952b; Creswell, 1953; de Gaury, 1952; Dothan, 1953; Ebeling, 1954; Fares, 1952; Field, 1952, 1953; Filipoviç, 1954; Finnegan, 1952; Hrozny, 1953; Jackh, 1952; Levy, G. R., 1952; Lewy, J., 1953a, b; Magie, 1953; Miles (ed.), 1952; Moscati, 1953; Patai, 1952; Poliak, 1953; Speiser, 1953; Taeschner, 1952; Wales, 1953; Young, 1952; Zohary, 1952.

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ARABIA

OUR knowledge of the anthropology of Arabia is gradually growing. As far as the present situation in Arabia is concerned there is ample information in *The Middle East* (see Introduction, p. 446). Levalloisian, Mousterian, and Aurignacian artifacts gathered by Caton Thompson, Gardener, Henry Field, Bertran Thomas, and Philby in both Saudi Arabia and in the Hadramaut region of southern Arabia are an indication that this part of Southwest Asia was inhabited since Paleolithic times. T. Norris (1952, pp. 33–34) has reported on rock-shelter buildings found in northern Arabia.[4]

Among works dealing with the anthropology of Arabia, Philby's *Arabian Highlands* (1952a) deserves our attention. This work is based on a tour taken by the author in Saudi Arabia, and deals with the population and ethnography of the region. J. Henninger finds Philby's *Arabian Jubilee* (1952b) valuable from the point of view of ethnology and ethnography. Joseph Henninger's analysis of polyandry in Arabia in pre-Islamic times is also very interesting (1954). Field's study of the ethnoanthropology of Sinai[5] is an important contribution to our knowledge of the anthropology of Arabia. He says in this work (1952b):

"As a result of the University of California African Expedition, 1947–1948, evidence is now available that man in a Paleolithic phase of culture lived in northern, central, and southwestern Sinai. Thus, the chain of surface stations is now linked from the Suez Canal to the Caucasus.

[4] See also Vallois and Boule, Introduction, p. 446; Field, 1952a; Neuville, 1952; Rathjens, 1952; Roes, 1953.

[5] The following scholars must be mentioned for their anthropological studies on Arabia: Bowen, 1952; Chelhold, 1952; Rathjens, 1952–1953; Ryckmans, 1952; Salonen, 1952; Schaffer, 1952; Serjeant, 1953a, b; Spencer, 1952; and Wright, 1952.

"In the Acheulo-Levalloisian cultural phase Paleolithic man migrated across the intercontinental land bridge between Africa and Asia. It cannot now be stated with certainty the direction of the flow, but in all probability it was in both directions.

"Although such great streams as the Wadi el-Arish, Wadi Gharandel, Wadi Feiran, and the Wadi es-Sheikh flowed with water, the animals to be hunted must have been limited, thereby naturally reducing the number of hunters.

"Further archaeologists will plot distribution maps of Paleolithic, Neolithic, and Mesolithic surface stations. Stratified deposits will also be found. The stone monuments within this peninsula will be studied and plotted by periods. The pottery will be classified and dated. The inscriptions will be copied and translated.

"Finally it will be possible to show the cultural position of Sinai through the millennia in relation to Egypt, Palestine, Jordan, Saudi Arabia, both sides of the Red Sea coast, and the Mediterranean area. The influences on Sinai from the Far East, India, Central Asia, and Europe will also be shown.

"Sinai was indeed the land bridge between Asia and Africa or Africa and Asia and between Eurasafrica."

After dealing with the history of ancient and modern Sinai, and with its population in length in this work, Field reports on his findings concerning the physical anthropology of the present day Beduins and Jebeliyehs living in Sinai. He says (p. 92) that the Jebeliyehs have been kept apart from the Beduins of Sinai. However, in general dress and outward custom the Jebeliyeh appear to be like Beduins, who refused to permit intermarriage between them. Both the Beduins and the Jebeliyehs are dolichocephalic. Among those Beduins whose cranial measurements have been taken, only one has been found to be brachycephalic. Average stature in Beduins is 165.72 centimeters which is very close to the mean for Southwestern Asia. Average stature in Jebeliyehs is 167.01 which is slightly above the mean for Southwestern Asia.[6]

[6] See also Albright, 1952; Cox, 1952; Fakhry, 1951/1952; Izzeddin, 1953; Rodolfo, 1952; Wissmann and Höfner, 1952.

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IRAN

AFTER the works of such researchers as Jacques de Morgan, Herzfield, Field, Browne, and McCown, who were pioneers in this field, we have begun to see works dealing with discoveries of fossil man in Iran.[7] Vallois prepared his article "Hommes fossiles en Iran," published in *L'Anthropologie* (1953), on the basis of Carleton Coon's study of the Paleolithic cultures unearthed in Iran in 1949. We understand from Vallois' article that between the Neandertaloids discovered in Kafreh and Mount Carmel, and the Teshik Tash Neandertaloids, that is to say, between Palestine and the Russian Turkestan, Iraq and Iran have remained a large area where no remains of fossil man were found until 1951. D. Garrod, however, about twenty years ago was able to trace the existence of a Paleolithic industry in a cave in Kurdish Iraq. This discovery led Coon to examine (1951) many caves of the Iranian plateau. Four caves attracted his attention: 1) the Tamtama cave near Ourmia Lake in Azerbaijan, 2) the Mazenderan cave on the

[7] Coon, 1952a, b; Duprée, 1952; Mitsumuri, 1952.

Caspian, 3) the Behistoun cave near Kermanchah, 4) the Khunik cave to the south of Meshed, on the Afghanistan border. Nothing has been found in Khunik, but ancient human remains have been found in the other three. The cultures found in the Behistoun cave were classified by Movius as very advanced Lavalloiso-Mousterian. They were found in a layer of dark red soil twelve feet deep. What was most interesting was that no signs of hearths were found in this layer. Coon found a human radius bone in this layer, which looked identical with the radius of La Chapelle-aux-Saints man. An individual incisor also showed entirely Neandertaloid characteristics. Thus Neandertal man and industry were found in this cave, but were these layers contemporary with the European Mousterian? Can this layer be contemporary with the upper Paleolithic of the Palestine coast? Coon also found a piece of a human femur in a deep layer of the Tamtama cave. This bone showed Neandertal characteristics too. No sign of fire was found. The importance of the Mazenderan cave lay in the discovery of a grave, found at the base of its Mesolithic layer. Three skeletons were found in this grave. One of these reminded Coon of the Cro-Magnon type. The third skeleton belonged to a mesocephalic woman of about 12–13 years. Coon found certain Neandertal characteristics in this skeleton. Thus Coon believes that Neandertal characteristics continued until at least the beginning of the post-Pleistocene in Iran. Coon and Angel published two reports (1952, 1953) on the Hotu skeletons.

Apart from the works of Henry Field, H. V. Vallois, and Krogman, which belong to the period before 1952, we have not encountered any new publications about the racial history and physical anthropology of the peoples of Iran. As for archeological research we refer the reader to the work of L. Van den Berghe (1953), R. Ghirshman (1952), and A. Godard (1954). H. Samadi's communication (1952) is also worth noting. Lambton's work (1953) on the social anthropology of Iran, and Stirling's analysis (1953) are very interesting. P. Stirling writes (p. 191) of Lambton's work as follows:

> "This thorough, scholarly and highly factual study of the peasants of Persia, and of their relations to the landlord and the state, falls into two parts. The first of these gives the history of land tenure and administration from pre-Islamic times down to the rise of the Riza Shah. . . . In the second part Dr. Lambton gives an outline, subject by subject, and area by area, of the present position in Persia, much of which is clearly based on her own widespread field researches. . . . Yet even as it stands, this book is of the first importance to any anthropologist, indeed, to anyone interested in the social problems of the Middle East."

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IRAQ

IN dealing with anthropological studies concerning Iraq we begin by reviewing the research carried out in the field of physical anthropology. We are indebted to Henry Field (1940, 1949, 1951, 1952) for his anthropological investigations of the inhabitants of Iraq. In his latest work Field gives us a description of North and South Kurdistan, and goes on to explain the anthropological characteristics of various human communities living in those areas (Assyrians, Jews, Armenians, Gitans). In his investigations Field concerned himself not only with the physical characteristics of the population of Iraq, but also with the ethnological and ethnographical features observed in these communities.

Research into Iraq's Paleolithic cultures and findings of remains of fossil man presented a new phase between 1952 and 1954. Ralph Solecki's work (1953a, b; 1954a, b) particularly is to be mentioned. The prehistory of Iraq has gained new data as a result of his discoveries in Shanidar Cave, particularly of a Mousterian child skeleton. Acheuleo-Mousterian and Mesolithic fossil remains of man have, in fact, been found long ago in Palestine. In 1949 two teeth of Neandertal man were discovered in the Mousterian strata of Anatolia. In the same year Coon found remains of Neandertal fossil man in Behistoun cave in Persia. Considering that no remains of fossil man previously had been found in Iraq, one can understand the importance of the discovery made by Solecki in Shanidar cave. Skeletal data on Pleistocene man are gradually increasing. In his detailed published report on his work on the Shanidar Cave, Solecki says (1953b, pp. 229–232):

> "In northern Iraq, the limestone formations of the Zagros Arc present a plethora of cave sites of excavation. . . . The cultural sequences recognized so far from the top to the depth explored include 1) Modern and Historic, 2) Protoliterate and Neolithic, 3) Mesolithic, 4) Aurignacian, and 5) Mousterian. The Aurignacian seems to have a microlithic component in the upper level. This microlithic level may be part of a mesolithic occupation, which poses an interesting problem waiting to be solved. . . . A continuation of the 1951 sounding this season (1953) at Shanidar cave resulted in a considerable amount of data.

"Chief among these was the finding of an infant's skeleton in the Mousterian layer of the Middle Paleolithic period, layer D, at a depth of nearly 26 feet. This represents the first paleolithic skeletal remains to be recovered in situ in Iraq. . . ."

As for publications dealing with the prehistory or protohistory of Iraq during the last two years we would like to mention the works of H. E. Wright (1952), Helen J. Kantor (1952), R. J. Braidwood (1953), E. C. Shenck (1953), and André Parrot (1953). The following lines are from *Syria,* Vol. XXX, 3–4, 1953, pp. 310–312 on the two volumes by André Parrot called *Archaeologie Mésopotamienne:*

"M. Parrot est le premier à nous renseigner sur les fouilles de *Hassuna,* site découvert par Said Fuad Safar à 22 milles au sud de Mossoul, et fouillé en 1943–44 par le service des Antiquités de l'Iraq. Seize niveaux ont été reconnus, bien en place depuis l'époque assyrienne (No. XVI en surface) jusqu'à la période néolithique (Ia, au contact avec le sol vierge). (Seton Lloyd et Fuad Safar, dans Journal of Near Eastern Studies, IV, 1945, pp. 255–289).

"Jamais chantier mésopotamien n'avait fournit pareille succession" (p. 113). La couch Ia n'a fourni aucune construction, mais de simples foyers de campement. Sommes-nous au début de l'époque néolithique?

"M. Seton Lloyd propose d'en rapprocher le niveau V d'Ugarit, c'est une question à préciser. La Sédentarisation s'affirme avec l'agriculture (Faucille en silex) et la céramique se développe. Aux niveaux IV–VI on trouve-importée ou imitée-la céramique de Samarra, qui disparaît aux niveaux VII et VIII pour faire place à la céramique du type Halaf. M. Parrot en Conclut (p. 123) que la céramique de Samarra précède celle de Halaf. Il la retrouve sur le Moyen Euphrate, à Baghouz. Aux niveaux IV et V apparaissent des figurines humaines, notamment une desse-mère. La céramique type Obeid apparait aux niveaux XI–XII. A ce dernier niveau c'est révélé la première construction en briques crues qui marque un grand progrès sur la stade de la hutte en pisé. Les Fouilles d'Eridou prouvent que la période d'Obeid a duré fort longtemps.

"Les objets découverts dans les couches les plus profondes d'Eridou (XVIII–IX) montrent une contemporanéité avec les civilisations de Halaf-Samarra, mais aussi des distinctions très nettes. Ainsi on n'y trouve pas de figurines de "desse-mère," si abondantes ailleurs. M. Parrot en conclut que les gens d'Eridou XVIII–IX ne sont pas de colons de Halaf-Samarra. Ils ne proviennent pas non plus du plateau Iranien et ici se place une très notable conclusion (p. 210): "Au début du IV[e] millénaire, un fort groupment de provenance sud-orientale s'est installé sur les rives du golfe Persique et à l'embouchure des deux grands fleuves mésopotamiens. Ce groupement a solidement organisé ce qui constituait pour lui une importante tête de pont. Il est entré fatalement en relation avec ses voisins du Nord (les gens de Samarra et de Halaf) et l'est tout naturellement resté avec le gens fixés aux confins sud-orientaux." Leur expansion est marquée par de la céramique d'Obeid.

"En somme, si nous ne nous trompons sur la pensée de l'auteur, on saisit là la plus ancienne intervention de la population de l'Arabie, c'est-à-dire des Sémites. Cette Sedentarisation des nomades de l'Arabie dans le sud de l'Iraq se retrouve à toutes les époques de l'histoire et se manifeste par une assimilation plus ou moins complète.

"Les fouilles si bien menée d'Uruk sont précieuse pour noter le développement de l'architecture au IV[e] millénaire. Les cachets et cylindres de Warka sont célèbres; ils précèdent l'écriture sur tablettes avec lesquelles on entre dans la période de Djemdet Nasr dont on a éprouvé le besoin de changer l'appellation en celle de protoliterate."

We would like to refer the reader to the works of the following investigators in this field: Tribondeau (1953), Maurice Lambert (1953), Pierre Amiet (1953), S. H. Hooke (1953), Mebrure Tosun (1952), Jean Bottero (1952), Walter Andrea (1952), Furuzan Kınal (1952), Samuel Kramer (1952), Lees and Falcon (1952), Dijk (1954), Gordon (1954) and Powers (1954). The articles in *Sumer* contain detailed information about excavations in Hatra, Nimrud, Nippur, Shanidar Cave, Dukan Cave and Warka.[8] *Sumer* is published by the Directorate General of Antiquities in Bagdad. *Iraq,* which is published by the British School of Archaeology in Iraq, is mostly devoted to the protohistoric archeology of the neighbors of Iraq.

[8] Contributed by the following workers: Asil, 1953; Awad, 1953–1954; Awad and Bashir, 1952; Baquir, 1952–1953; Baquir and Bashir, 1954; Basmachi, 1952, 1953; El-Amin, 1953; Ishaq, 1953; Mahfudh, 1954; McCown, 1954; Mustafa, 1954; Safar, 1952; Shukri, 1954.

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ISRAEL

IN spite of the small area it covers in Southwest Asia, Israel has been a region of intensive anthropological research. The material we have gathered for the period of 1952–1954 is an indication of this. P. A. Gloor has published the latest work (1950, 1952) on the physical anthropology of the inhabitants of Israel. His researches show

that an anthropological complex of Alpine, Armenoid, Nordic, and Negro races have intermingled in Israel. We learn that Christian people of the area are of brachycephalic type, while Moslems are of the Mediterranean stock. Sixty per cent of the 419 Palestinians studied by this worker are found to be brachycephalic, and 40 per cent dolicho-mesocephalic.

As for prehistoric and protohistoric research in this field R. Neuville's large and detailed work (1951), and J. Perrot's study (1952d) are in the foreground. Perrot's study gives us information about recent prehistoric and protohistoric discoveries made in Israel. Furthermore, it gives us information regarding research carried out in Israel in recent times in the field of prehistory. The Chalcolithic period, the Bronze Age, the Iron Age, the Hellenistic, Roman and Byzantine periods receive special treatment in this work.[9]

During the last two years Raphael Patai (1953), A. Grannot (1952), Bernard Lewis (1952), Emile Marmorsteen (1953), David Mace (1953), and S. Schwartz (1954) have written books or articles on the cultural history and ethno-sociology of Israel. We quote from Israel M. Sief's analysis (1953, pp. 190–191) of Raphael Patai's *Israel Between East and West:*

"The main theme of Prof. Patai's study is that the gathering of the exiles into modern Israel has brought together many differing Jewish communities—Jews from the deserts of the Yemen, industrialists and craftsmen from Holland and Russia, farmers from Rumania, city clerks from France, shopkeepers and poverty-stricken Jews from the bazaars and ghettos of North Africa, workers and merchants from Iraq and Iran, dons from Oxford, from Harvard, and from Heidelberg. Each brought the cultural pattern of his country. Whilst this multitude of cultures and their impact on each other is of interest to the student, the task of the statesman and educator is to weld these various cultural groups in as short as possible a time into one homogenous cultural pattern, while maintaining in each group that élan vital which has given it organic life and purpose . . . it is the continuity of historic tradition and the basic moral and ethical principles which in the end will weave the Israeli cultural and social patterns which, in their turn, will help the Jewish and non-Jewish world to understand the meaning of a renascent Israel . . . indeed, Israel offers a field of much interesting and valuable work to the social anthropologist."

[9] With regard to the pre- and proto-historic research conducted during the past two years in Israel, we shall mention Anonymous, 1953; Avnimeleck, 1952, 1953; Bate, 1952; Brice (See Introduction, p. 5); Dothan, 1952; Petrie *et al.*, 1952; Free, 1953; Glueck, 1952, 1953; Haas, 1953; Isserlin, 1952; Kallener-Amran, 1953; Kenyon, 1952, 1953a, b; Milik and Cross, 1954; Perrot, 1952a, b, c, 1953; Pfannenstiel, 1952; Skutil, 1952; Snow, 1953; Stekelis, 1952; Stekelis and Haas, 1952; Tushingham, 1954; Winnet, 1952; Yeivin, 1952.

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JORDAN

WE are indebted to the publications of the Department of Antiquities of Jordan for our knowledge of the anthropological research carried out in Jordan during the period 1952–1954. The aim of the *Annual,* the most important publication of this department, is set down in its first volume published in 1951:

"This present publication is the first volume of an annual of the Jordan Department of Antiquities, designed to be a successor for East and West Jordan to the Quarterly of the Department of Antiquities of Palestine, and sponsored by the government of the Hashemite Kingdom of Jordan. Its aim is to provide a medium for the publication not only of the work of the Department of Antiquities but also for the researcher on all aspects of the archaeology, history and philosophy of East and West Jordan.

". . . the construction of the Jordan Archaeological Museum on the citadel at Amman should be able to open its doors to the public early in 1952. . . . Exhibits will cover all periods of man's history in Jordan, from paleolithic to Islamic, and the system of exhibition will be based on that set up . . . in the Palestine Archaeological Museum."

The first volume of the *Annual* contains two articles, one concerning prehistoric archeology by Lankester Harding, and the other, excavation work in Jordan by Aouney Dajany.

In the second volume of the *Annual* (1953), W. M. Shanklin and A. J. Dark published two reports (p. 57) on two skulls found in Jordan:

"These are the skulls of Hani (A) and of the unknown woman (B). Cranial index: (A) 72.1 per cent, (B) 75.9 per cent—Stature (A) 167.99 cm.,

(B) 152.11 cm. These two skulls are unlike those of the present day Lebanese (Kappers and Parr, 1934, Shanklin 1938). . . . These two skulls are not unlike those of the Bedouin of today; however, people with skulls having similar characteristics have probably occupied this area for at least five thousand years."

The second volume also contains reports on excavations at Qumaran Caves, Bethany, Khubet Qumran, Wady el Marabaat, Dhiban and Jericho (pp. 82–88) and also on an iron age tomb at Alji, a Hyksos tomb at Kalandia, and on a Herodian tomb at Wade El Badhan (pp. 66–78). We must, in this connection, mention two articles by G. Lankester Harding (1953), i.e., "A Holy Man of Dark Age Jordan" and with others (1953), "Four Tomb Groups from Jordan."

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LEBANON

WE shall deal with the anthropological activities in Lebanon by mentioning the communication of William M. Shanklin (1953, p. 134) to the Royal Anthropological Institute of Great Britain and Ireland:

"This lecture was based on observations and measurements made on the males of five Bedouin Tribes. The series includes 270 Rwala, 176 Maualy, 120 Akeydat, 70 Howeitat and 65 Beni Sakhr tribesmen. The Akeydat and Maualy are primarily sheep breeders living in the North Syrian desert; the Rwala raise camels and migrate deep into the Syrian desert; the Beni Sakhr and Howeitat live in Jordan, some of their tribesmen raising sheep while others are camel-breeders.

"Members of the different tribes were fairly similar in their observable characteristics. The observations given below, unless otherwise noted, are on the Beni Sakhr. . . . The presence of light mixed eyes among these Bedouin is evidence of some degree of blondism. The same is true for eye colour among the desert border villagers. . . . Examples of the 'Jewish type' of nose were not numerous among the Bedouin. Actually their noses tend to be straight with a high bridge. . . . One of the most interesting findings was the striking difference in stature. . . . All five of the groups have long narrow heads. . . . The actual facial measurements show that the faces of the Akeydat and Maualy are, like stature, much greater than those of the other Bedouin. . . . On the basis of the above measurements I conclude that these Bedouin constitute two varieties of the Mediterranean race, the Rwala, Beni Sakhr and Howeitat representing the small variety while the Akeydat and Maualy represent the large variety. . . .

"The customs and manners of these Bedouin remained unchanged from early biblical days until very recent years. Strong governmental control, aided by modern transportation, has

nearly ended some of their activities, especially raiding."

The most interesting archeological discovery made in Lebanon during the recent years, was at Ksar'Akil. Readers are referred to F. Bordes' summary in *L'Anthropologie* which is based on the reports of Braidwood, Wright, and Ewing published in 1951.

In connection with the prehistory of Lebanon we recommend consultation of the following publications: Henri Fleisch (1952), Waechter (1952), and Henri Seyring (1953).

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SYRIA

WE shall deal with the prehistoric and protohistoric archeology and only partly with the cultural history[10] of Syria. Foremost among the research in Syria is the Ras-Shamra excavations conducted by Claude Schaeffer (1954), who continued his exploration of the ancient Ugarit during this period. Another important site of excavation in Syria is Mari. André Parrot gives us detailed information (1952, 1953a) about the eighth and ninth excavation seasons at Mari, and their early results in *Syria* (1953b, pp. 196–221):

"Pour la deuxième saison depuis la guerre et la huitième depuis le commencement des travaux, l'expédition archéologique Française de Mari a pu rouvrir son chantier et reprendre l'exploration de la ville royale. . . . Sept campagnes de fouilles n'avaient fourni que 3 inscriptions présargonique. La VIII[e] campagne en abandonne quelques 35, entières ou fragmentaires il en ressort, d'après l'onomastique, que dans cette ville ou l'on ramasse des objets qui auraient pû tout aussi bien sortir de Lagash ou d'Ur, tellement ils portent la marque Sumérienne, la caste dominante, les cadres, la dynastie, sont Sémitiques et il n'y a pas lieu de penser que la population appartienne à une race différente. Cependant l'influence sumérienne s'exerce aussi dans le type d'écriture, comme dans la rédaction des inscriptions. La plus longue (elle compte quatorze cases) gravée sur la grande roche de Pierre de la statue colossale, présente, selon les remarques de M. Dossin, un mélange de Sumérogrammes et d'accadien. Population Sémitique, influence sumérienne. De cette synthèe, sort une civilisation que nous avons qualifiée naguère de mésopotamienne, car elle est *un* du moyen Euphrate au Golfe Persique, mais Mari lui assure une frappe qui lui confère une charme, une finesse, d'une indéniable originalité. Ainsi, au milieu du III[e] millénaire le royaume de Mari constituait non

[10] Lewis, 1952; Sabri and Wikander, 1953; Sourdel, 1953; Speiser, 1953.

seulement une puissance politique redoutable mais un foyer artistique dont les derniers travaux ont confirmé la grandeur et le rayonnement. Il pouvait sembler qu'après les statuettes du temple d'Ishtar nous n'avions plus rien à attendre de nouveau. Et voici, avec le sanctuaire d'ishtarat la neuvième campagne, Octobre, Decembre, 1953, a montré qu'il y a côte à côte deux sanctuaires, l'un dédié à ishtarat, l'autre à Ninni—Zazai, toute une série de sculptures inédites. Mari n'est sans doute pas à la veille d'être épuisé et nul ne peut prévoir de quelles révélations il est encore dépositaires. . . ."

Among studies related with the prehistory of Syria we mention Miss Garrod's (1952), Waechter's (1952), and Henri Fleisch's (1952).

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TURKEY

THE beginning of anthropological research in Turkey dates back to 1925 when the Turkiye Antropoloji Tetkikat Merkezi (Centre des recherche anthropologique de la Turquie) was established in the University of Istanbul and the *Türk Antropoloji Mecmuası* (Revue Turque d'Anthropologie) began to be published (Kansu, 1940, 1946; Şenyürek, 1953c). This center was moved to the University of Ankara in 1935, and the *Revue* was published until 1939. Since then, articles concerning anthro-

pology have been published in *Belleten,* published by the Turkish Historical Society, and the *Dil ve Tarih-Coğrafya Fakültesi Dergisi,* published by the Faculty of Letters, Ankara University.

An anthropometric survey was made in Turkey in 1937 when 59,728 men and women were examined. Afet Inan published a detailed work (1939; 1947) based on the material of this survey.

There has been an intensive research in the field of folklore in Turkey. A new journal publishing articles on Turkish folklore has been issued since 1949. The Türkiyat Enstitüsü (Institute of Turkology), founded in the University of Istanbul in 1924, also has publications dealing with Turkish folklore. The Türkiyat Mecmuası, published by this institute is a valuable contribution consisting of ten volumes. The Institutes of History of Medicine established in the Istanbul and Ankara Universities are engaged in research into medical folklore.

The *Türk Tarih, Arkeologya ve Etnografya Dergisi,* published by the Turkish Ministry of Education, is devoted to research in Turkey and its archeology, ethnology and history. Although research into the Pleistocene is at an initial stage in Turkey, The Turkish Historical Society, the Türk Maden Tetkik ve Arama Enstitüsü (the Mining Research Institute of Turkey), and the Turkish Geological and Geographical Associations have research projects connected with this field. As for our knowledge of the prehistory of Turkey, Jacques de Morgan wrote as follows on the subject in 1924 (p. 300):

"D'autre part on remarque que 'le coup de poing' ne se recontre pas dans un grand nombre de régions telles. . . . L'Asie Mineure . . . ainsi que dans les contrées du Nord, le plateau iranien et celui de l'Arménie, pays couverts de glaces pendant la majeure partie des temps quaternaires et, par suite, inhabitables."

His quotation shows that the dominating belief until very recently has been that human cultures in Turkey—within her present frontiers—date from protohistoric times. But the discoveries and researches of recent years do not support the views of the French scholar. We know now that human civilization in Turkey began not in the Holocene but in the Pleistocene. This is shown by an examination of Pleistocene terraces (open air) settlements, and cave explorations. In this connection we wrote (pp. 227–232) in 1947 as follows:

"The discoveries of the last ten to fifteen years connected with the Quaternary era, of the Paleolithic civilization of Turkey, have confirmed the existence in Turkey of biface industries such as Chellean, Acheulean, and Micoquian; and chipping industries such as Clactonian, Levalloisian and Mousterian. These industries belong to the old Paleolithic times. From among the Aurignacian, Solutrean, and Magdalenian industries of the Upper Paleolithic period, only the Aurignacian industry has been found in Turkey. According to our present knowledge and research, the Solutrean and Magdalenian industries do not exist in Turkey. After the Aurignacian, the Paleolithic civilization of Turkey is connected to Neolithic and Chalcolithic civilizations by a transitional period called the Mesolithic."

In the IIIrd Congress of the Turkish Historical Society (Ankara, 1943) one of our reports (1948, pp. 306–314) said:

"Anatolia must be studied from the point of view of fossil monkeys. The pontien fossils we discovered in Ağilkaya in the valley of Ilhançay near Ayaş in 1936 have increased the possibility that there may be in this bed fossils similar to those Mesopithecus Pontelici fossil monkeys found at Pikermi (Greece). Professor Boule believes that Mesopithecus abounds in Upper Miocene regions of Europe and Asia Minor. It must not be overlooked that such monkeys as Dryopithecus have spread from India as far as Europe using Anatolia as a passage way."

Intensive research is now being carried out on this problem by Professor M. S. Şenyürek, Chairman of the Division of Palaeoanthropology, University of Ankara (1952a, b, c, d; 1953a, b, d, e, f; 1954a, b, c, d).

Among the anthropological publications on prehistory, ethnology, and linguistics between 1952–1954 in Turkey, we mention the works of the following authors: Şevket Aziz Kansu and Seniha Tunakan (1953), and Enver Bostanci (1953). Contributions to the prehistoric and protohistoric archeology of Turkey between 1952–1954 were made by the following workers: Nimet and Tahsin Özgüç (1953), Bahadır Alkım (1952a, b, c, d), Bossert (1953), Kılıç Kökten (1952,

1953), Nuri Gökçe and Seton Lloyd (1953), Enver Bostancı (1952), J. Garstang (1953), Kurt Bittel (1953), Sir Leonard Woolley (1953), von der Osten (1952a, b, 1953), Gurney (1952, 1952–1953), Barnett (1953a, b), Güterbock (1953a, b), René Dussaud (1953), Sedat Alp (1952), E. Laroche (1953), M. V. Seton Williams (1953), D. S. Rice (1952), Michael Gough (1952), J. B. Segal (1953), R. D. Barnett and Nuri Gökçe (1953). As for works dealing with the ethnology and cultural history of Turkey the reader is referred to the following authors: Hamit Koşay's monograph on the Alaca Höyük (1951), Bossert (1952), J. L. Myres (1952), Ahmet Dönmez and W. C. Brice (1953), Gotthard (1953), Eberhard and Boratav (1953), Arseven (1954), van Palotay (1952), Mahmut Makal (1954), Sabri Oran (1954), and Jean-Paul Roux (1953).

Among works dealing with linguistics we can mention: Emin Bilgiç (1953), the *Language reform in Turkey* (Anonymous, 1952b), published by the Turkish Language Society, Uriel Heyd's *Language Reform in Modern Turkey* (1954), *Folklore Sözleri* (Anonymous, 1952a) published by the Turkish Language Society, *Türk Dili Araştırmaları* (Anonymous, 1953–1954), Faruk Sumer (1952), Abdülbaki Gölpınarlı (1952), Abdülkadir İnan (1950) and Mehmet Emin Müderrisoğlu (1953).

The annual reports of the Turkish Historical Society and the preliminary reports published in *Belleten* give us sufficient information about the early results of the excavations that are being made by the Society in Karahöyük (Konya), Sinop, Side, Perge, Isparta, Karatepe, Domuztepe (Adana), Fikirtepe (Istanbul), Kültepe (Kayseri), Ergili (Manyas) and Höyücek.

Members of the Dil, Tarih-Coğrafya Fakültesi (Faculty of Letters) have been using the research stations established by the University of Ankara in Eastern, Central and Western Anatolia. The German and French Institutes of Archaeology which have their headquarters in Istanbul have continued their work during the last two years. The British Institute of Archaeology in Ankara has made excavations at Sultan Tepe and Beyce Sultan (1954). Arif Müfid Mansel's *Türkiyenin Arkeoloji, Epigraphy ve Tarihi Coğrafyasi için Bibliyografya* is a valuable work covering these fields up to 1939.

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Greece

An Anthropological Review for 1952-1954

JOHN G. KOUMARIS

Professor Emeritus of Anthropology of the University of Athens (Medical School), Dr. Koumaris was Director, 1915–1950, of the Anthropological Museum and Professor, 1925–1950. He was founder in 1924 of the Hellenic Anthropological Society and its General Secretary from 1924 to 1950. His numerous articles on physical anthropology have appeared in Greek, German, French, Italian, and English journals.

ALTHOUGH we think that "physical anthropology" is the most important branch of our science, it is just in this field that, for 1952–1954, the contributions from Greece have been of lesser value than in other aspects of anthropology taken in the widest sense. For several years the writer has retired from active service; numerous works from the Anthropological Museum remain unpublished; and the communications of The Hellenic Anthropological Society are temporarily suspended. Greatest activity of international interest during the period under review has been in prehistoric archeology.

Without attempting to touch upon the great number of excavations in the total field of archeology, our brief review considers the status in Greece of the discipline of anthropology in its *physical* and *psychical* aspects. We note the contributions from the Anthropological Museum, from the Laboratory of Hygiene, from the Archeological Museums of Greece, the work in Popular Art and prehistoric excavations, as well as the very important private works of the Society for Macedonian Studies, the Psychological Laboratory, and others.

PHYSICAL ANTHROPOLOGY

Consideration is here given to a number of publications of John G. Koumaris, M. D.; to the work of George G. Philippas, D.D.S., M.S.D., on examination of teeth and investing tissues of ancient skeletal material; and to research on the distribution of blood groups among the Greeks, including the contributions of Gerasimos P. Alivisatos, Professor of Hygiene at the University of Athens.

To spread the modern concept of anthropology, John G. Koumaris published many popular works on different branches of anthropology in various journals and in the periodical, *Sun*. A large number of articles were edited for the *Great Encyclopedia* (1934) and the *New Encyclopedical Lexicon*. With the completion of Volume XVIII, more than 550 words form, for the first time in Greek, an anthropological dictionary. A general work on anthropology, with 200 pages and 116 pictures, was edited in May 1954, under the title "Man and his History." With E. Katritsis, M. D., Koumaris published an article on "The frequency of the Ape ply" (1953), which reported its occurrence 120 times (3.2 per cent) among 3,641 persons observed; except for non-typical cases, 3.6 per cent on males, 2.3 per cent on females; and most often on workmen. The article, "Die Homöomorphie in der Entwicklung der Menschen" (1954), supported homoeomorphical evolution from both (1) physical and (2) psychical points of view: for *natural* man, by the identical evolution of the body of all

humans—standing position, brain, speech, thumb, with the same evolutionary steps from Proanthropi to Protanthropi to Homo sapiens (teleoanthropos); for *psychical* man, by the identical development of the brain about the *material* inventions, such as fire, industry, housing, clothing, nutrition, money, ceramics, etc., as well as about the *spiritual* manifestations, such as religion, superstitions, aesthetics, adornment, customs and habits, art, language, writing, medicine, astronomy, society, family, ownership rights, etc.

Since 1949, G. Philippas, has made detailed EXAMINATIONS OF DENTAL SYSTEMS OF SKELETAL REMAINS, as preserved in Greek museums, material representative of nearly the entire time-span since the Neolithic. Investigations, with the cooperation of the archeologist A. A. Papagianopoulos-Palaios were begun on the material excavated in the ancient Athenian Agora by The American School of Classical Studies, on that of Kerameikos (now completed), on that of The Anthropological Museum, and on that found at Nydri on the island of Leukas. In addition to detailed examination of dentition together with investing tissues, the lower second premolar and first molar regions were selected for thorough study, in all cases by visual and roentgenographic examination, supplemented by scale photographs.

During 1952–1954, Philippas was engaged primarily in the examination of material preserved in The Anthropological Museum of the University of Athens. This is part of the larger study on all material extant in Greece for the incidence of dental caries and other dental diseases at different historical periods, the comparative susceptibility to caries of the various teeth and teeth surfaces, the degree of abrasion of the surfaces of the teeth, the changes of the tissues of the teeth (deciduous-permanent) and their investing hard tissues, the width of the pulp chamber, the picture of the calcification and eruption of the teeth, the deduction of age at death of skeletal remains from elements of the dental system that appear after eruption of all the teeth, and the incidence of the congenitally-missing and impacted third molars or other teeth.

The first BLOOD GROUP RESEARCH among the Greeks was made in 1918 by Hishfeld on 500 Greeks in the Saloniki and, later, by C. Savvas on 423 persons and J. Koumaris on 716 persons. Further studies were made by Diamantopoulos in 1928 on 1,200 persons, by G. Pangalos on 266 persons, by P. Sfeticopoulos in 1938 on 1,133 persons and by Papamarkon-Sklepa on 10,000 persons. In 1948–1949 G. P. Alivisatos and P. Sklepa studied the blood group distribution of 7,517 persons from all parts of Greece, one quarter of whom were refugees from Asia Minor. Having found that in no case was there a statistically significant difference between the results of earlier surveys and those of their own, the writers compiled a blood group distribution of all 21,779 Greeks examined, finding 8,585 persons (39.41%) belonging to group A, 3,216 (14.76%) to group B, 1,102 (5.05%) to AB, and 8,876 (40.78%) to group O. These results were compared with those known from the literature: for 14,747 Turks (A, 45.49%; B, 15.56%; AB, 7.39%; O, 31.56%); for 3,898 Serbs (A, 40.36%; B, 18.87%; AB, 5.77%; O, 34.95%); for 8,199 Bulgarians (A, 44.4%; B, 15.6%; AB, 8.09%; O, 31.91%). These comparisons gave a statistically significant difference between the distribution of blood groups among the Greeks and that among all adjacent peoples, a biologically characteristic fact indicating, according to prevailing concepts, that, in spite of the long coexistence of these peoples within a common area, there has been no mixing among them to an extent sufficient to cause an approach between their blood groups. Studies of distribution of factors M, N, and MN among 4,113 Greeks, made by Alivisatos and Sklepa, revealed that factor M occurred in 1,237 persons (30.08%), factor N in 804 persons (19.54%), and factor MN in 2,072 persons (50.38%).

The significance of this blood group research is that it confirms the conclusions of Koumaris that there exists a uniformity of blood group types among the Greeks of Hellas and of Asia Minor, and that the

old Mediterranean stock persists in the modern Greeks.

PSYCHICAL ANTHROPOLOGY

Archeology

During the years 1952 and 1953 a great deal of excavating was done in Greece that properly can be classified under anthropology since it deals mostly with excavating graves. Besides the discoveries described below a great many other excavations and discoveries were made, but these belong to classical archeology.

The sanctuary of Demeter and Persephone at ELEUSIS was one of the most celebrated in ancient Greece and within it were held the Eleusinian mysteries. The sanctuary was the hub of a prosperous small town whose cemetery was discovered in 1951. In the spring of 1952 and of 1953 a good section of the cemetery was excavated by the Greek Archaeological Society and Washington University, under the direction of Professor George E. Mylonas, Head of the Department of Art and Archeology, Washington University, St. Louis. The work proved that the cemetery was in use from the beginning of the Middle Bronze Age until the end of the Bronze Age in Greece (ca. 1900 to 1100 B. C.). Then it was abandoned to be used again at the beginning of the fifth century B. C.; from then on it was used during the Roman and Christian periods. Graves of the historic period—tile graves, burials in sarcophagi, in cists of trenches, cremations—were found sandwiched among the prehistoric (Bronze Age) graves and in various levels. They have yielded abundant skeletal remains and an assortment of funereal gifts, such as vases, weapons, mirrors, jewelry, and the like.

Of greater importance are the prehistoric graves, because they offer an unbroken series through which can be studied the development of grave architecture and the burial customs. The cist graves of the Middle Bronze Age were gradually developed into the shaft graves of the ensuing centuries. In the Middle Bronze Age the graves were individual, but gradually they became family tombs—the typical tombs of the Late Bronze Age. The habit of placing funereal gifts with the bodies developed gradually and at the beginning but a few objects are found beside the skeleton; as the centuries pass more and more gifts were placed in the graves. In the earlier graves of the Middle Bronze Age the bodies were laid in a contracted position; gradually the position became more and more extended until in the Late Bronze Age the bodies were laid fully extended in the middle of the grave and around them were placed the funereal gifts. In that period the habit of pushing aside the bones of the previously buried to make room for the latest interment became prevalent.

In the Middle Bronze Age the individual graves were transformed into family graves. The erection of a tombstone or stele over the grave appears toward the end of the Middle Bronze Age and becomes common in the Late Bronze Age. The objects buried with the dead were their personal belongings, such as jewelry, weapons, and vases. Of the latter, most common are cups and vases holding liquids, though storage vases are also to be found. Apparently they were filled with provisions when placed in the graves. The skeletal material, unfortunately, was not preserved in a good state, but it is abundant and careful measurements have been made. A good deal of it, including complete grave groups, has been preserved and is placed on exhibit in the Museum of Eleusis. Preliminary reports on the work appeared during 1952 and 1953 in the *Praktika* of the Archaeological Society of Greece.

MYCENAE, the capital city of Agamemnon made famous in our era by Heinrich Schliemann, again is yielding important and striking evidence. In 1876 Schliemann discovered his famous Grave Circle within the citadel of Mycenae and in it explored five shaft graves filled with precious objects; later a sixth grave was discovered. In 1951 a second grave circle was discovered outside the citadel and at some 120 meters to the west of the Lion Gate. The Greek Archaeological Society is exploring the area; the

work is directed by the Ephor of the district, Dr. John Papademetriou, and Professors George E. Mylonas, Spyridon Marinatos, and Antonios Keramopoulos. In 1952, five shaft graves, similar to those found by Schliemann, were cleared, along with three small cist graves. In 1953 seven more shaft graves and a small cist grave were explored. The central area of the circle was investigated in the summer of 1954. The contents of the graves are not as rich as those found by Schliemann, yet they are very rich when compared to graves of the same period found elsewhere.

Belonging to the ruling families of Mycenae, the graves seem to be somewhat older than the Schliemann graves and apparently are of the 17th century B. C. In some only one skeleton was found in a more or less extended position. In others two and three interments were made. Grave Γ has yielded the skeletons of four individuals. Around the skeletons was found the funereal gear composed of bronze vases, bronze swords and daggers, gold ornaments, and clay vases, both goblets and storage pots. In grave O, apparently that of a woman, the finding of a good many objects made of rock crystal led to its being called the crystal grave. One bowl has the shape of a duck; the head and neck, turned toward the bowl, form the handle, while the tail forms the spout of the bowl. The whole is of one piece of rock crystal and measuring 13.5 cm. in extreme length at the top. A circular gem of amethyst, one-half inch in extreme diameter, is engraved with the protome of one of the people buried in the graves and will certainly prove of great value in the study of the appearance of the people. The skeletal material is fairly well preserved, has been extracted with great care and reconstructed in boxes of the same length as that of the graves. The excavation of the new shaft graves provides answers to a number of problems created by Schliemann's discoveries and illumines fully the burial customs and the art of the seventeenth century B. C. The Society hopes to develop a Museum at Mycenae where the finds will be exhibited (Publications: *Praktika,* 1953).

On the ancient site of PYLOS in Messenia, Professor Carl W. Blegen of the University of Cincinnati is exploring the Palace of Nestor. Among other things he brought to light the central part of the palace, dating from ca. 1200 B. C., with its great hearth and a large number of inscribed tables which are contributing to the decipherment of the prehistoric Linear Script B—one of the greatest archeological developments of our times. In the vicinity of Pylos, Professor Spyridon Marinatos of the University of Athens is exploring a vast cemetery of the Late Bronze Age located near the modern town of Chora. Unfortunately most of the graves were despoiled by villagers in the past, but still the cemetery is very important. The graves are chamber tombs cut in the soft rock and were family sepulchers. For the first time such graves have been found on the western coast of southern Greece; as comparative material their value is of the greatest. A few vases and fragments left with the disturbed bones make it possible to date the graves and place them in the years from ca. 1600 to 1100 B. C. The material is stored in the local museum, an old school house at Chora (*Praktika,* 1952, 1953).

An event of significance for studies in prehistory was the opening in Crete of the ARCHEOLOGICAL MUSEUM OF HERAKLION, containing the treasures of the so-called Minoan civilization. The director of the museum is Nicolas Platon, Ephor of antiquities of Crete. Thirteen exhibition rooms present systematically the evolution of all phases of the Minoan civilization from the Neolithic to the Hellenic period. Scientific collections are housed in six rooms, including a great unclassified collection of prehistoric skulls and some skeletons in burial positions.

Noted for its prehistoric material on Crete is the private archeological collection of Dr. Stylianos Giamalakis, which is shown upon permission and includes such important relics as gold jewels, the large bronze idol of the goat-bearer, a rich collection of seal stones, and a Neolithic idol of a seated woman, the largest found in all the Balkans.

A number of archeological investigations have been concerned with Cretan prehistory. We here touch upon a few. Articles on the prehistoric civilization of Crete were published by Nicolas Platon, Sp. Marinatos, Doro Levi, Styl. Alexiou, and others, in the journal *Kritika Chronika,* which included articles on the decodification and reading of Minoan script.

Successive phases were discovered of the older Minoan Palace on Phestos, dated between 2000 to 1700 B. C. Three clearly different sealed layers revealing three phases of Kamaraic ceramics and important buildings were uncovered by a team of archeologists of the Italian School of Archeology, headed by Dr. Doro Levi. Around the Minoic palace of Malia the French Archeological School dug a series of house-forms to further uncover the city around the palace.

The British Archeological School, through its associate, Dr. Hood, dug interesting tombs, of the mid-Minoan II and III epochs, on the Prophet Elias Hill in front of the Palace of Knossos. Bodies were buried in a very characteristic bent position into pots and small sarcophagi; seals and other jewels were among the important findings. The same School dug Minoan and protogeometrical tombs in the region of St. John of Heraclion. Minoan copper arms and a golden cup with consecutive spirals were discovered in one of the former.

Cemeteries of the hysterominoan period III (mainly fourteen and thirteen centuries B. C.) were dug by the Ephor of Archeology in the region, Episkopi Pediados; also excavated was a mid-Minoan temple (1800–1600 B. C.) at Piscocephalo of Sitia, from which was collected ritual idols with splendidly dressed hair and costumes.

A cemetery at Katsamba of Heraklion near the Minoan port of Knossos was dug by the Inspector of Archeology, Styl. Alexiou. Beautiful pots of anactoric style and other utensils of alabaster and diorite were discovered. Also in the same region were a Neolithic house and grave grotto.

The most important finding of Professor Sp. Marinatos at a spacious Minoan palace at Vathypetron in the region Archanon Heraklion was a wine-grape press. The grotto of Carnari on Mount Gioucta revealed Neolithic and earliest Minoan findings.

Ethnology, Folklore, and Popular Art

The Folklore Archives of the Academy of Athens includes the National Collection of Music. Founded in 1918 and governed by the Senate of the Academy of Athens, its administrative officer is Professor Dr. George A. Megas. The staff consists of Assistants Dr. M. Ioannidou-Barbarigou, Dr. Spyridakis, Dr. Loukatos, Dr. Petropoulos, Dr. Economidis, and Musician Sp. Peristeris. The collections consist of 2,142 folklore manuscripts, popular art, and 1,000 songs and recordings of music. Seven volumes of a *Yearbook* have been published since 1939.

The Folklore Archives collaborates with the Hellenic Folklore Society, founded 1909, to collect and preserve popular art and the monuments pertaining to psychical and social life. Its President is Professor Dr. A. Keramopoulos, and Secretary General, Professor Dr. George Megas. Fifteen volumes of its bulletin, *Laografia,* have been published.

During 1952–1954 the Benaki Museum at Athens published in Greek a 78-page, 32-plate, systematic catalogue of all Greek ecclesiastic embroideries (fourteenth to nineteenth centuries), prepared by Assistant Keeper Mrs. E. Chatzidakis. The Museum, under the directorship of Dr. Manolis Hatzidakis, also continued the printing and publication of the *Album of Greek National Costumes,* a two-volume work containing 112 colored plates, and descriptive text and indexes in three languages—Greek, French, and English. This monumental work crowns the efforts of thirty years of Antony Benaki, the Museum's founder, for the preservation and propagation of the artistical manifestations of the Greek people. His death in early Summer 1954 prevented his seeing his work completed. During 1954 the Museum organized a series of "visites guidées," with special attention to Greek peasant art.

The foundation in 1918 of the MUSEUM OF DECORATIVE ARTS was necessary to preserve items of popular art representing the centuries-long traditions and customs of every part of Greece. Previously, only ancient art, from ancient monuments to the Byzantine period, attracted attention. Before the erection of the Museum, popular art was collected only for the enrichment of foreign museums and private collections. The Museum, under the directorship of Dr. Anna Apostolaki, occupies an old mosque whose special decorations and two Turkish inscriptions were retained. In 1922 the Museum was enriched by donations from Asia Minor refugees. The collection of carved wooden crosses, all the work of monks of Agion Oros Athos, is very rich. There is also a collection of fabrics with intensive influence of Hellenistic art from Egyptian tombs of the post-Minoan period. Fabrics and embroideries, together with traditions, are representative of the Dodecanese, Naxos, Patmos Islands, Thessalia, Epirus, Skyros, and Crete. The Cretan embroideries were peasant family relics saved from the war and German occupation.

Important for ethnology and folklore in Crete is the HISTORIC MUSEUM OF CRETE, with its rich collection of Byzantine and Medieval relics, Cretan folklore and art (embroidery, weaving, wood-carving, costumes), and a full reconstruction of a Cretan house. The Museum, with nine exhibition rooms, was formed by contributions of the Society of Cretan Historical Studies and the Archaeological Service of Heraklion. The *Cretan Annals* of the Society of Cretan Historical Studies has completed its eighth year with the publication of original works and historical manuscripts on Crete, many of which are relevant for Cretan prehistory, ethnography, and folklore. In 1954 two prize articles appeared on weaving and embroidery of Crete.

The HANDICRAFT WORKSHOPS ASSOCIATION has continued uninterruptedly since 1931 to support, develop, and propagate Greek popular art. Under the presidency of Mrs. Aggeliki Hadjimichali, the Association aims to maintain the traditions of Greek handicraft as well as its adaptation to modern conditions by giving help to Greek artisans through a permanent display and sale of their products in Athens, through local shows in Greece and abroad, through founding popular workshops, through elaboration of designs and supervision of their execution, and through improvement of the artisan's standard of life. Philanthropic institutions participate in supporting workshops of art and handicraft.

The "GREEK HOUSE" is a professional school for household handicraft; its President, since its founding in 1938, is Mrs. Aggeliki Hadjimichali. The House maintains and instructs 110 girls, of an age range from thirteen to nineteen years, originating from all parts of Greece. The aim of the school is similar to that of the Handicraft Workshops Association—to foster the improvement and maintenance of rural living by providing handicraft skills which result in local income. Almost all of the school's graduates are engaged in local schools and workshops throughout the country as instructors in art and handicraft. A conference on popular art and national costume was held during May 1954 at the Benaki Museum.

In 1937, a special "NATIONAL TRADITIONS" section of the "GREEK WOMEN'S LYCEUM CLUB" was formed for the purposes of promoting and safeguarding the moral and intellectual heritage of the nation and of improving the position of the woman, first and foremost as a person and, more generally, as the foundation of society. Regular meetings are held to study and determine the various elements of national traditions and to consider their humanistic influence on national life. A news bulletin of Section activities is issued regularly, under the guidance of its President, Mrs. Anna Triantafyllidou, and the Section's endeavors are important for the study of racial development and the linking of the present not only with recent centuries, but also with the remote past.

Katherina J. Kakouri revised and completed in 1954 the second edition of her 1946 volume, *Pro-aesthetic Forms in the*

Theatre, attempting, on the basis of ethnology and folklore, to distinguish the foremost elements of the theater, especially those aboriginal forms of magic and religious rites still extant in folklore, which gave birth to the theater as a species of art. She also completed local research on certain semi-magic, semi-religious rites of modern Greek Popular Cults, based mainly upon mimical magic and known as "dromena." In progress is research on the dramatic element in the ritual of the Eucharistic rite and the sequence of services of the Greek Orthodox Church and particularly on modern Greek liturgical drama which carried on the traditional form and content of Byzantine liturgical drama.

Mrs. Athina N. Tarsouli, author of several volumes of ethnological-folklore interest, including *Dodecanese* (1947), published in 1954 the first, 400-page, volume of a two-volume work on *Cyprus,* containing considerable folklore material, customs, embroideries, costumes, ceramics, monuments, and popular art.

Mrs. Melpomene Merlier of the INSTITUT FRANÇAIS D'ATHENES has conducted studies on the Greeks returned from Asia Minor and reported on her ethnographic research at the 22nd Congress of Orientalists in Constantinople, 1951. Her interests are in the ethnography and folklore of ancient and modern Greeks of Mysia, Ionia, Lydia, Caria, Lycia, Pamphylia, Cappadocia, Pontos, etc. In publication are lexicographies of dialects; works on worship, tales, proverbs, and a map of Cappadocia; and a "History of Cappadocia."

In Thessaloniki, folklore is studied primarily at the University of Thessaloniki and at the "SOCIETY FOR MACEDONIAN STUDIES." The "FOLKLORE MUSEUM AND ARCHIVES" of the Philosophical Faculty of the university was founded in 1926. During World War II its removal from the buildings for German occupation caused some irreplaceable losses, but, by and large, it is now completely restored. The Archives, of folklore manuscripts, have been enriched in recent years with new collections dealing especially with customs of worship. The Society for Macedonian Studies, founded in 1939 under the guidance of Professor Stilpon Kyriakidis, Academian, has for its purposes the cultivation of intellectual interest in Macedonia and the study of the country in its historical, archeological, linguistic, and folklore aspects. In 1940 it began the publication of a special magazine, *Makedonika,* which includes historical, archeological and folklore contributions. Discontinued because of the war, it now has been resumed, with the second volume, of 855 pages, being published in 1953. A contest has been announced for the collection of folklore material. The Society in 1952 undertook re-publication of the general philological, historic, and linguistic periodical, *Hellenika.* Also issued are independent works in various series under the following titles: Macedonian Library, Macedonian Folk-Library, National Library, and Scientific Treatises. In these series were published, in addition to historical and philological works, a number of treatises dealing with old and new controversial ethnological problems of the Balkans. The Society founded as its annex the INSTITUTE FOR RESEARCH-STUDY FOR THE BALKAN PENINSULA, whose purpose is to study the peoples living in the peninsula. Also, thanks to the financial assistance of the Greek government, the Society succeeded in erecting a building of its own. But now even this has been considered inadequate for the anticipated needs of the Society and, therefore, a second building is being built, which will provide the rooms needed for the establishment of a complete folklore museum.

Psychology

In the LABORATORY OF EXPERIMENTAL PAEDAGOGY of the University of Athens and its affiliated EXPERIMENTAL SCHOOL with abundant anthropological material, students are measured for their physical and psychical development. The indices obtained, as well as other conclusions, are published in studies and essays. The measurements serve not only for the classification of students according to body types, but also psychologically according to Ernst

Kretschmer diagrams. Such results are accurate for older boys and with sufficient probability for the younger. Following the previous publications of Professor M. Exarchopoulos, the first conclusions were issued in 1950 as *Introduction to E. Kretschmer's Characterology* by Spyros Kalliafas and Miss F. Psalida, the former being Professor of Education and Psychology at the University of Athens. Other notable works were by Miss F. Psalida (1952) on the intellectual evolution of school children and by Miss M. Tenezaki (1953) on the interests of young Greeks.

The PSYCHOLOGICAL LABORATORY of the University of Athens, under the directorship of Dr. George Sakellariou, Professor of Psychology, has as its two-fold purpose the preparation of students in the use of psychological methods, tests, etc., and research on vocational guidance, clinical psychology, and personality diagnosis. The major research activities during 1952–1954 have been the completion of the Sakellariou Personality Scale, on measurement of intelligence, on sympathy and pity, on mental fatigue, and on vocational guidance.

The Sakellariou Personality Scale was developed after many years of experimental studies both in Greece and in the United States, where Dr. Sakellariou was a Fulbright Research Fellow in both The Ohio State and Western Reserve universities. The S.P.S. is a projective method of exploring personality, consisting of fifty incomplete sentences (condensed form) or one hundred sentences (extended form). The subject is asked to complete the sentences while thinking of the most usual case of feeling each emotion listed in the test. Compared to the Rorschach and T.A.T. methods, the S.P.S. is of higher value because it was constructed on the theory that disturbance in the emotional life of a person is the main cause of mental and physical disorders. It can be used both as an individual and a group test and it gives a more complete picture of the subject, including esthetic and religious aspects, than do other methods, for the subject is free to express himself without confinement to "yes" or to "no" answers. The analysis and interpretation of the data does not require long training, while the time required for interpretation and written report of the personality diagnosis is three to five hours, much less than for Rorschach or T.A.T. The S.P.S. is valuable for both normal and abnormal subjects; it brings catharsis in clinical subjects and helps abnormal ones to know themselves. It forms the basis for prediction of future behavior of a subject, including probable evolution of an abnormality, and is valuable for vocational and educational guidance.

A summary of the S.P.S. method was published in the *Bulletin de Psychologie* and in the *Bulletin de l'Institut National d'Orientation Professionnelle,* March-April, 1953, under the title, "Nouveautés Techniques." The volume on measurement of intelligence published in 1952 is a new edition of the 1927 scale revised on the basis of several years of experimental studies on pre-school and school-age children. The scale contains 130 tests for the ages two to fourteen, and a series of tests for the average and higher intelligence adults. Completed in 1953 was a research program on sympathy and pity begun in 1950. Through questionnaires to 1,300 subjects, information was obtained on sympathy and pity to parents, teachers, relatives, friends, unknown persons, small children, enemies, oneself, plants, and animals. The answers of the school children were controlled by parents and teachers with a correlation of .80. A Ph.D. thesis published in 1953 was by Anna Garmati-Theodoropoulou on mental fatigue and its relation to bodily and physical functions. Also to be reported is Dr. S. Paraskeva's 1954 work on vocational guidance in theory and practice.

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Italy

An Anthropological Review for 1952-1954

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FOREWORD

FROM a scientific point of view, anthropology in Italy is understood to be essentially the Science of Man, and therefore includes branches other than biological. The continual evolution, however, of meaning and content of the various disciplines and the necessity for specialization have prevented their integration into the Science of Man as a whole.

The attention of English-speaking colleagues should be drawn to the difference (often considerable) which exists between the Italian concept of anthropology and that of countries with English culture. In the latter, anthropology includes many fields foreign or independent to our way of thinking. The English-speaking concept of anthropology is remarkably broad; it includes, for instance, "social anthropology" which, to our mind, is more a part of sociology. In fact, social anthropology is considered that branch of sociological studies concerned with primitive societies. The difference, however, is not only in the field of investigation, but also in the methodology employed. The social anthropologist studies primitive societies by living among them for months, whereas the sociologist resorts to the available documentation. The social anthropologist studies a community as a whole. The sociologist specializes on particular or isolated problems, e.g., crime, divorce, etc. Another distinction is that sociology also considers problems pertaining to social planning which anthropology, in general, ignores.

The Italian concept of anthropology can best be compared with the physical anthropology in English-speaking countries. Ethnology, ethnography, and paleoethnology are not considered part of this concept, while the autonomous position held by the disciplines of biology, biology of human races, human anatomy, and human paleontology, places them outside the limits of anthropology in Italy. Though the disciplines of archeology, linguistics, psychology, demography, biometrics and the specialities of etruscology, egyptology, assyriology, indology, etc. are discussed here, they are not considered as part of anthropology in the Italian sense. During the period under review, the following courses in anthropology and related subjects were taught in Italian universities: Anthropology, Anthropometry, Archeology, Assyriology, Biology, Biology of Human Races, Biometry, Criminal Anthropology, Demography, Development of Population, Egyptology, Ethnography, Ethnology, Etruscology, Glottology, His-

tory of Religions, Human Paleontology, Indology, Literature of Popular Traditions, Paleoethnography, Paleoethnology, Psychology, and Sociology. Not all are taught within a single faculty.

There is a distinct trend toward a biological emphasis on the limits of anthropology which now practically includes also the science of human constitution and human genetics.

All Universities in Italy are state institutions. Professors are officials of the State, and the curriculum is standardized, and therefore uniform, throughout the country.

GENERAL ANTHROPOLOGY

During the period under review, a number of works in general anthropology appeared: the first and second volumes of Biasutti and collaborators' *Races and Peoples of the World* (1953); Canella's *Features of Anthropo-Biology. I: Anatomy, Physiology, Pathology, Psychology* (1953); Kluckhohn's *Anthropology and Modern Life* (in Italian, 1952); Marcozzi's *Features of Anthropology. Mankind in Space and Time* (1953).[1]

As to systematics, Beer and Sacchetti (1952) urged a demogenetic methodology concerned with analyzing large population samples by statistical and biometrical measures, as a substitute for the orthodox descriptive Linnean scheme. These methods, to a certain extent, were new, and they contended that their analyses established a more natural classification of organisms than had hitherto been possible. Examples of English works of a similar trend of ideas can be found in *The New Systematics,* edited by Julian S. Huxley, and in *Systematics and the Origin of Species* by Ernst Mayr. Beer, a lepidopterologist, dealt with the historical aspects of the problem, while Sacchetti, an anthropologist, outlined the steps necessary to give effect to the application of biometric methodology to classification of groups. Among those who have attempted to work with this method are Cappieri (1953a, c; 1954b, c), and Petrocchi, in his classification of fossil mammals.

Marcozzi, Professor of Anthropology at the Catholic University of Milan, drew a comparison (1952a) between the Australopithecinae, the Anthropoidea, and the present and fossil Hominidae to determine the systematic position of the former. He concluded that the Australopithecinae, in spite of the fragmentary evidence, represent a heterogeneous group with the Catarrhines, and, though they cannot be classified with either the present Anthropoidae or Hominidae, are more similar to the latter.

PHYSICAL ANTHROPOLOGY

In his paper (1953), A. Cipriani determined the comparative morphological position of the sphenoid bone and the projecting wings in Primates according to Sergi's method.

Corrain described (1953) the modality of the variations in the shape of hair on the forehead and nape of the neck, during growth, of a group of 1,600 boys from the province of Rovigo.

Correnti, Professor of Anthropology at the University of Palermo, explained (1952d) his application of radio stratigraphic technique to study the human skull, placed according to the oblique position of Sergi.

Graffi Benassi, Professor of Anthropology at the University of Bologna, and her collaborators have been at work on craniology, constitutional anthropology, and female somatology, with sex diagnosis by skeletal characteristics. Specific research in progress concerned methods for determining pigmentary characteristics, growth studies of Bolognese students, heredity of cranial and facial characteristics, and erythrocyte counting. Graffi Benassi, an exponent of morphofunctional and biometrical anthropology, with stress on standardization of methods and elaboration of data through binomial distribution, described the results of her research (1952a, b) on 500 skulls, of which 157 were metopic. She also explained her thesis on the origin of metopism.

Parenti, Professor of Anthropology at

[1] See also Biasutti (1953c, n, s); L. Cipriani (1952b).

the University of Pisa, concerned with the classification of skull elements into well-defined morphologies, and with the connection between individual and racial morphological variations, wrote (1952) on the results of his biometrical study of eighty modern Syracusan skulls of both sexes. Among his conclusions were that, in the evolutionary sense, the modalities of variation and covariation of the value of the angles measured which have the vertex on basion and bregma, divide recent mankind from fossil man.

M. Sergi described (1953) a special case of a modern Roman skull with reference to the peculiarity of the spheroid cranial form.[2]

Science of Human Constitution

Though many scholars such as De Giovanni, Viola, and Pende, are devoted to the science of human constitution, it is not organized as an independent discipline. Among the more important works published during the period under review were: Barbara's *Individual Constitution and Body Development* (1953); De Toni's *Human Growth and Elements of Auxology* (1954); Pende's *Historical Evolution of the Science of Human Constitution* (1953); and Tatafiore's *Elements of Auxology* (1954).

Correnti developed further (1952a, 1953) the features of his auxogram method (introduced in 1948–1949) to assess the statics and dynamism of the different characters of stature, weight, and chest circumference. He went on to explain his application of the allometric formula to the growth study of 9,634 children of both sexes from five to fourteen years of age.

Landogna Cassone, Professor of Anthropology at the University of Messina, presented a study (1952a) on forms of hypogonadias with comments on the most rational corrective treatment for each. He briefly expounded also (1953a) the principles and methods of modern human typology, explaining that the endocrine system fundamentally controls somatic and psychic growth.

Physiological Anthropology

Within this specialty, the following volumes are of interest: Dunn's booklet translated into Italian with the title, *Race and Biology* (1954) and Stefanelli's *Biology of Human Races* (1952).

Using the statistical data compiled by the Italian Committee for the Study of Population Problems, Rome, Federici has expounded a long study (1952b) on the age of onset of puberty and menopause and the duration of the fertility period. Among her conclusions were that constitutional factors determine the onset of menopause more than do factors of individual sexuality; within the same racial group, the action of constitutional factors is responsible for variations in the onset of menopause; and that climate and social factors have an, as yet undetermined, effect upon its onset.[3]

Blood Groups

In addition to G. Benassi's publication (1953) on *Introduction to the Study of Blood Groups, with Particular Regard to Its Juridical Application,* Genna's paper on "Serological Characters and Blood Groups" (1953a) deserves special mention since it is a standard work in Italy on blood grouping and serology.

Genna, Professor of Anthropology at the University of Rome, and his collaborators have particularly developed the work of the recognition of human remains belonging to famous individuals or to princely families. His research has been directed toward discovery of the anthropological meaning of blood groups, etc. with the aim of finding kinships among races, sub-races, and types.

Sacchetti published the results (1953) of

[2] Strictly specific books and papers are: Amprino (1953); Carella (1953); Correnti (1952b, c, e); Costanzo (1952); Genna (1953b); Landogna Cassone (1952c); Marcozzi (1954); Picardi (1953); Sofia (1952).

[3] See also Battaglia (1953a); Canella (1953); Scarpa (1953a); Scarpa and Corrain (1953).

his research on the distribution of the Rh factor among a group of Andeans in the Lake Titicaca region, as well as their serology. During 1952 Sacchetti conducted the field program in Bolivia on behalf of the Institute of Demogenetical Investigations of the National University of Cordoba, Argentina, where he is a professor.

There are to be mentioned the works of Barigozzi on "Critical Considerations on the Application of Blood Groups Frequencies to the Study of Human Populations" (1952), and of Ceppellini on "Problems and Progresses of Genetics and Serology of Blood Groups" (1952).

Pathological Anthropology

Though pathological anthropology is still in its infancy, results of research have begun to appear, nevertheless.

During the last decade, Silvestrini, Bianco, and Alfieri have investigated 47,000 individuals in an attempt to establish the frequency of appearance in Italians of the red blood corpuscle discrasia associated with Cooley disease and its possible connections with other races (1952).

Other publications of significance were Battaglia's long article on "Physiological, Pathological and Psychical Characters" (1953a), and Scarpa's "First Results of the Research on Diffusion and Gravity of Dental Decay in India" (1953b).

Biometry

Biometry, in a sense, is statistical methodology applied to biological sciences, and as such, is not as well developed in Italy as in the English-speaking countries. Nevertheless, a few works of interest to anthropology are included here: Ascenzi and Alisi's "Biometrical Research on the Development of the Aorta, and Its Senectute" (1954); Barbensi's *Introduction to Biometry* (1952), "The Teaching of Biometry in Italy" (1953a), and "Observations on the Association of Histological Characters" (1953b); Leone's *Elements of Biometry* (1952); and Tagliacarne's "Statistical Contribution to the Study of Variability of Characters in Both Sexes" (1952).

PSYCHICAL ANTHROPOLOGY

Though psychical anthropology has no well-defined limits, there are University courses in psychology and experimental psychology in different faculties.

Among the works published during the period under review were: Bernardi's book, *Religion of Primitives* (1953); Ceni's *Biological Evolution of the Psyche* (1952); Cesa-Bianchi and Perugia's volume, *Statistical Methodology in Psychology* (1952); the second volume of Falorni's work, *Psychological Study of Intelligence and Movements, and Psychological Tests* (1952); the translation into Italian of Freud's *Totem and Taboo. On Some Concordance in the Psychical Life of Savages and Neurotics* (1953); the translation into Italian of Klineberg's *Race and Psychology* (1954); the translation into Italian of Koppers' *Primitive Man and His World Picture* (1953); Pettazzoni's *Myths and Legends* (1953); Ponzo's *Course of Psychology* (1953); Scotti's *Art of Primitive Peoples* (1952a); and the two volumes of *Contributions of the Laboratory of Psychology of the Catholic University of Milan* (1952).

Gemelli and Zunini, who consider psychology as the study of mankind and/or its psychical activity, published (1952) a review of the American and European schools of psychology, as well as the research in progress in Italian schools.

Falsirol (1952) published a long paper on the magic of primitives, in which he suggested that the act of magic is a subjective one, not to be explained by laws of similarity and contagion.

Landogna Cassone wrote (1953b) of "characterology," the complex of ethnical characters, individuality, and personality prominent in certain ethnic groups; he described the "characterology" of some well-known modern peoples and applied it to an interpretation of recent human phenomena in history.

Tentori, in a paper (1952) dealing with the ethnological concept of the soul in the

after-world of South Amerinds, suggested that such beliefs are truly indigenous in America, having existed in pre-Columbian times.[4]

Criminal Anthropology

Though the study of criminals as biological subjects has always created intense interest in Italy, criminal anthropology as a discipline falls outside the field of anthropology in its strict sense. It is organized as an independent discipline and usually is found within the Faculties of Law. For general purposes, one may consult Formaggio's *General Criminal Anthropology* (1953).

SOCIAL ANTHROPOLOGY

There are remarkable differences in social anthropology between the concepts of Italian and English-speaking scholars. The field is not much developed in Italy.

Using Bonarelli's term, "sobolic" groups, Cappieri (1953b) described the differences between musical concepts of civilized and primitive peoples. Other pertinent publications were those of Niceforo on *Adventures and Disadventures of the Personality and Human Society* (1953); Biasutti on "Production and Technique as Elements of Civilization" (1953a); and "Seats, Communication, Arts and Sciences" (1953p); Caputo on "Prehistoric Currents of Artisans' Work in Tripolitania" (1952); Corso on "Social Institutions" (1953c); and Vannicelli on "Consanguinity and Akin Relations, and Incest Prohibition" (1952).

RACE

Primitive or Isolated Racial Groups

Research among "primitive" or "isolated" groups is largely concentrated on investigation of their single components, i.e., physical anthropology, biometry, anthropometry, demogenetics, etc.[5]

[4] See also L. Cipriani (1952a); Corso (1953b); D'Agata (1952); Falsirol (1953); Valentini (1953).

[5] See also Battaglia (1953c, e); Biasutti (1953b, d, k, l, e, f, g, h, j, m, o, q, r); Fumagalli (1952c); Leires (1954); Muccioli (1953).

Landogna Cassone analyzed (1954) the morphometrical elements of four skulls of an indigenous population in Brazil, discussing their anthropological values in connection with the problem of the group, which he called "Paleo-Amerindian." In another study (1952b), using radio-stratigraphy, he described the reduced sella turcica of three skulls of the Botocudi Brazilian group which led him to believe that the probable resultant hypopituitarism explained certain anthropological characteristics of the Botocudi.

Luzzatto's report appeared (1953) on the origin, history, habits and customs, anthropological characteristics, and racial position of forty-one males and nineteen females of the Egyptian Karaites.

Massari published his study (1953) of one of the four known skulls of the Siriono of eastern Bolivia.

Cappieri, Professor of Anthropology at the Oriental University-Institute of Naples, is primarily a physical anthropologist, although his collateral program of studies also emphasizes research on primitive and isolated racial groups within defined limits of physical anthropology, biometry, and demography. During the period under review, his volume appeared (1952a) containing the demographical data on the Amerinds of the United States, Canada, and Alaska; aboriginal Australians; Eskimos; Maoris; Lapps; Ainus; Andamanese; Bhil, Munda, Oraon, Gond, and Santal of India; and the Bantu of South and East Africa. Using only material from official statistics, Cappieri outlined the population trends for each of the groups, for comparative purposes. The volume was put into use as a text for the course in demography in the Faculty of Statistics, Demography, and Actuarial Science at the University of Rome. Part One of Cappieri's work (1953a) on Andamanese skulls appeared, containing the anthropometrical data of nearly one hundred skulls and their elaboration with reference to sex-index, von Bonin's female skull series, and the problem of their homogeneity with the few known Jarawa skulls. Parts Two and Three will contain the comparative results of the bio-

metric study of Andamanese and other Asiatic Negritos and the results of his comparative study on African, Asiatic, and Indonesian Pygmies.

Another work on the intensive study of a group is the translation into Italian of Koller's volume; *Moroccan Berbers* (1953).[6]

HUMAN GENETICS AND HEREDITY

Cottafavi discussed the results of his investigation (1952) on 1,916 students of both sexes in the elementary schools of Florence for the frequency of external ear anomalies among the parents and relatives of those afflicted. The results were discussed in terms of hereditary transmission.

Parenti investigated (1953) the modality of the transmission of iris color in a group of 328 individuals from a Tuscan village, near Arezzo. As to the many modalities of non-blue irises, he advanced two contemporary theses: a genetical differentiation due to hetero-valence between genes of the same allelomorphic basis and iso-valence between pair and pair, and a certain degree of environmental lability of the phenotypical character.

Scarpa and Corrain studied (1953) the data on dentition of 1,062 children under thirty months, from the province of Rovigo. They concluded that a relation exists between retarded teething and weight; and that not only do pathological factors such as rachitism produce retardation and anomalies, but racial and hereditary factors do also.

Other works to be mentioned are S. Benassi's *Anthropogenesis. Ape's Descending Man* (1954); Nigris' *Evolution and Man* (1952); Pastori's *The Laws of Biological Heredity* (1953); and the translation into Italian of Simpson's *The Meaning of Evolution* (1954).[7]

Demogenetics

The problem of correlating demographical and demogenetical data on "races" has, up to the present period, met with little progress. Nevertheless, the realization that both manifest and concealed traits must be considered in differentiating various groups of people, indicates a growing awareness of the importance of modern genetics. From a scientific point of view, the "theory of race," which came into force after 1930 and was based upon relative stages of superiority of one group over another, is devoid of any significance. On the other hand, UNESCO's 1950 statement on "race" is to be recommended.[8]

The problem of race is further complicated by the conflict over heredity and environment. The influence of heredity, rather than environment, was generally given greater weight until the appearance of Boas's studies on European immigrants to New York. Boas found the group very different from the parents in nearly every important index and therefore concluded that environment determined characteristics to a greater degree than did heredity. Italian workers have since been concerned over whether the observed differences represent adaptation to a new milieu or only the initial phase of a progressive adaptation. Gini reported (1952) that his study of descendants from a group of Albanians who migrated to Calabria over five hundred years ago, revealed no systematic differences between the descendants and the native Calabrians. On the other hand, Gini reported upon his anthropometrical data on the two villages of Carloforte and Calasetta in Sardinia. His analysis indicated definite differences between the inhabitants of the two villages and their neighbors. However, the Italian Committee for the Study of Population Problems has found that progressive assimilation has begun. Other reports of interest were Boldrini's on "Demography of Human Races" (1954), a continuation of his studies in biometry; and

[6] See also Cappieri (1953c, 1954a, b, c); L. Cipriani (1954); Correnti (1954); Federici (1952a); Massari (1953); Sergi (1954a).

[7] See also Battaglia (1953b); Bosio (1952); Breitinger (1953); Ceppellini (1952).

[8] For other works on race see Comas (1954) and Rose (1954).

Lasorsa's on "Assimilation of the Immigrants" (1952). Livi explained (1953) his conception of "minimum of population," under which species with a poor demographical habitat have little possibility of obtaining durable settlement.

PALEOANTHROPOLOGY

During the period under review, only a few Italian universities offered independent courses in human paleontology. However, growing interest in the field was reflected by the appearance in 1954 of a new journal, *Quaternaria,* edited by A. C. Blanc.

Part One (1955) of Cappieri's long memoir on the prehistoric populations of the Near East presented the elements of his thesis on their racial origins. Through biometric and morphological analysis of a series of archaic skulls collected by others from excavations in Western and Southwestern Asia, Cappieri came to the conclusion that the group forms a relatively homogeneous archaic racial type of extensive diffusion which he named "Proto-Mediterraneans of the Near East." In Part Two, Cappieri expects to present the biometrical elaborations of the data and their significance.

S. Sergi has devoted much study to the problem of classification of fossil human remains. In two of his works (1953a, b), he defended his placement of Swanscombe and Fontechevade remains with the Paleoanthropic, contrary to a tendency to regard them as an independent phyletic line; and introduced the term, "Prophaneranthropi," for remains (such as Swanscombe and Fontechevade) contemporary with the Paleoanthropi.

Other volumes of importance are: A. C. Blanc, Tongiorgi, and Trevisan's on *The Pliocene and the Quaternary around Rome* (1953); *Trips in Abruzzi, Puglia and the Salerno Coast, and Report on the IV Congress of the Quaternary* (1953); and a translation into Italian of Kuhn's *Mankind of the Glacial Epoch* (1952).[9]

[9] See also A. C. Blanc (1953a,b); A. C. Blanc and Segre (1953a,b); Bourcart (1954); Leonardi (1953); Rasetti (1953); S. Sergi (1953c).

Italian Prehistory

A new prehistoric site was discovered and excavation begun in Puglia. Acanfora has assigned (1952a) the pottery remains and other artifacts to the "New-Aeneolithic age of Puglia and Matera" (as she calls it).

Marcozzi reported (1952b) his examination regarding a skull unearthed beneath a layer of peat, near Padua. He concluded that the skull presented various similarities to the group of Atestini skulls (his "Roman Aeneolithic age").

Maxia, Professor of Anthropology at the University of Cagliari, has long been interested in the prehistoric and modern Sardinians. In a paper (1952) on the Proto-Sardinians, he concluded that Eurafrican elements were predominant from the Neolithic age onward, and that settlement in Sardinia occurred earlier than that in other Mediterranean areas. Maxia has called for closer collaboration among anthropologists, archeologists, and geologists, to aid in clarifying the origin and history of Sardinia's peoples. In collaboration with Cossu (1952), Maxia examined a 50–60-year-old male skull of Seulo territory, Nuoro, which showed evidence of three successive trephinings, two clinically healed, and the third performed just prior to death.

Other works to be mentioned are the first volume of Calzoni's *The Prehistoric Stations of Cetona Mountain* (1954); and Devoto's *The Ancient Italics* (1952).[10]

Italian Neandertalians

A. C. Blanc and Sergio Sergi have led the research on Quaternary remains for many years. Blanc's most recent work (1954c), in continuation of a long series of work on the Pleistocene, dealt with his discovery of three human teeth and a fragment of mandible at the base of a Mousterian industry level excavated at Fossellone Cave,

[10] See also A. C. Blanc (1954d); Ferri (1952); Fogolari (1952); Formentini (1952); Franco (1952); Kossack (1952); Maviglia (1952); Monaco (1952); Pallottino (1952); Pecorini (1954); Pesce (1952); Puglisi (1954); Rittatore (1952); Romanelli (1952); Sestieri (1952).

Monte Circeo. He attributed the teeth to a child of *Homo neandertalensis* Circeo IV.

Lithic Industries

Cocchi published information (1952) on the discovery of a new surface Upper Paleolithic site near the Laterina railway station. The implements collected belonged to the same culture, and it was possible to localize their position to indicate their affinity to levels F^1 and F^2 of the Mochi Shelter at Balzi Rossi and to the industry from the Golino Cave at Talamone.

Micheli described (1952) the lithic material from Central Africa, deposited at the Anthropological Institute of the University of Florence, from the standpoint of typology, origin, and chronology of the greatly discussed "Tumbian" industry.

Other works on lithic industries include Calzoni's *The Prehistoric Stations on Cetona Mountains* (1954); and Acanfora's "Observations on Prehistorical Lithic Industries of Recent Ages" (1952b).

Caves

A. C. Blanc discussed (1954a) the meaning of the two central figures carved on the walls of Addaura Cave, near Palermo. His observations led him to believe that the figures represent some kind of magic ceremony, and their unnatural and probably painful position could be put into harmony with the ithyphallic representation.

Bovio Marconi described the carvings in the Addaura Cave (1953), and pointed out that the drawings of the animals, like those of Levanzo, represented a special Sicilian archaic art, while the human figures formed a composition. Her opinion was that the most important scene represented a magic rite and belonged to an Aurignacian-Perigordian cycle of the Upper Paleolithic.

Other works which dealt with cave findings were Anelli's "Puglia Caves" (1953); A. C. Blanc's "Human Sacrifice in Addaura Cave Carvings" (1954b); G. A. Blanc's "Romanelli Cave, Terra d'Otranto" (1953); Chiappella's "Other Considerations on the 'acrobats' of Addaura Cave Carvings" (1954); Laj Pannocchia's "Pontinian Industry of Sant' Agostino Cave, Gaeta" (1952); and S. Sergi's "Paleolithic and Mesolithic in the Cave of Arene Candide, Liguria" (1954).

ETHNOLOGY, ETHNOGRAPHY, AND PALEOETHNOLOGY

Before World War II, no distinction was made between ethnology and ethnography. During the period under review, several scholars were concerned with the clarification between the two. Professor Corso viewed ethnography as a universal science concerned with the various forms of life of different peoples and ethnology as historical studies. Since 1935, the first and only course in ethnography has been taught at the Oriental University-Institute of Naples. Publications of interest include Begey's *Ethnological Features of Kenya* (1952); Panetta's *Unknown Cyrenaica* (1952a); and Scarpa's *African Native Children Care* (1954); Battaglia's *Peoples and Cultures of Africa* (1954); Ceram (Marek)'s *Buried Civilizations,* translated into Italian (1953); the translation into Italian of Glotz's *Aegean Civilization* (1953); Laviosa Zambotti's *Mediterranean Sea, Italy and Europe during Prehistory* (1954).[11]

A rather new theory on paleoethnology was advanced by Laviosa Zambotti (1952b). Rejecting both the evolutionary and culture-historical theories, her thesis is that constant historical laws preside through space and time at the formation of a civilization, and operate where there are dynamic and concentrated phenomena.

Linguistics

Linguistics, glottology, and allied sciences are considered beyond the interests of the Science of Man in Italy. Neverthe-

[11] See also Biasutti (1953a,d,i,p); Bovio Marconi (1952); Corso (1953d,e); Falsirol (1952); Graziosi (1953); Grottanelli (1952a,b); Kossack (1952); Lamboglia (1952); Laviosa Zambotti (1952a); Pace (1952); Panetta (1952b, 1953); Pauli (1952); Ribezzo (1952); Stella (1952b); Vannicelli (1952).

less, those works of interest to anthropologists are Assirelli's "The Bantu Group of Languages—Preeminence of Linguistic Antiquity in Africa" (1953); Ribezzo's "The Unity of Origin of Languages and Culture of Mediterranean Europe" (1952); Tagliavini's "Languages and Their Classification" (1953); and Vidossi's "Linguistics, History of Culture, and Ethnology" (1953).

Egyptology and Etruscology

Work done in egyptology, etruscology, assyriology, indology, etc., is generally carried out in the fields of art, archeology, language, religion, philosophy, etc. Only the research related to the Science of Man is included in this report.

Fumagalli, Professor of Anthropology at the University of Turin, studied (1952a, b; 1954) fifty-seven Egyptian skulls for comparison with other Neolithic skulls, particularly those of Villeneuve, in the valley of Aoste, and for the chemical composition and hardness of Neolithic teeth.

From research on Egyptian texts and other sources, Stella wrote (1952a) that the two attacks against Egypt during the reign of Merneptah and Rameses III were not caused by two distinct waves of migration, but came from two different and successive coalitions with regular armies and organized fleets and were not a homogeneous racial group representing "The Peoples of the Sea."

Messeri's article (1953) on the study of two fourth-century B. C. Etruscan skulls reached the conclusion that while the Etruscans were well-defined by cultural elements, they were not differentiated anthropologically from Italic populations and should be considered as a group of the Mediterraneans, to which presumably all other Italic groups have belonged since the Neolithic age.[12]

Folklore

Folklore (in Italy akin to ethnology) constitutes an independent discipline called "Literature of the Popular Traditions." It is taught as an independent course throughout the universities usually within the Faculties of Literature and Philosophy. During the period under review, a number of works of interest to anthropologists are Bronzini's *Popular Traditions in Lucania, A Cycle of Human Life* (1953); Cocchiara's *History of Folklore in Europe* (1952a), and *Sicilian Folklore* (1952b); Corso's *History, Object, Methodology, and Bibliography of Folklore* (1953a); Crocioni's *Bibliography of the Marches Folklore* (1953); Gasparini's *Slavic Popular Rites* (1952); Naselli's *Folklore Studies* (1953); the fourth volume of Pitrè's *Habits and Customs, Beliefs and Prejudices of Sicilians* (1952); Prampolini's *Chinese Proverbs* (1953); Toschi and collaborators' *Habits and Customs, Beliefs and Prejudices of Traditional Romagna* (1953); Toschi's *Folklore* (1952); and G. Valentini's *Folklore and Legends of Fassa Valley* (1953).[13]

CONGRESSES AND MEETINGS

In 1952, the Congress of Italian Ethnographical Studies was held at Naples from September 16 to 20.

In 1953, the IV Congress of the International Association for the Study of the Quaternary (INQUA) was held in Rome and Pisa from August 30 to September 10. Professor Gian Alberto Blanc was President and Professors Alberto Carlo Blanc, Ezio Tongiorgi, and Livio Trevisan were Secretaries-General. Sections included those devoted to anthropology and paleoethnology.

Also in 1953, the XXVIII Session of the International Statistical Institute met in Rome from September 6 to 12, to present many communications on biological and related disciplines.

Professor Raffaele Corso, who holds the only chair in ethnography at the Oriental University-Institute of Naples, was honored on the occasion of his thirtieth year of teaching by a National Committee of ethnologists, anthropologists, geographers, and other scholars, on May 14, 1953 at the Italian Geographical Society, Rome.

[12] See also Bolzoni (1952); Lopes Pegna (1954).

[13] See also Battaglia (1953d,f); Corso (1952, 1953d); Zavatti (1952).

In 1954, the United Nations World Population Conference was held in Rome from August 31 to September 10 at which many communications in the biological sciences as well as anthropology and ethnology, were presented.

A section on anthropology and ethnology was represented at the XLV Meeting of the Italian Society for the Advancement of Science, held at Naples during October 16–20.

NEWS OF INDIVIDUAL SCHOLARS

From December 1951 to March 1952, Grottanelli directed a field mission to Jubaland (Italian trusteeship Somaliland) to study the ethnical group of the Bagiuni.

Between 1951 and 1954, Lidio Cipriani made many trips to India, visiting Northwestern Assam, the Andaman and Nicobar islands, to collect anthropometric data on the Abor, the Jarawa, the Önges, and other tribes. He also had the opportunity to excavate some kitchen middens in the Andamans.

Professor Fabio Frassetto was taken by death on November 26, 1953. Born in Sardinia in 1876, he was Professor of Anthropology and Director of the Institute of Anthropology at the University of Bologna.

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Spain and Portugal

An Anthropological Review for 1952–1954

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PREHISTORY

Paleolithic and Mesolithic

THE years 1952–1954 have seen only limited activity in the study of the Paleolithic in the Iberian Peninsula; and this has been confined to isolated instances. Nevertheless, interesting results have been obtained.

In the rich Cantabrian zone—apart from cave art which will be treated separately—one must mention the work carried out by the recently created "Servicio de Excavaciones Arqueológicas de la Diputación de Oviedo," under the direction of Francisco Jordá. It is his intention to reinvestigate the numerous caves of the region in which Paleolithic levels have been noted, in order to excavate the intact levels remaining and so recheck the published results which were generally the work of that noted investigator, Conde de la Vega del Sella. At the same time, data have been collected about other caves which had not been noted or where no archeological work had been carried out. It is hoped that they can be explored with modern methods; the first campaign is to be carried out in the summer of 1955.

In 1953, F. Jordá explored Bricia cave near Cueto de la Mina (1954c). With the geologist Professor N. Llopis, he studied the Asturian shell-mound in the cave entrance, coming to the conclusion that the shell-mound had been formed by alluvium from the river Calabres, which had capped the cave deposits. This modifies the old views on the habitat of Asturian Man. The two Magdalenian levels from the cave, with their many quartzite tools, were classified as Magdalenian VI b and VI a.

The construction of the path leading to Castillo and La Pasiega caves, besides being responsible for the discovery of new paintings (Las Monedas and Chimenea caves), also led to the discovery of a poorly defined Mousterian industry in La Flecha cave. In Las Monedas cave, in addition to the bed of quartzite tools of a Mousteroid charac-

[1] The division of effort in the preparation of this chapter has been shared by the authors according to their special interests: Professor Pericot prepared the report on "Prehistory," Professor Alcobé contributed the section on "Physical Anthropology," and Professor Caro Baroja wrote on "Ethnology."

ter, there also was found a poor post-Paleolithic industry. At the same time, the work of conservation in La Pasiega cave gave rise to the discovery of some rich stratified layers, one of which contains an assemblage of Mousteroid pieces, with choppers made on quartzite pebbles and quartzite points. The upper and final Solutrean level was well-defined with laurel points and others of willow leaf, hollow base, and shouldered types; also fluted gravers, a painted sandstone spatula, and an incised horn awl. The Magdalenian bed also was very rich, with many flint and horn tools (points with circular, quadrangular, and triangular sections, one of which has a basal perforation; bevelled points); a small cylindrical rod bore engravings which were difficult to interpret. This belongs (Anonymous, 1953; Carballo, 1952, 1953) to the Early Magdalenian of the Cantabrians (Magdalenian III of Breuil's system).

In Pendo cave (Escobedo-Camargo, Santander), the excavations were renewed in 1953, under the direction of Messrs. Martinez Santa-Olalla, Ruiz Argilés, and Cheynier. They found a clear stratified deposit of much interest for the study of the proto-Magdalenian. Previously unpublished finds from the cave now were made known, providing rich material from various stages, especially the Magdalenian VI, the Magdalenian-Azilian transition period. An Asturian shell-mound contained bones engraved with fish and horse. A Solutrian industry yielded a *baton-de-commandement*, supposed to represent a woman. In a trial dig, lower Paleolithic deposits were found, with Acheulian industry and Levallois pieces (Carbollo and Gonzalez, 1952).

In Catalonia, work in the important cave of Reclau Viver (Seriñá, Gerona) by J. M. Corominas was continued to 1952. Corominas also explored other Paleolithic deposits. The 1954 find of part of a skeleton, imbedded in the tufa of Bañolas lake, excited much interest in scientific circles. Unfortunately, the skeleton was badly treated by the workmen who found it, but the circumstances in which it was found suggest that it was of Mesolithic age, because, nearby, there was a trapezoidal flint, and an upper bed contained other remains with pottery (Pericot *et al.*, 1952).

The finds made by Salvador Vilaseca in the province of Tarragona were of great interest (1952c). They show, among other things, a Mousterio-Levallois industry in Reus and an Epigravettian industry near the Tivissa cave paintings.

The "Seminario de Historia Primitiva del Hombre" of Madrid University continued working on the classic site of Manzanares under the difficulties to be expected for a site next to a rapidly expanding city. Although the sandpits on which Obermaier and Perez de Barradas based their system have disappeared, new deposits have been opened nearby. The results from the work of recent years have not yet been published. It is to be hoped that during the preparation for the 1957 INQUA Congress it will be possible to clarify a matter of such transcendental importance. Occasional notes in the newspapers indicated that at Manzanares, as in the Jarama terraces, various Paleolithic industries and their associated faunas, including elephant remains, were found.

The most intense and methodical field work on the Paleolithic during the period under review was that undertaken by the "Servicio de Investigación Prehistórica de la Diputación de Valencia" in the caves to the south of the province of Valencia. The investigations carried out in the district of Rotova were under the direction of Pericot, while Jordá directed the excavations in Cova Negra (Játiva). In addition, Professors S. Alcobé, D. Fletcher (1952b, 1953, 1954), E. Pla, and J. Alcácer, gave their help. In the 1954 campaign, Miss Beatrice Blance from Edinburgh University took part.

In 1951, after the excavation of the Rates Penaes cave (with Solutrian beds), the cave of Barranc Blanc was discovered, only a few kilometers to the south of the famous cave of Parpalló. The cave showed human remains and a clearly defined stratigraphy. In 1952, only work of an exploratory nature was carried out in the district. In 1953 and 1954, thanks to the help given by the Wenner-Gren Foundation it was possible to excavate, almost completely, the

cave of Barranc Blanc. The stratigraphy was very clear, and at this writing, the excavation report is in preparation for publication. Briefly, the stratigraphy showed three levels, without separation by sterile layers. The earliest can be attributed to the upper Gravettian; the middle layer is Solutrean, and the upper is Epigravettian. Here is represented the Epigravettian of Pericot's system in its purest form, similar to the corresponding level in the Mallaetes cave. In 1954 a curious industry of macroscrapers and discs made from hard limestone and quartzite appeared and was reminiscent of the finds from Cocina cave (Dos Aguas).

Many caves in the Gandia region remain to be investigated and great results can be hoped for.

Thanks to aid from the Wenner-Gren Foundation, it was possible to undertake an intensive campaign of excavation on the important site of Cova Negra (Játiva), in 1953, under the direction of F. Jordá and D. Fletcher. Jordá presented (1953) the following stratigraphical sequence of the six levels observed in the most complete portion of the cave: a) final evolved Levallois-Mousterian with typical Aurignacian and pre-Aterian or Aterian pieces; b) Levallois-Mousterian; c) Mousterian in the Acheulean tradition, with small pieces, triangular points, Levallois flakes, bifacial quartzite hand-axes of final Acheulean types; d) sterile; e) Early Mousterian with side scrapers and triangular points worked in the Clactonian technique; f) Moustero-Tayacian with small Mousterian types and pieces worked in the Clactonian technique. The tendency towards the Tayacian technique was interesting and already has been commented upon by Breuil. A parallel to the persistence of Mousterian traditions in the Aurignacian can be seen in other Spanish sites (Conde cave, Tuñón, Asturias).

The Alcoy region continued to be one of the most important in Spain for prehistoric finds. Various open-air sites which produced Paleolithic-looking flints may have been workshops. Brotons excavated a cave in Mariola mountain containing a clear Mousterian industry with affinities to the Mousterian of Cova Negra (Játiva) with its Tayacian influence.

In 1953 and 1954, Paleolithic-looking flints were found (Ramos, 1953) in the terraces of the Vinalopó river near Elche (Alicante).

In Portugal, no new important Paleolithic discoveries were published in 1952–1954. The rich Solutrean material from Rio Maior and other sites remained unpublished. On the other hand, geologically badly defined quartzite tools, in the northern coastal regions, were becoming increasingly common. Apart from the classic Asturian industry, another quartzite industry, which showed signs of being much earlier, was appearing from material presented by Professor Castro Nunez to the Archeological Museum of Barcelona.

Viana and Zbyszewski (1952) made known their earlier finds in the Beja neighborhood. These came from twenty-nine surface sites forming a dense nucleus on the 250-meters plateau. Both authors considered the sites to be grouped in the following five series: a) Abbevillian, quartz tools much rolled and heavily patinated. b) and c) Early and Middle Acheulean, with an Eolithic patina. d) Mousterian or Mousterian with Tayacian facies. e) Languedocian. f) Post-Paleolithic. All the implements (483) and sites were classified according to this series, and the results of a statistical analysis of the series and types, morphology, special techniques, and typology of utilized pieces, were presented in tabular form. The Mousterian technique predominated in the quartzite (369), jasper (56), and quartz (45) implements, and there were only 8 pieces of flint.

Costa Arthur made known the results of her investigation in Setubal (1953), where she studied a series of Paleolithic and Mesolithic sites.

From the point of view of Mesolithic chronology, the excavation of the shell-mounds at Muge has been always very important. The earliest, "Cabeço d'Amoreira," is 12 meters higher than "Cabeço d'Arruda," which would appear to suggest a higher sea level. There were no shells of *Mytilus edulis* in the first; instead there was

Natica hebrea, indicating that the sea was warmer than at the present day. Triangles predominate in the industry which has an almost complete lack of trapezoids, while a Paleolithic tradition is present. Thus it is an early Mesolithic site, approximating in time to the early Sauveterrian and Tardenoisian cultures of southwest France. On the other hand, the excavations in the "Moita de Sebastiao" shell-mound, showed that, there, triangles were rare and trapezoids were the most common tool; this was a more evolved industry of Tardenoisian type. Carefully constructed hut foundations and pits for the storage of shell-fish were also uncovered (Roche, 1952).

The controversy over the relations between North Africa and Spain during the Paleolithic continued to be very lively and many publications appeared discussing the problem. Professor Balout of the Algiers Museum held a negative view, and Professor Pericot held the affirmative one. Cabot Briggs (1953, in litteris) reviewed the situation and considered that there were no decisive factors for or against either side. Balout and Pericot (1953a) had occasion to present their respective points of view in the congresses at Algiers and Tetuan.

A group of students attempted (September 1954) to prove that even with primitive means it would have been possible to cross the Strait of Gibraltar. The attempt was abandoned, though for reasons not affecting the tenability of the hypothesis under discussion.

F. Jordá continued the study of the Solutrean and was awarded a doctorate from Madrid University for his thesis on this theme. He accepts Gisela Freund's views and rejects the hypothesis of an origin in the African Aterian for the Spanish Solutrean, for which he accepts the persistence of Mousterian tradition. The Spanish Protosolutrean is more limited and later than the French. In November 1954, Jordá explored some sites in the northern Spanish Sahara.

Pericot, in a review (1954) of the Spanish Paleolithic, retained his already known opinions, while admitting the possibility of a Euro-Asiatic Solutrean which recent work seemed to point to. (See also Jordá, 1954b.)

Cave Art

Discussions on cave art at many congresses and visits from Spanish and foreign experts in recent years have stimulated interest leading to new discoveries and further study. All this has added to the controversy over the chronology and the relations between Eastern and Cantabrian art. Since the stratigraphical proof of the extensive development of Solutrean art at Parpalló, bringing almost general acceptance of a post-Paleolithic age for the nucleus of Eastern art, a truly great step forward has been taken in the study of prehistoric Spanish art.

The question was summarized in two pamphlets from the IV International Congress of Prehistoric and Protohistoric Sciences, celebrated in Madrid in April 1954; one by Jordá on "El arte rupestre cantábrico" (1954; see also Castillo, 1954a); and the other by Almagro on "Las pinturas rupestres levantinas" (1954b). Jordá believed that the Epigravettian peoples did not produce works of art, and that with them and the final Magdalenians there disappeared the creators of the great Cantabro-Aquitanian art. In the Cantabrian caves are paintings which ought to be attributed to the Solutreans, as should one of the phases of the paintings of La Pileta. Today it is difficult to justify the evolutionary scheme as set forth by Breuil.

Professor Martín Almagro, who was recently assigned the Chair of Prehistory at the University of Madrid, considers that the thirty-four rock-shelters in Eastern Spain containing naturalistic paintings are the individual creation of another race or people; although the technique is more primitive, the vivid compositions show scenes illustrating hunting, dancing, war, gathering of natural produce, with frequent representation of humans; the fauna is post-Quaternary and includes domesticated animals, and the stone industry found in the shelters is post-Paleolithic. Almagro accepts the derivation of this art from the Perigordian art, but considers it a Meso-

lithic development which persisted until the farming and metal-bearing colonizations arrived, to which later period the schematic rock art corresponds. Recently, Camón (1954) put forward an interesting theory in an attempt to explain the chronological and technical differences between the two Spanish cave arts. The Eastern style was attributed by Camón to an African influence, which, in its turn, would have had a remote origin in the European Paleolithic.

However, one must not lose sight of the importance in Spain of a population persisting for many millennia, whose origin lay in Gravettian culture.

To make visiting easier, the Cantabrian caves are being carefully arranged, and electric lighting has been installed in the more interesting ones. During construction work of a path leading to the caves on Castillo Mountain (Puente Viesgo, Santander), two new caves with paintings were discovered, Cueva de las Monedas and Cueva de la Chimenea, thanks to the worthy attention of the engineer, A. Garcia Lorenzo. Las Monedas cave contained thirty-six partial paintings of a pre-Magdalenian aspect (deer, bison, a very big cave bear, reindeer (?), acephalous horses, and tectiform signs). Ripoll made the copies on exhibit in Santander Museum (1952c; see also Gonzalez Echegaray, 1952a). New engravings were found by Ripoll in Castillo and Pasiega caves (Gonzalez Echegaray, 1952b; Gonzalez Echegaray and Ripoll, 1954). The discovery of Magdalenian and upper Solutrean levels in La Pasiega threw doubt on Carballo, who considered the paintings from this cave to be Aurignacian (1953).

Jordá, on the basis of unpublished Magdalenian III and IV bone-engravings from Balmori cave (Llanes), suggested (1952b) that the naturalistic and schematic representations are contemporary, as is accepted by Pericot and Castillo. One of the figures in the schematic female form is similar to one from Bruniquel. Breuil visited the cave in Lledias and he accepted (in litteris) the authenticity of the paintings which had been much doubted.

Engravings of fish and other signs appear on the entrance of the Cova de les Pates Penaes (Bats cave), Rotova.

In Eastern Spain a few new discoveries were made. The most important of the publications referring to this region was the monograph of Almagro on Cogul (1952b), in which he stated that the shelter was used as a sanctuary until Roman times, and established a triple superimposition of paintings. The flints found at the base of the shelter and nearby were classified as Mesolithic of the type used by the hunting peoples until the Neolithic. The Iberian and Latin inscriptions of votive character demonstrated the continuity of the cult.

Vilaseca reported (1954) on the rare find in Lloá cave (Tarragona) of a goat's head in relief and engraved. It was very difficult to date. Jordá and Alcácer published the paintings from Dos Aguas (Valencia) which show various naturalistic and schematic styles including scenes of hunting, dancing and two women wearing long skirts, one with a basket and the other carrying a curved stick (collection scene ?). New copies have been made of the paintings from Secans shelter (Mazaleón, Teruel) by Vallespí (1952; see also Beltran, 1954c) and from Les Dogues (Ares del Maestre, Castellón) by Porcar (1953). In the latter, a vivid battle appears between bowmen. Porcar's copies are of extraordinary liveliness. New important paintings have been discovered near Alcoy.

Ortego discovered new paintings (1952) on Monte Valonsadero (Soria), where, besides the naturalistic East Spanish influence, the semi-naturalistic and schematic figures predominate, representing hunting, pastoral, and agricultural scenes. Ortego discovered also other painting of quadrupeds, human figures, and signs in a rockshelter called Cuerda del Torilejo.

Neolithic and Beginning of the Metal Age

The history of the Spanish Neolithic has undergone great changes owning to chronological revisions, racial study, and new points of view on the relationships with the Eastern Mediterranean. The work of San Valero (1954) is especially important as he employs historical methods, following the teaching of Santa Olalla. According to his chronology, during the period

from 3000–2000 B. C., the first oriental farmers arrived from the North African coast to constitute the Neolithic I A and B cultures, the Neolithic B peoples bringing cardial pottery.

The excavations at San Quirze Neolithic site (Sabadell, Barcelona) yielded pit graves containing shrunken bodies. It is interesting to compare this culture with that from Lagozza (Panyella, 1952). Colominas published on other tombs from Caldas (1952). Also in Villafranca, three new pit graves containing shrunken bodies were excavated (Giro, 1954); the graves contained three trapezoid microliths and a turquoise necklace; one of the graves was of a later period and contained a copper arrowhead and an advanced type of pot.

In the province of Tarragona, Vilaseca made an exhaustive study of numerous prehistoric sites with Neolithic, microlithic, and Campignian-like Aeneolithic industries, which persisted until the Bronze Age. He produced an interesting study (1953a) on the position of these sites in relation to their geology, the economic basis of settlement, the analysis of industrial techniques, and the origin and extraction of the flint used. New flint deposits were noted in Cornudella. Vilaseca classified (1952b) the Molí dels Abur as Neolithic of a pseudo-Tardenoisian type, and Mas de l'Oliver and Barranc del Patacá as of Campignian type.

A site which appeared to be a workshop was found near Massanet (Gerona) and produced a fine Neolithic knife, a bifacial arrowhead, and other implements (Riuro, 1954). An important cave was found in Seriñá (Gerona).

Other Neolithic finds were noted, without being fully published, in the neighborhood of Gandia and other parts of Valencia province, in Villena (Alicante), in Tabernas (Almeria; excavated by the Seminario de Historia Primitiva del Hombre), in the Manzanares terraces and the area around Madrid, and in other provinces.

The study of Spanish megaliths, stimulated by the work of Leisner and Pericot, has progressed in the last few years. The former collaborated with Cerdán to produce a catalogue (Cerdan, Leisner and Leisner, 1952) of the megaliths in Huelva province, especially those of El Pozuelo, which are chambered passage graves, and those of La Zarcita, which are corbelled, similar to the one at San Bartolomé de la Torre. The last has a type of "altar" in the principal chamber. Abundant flint implements and extremely interesting pottery (one vase in the form of a bird and a four-footed rectangular vase) were found at Zarcita. The architecture of the El Pozuelo megaliths is very varied, with the employment of double passages, side chambers, and central pillars. There are rich grave-goods consisting of microlithic arrowheads, knives, cylindrical axes, anthropomorphic idols, engraved plaques, turquoise beads, and pottery; the hollow-base arrowheads indicate Atlantic influence mixing with the culture of pastoral Neolithic peoples who began the exploitation of copper mines.

The settlement and megalithic necropolis at Los Millares (Almeria) continues to be of great interest for the study of the Spanish Neolithic and early Bronze Age, and interesting, though unpublished, results have been obtained from the new excavations directed by Almagro and Arribas. They also explored the megalith of Guaino alto, which is of the gallery type, but contained only plain pottery (Arribas, 1954).

Almagro reported (1952c) on an idol with rayed eyes and incised hair of the type associated with the western Hispano-Portuguese culture, intermediate between those of Conquero and Vila Nova de San Pedro. He set forth the following typology for eyed idols: a) those on a horse or bovine phalanx, certainly of Cretan or Egyptian origin; they are dated to phase A at Los Millares and were later manufactured in marble; b) those painted on long bone and found only in Eastern Spain; c) stone cylinders or cones with neither signs nor marks. The eye motif is also found in the pottery (Los Millares) and the schematic paintings.

In Catalonia some new megaliths were found. The dolmen of Mas Clamí (Castelltersol, Barcelona) contained seven or eight skeletons, fragments of a bell-beaker,

and a thumb-handled pot (Colominas, 1954).

Barandiarán produced a summary (1953) of the Basque megaliths, which are the tombs of a pastoral people, belonging to the so-called western Pyrenean race to which the present day Basques also belong. The catalogue includes the 290 dolmens and some of the tumuli and cromlechs.

The "Aranzadi" group of San Telmo Museum in San Sebastián continued the work of previous years in looking for dolmens (Elósegui, 1952a, b, 1953, 1954). Elósegui published data on the eight new megaliths from Guipuzcoa, four more from Urbasa-Andia (Navarra), seven from El Roncal, Aralar, and Urbasa and two dolmens and three tumuli from the Sierra de Andia (Navarra). Barandiarán published the data on various dolmens and cromlechs, and five more dolmens were noted by other authors. The report of the megaliths near Roncesvalles, drawn in 1926 by Barandiarán and the late Aranzadi (1953), has now been published; the finds were very few.

The number of known megaliths from Aragón increased. New ones were found near Guarrinza and also in Ordesa, Bielsa, Gesera, and Nocito in the Sierra de Guara (Huesca). Beltrán explored some of the destroyed cists at Biescas and excavated (1954a, b) the megalith at Lasaosa (Gesera).

The bell-beaker is a type of pottery which constitutes a genuine style and has aroused the greatest interest among Spanish archeologists. Castillo produced (1953, 1954b) a concise summary of the problems in which he discussed whether the bell-beaker type of pottery appears in distinct cultures, or is the basic type of a single culture, as in the British Isles. In the Iberian Peninsula bell-beakers are associated with a great variety of tomb types; thus the latter alternative appears to be more probable. Castillo, like many other Spanish archeologists, believes that the origin of this pottery style should be sought in the cardial pottery of Southern Spain which is earlier and stylistically similar, although some types perhaps could have a remote origin in the Egyptian Tasian culture, as maintained by Childe and Santa Olalla.

A report was published (Ferrer, 1954) on the discovery of two pots, decorated in the bell-beaker style, from the sepulchral cave of Batlle vell (Pontons, Barcelona); their form and associated grave goods indicated that they were late and belonged to the beginning of the Bronze Age II.

Tarradell's excavations in the cave of Gar Cahal, near Ceuta (Spanish Morocco), in November 1954, means an important step in the study of bell-beakers. The stratigraphy of the cave provided useful information on the Mauritanian industries from the Neolithic to the Bronze Age; several levels with bell-beakers of all the various Spanish types are decisive factors for the relative, and even the absolute, chronology of this type of pottery.

In Portugal there was intense activity in the study of the Neolithic. Rusell Cortez has published extensive works on the Portuguese Neolithic. He believes that the end of the occupation of the shell-mounds of Muge ought to be connected with the arrival of the farmers who were bearers of cylindrical axes and domesticators of the pig; pottery was found in the latest levels. The settlement of "Areias Altas" (Oporto) developed during the Epi-Paleolithic and persisted until an advanced Neolithic. Rusell discusses also the problem of earliest megaliths. He considers that the Iberian Neolithic is of Mediterranean origin and, following Daniel's arguments, shows the impossibility of assembling in a single complex the two supposed megalithic streams, the one formed by inland farmers building gallery dolmens and the other by the builders of the passage-type megaliths and tholoi (1952).

In 1950–1952, A. do Paço and M. L. Costa Arthur (1952a, b, c, 1953; Paço, 1954) found a stratified zone and the remains of an interior wall of the central redoubt of Vila Nova de San Pedro. One of the strata corresponded to the earliest occupational phase of the settlement, and it is possible that the interior redoubt belongs to this phase. Above this first level and next to the wall, they found a pottery oven and a

well. The finds from the earliest phase consist of abundant flints and pottery, among which appears a very fine red burnished ware, thought to be imported, perhaps, by the first foreign colonizers who combined with the native population to create the magnificent settlement at Vila Nova de San Pedro. The flax seeds collected by Jalhay have been classified as *Linum humile mill.*, a species originally cultivated in Asia Minor; their presence confirms the theory that linen was cultivated before the Celtic invasions. Do Paço and Arthur published the profiles of the undecorated pottery which show very simple forms. Two samples of metal were analyzed and gave very unequal results; one sample was of almost pure copper, and the other was of bronze with 87.93% copper and 10.38% tin.

The richest megalithic area in Portugal, the data on which has been fully published, is that of Caldas de Monchique (Viana and Dias, 1952). The megaliths belong to two groups: one Eneolithic, comprising thirty cists or small galleries covered by a tumulus. Although the majority have been destroyed, they produced abundant polished stone tools and flints (triangular and trapezoid microliths) and ornaments (plaque idols, pendants, turquoise and slate beads).

Another megalithic area discovered in 1952 is that of Lousal (Grandola). It contains an interesting monument resembling the already noted Huelva megaliths in its passage separating two chambers, and in its technique of construction. The site contained an archer's bracer, a lanceolate copper arrowhead, two beads, and a carinated beaker (Veigas and Rodrigues, 1952; Formosinho, Veiga, and Viana, 1953).

Dias de Deus and Viana excavated three new megaliths in Elvas, all with a polygonal chamber and a passage. The grave goods were rich in pottery, flint, beads, and many axes. The Odivelas megalith was even richer and contained big flint knives, much pottery, decorated slate plaques, and ornaments (Viana, 1953). The passage dolmen in Agualva, which had an almost circular corbelled chamber, contained abundant finds, consisting of bell-beakers, bone buttons of tortoise form, stone and bone cylinders, boar tusks, flint weapons, turquoise beads, and a copper awl (Veiga, 1953).

The City Museum of Lisbon keeps some important finds from Monsanto, among which are fragments of twelve incised bell-beakers and many other decorated pots (Paço and Bartholo, 1954).

Da Veiga and Trinidade gave a preliminary report (1954) on the Eneolithic idols from two graves in the necropolis of "Cabeço da Arruda." One is a tholos-type tomb of the bell-beaker period, and the other is somewhat earlier. Six of the idols have the shape of a rabbit, two are pear-shaped, and there are also a limestone crescent and an engraved and perforated marble plaque.

Museums

The new Archeological Museum of Oviedo is of great interest for its Paleolithic collection. The present director is F. Jordá. The museum contains a very important series of material from various Asturian sites, where much still remains to be studied.

P. J. Carballo and P. J. Gonzalez Echegaray are director and subdirector, respectively, of the Santander Prehistoric Museum, which has been greatly enriched by the finds from Pendo and other caves. The exhibition space has been extended, and it is the hope of the Diputación Provincial to erect soon a new building.

The Archeological Museum of Bilbao which contains finds from the cave of Santimamiñe, besides other material mainly ethnographical, is also considering a new and better installation.

The Museum of San Telmo in San Sebastián, which is excellently organized, keeps archeological and ethnographical material. The Prehistory room contains numerous Paleolithic remains, including the Magdalenian finds from the cave of Urquiaga, and pottery, tools, and human remains from many of the Basque dolmens. The museum of Vitoria also has been renovated.

The Pamplona Museum, of which Miss Mezquiriz has been nominated curator, is

in the course of installation in a splendid manner. It is very rich in Hallstatt material (excavation of the Celtic settlement of Cortes by J. Maluquer on behalf of the Institución Principe de Viana), and also possesses dolmen material.

The total renovation of the Cantabrian museums without doubt will have repercussions on the investigation of the Paleolithic in this rich area.

The renovation of the Galician museums is also under way. The beautiful installation of the Pontevedra Museum with rich collections of jewelry of the Bronze Age, under the direction of J. Filgueira, deserves special mention.

In Catalonia, the reorganization of Bañolas Museum was completed, displaying very rich Paleolithic and Neolithic material, the former mainly from Reclau Viver cave (Seriñá) with Solutrean and Gravettian horizons. The famous Neandertal mandible is permanently in the Alsius collection at Bañolas.

The Archeological Museum of Gerona received additions to its Paleolithic and Neolithic series, including the Bosoms collection from the Magdalenian layer of Bora Gran (Seriñá). P. Palol and M. Oliva are in charge.

The Archeological Museum of Barcelona (Director, M. Almagro), although it added only a few items to its Paleolithic and Neolithic collections, extended and improved its display, and one can safely say that at present it is the most active center for all investigations into Spanish prehistory.

The Museum of Prehistory in Valencia was in the process of installation. New material from the caves of Mallaetes, Barranc Blanc, Cova Negra, Llatas, and from the settlement at Navarrés has especially enriched it. It is under the direction of D. Fletcher and E. Pla.

With regard to the National Archeological Museum in Madrid, its display was completely reorganized when it was reopened in April 1954 for the IVth International Congress of Prehistoric and Protohistoric Sciences. A selection of material from the large Paleolithic and Neolithic collections covering the whole of Spain was on display. Of special interest was the material from the Siret collection, closed during many years, which has important Neolithic series, besides very fine Solutrean and Gravettian pieces, all from southeast Spain. The Director is J. Navascués.

The collection in the Seminario de Historia Primitiva del Hombre (Philosophy and Letters Faculty of the Madrid University) also was installed within the past few years by J. Martinez Santa Olalla. It is primarily a study collection, but also contains Lower Paleolithic material obtained during recent years from the excavations in the Manzanares terraces.

Other Spanish archeological museums whose collections are being renovated are: Almeria, Alicante, Málaga, Segovia, Zaragoza, Albacete, Murcia, and Cartagena.

Scientific Meetings

During the period under review, international contacts were developed through the many courses and scientific meetings which were held.

Barcelona University continued the International Course on Prehistory and Archeology directed by Almagro and Pericot, mainly in Ampurias (VI, 1952; VII, 1953; VIII, 1954). The collaboration with the Institute for Ligurian Studies (Secretary, N. Lamboglia) led to the excavation of the Pipistrelli cave (Finale, Liguria, Italy) by M. Almagro.

The IIIrd National Congress of Archeology was celebrated in July 1953 in Galicia and northern Portugal. It was presided over by Admiral Bastarreche, with Beltrán as Secretary.

The Ist Archeological Congress of Spanish Morocco was organized in June 1953 by the "Delegacion de Cultura de la Alta Comisaria de España en Marruecos" and the Archeological Museum of Tetuán, with the Museum Director, M. Tarradell, as Secretary. The representatives of ten countries were present.

Jaca developed courses in archeological technique, organized by Zaragoza University and directed by A. Beltrán.

The First International Course in Field Archeology, organized by the "Comisaria

General de Excavaciones Arqueológicas" under the direction of J. Martinez Santa Olalla, took place in Granada in September 1953.

The IVth International Congress of Prehistoric and Protohistoric Sciences met in Madrid from 21 to 27 April 1954, under the Presidency of L. Pericot, with A. Beltrán as Secretary. It was preceded and followed by excursions to the most interesting Spanish prehistoric sites, especially to Santander and the Cantabrian painted caves. Four hundred prehistorians assembled for this occasion. A special exhibition of the Spanish "Arte levantino" was organized. The celebration of this Congress gave a new impulse to Spanish prehistory.

PHYSICAL ANTHROPOLOGY[2]

Chairs, Institutions, and Societies

There exist in Spain two university chairs for physical anthropology, in Madrid and Barcelona, whose instruction is obligatory for the scholars of biological sciences. In addition, as a research organization, the "Instituto Bernardino de Sahagún de Antropología y Etnología" belongs to the "Consejo Superior de Investigaciones Científicas" and also has Sections in Madrid and Barcelona. The Institute publishes a review, *Antropología y Etnología,* as well as a separate series of papers under the title *Trabajos del Instituto Bernardino de Sahagún.* Mention must also be made of the Sociedad Española de Antropología, Etnografía y Prehistoria (Madrid), and its publications.

In Portugal, there are chairs for anthropology in the Universities of Lisbon, Porto, and Coimbra, and the following societies should be noted: Sociedade Portuguesa de Antropología e Etnología (Porto), Sociedade Portuguesa de Estudos Eugénicos (Coimbra), and the Sociedade Anatómica Portuguesa which has a Section for physical anthropology.

[2] The writer apologizes if important facts concerning Portugal are omitted due to circumstances beyond his control. He owes thanks to Professor dos Santos Junior (Porto) for much information about anthropological activities in that country.

Prehistoric and Historic Human Remains

Besides a general review concerning the *Homo neandertalensis* published by Andérez (1954a), a parietal bone, found by Viñes in 1933 in a Mousterian layer of Cova Negra (Valencia) and heretofore not studied, was described by Fusté (1953b). According to its morphological correlations, this fragment belongs to a "classical Neandertalian," differing from those of Gibraltar and Saccopastore which constitute a Mediterranean variety after G. Sergi. Therefore, these two somewhat different forms of Neandertal Man lived in the Iberian Peninsula.

The excavations of the cave of Barranc Blanc (Valencia. See also pp. 502, 503) delivered first a frontal bone (1951) assigned to the Epigravettian period after study by Alcobé. Its features showed similarity with the North African Cromagnonoids of the Mechta-Afalou type, rather than with the European ones, and the accordance may be extended in space and time to the historical Guanches of the Canary Islands, adding thus some suggestions to the problem of the relations and biodynamics of the western Mediterranean populations during the Upper Paleolithic and their ulterior co-sequences. Excavations were pursued at the same site in 1953 where many other fragments of human bones were found, also from an Epigravettian layer. A single, nearly complete juvenile skull was reconstructed, showing clear Cromagnonoid traits in the face, although the vault seemed more similar to the subsequent Mediterranean racial types. At this writing, the findings from Barranc Blanc were unpublished.

Another skull, possibly Upper Paleolithic, was mentioned by Andérez (1954b). It was found by García Lorenzo in the cave of Santian (Santander). This specimen is essentially Cromagnonoid, but with some features resembling Neandertalian. However, the circumstances of this finding do not permit its definite assignment to any well-established period.

Once more in 1953 and 1954, the Kjioekkenmoeddings of Muge (Portugal) were explored under the supervision of Professor

Mendes Corrêa. An important series of skeletons was studied by this author and communicated to the IVth International Congress of Prehistoric and Protohistoric Sciences in April 1954.

Concerning Neolithic populations, Fusté (1952a) investigated the remains from the site of San Quirze de Galliners (Sabadell, Barcelona). This was a composite population of Mediterraneans and some so-called "negroids," which were interpreted as being genetically independent from true Negro stock and which represented only survivals of certain Paleolithic human types. Fusté, who worked for a time in Paris under the direction of Professor Vallois, also wrote a paper (1952b) dealing with the human remains from the Dolmen des Bretons (Marne, France). He emphasized the predominance of Alpine racial types.

Two repertories detailing the principal Spanish finds of prehistoric human remains were composed by Alcobé (1952b, 1954). The first gave information about Paleolithic Man. The second, which was printed as a Guide on the occasion of the IVth International Congress of Prehistoric and Protohistoric Sciences held in Madrid, extended to the Neolithic and was preceded by an interpretative synthesis.

With regard to historical times, some Portuguese authors (Serra, Albuquerque, and Neto, 1952) paid attention to the skeletons from a Visigothic necropole in Silveirona (Evora District). The characteristics of this population did not differ very much from those of the present Portuguese, and showed no significant differences from other Visigothic series, including those known in Spain. Therefore, it seems that the Nordic invaders have been strongly mixed with the peninsular peoples, and the racial influence of the former may have been exaggerated. In Spain, the skeletons from the Visigothic necropole of Madrona (Segovia) were studied by Schwidetzky (Mainz), at the request of the "Comisaría General de Excavaciones," though at the present writing, the findings are unpublished.

In an interesting miscellaneous work, Mendes Corrêa (1954) dealt with several problems connecting anthropology with prehistoric and historical events, especially in Portugal, its colonies, and Brazil.

Geographical Anthropology

The well-known Spanish anthropologist Hoyos Sáinz, recently deceased, attempted to delimit anthropogeographical regions in Spain, and, after comparing stature and cephalic index from both sides of the boundary between Spain and Portugal, concluded (1952a) that except for small local differences, the political frontier did not separate essentially distinct populations. Dealing separately with the single Province of Málaga in southern Spain, the same author stated that the racial composition of its inhabitants is more complex than in the majority of other Spanish provinces. Altava, Villalonga and Barrera (1953) attempted to distinguish the most conspicuous human types in the Province of Castellón. In Portugal, Athayde (1953) statistically analyzed several features of people born in the District Bragança. At this writing, he was collecting data in the Porto district.

Mateus (1952, 1953a, b) and Oliveira Mateus (1952, 1953) gave data about cephalic index, stature, robustness, metrical correlations, and mongoloid traits among Portuguese Guinea Negroes, and Athayde dealt with their dynamometry and ergography (1952). Alcobé wrote a chapter (1952b) for the first volume of *Historia Mundi*. Robles analyzed a series of native women from Spanish Morocco (1953).

Blood Groups

In a general statement for Spain, only the Basques being excepted, Guasch and others (1952) found a relatively high frequency for blood group A in Galicia and for B in Andalusia and the Canary Islands, while no significant regional differences for A_1, A_2, A_1B and A_2B could be ascertained. For the Rh system the results showed low rr and high D cc ee frequencies in the Canary Islands and homogeneity for continental Spain, whose inhabitants could be expected to be more similar to those of

France and England. Examining blood donors in the Province of Barcelona, Grifols-Lucas and Manau (1952) gave several chromosome frequencies for the Rh system.

Serra (1952) pointed out a distinction in the gene frequencies for ABO between the populations of Spain and Portugal, taken as a whole, consisting of a higher frequency of the p-gene among the Portuguese. He also stated differences with North Africa, where the q-frequency was greater. In general, more resemblances between Portugal and the Atlantic countries should be expected and, on the contrary, more differences expected with the populations of the Mediterranean basin.

Dermatoglyphics

Departing from an analysis of finger and palm prints of scholars of the University of Barcelona and of Spanish Guinea Negroes (collected by Alcobé and Fernández Cabeza), and comparing them with many other groups, Pons pointed out a criterion (1952a, b; 1953a, c) for the differentiation of the three great racial stems. The differences among more restricted groups, e.g., African Pygmies, Khoisanids, Eskimo, and Amerindians, were also appreciated. At this writing, several papers dealing with the dermatoglyphics of Portuguese Guinea Negroes and of natives from Timor are in preparation by Leopoldina Ferreira.

Working in Rome, at Professor Gini's request, Pons also analyzed (1953b) finger and palm prints of several other populations collected by the Comitato Italiano per lo Studio dei Problemi della Popolazione. It was proved that the Bantu from Natal were in accordance with the Negro's variability, as the Polish Caraites were in regard to the Europeans. The Berbers from Giado, through their affinity with European groups, showed some tendency toward the Negro characteristics, while the Dauada of Fezzan did not agree neatly with any of the three great racial stems, a fact in accordance with their mixtures and general morphology.

By means of linear discriminant functions, the probability of assignment of an individual to a given group can be ascertained by dermatoglyphics, Pons maintained. He also dealt (1954) with the inheritance of the main palm lines. He verified that its obliquity is an hereditary character, where several genes are probably involved. A polymer, with genes of additive effect, is to be kept in sight.

Growth

The brothers Fernández Cabeza illustrated the growth of Spanish children. Their research (1952, 1953) referred to the Andalusian Provinces, Málaga and Granada. With data taken in preceding generations for comparison, they verified an increase in stature for the same age groups as they observed previously in Asturias and as Prevosti found in Barcelona. This is a well-known and nearly general occurrence, in spite of the fact that Spanish children were underfed during a part of their lives, due to the war and postwar difficulties. Nevertheless, this apparently has had no influence upon length of the body's growth, but perhaps only upon the width dimensions. On the other hand, the growth rate is greater of peoples in southern Spain, though they attain shorter statures, than those in the northern provinces. In biotypes, the majority of individuals are slender, macroschelic, hypobaric, and have good lung capacities.

Other Studies

To review other subjects which deserve mention, there is Albuquerque's study (1952) dealing with the jaw-bone, in which, after comparisons with many other populations, he argued critically on the taxonomic usefulness of each single character. Sánchez y Sánchez (1952) gave absolute and relative values for the upper extremity of university scholars from northwestern Spain, comparing them with other groups in and out of this country. Ferreira established (1952) sexual differences for the hand proportions of Portuguese. The vital capacity of the lungs of Spanish officers and soldiers was determined by Hernández Giménez and others (1953), who calculated also its

correlation with stature, weight, and thoracic perimeters.

Mendes Corrêa (1953b) dealt usefully with personal identification and twins; and Alcobé (1953a) with the inheritance of Fabism, i.e., a hematic disorder related with Thalassanemia or Cooley's anemia due to a specific response from eating or smelling *Vitia faba,* the large bean. These researches were accomplished on the island of Minorca, one of the most conspicuous focuses of Fabism among the Mediterranean countries. Knowledge of it is of anthropological interest, not only because of its restricted geographical localization, but also because of its restricted incidence to the western part of that island where the population is strongly endogamous. The eastern part is nearly free from Fabism. The predisposition to such a disease should be inherited in the same way as allergies and agrees with the Wiener-Zieve-Fries hypothesis.

Expeditions

Directed by Professor António Almeida, three expeditions took place to Portuguese overseas territories: Angola (1952), Timor (1953), and Sâo Tomé and Príncipe (1954). At this writing, Antonio de Veciana was collecting further data in Spanish Guinea, committed by the Instituto de Estudios Africanos (Consejo Superior de Investigaciones Científicas).

Scientific Meetings

Communications on physical anthropology, made before the IVth International Congress of Prehistoric and Protohistoric Sciences in April 1954, were as follows: Mendes Corrêa, on human remains from Muge; Alcobé, on fossil man in Eastern Spain; and Fusté, on the survival of Paleolithic human types in Eastern Spain.

To the IVth International Congress for Mediterranean Hygiene and Medicine (1953) research on Fabism was presented, the clinical part of which was attended by Surinyach and Llebaría (Barcelona) and Marcolongo (Cagliari, Italy).

In September 1954, the International Congress of Pyreneists, which alternatively meets in France and Spain, took place in Luchon (France, Pyrenees). Spanish communications presented were: Alcobé, on the physical anthropology of the Valleys of Baztán and Aézcoa (Navarra); Pons, on dermatoglyphics among the Basques; and Fusté, on Neolithic populations in the Pyrenees.

An International Course on Paleontology was held in 1954 in Sabadell (Barcelona), under the direction of the Spanish paleontologist, Miguel Crusafont. The Paleoanthropological lectures were: "Considerazioni su alcune recenti scoperte paleantropologiche," by Piero Leonardi (Ferrara); "Récents progrès de la Paléontologie Humaine en France," by Jean Piveteau (Paris); and "The Fossil Man of Java," by G. H. R. von Koenigswald (Utrecht).

ETHNOLOGY

Educational Institutions

The most outstanding event of 1954 was the declaration that ethnology was to be officially included in the Departments of Philosophy and Letters in Spanish universities. As yet, however, Chairs have not been endowed and it can be foreseen that ethnology will, after a time, be relegated to a provisional position. The urgency of instituting this type of study in Spain has been publicly proclaimed by Angel Alvarez de Miranda, Catedrálico de Historia de las Religiones de la Universidad de Madrid, and others, as well as by groups such as the Sociedad de Etnologia y Folklore and the Instituto General Franco de Estudios de Investigación Hispano-Arabe.

In Portugal, Professor A. A. Mendes Corrêa continued to preside over the Chair of Ethnology of the Instituto Superior de Estudos Ultramarinos. In 1954, a new Centro de Estudos de Etnologia do Ultramar was formed, under the directorship of Professor Antonio Almeida, which seemed to be a new designation of the Escola Superior of the Instituto Superior.

Research Institutions and Museums

The most interesting activity in Spain during the period under review was the completion of the Instituto de Estudios Africanos. The Instituto is subordinate to the Consejo Superior de Investigaciones Científicas, and perpetuated, to a large extent, by the Dirección General de Marruecos y Colonias, both under the direction of D. José Diaz de Villegas. The work of the Instituto applies to the four zones in Africa of Spanish Morocco, Ifni Territory, Spanish Sahara, and Spanish Guinea and adjacent islands. With respect to research conducted in Morocco, the extensive work on the social economics of Morocco carried out by T. Garcia Figueras and R. de Roda Jimeniz was published in two volumes (1950/1952). Arcadio de Larrea Palacín's three-volume work on Jewish music of Northern Morocco was published (1952). Apart from these major works, several interesting publications on indigenous elements deserve mention. They are Mohammed Ibn Azzuz Haquim's volume on Moroccan proverbs (1954); Sidi Ahmad R'Honi's volume containing many odd social and economic details of Tetuán (1953); and Abraham I. Laredo's historical-cultural study on the Berbers and Hebrews in Morocco (1954). Those scholars with a special interest in the Moroccan region are Julio Cola Alberich, P. P. Garcia Barriuso, T. Garcia Figueras, F. Esteban Ibañez, Arcadio de Larrea Palacin, and José A. Sánchez Perez.

As regards the Ifni Territory, in addition to the publications of Colonel Domenech and several officials and employees who had worked there from 1940–1950, the appearance of P. E. Esteban Ibañez's *Diccionario Español-baamarans* (1954) was of significance. Though Arcadio de Larrea has been at work in the field of musicology in the area, the results of his work have not as yet been published.

In the Sahara, where ethnographic reports have been made by Domenech, A. Flores, and several military men stationed there, ethnographic research has not been as intensive as research by naturalists and archeologists. Julio Caro Baroja (1955) and Miguel Molina Campuzano (1954) completed a field trip to the Sahara from November, 1952 to February, 1953, for the Instituto de Estudios Africanos, and published their results. In our opinion, the two reports should be considered as of a very provisional nature as only repeated trips to such a large area will provide accurate and complete information.

In Spanish Guinea, Gonzalez Echegaray was at work on indigenous linguistics, the Pamue mythology, and other cultural themes, though the results of his research have not yet been published. Both D. A. Panyella, Director of the Museo Etnológico de Barcelona and Professor Santiago Alcobé have conducted socio-anthropological research in Spanish Guinea, though no reports have appeared as yet. Among publications by natives written in Spanish, the work of F. J. Mopila (1949) deserves mention.

In Portugal, Professor Manuel Heleno was the President of the Instituto Portugués de Arqueologia, Historia e Etnografia in Lisbon.[3] Two other institutions which exhibited great vitality with reference to metropolitan ethnology were the Centro de Estudos de Etnologia Peninsular at Porto and the Comissão de Etnografia e Historia da Provincia do Douro Litoral, also at Porto. Both issued several publications during the period. In collaboration with Fernando Galhano, Jorge Dias published the results of a study (1953) on the forms and distribution of the ingenious methods of irrigation in Portugal, which was of undeniable worth from the historical-cultural point of view. His monograph on the Rio de Onor, a community on the frontier of Spain and Portugal also appeared (1953). His methods were eminently descriptive and ethnographic. José Gonçalo C. Herculano de Carvalho completed a thesis (1953), which is not only of ethnographic but also of linguistic interest, on the threshing systems of Spain and Portugal.

Among the foreigners who arrived to study Spanish socio-anthropology, Julian

[3] The above information was supplied by Professor dos Santos Junior through Professor Alcobé.

Pitt-Rivers of Oxford made an important contribution (1954). Though there are also other important scholars, George M. Foster, Jr., of the University of California, stood as the most steadfast example of the collaboration between North American and Spanish social and cultural anthropologists. It should be noted that there has been a resurgence in Spain of the works of the Basque pre-historian and folklorist, J. M. de Barandiaran and an interest in Basque studies by several North American investigators, among them, John Chictaine of the University of Arizona.

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France

Revue de l'Ethnologie en 1952-1954

GEORGES BALANDIER

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ETABLIR un bilan de l'activité ethnologique, même sur une courte période de temps, reste une tâche aux limites imprécises. Où arrêter l'inventaire alors qu'il s'agit d'une discipline étroitement liée à l'ensemble des sciences sociales et des sciences humaines et qui détient, ou veut détenir, une position carrefour? Une discipline qui commence aussi à "imprégner" nombre de disciplines proches et dont le dynamisme se révèle justement à cette puissance de contamination. Ce ne sont pas seulement les sociologues, les psychologues, les historiens et les économistes qui ont découvert, très souvent par le truchement des travaux nord-américains, l'importance actuelle de l'ethnologie. Ce sont leurs enseignements eux-mêmes qui sont affectés. Un groupe d'historiens—celui du "Centre de Recherches Historiques"—souhaite la collaboration des ethnologues tout comme le font les jeunes sociologues du "Centre d'Etudes Sociologiques." Et les économistes dont le champ d'intérêt s'est considérablement élargi, qui ont maintenant à évaluer les comportements économiques des Asiatiques ou des Africains, par exemple, éprouvent un même besoin pour cette rencontre. Lorsque des enseignements nouveaux son créés, il est souvent fait appel à la collaboration de l'ethnologue. Ainsi en est-il lors de l'organisation d'un enseignement technique de la psychologie sociale par l'Institut de Psychologie de Paris, ou de la création d'un cours, et de groupes d'études, relatifs aux problèmes des pays insuffisamment développés, par l'Institut d'Etudes Politiques de Paris.

Il est bien certain que cette multiplication des appels, à une discipline longtemps dédaignée, n'est pas la conséquence d'une sorte de conversion généralisée. Elle est *d'abord* le résultat d'une nécessité. Les profonds bouleversements nés avec (et de) la seconde guerre mondiale ont multiplié les problèmes au niveau des sociétés habituellement considérées comme "exotiques," ont assuré la montée de nations et de peuples jusqu'alors regardés comme mineurs. Cet élargissement de l'actualité a ainsi porté au premier plan de l'attention des domaines longtemps abandonnés aux spécialistes, et aux ethnologues en particulier. C'est sans doute moins en tant que détenteurs d'une méthode particulière d'étude, qu'en tant que chercheurs ayant la connaissance minutieuse de certains systèmes de civilisation, qu'il est fait appel à ces derniers; ils sont sollicités en tant qu'africanistes, océanistes, specialistes du monde musulman et des civilisations asiatiques.

D'un autre côté, dans le cas de la France, le bouleversement des anciens rapports de colonisation a imposé aux administrations le recours à une information scientifique-

ment établie. Là encore, l'actualité politique a orienté les sollicitations dans un sens pratique. Cet infléchissement est particulièrement affirmé dans le cadre des recherches réalisées sous la direction de l'Office de la Recherche Scientifique et Technique Outre-Mer ou en liaison avec le programme établi par le Conseil Supérieur des Recherches Sociologiques Outre-Mer. Il est également sensible à la nouvelle orientation prise par les sections de sociologie-ethnologie des instituts établis dans les différents territoires, notamment en Afrique Noire. Mais il importe d'ajouter à ces remarques que le fait colonial a, en tant que tel, attiré l'attention de certains chercheurs (P. Mus et G. Balandier) qui reprennent un examen trop souvent escamoté, ou partial, dans les limites des études anciennes. L'analyse aborde ici un problème, celui des rapports entre sociétés non seulement différentes quant aux civilisations qu'elles supportent mais encore inégales en puissance, dont l'importance et l'actualité sont incontestables.

Ce n'est pas l'actualité politique seule qui, s'élargissant à l'échelle mondiale, a donné une impulsion nouvelle à la recherche ethnologique. Une formule, devenue banale, veut que la connaissance qu'apportent les ethnologues soit à l'origine des formes modernes de l'humanisme. Dans la mesure même où l'homme occidental a davantage à s'interroger sur lui-même et sur ses oeuvres, il a de plus en plus à interroger les hommes et les oeuvres culturelles différents de ceux auxquels il est accoutumé. La régression continue de l'ethnocentrisme est la conséquence de l'histoire récente, qui a exigé une ré-orientation des cadres de pensée. Elle s'appuie sur les résultats de la recherche moderne: M. Griaule et ses collaborateurs, à la suite de longues et minutieuses enquêtes, s'attachent à manifester que les Soudanais, par l'intermédiaire de leurs théories cosmologiques, révèlent des formes de pensée voisines de celles des anciens Grecs et des Egyptiens. Ainsi ces peuples ont-ils des titres de grandeur intellectuelle comparables aux nôtres; telle est du moins la conclusion qui commence à se vulgariser. Mais cette régression de l'ethnocentrisme s'appuie aussi sur un élargissement de la curiosité. L'ethnologue est de plus en plus "questionné," de plus en plus invité à publier largement les résultats de ses expériences et ses documents originaux. Cette sollicitation d'un public élargi comporte à la fois une chance—la possibilité d'appuis plus nombreux pour une tâche longtemps méconnue—et un rique—celui d'une vulgarisation rapide et d'une banalisation affectant la qualité technique des recherches. La profession d'ethnologue a besoin d'être protégée contre la pression de solliciteurs pressés et contre la complaisance des contrefacteurs.

LA SITUATION DE LA RECHERCHE ETHNOLOGIQUE

Cette actualité de l'ethnologie, que nous nous sommes attachés à évoquer, explique que cette dernière ait trouvé, durant les dernières années, de meilleures opportunités au sein d'organisation officielles pourtant rigides. La centralisation des recherches et enseignements ethnologiques continue à s'effectuer à Paris: l'Institut d'Ethnologie, dont P. Rivet et C. Lévi-Strauss sont les secrétaires généraux, le Centre de Formation aux Recherches Ethnologiques, que dirige A. Leroi-Gourhan, et les laboratoires du Musée de l'Homme y représentent un ensemble dont les assises sont déjà anciennes. Ce qui ne veut pas dire que des transformations n'y aient opéré: l'Institut d'Ethnologie notamment a étendu (1952–1953) la série de ses cours—en adjoignant des enseignements relatifs à la dynamique des changements sociaux et culturels, à la morphologie sociale et à la démographie des peuples d'outre-mer. De son côté, l'Ecole Pratique des Hautes Etudes, dans sa Section des sciences économiques et sociales, a élargi la place accordée aux recherches ethnologiques: il vient d'y être créé (1954) une Direction d'études relative à l'Afrique Noire. Cette Section particulièrement dynamique envisage d'étendre très prochainement, à d'autres ensembles de civilisation, la série des enseignements ethnologiques. Elle deviendra alors l'un,

peut-être même le plus important, des foyers de recherche.

En dehors de ces organisations, assurant un enseignement s'étendant sur une ou plusieurs années et rigoureusement contrôlé, il se trouve à Paris diverses institutions ou écoles qui font une place à l'ethnologie. Nous avons déjà évoqué l'Institut de Psychologie de la Sorbonne et l'Institut d'Etudes Politiques de Paris, il convient d'ajouter encore l'Ecole Nationale de la France d'Outre-Mer, le Centre des Hautes Etudes d'Administration Musulmane et le Centre d'Etudes Asiatiques et Africaines. Ces trois institutions visent essentiellement à assurer, ou compléter, la formation d'administrateurs et d'officiers; leurs activités les orientent donc essentiellement vers les aspects appliqués de la recherche ethnologique.

La présence à Paris de l'Unesco, et du Conseil International des Sciences Sociales, a permis le développement d'activités parallèles qui ont bénéficié de l'appui de l'un ou de l'autre. Une telle conjoncture a donc renforcé la position largement prépondérante des laboratoires et organisations établis dans la capitale. Parmi les travaux qui ont pu s'effectuer à cette occasion, il importe d'attacher une attention particulière au séminaire, dirigé par C. Lévi-Strauss, qui visait à assurer une collaboration inter-disciplinaire entre mathématiciens et spécialistes des sciences humaines et sociales. Les séances de travail, qui eurent lieu régulièrement au cours des années 1952–1953 et 1953–1954, visaient à une formulation à la fois plus précise et plus "riche" des problèmes particuliers à ces dernières disciplines. Le mathématicien ainsi sollicité suggère non seulement une expression plus adéquate, mais encore des "modèles" qui peuvent contribuer à un nouveau progrès de l'analyse. Nous ajouterons encore, parmi cet ensemble d'activités, les travaux auxquels contribuèrent des chercheurs français dans le cadre des études animées par le Bureau International de Recherche sur les Implications Sociales du Progrès Technique. Ce fut le cas à l'occasion du colloque (mars 1954) établi sur le thème des "motivations et stimulations économiques dans les pays insuffisamment développés," et pour lequel un rapport général a été rédigé par G. Balandier (1954c).

Par contre, l'implantation de la recherche et de l'enseignement ethnologiques dans les universités de province reste très insuffisante. En 1945, une chaire et un laboratoire d'ethnologie sont créés à l'Université de Lyon: dirigées par A. Leroi-Gourhan, les recherches sont essentiellement orientées vers les phénomènes manifestant l'évolution de la civilisation matérielle et vers l'étude des relations entre sociologie et technologie. Ce n'est qu'en 1954 qu'un nouvel enseignement d'ethnologie est institué à l'Université de Bordeaux; il est établi en un centre ouvert à la fois sur l'Amérique Latine et sur l'Afrique Noire et occupe ainsi une position privilégiée; il a suscité le plus grand intérêt parmi les géographes et les psychologues de cette université et a la possibilité de développer d'intéressantes connexions interdisciplinaires.

Tel est le tableau que l'on peut rapidement dresser. Il importe de souligner que l'ethnologie, en France, ne dispose toujours pas des larges facilités qui lui sont ouvertes dans certains pays étrangers; soit en raison du nombre encore réduit des chaires universitaires, à l'inverse de ce qui se passe au Royaume Uni, soit en raison du manque de fondations, semblables à celles existant aux États-Unis, propres à financer ses recherches. Il est certain que les difficultés d'expansion matérielle, rencontrées par toutes les universités françaises, n'ont pas permis l'essor que l'ethnologie française était capable de prendre au cours de cette dernière décade. Cependant son dynamisme est réel: une nouvelle génération de jeunes chercheurs s'est constituée dont plus d'une vingtaine ont enquêté, durant les trois dernières années, en Afrique, en Asie et en Océanie. Un autre aspect, non moins intéressant à signaler, est l'intérêt que les Français originaires de territoires d'outremer commencent à manifester pour les études ethnologiques. Certains d'entre eux occupent ainsi des postes d'assistant—direction de la section d'ethnologie, direction du Musée historique de Gorée—au Centre

Fédéral de l'Institut Français d'Afrique Noire à Dakar. De même, le nombre des étudiants africains recevant un enseignement ethnologique, notamment à l'Ecole Pratique des Hautes Etudes, s'est accru sensiblement.

Il est incontestable qu'une meilleure coordination des enseignements et des laboratoires, qu'une sanction spécifique aux études anthropologiques (et aux degrés supérieurs), qu'une meilleure prospection des possibilités "de carrière" ouvertes aux ethnologues auraient été propres à accentuer une telle tendance à l'expansion. En ce qui concerne ce dernier point, la conjoncture se révèle néammoins plus favorable: des ethnologues sont engagés dans le programme d'études défini par la Direction du Fonds d'Investissement et de Développement Economique et Social, d'autres commencent à être sollicités par d'importantes entreprises établies outre-mer, quelques uns sont associés aux expériences d'éducation de base dans les territoires africains, quelques uns participent à des recherches accomplies dans la métropole—ainsi, à une large enquête consacrée à l'urbanisme. Il se crée insensiblement une "demande" qui n'est pas toujours à même d'être satisfaite; surtout si l'on y ajoute les sollicitations exprimées par certaines organisations étrangères et internationales.

La vitalité de l'ethnologie française, en dépit du fait que les moyens dont elle dispose restent en deçà de ses besoins, est indéniable. En dehors des chercheurs qui, en raison du poste qu'ils occupent, sont d'une manière permanente à pied d'oeuvre pour le travail "sur le terrain," des missions assez nombreuses ont accompli des enquêtes au cours de la période 1952–1954. Plutôt que de dresser le tableau complet de ces dernières, nous tenons à manifester leur large dispersion géographique: En Afrique: au Soudan français (M. Griaule, G. Dieterlen), en Guinée Française (A. Schaeffner, D. Paulme-Schaeffner), en Gold-Coast (J. Rouch), au Togo (G. Condominas) et au Dahomey (A. Métraux, C. Tardits, P. Verger); Aux Antilles: à la Martinique et Guadeloupe (M. Leiris), en Haiti (L. Bernot); En Amérique: au Mexique (G. Stresser-Péan), au Brésil (R. Bastide, A. Métraux); Dans le Pacifique: en Nouvelle-Calédonie (P. Métais), en Nouvelle Guinée (F. Girard); Dans le Sud-Est Asiatique: au Pakistan Oriental (L. Bernot), en Inde du Sud et du Nord, en particulier dans les Provinces Unies (L. Dumont) et en Indonésie (J. Cuisinier). Cette énumération, qui n'est nullement exhaustive, montre l'importance accordée actuellement aux recherches sur le terrain; C. Lévi-Strauss, dans une étude récemment publiée (1954b), demandait que l'enseignement de l'ethnologie soit réservé à ceux qui ont eu la qualité de "témoins"—les ethnologues français pour la presque totalité satisfont à une telle et nécessaire exigence.

LES ORIENTATIONS DE LA RECHERCHE ETHNOLOGIQUE

S'il est aisé de révèler la vitalité de la recherche ethnologique, il l'est beaucoup moins de préciser les orientations et les influences qui la caractérisent. La part consacrée aux enquêtes est beaucoup plus importante, si l'on considère l'ensemble des travaux, que celle relative aux investigations d'ordre théorique. Ce fait s'explique en partie par la montée d'une nouvelle génération de chercheurs, qui a pour première tâche de "faire ses preuves," et par l'influence de l'anthropologie nord-américaine. Mais il convient tout de suite de préciser que cette dernière n'a évidemment pas eu pour seul effet de multiplier les enquêtes ethnologiques, elle a stimulé les confrontations auxquelles donne lieu l'ethnologie en tant que discipline aux frontières imprécises. Tel est le cas avec les controverses qu'a suscitées la notion de "personnalité de base": avec les études de M. Dufrenne et C. Lefort. A l'occasion de son examen, M. Dufrenne (1953) envisage l'effort de synthèse qui s'impose, la nécessité d'assurer la coopération de disciplines divisées plus qu'il est nécessaire pour une saine division du travail scientifique. Il affirme l'unité des sciences humaines par la nécessité où se trouve la recherche de conjuguer l'approche à la fois objective, psychologique et "historisante." Ces dernières remarques ne sont pas

étrangères à notre propos: elles nous permettent de souligner une deuxième tendance de la recherche—le souci plus affirmé de participer à une démarche ayant un caractère interdisciplinaire.

Les ethnologues de la nouvelle génération sont plus sensibles à l'influence des travaux nord-américains et britanniques que ne le sont leurs aînés. Les recherches de M. Griaule et de ses collaborateurs se sont développées de manière indépendante, en demeurant dans la tradition française établie par Lévy-Bruhl et surtout M. Mauss. Bien que, par rapport au premier, le dynamisme qui les anime opère en quelque sorte à l'inverse de celui qui devait conduire à la définition de la "mentalité primitive." M. Griaule, à partir de l'étude du système mythologique et symbolique des Dogon (Soudan français), montre que les catégories de pensée particulières aux Soudanais ne sont pas irréductibles aux catégories de la pensée dite civilisée. C'est à un mouvement de même nature qu'obéissait la recherche de M. Leenhardt qui démontrait combien la connaissance mythique ne saurait se confondre avec la connaissance mystique, et implique en fait des virtualités très importantes de la pensée rationnelle. M. Leenhardt, décédé en janvier 1954, avait en même temps qu'une capacité d'analyse pénétrante une influence très réelle en tant que professeur. Il a beaucoup contribué au maintien des premières orientations de la recherche ethnologique française.

Cependant, cette dernière dans son état actuel révèle une situation assez complexe; les hésitations même, qui se manifestent, sont le signe d'une période de renouveau durant laquelle interfèrent des influences parfois contradictoires. Dans une telle conjoncture, le rôle que joue C. Lévi-Strauss, qui assure la liaison entre la tradition proprement française (celle de M. Mauss, en particulier) et certains courants de l'anthropologie anglo-saxonne, qui se situe au carrefour des disciplines que l'ethnologie avoisine nécessairement, est extrêmement salutaire. L'activité scientifique de quelques uns des jeunes ethnologues français en témoigne—et notamment les techniques d'enquête et d'analyse auxquelles ils commencent à recourir.

Nous avons, en commençant cette étude, poser la question des limites qu'il conviendrait de fixer à un tel inventaire. Nous n'y avons guère répondu jusqu'alors. Sans vouloir nier les liens étroits existant entre l'anthropologie physique et la science ethnologique, nous ne pouvons donner à cette discipline la place qui lui est due; et cela bien que des chercheurs français, comme H. Vallois et L. Pales, y ait manifesté une importante activité au cours des trois dernières années. Il en est de même vis-à-vis des études archéologiques et préhistoriques. Cette nécessaire restriction, afin de ne pas établir un inventaire ayant l'aspect d'un catalogue, nous impose également de ne pas nous étendre sur le développement des travaux de linguistique qui, attachés à l'étude des langues non-écrites, sont à certains égards proches de l'ethnologie.

Les recherches de folklore—ou d'ethnographie française—bien qu'elles disposent de laboratoires et de publications particuliers sont étroitement reliées à l'ensemble des activités ethnologiques. Les jeunes chercheurs reçoivent une formation souvent double et peuvent passer de l'un à l'autre de ces domaines d'étude. Cette relation se comprend aisément si l'on rappelle que le même phénomène d'*éloignement* intervient quant à l'objet d'étude que se sont fixé ces deux disciplines. C'est d'abord par le caractère archaïque des faits analysés que A. Varagnac, fondateur de l'Institut international d'archéocivilisation, définit son champ de travail. L'étude des civilisations traditionnelles—dans un cadre européen et non plus dans un cadre "exotique"—tend à prendre une nouvelle extension; une direction d'études vient justement (1954) d'être attribuée à A. Varagnac, au sein de la VIème Section de l'Ecole Pratique des Hautes-Etudes.

Le folklore donne lieu à de multiples recherches qui ne sont pas toutes le fait de spécialistes, mais qui, à des degrés divers, sont contrôlées par les laboratoires du Musée National des Arts et Traditions Populaires dont G. H. Rivière est le con-

servateur. G. H. Rivière, dont les travaux relatifs aux arts populaires français se poursuivent, a montré grâce à de remarquables talents de muséographe, que le musée et ses expositions spécialisées constituent un prolongement fécond du travail sur le terrain.

Le laboratoire d'ethnographie française, que dirige M. Maget, assure le développement d'enquêtes extensives en vue d'aboutir à la connaissance scientifique des "réalités culturelles métropolitaines." M. Maget poursuit une vaste enquête régionale concernant l'ensemble Damphiné-Savoie en même temps que l'un de ses collaborateurs (I. Chiva) réalise une recherche de même nature dans le cadre de la Sologne. Cette longue et minutieuse pratique de l'enquête représente une expérience qui s'exprime par des enseignements spécialisés et, tout récemment, par la publication d'un guide d'étude (Maget, 1953).

Il n'est guère facile de donner une vue générale des diverses orientations caractérisant actuellement les travaux des spécialistes du folklore français. Ces derniers concernent les techniques préindustrielles (A. Lagrange), la vie et l'équipement domestiques (S. Tardieu), la littérature populaire (M. L. Teneze, P. Delarue), le théâtre et les arts populaires (P. Soulier, M. Richet), cependant qu'une place importante est accordée à l'ethnomusicologie française et comparative (Cl. Marcel-Dubois et M. Andral).

Il faut ajouter que les résultats de telles recherches sont encore élargis par les enquêtes que les ethnologues, assistés par des psychologues, ont pu entreprendre auprès de certaines communautés rurales de France. Ce qui est le cas avec le travail de L. Bernot (ethnologue) et R. Blancard (psychologue) consacré à Nouville, petit village de la Seine-Inférieure (Bernot, 1953); avec l'enquête qu'un jeune psychologue d'orientation ethnologique, R. Faucheux, est en train de conduire dans une communauté villageoise de Corse. Et cette remarque nous incite à souligner que l'ethnologie française ne vise plus seulement à s'appliquer à des sociétés en quelque sorte "exotiques," mais à certains aspects de la société française pour lesquels l'ethnologie apporte des moyens efficaces d'analyse. Ainsi, s'est-il constitué un laboratoire d'ethnographie sociale, domicilié au Musée de l'Homme, dont le champ d'investigation n'est pas une communauté malgache ou négro-africaine mais la région parisienne (P. Chombart de Lauwe, 1952a). De même, les résultats de la "Semaine Sociologique," organisée sur le thème: "Villes et Campagnes, civilisation urbaine et civilisation rurale en France," par le Centre d'Etudes Sociologiques, montrent la part croissante que les concepts et les apports de l'ethnologie jouent dans l'appréciation scientifique de la société française contemporaine (Friedmann, ed., 1954).

LES RÉSULTATS OBTENUS

L'inventaire entrepris à l'occasion d'une étude limitée, comme l'est celle-ci, ne saurait être extensif; en ce sens, nous entendons maintenant envisager de manière plus minutieuse les résultats obtenus dan le cadre des disciplines qu'il est convenu de désigner sous les rubriques: anthropologie sociale, anthropologie culturelle, anthropologie et sociologie appliquées aux pays d'outre-mer. Cependant, certaines recherches qui apparaîssent quelque peu "en marge" ne sont pas moins riches d'incidences quant au développement de ces disciplines. On ne saurait ainsi ignorer les travaux poursuivis par A. Leroi-Gourhan quant à l'évolution des civilisations matérielles, quant aux relations, que révèle l'analyse des techniques "primitives," existant entre ces dernières et certaines caractéristiques sociales particulières aux sociétés dites primitives. Cette nécessité d'orienter l'attention vers les recherches d'ordre technologique apparaît encore plus indispensable lorsque, comme le fait A. Leroi-Gourhan dans un ouvrage en préparation, ces dernières s'attachent aux rapports qui s'établissent entre le "primitif" et les machines. Il est de même impossible, pour un chercheur africaniste, de ne pas accorder la plus minutieuse attention aux résultats des enquêtes que le Dr. L. Pales a dirigées en fondant la Mission Anthropologique de

l'A.O.F.[1] L'élaboration des matériaux se poursuit dans le domaine de la "raciologie comparative" (les études III à V bis ayant été publiées de 1952 à 1954) et dans celui de la "pathologie comparative"; ce dernier, en particulier, révèle un certain nombre de conditions, déterminant l'existance du Noir africain, que l'ethnologue ne peut sous-estimer. Cette remarque est encore plus impérative quant aux données apportées par L. Pales à la suite de son enquête relative à l'alimentation des populations de l'A.O.F. (Pales, 1954); des mécanismes d'ordre économique et social y sont manifestés avec une particulière netteté.

En faisant le bilan de l'ethnologie française, au cours des dernières années, on ne manque pas d'être frappé par le développement d'une orientation nouvelle: le souci de développer une recherche susceptible d'incidences *pratiques*. Ce phénomène n'est pas la conséquence d'un besoin de justification, qui aurait soudain animé les ethnologues français. Il s'explique par le mouvement général des sciences sociales, par l'influence après la guerre des travaux de langue anglaise, par les pressions qu'exercent l'actualité et par les demandes de certaines personnalités administratives et politiques. Il correspond aussi au souci d'organiser une recherche qui ne soit pas située hors du temps—nombre d'études, publiées au cours des dernières décades, avaient présenté un modèle en quelque sorte immuable des sociétés observées—mais qui soit au contraire "datée."

Les enquêtes de G. Balandier, auprès des villageois gabonais, ont ainsi abouti à une entreprise de modernisation et de ré-organisation des communautés rurales (Balandier, 1952). Les enquêtes de P. Mercier au Dahomey ont pu répondre à des questions posées par les autorités locales. Celles que J. Cl. Pauvert a organisées au Cameroun, sur la structure des communautés rurales, les rôles sociaux et les leaders que ces dernières révèlent, ont été associées à une intéressante entreprise d'éducation de base (Pauvert, 1953). Une telle orientation est maintenant largement admise et efficace hors des territoires de l'Afrique Noire. J. P. Lebeuf, dont les activités s'inscrivent depuis 1953 dans le cadre des travaux de l'Organisation Mondiale de la Santé, s'est attaché à définir les conditions de la participation permanente de l'ethnologie à l'assistance sanitaire aux populations techniquement attardées (Lebeuf, 1953c). Lors d'une mission en Haiti, dans la vallée de Marbial, L. Bernot (1953) a eu pour charge de dresser le bilan de l'expérience d'éducation de base dont A. Métraux avait assuré le démarrage après avoir dirigé l'enquête préliminaire.

Les recherches de J. Guiart (1952a, b, 1953, 1954), en Nouvelle-Calédonie et aux Nouvelles-Hébrides notamment, ont été conditionnées pour une part importante par les problèmes d'ordre politique et administratif, par ceux que pose le mouvement coopératif. Ajoutons enfin que les but pratiques sont nettement définis comme prédominants dans le cas des enquêtes réalisées par la Section de Sociologie du Maroc, dont R. Montagne fut le créateur, et dans le cas de celles (à la fois démographiques, économiques et ethnologiques) suscitées par le Conseil Supérieur des Recherches Sociologiques Outre-Mer dont le gouverneur H. Deschamps est Secrétaire Général.

Les chercheurs français poursuivent un inventaire toujours nouveau de cultures et types sociaux très divers, représentatifs de larges zones géographiques. Si la méthode monographique reste le moyen le plus propice à la présentation d'un inventaire complet—comme fait I. Dugast à la suite d'une observation de plusieurs années relative aux Banem du Sud-Cameroun[2]—la monographie tend néammoins à s'organiser en fonction d'une certaine "démonstration." Tel est le cas avec l'étude de G. Balandier et P. Mercier (1952), consacrée aux pêcheurs Lébou du Sénégal, qui montre les réactions d'un peuple original, peu nombreux, particulariste, aux nombreuses incitations au changement conditionnées par le voisinage de Dakar et de Rufisque.

[1] Cf. les divers *Rapports* publiés par la Mission Anthropologique de l'A.O.F., sous la direction de L. Pales.

[2] Ouvrage actuellement sous presse et à paraître dans la série des "Travaux et Mémoires de l'Institut d'Ethnologie."

Tel est le cas avec l'ouvrage que D. Paulme (1954) vient de consacrer aux Kissi de la Haute-Guinée. Dans cette remarquable monographie, présentée sous une forme classique, une place prépondérante est donnée à l'étude des phénomènes religieux et de la magie cependant que le rôle du sorcier, tel qu'il s'exprime dans une société africaine traditionnelle, donne lieu à un chapitre spécial.

Le domaine africain a certainement été l'objet des prospections les plus nombreuses, soit dans de cadre des programmes définis par les instituts locaux, soit à l'occasion de missions particulières. Les enquêtes ont pu prendre un caractère extensif dont les résultats s'expriment actuellement à propos de la contribution française à "l'ethnographic survey," que dirige l'International African Institute de Londres. Elles visent surtout, pour la plus grande part, à apporter une connaissance "profonde" quant à un peuple déterminé ou quant à un thème de recherche bien délimité. Les travaux de M. Griaule (1953, 1954) et G. Dieterlen (1954; Griaule et Dieterlen, 1954), relatifs aux Dogon et aux Bambara du Soudan, témoignent de cette continuité et de son efficacité. De même, les recherches de J. Rouch concernant les Songhay (peuple nigérien), dans leur habitat actuel et dans leurs "colonies" en pays étranger, montrent ce qu'une étude ouverte sur la perspective historique, visant à l'inventaire complet d'une société et d'une culture originale, peut présenter comme résultats valables. Les enquêtes s'attachant à la description et à l'analyse des phénomènes religieux restent nombreuses, manifestant la permanence d'une orientation qui fut très tôt celle de la recherche ethnologique française en milieu africain. Nous le montrerons en présentant les travaux du groupe de chercheurs associés à M. Griaule. En Côte d'Ivoire et en Haute-Guinée, les études de B. Holas (1952) s'attachèrent aussi, pour la partie la plus importante, à la vie religieuse: rôle des masques et de l'association que ces derniers impliquent, place des cultes spécialisés dans le système social (culte de Zié, culte de Massa) et développement des mouvements religieux nouveaux dans la région méridionale de la Côte d'Ivoire. P. Mercier, lors de son séjour au Dahomey, a étudié le système cosmologique et les valeurs sociales spécifiques du peuple fon; il vient de publier récemment (1954a) les résultats de son enquête. A l'occasion de son séjour en Afrique Centrale, G. Balandier (1953, 1955a) a pu analyser les mouvements religieux néo-chrétiens et messianiques—Kimbangisme, Matswanisme, Kakisme—qui représentent un phénomène d'innovation sur le plan de l'activité religieuse en même temps qu'une réaction au fait colonial. Il y a là un domaine de recherche auquel les jeunes ethnologues français, retrouvant une voie ouverte très tôt par M. Leenhardt,[3] s'attachent avec attention; les excellents travaux de J. Guiart (1952, 1953, 1954), réalisés dans une toute autre région, dans le cadre des activités de l'Institut Français d'Océanie, le montrent incontestablement.

Les études de structures sociales occupent une place importante et sont en général réalisées dans une perspective dynamique. Evoquons, toujours en fonction des sociétés négro-africaines, les travaux de D. Paulme (mission de 1954, en Guinée Française, à l'occasion de laquelle sont considérées les structures sociales des Baga de la région côtière), de P. Mercier (Somba du Nord Dahomey), de G. Condominas (Ouatchi et Cabrais du Togo), et ceux de G. Balandier qui viennent d'être récemment publiés (Bakongo et Fang du Congo et Gabon). Cette énumération n'est en rien complète, il faudrait y ajouter les travaux de nouveaux chercheurs, qui sont en train de réaliser leurs premières enquêtes sur le terrain, et ceux dus à des chercheurs non-professionnels—ainsi, les bonnes études de l'administrateur J. C. Froelich. Ajoutons que Madagascar n'a toujours pas donné lieu aux multiples enquêtes qui seraient nécessaires à un inventaire suffisamment large. Le fait important, en ce qui concerne ce territoire, est la publication des deux ouvrages de J. Faublée (1954a, b) relatifs à la cohésion des sociétés bara et aux religions des Bara.

Une des tendances les plus intéressantes,

[3] Leenhardt, M., 1902, *Le mouvement ethiopien au Sud de l'Afrique de 1896 à 1899.* Cahors.

quant aux recherches africaines, est l'orientation vers les phénomènes de transformations sociales et culturelles, vers les aspects et les problèmes les plus actuels que révèle le monde noir—en particulier, ceux que conditionnent les développements d'ordre technologique et économique, ceux que déterminent les réactions à la situation coloniale. Une telle approche s'éloigne des positions traditionnelles de l'ethnologie française, conduit à des démarches d'ordre inter-disciplinaire et donne aux considérations d'ordre proprement sociologique une position prédominante. Quant à cette nouvelle tendance, le rôle de G. Balandier s'est affirmé à la suite des résultats acquis lors de ses enquêtes en Afrique Centrale. Si les recherches qu'il a consacrées aux "crises" spécifiques des Fang gabonais, aux changements sociaux révèlés par les Ba-kongo de la région congolaise sont encore conduites selon la ligne propre à la démarche anthropologique, celles relatives aux centres urbains de Brazzaville imposent une toute autre approche. Ces dernières sont consacrées pour une large part à l'analyse des nouvelles relations sociales, au problème de la stratification et des classes sociales, à la définition des types sociaux émergents en milieu urbain (Balandier, 1954b). C'est dans le même sens que P. Mercier organise ensuite les enquêtes se développant au niveau des villes sénégalaises et notamment à Dakar: faits dits de "détribalisation," domaine de la stratification sociale, description des groupements et de leurs fonctions (Mercier, 1954b). Les publications de J. P. Lebeuf (1953a) relatives à Fort-Lamy et Bangui et de J. Lombard (relatives à Cotonou) complétent l'information jusqu'alors recueillie sur les villes "noires" des territoires français.

Ces études de changements sociaux et culturels caractérisant le monde noir se sont également poursuivies hors d'Afrique. Au cours d'une mission effectuée aux Antilles française, en 1952, M. Leiris a recueilli les éléments d'un ouvrage présentant les rapports entre "races et cultures" en Martinique et en Guadeloupe. A. Métraux (1953a, b, 1954) a entrepris, faisant suite à ses recherches en Haiti, une enquête dans la région sud du Dahomey afin d'y retrouver certaines formes de la pensée religieuse qui ont été transplantées et maintenues en milieu paysan haitien. Et L. Bernot a justement réalisé une évaluation actuelle de cette société paysanne à l'occasion d'une mission accomplie en 1954.

Dans le champ des études africaines, il convient encore de souligner la place qu'occupent en certains secteurs les recherches archéologiques et les études visant à une reconstitution de l'histoire négro-africaine. Il faut mentionner les travaux de R. Mauny, de J. Rouch (histoire des Songhai) et surtout ceux de J. P. Lebeuf et de Annie Masson Detourbet—tous deux poursuivant leurs recherches sur l'ancienne culture sao et les cultures parentes du Tchad. A. Masson Detourbet est, par ailleurs, en train de préparer une thèse étudiant l'origine et la constitution de différents Etats d'Afrique Centrale, en liaison avec les sysèmes religieux, en même temps que leur organisation actuelle. Dans un ordre tout différent, il est indispensable d'ajouter à cet ensemble d'indications les études réalisées dans le domaine de l'ethnomusicologie. A. Schaeffner, qui est chargé du Département d'ethnomusicologie au Musée de l'Homme, poursuit non seulement un travail de laboratoire mais complète, à l'occasion d'une mission récente en pays baga, les recherches accomplies sur le terrain en Guinée Française. Ces dernières sont essentiellement centrées sur l'inventaire ethnologique et musicologique des rituels (Schaeffner, 1952, and especially 1953).

L'Afrique Noire a donné lieu aux plus nombreuses enquêtes, mais elle ne constitue pas le domaine exclusif de la recherche ethnologique française. Loin de là. Le Sud Est Asiatique a, au cours des dernières années, suscité des travaux de grande valeur. Ceux qui sont directement liés à l'Ecole Française d'Extrême Orient figurent dans un chapitre particulier. En dehors des enquêtes que J. Cuisinier poursuit actuellement en Indonésie (étude d'une commuauté chrétienne des environs de Djakarta, étude de la condition des femmes et des mouvements féminins.

étude des phénomènes esthétiques), il importe de signaler en premier lieu les résultats présentés par L. Dumont à la suite de deux missions accomplies en Inde du Sud et du Nord. L. Dumont (1953a) a redigé la monographie d'une sous-caste, en tant que contribution à l'étude de la société et de la civilisation indienne en général, et une étude (1953b) comparative sur le thème: hiérarchie et alliance dans la parenté du sud de l'Inde. Durant la période 1952–1954, G. Condominas (1952) a pu mettre au point les documents rassemblés chez les Mnong-Gar, Proto-indochinois du Viêt-Nam. L'élaboration des matériaux conduit à la préparation de publications envisagées selon trois directions: description ethnographique de la société mnong-gar, étude socio-économique de faits à caractères apparemment religieux (notamment, les massacres de sorciers), étude des transformations survenues sous l'effet de la colonisation. De son côté, L. Bernot, dont le séjour en pays mogh dans les Chittagong Hill Tracts (Pakistan Oriental) s'est achevé en 1952, poursuit l'analyse des documents qu'il a alors rassemblés. Il rédige maintenant un ouvrage d'ensemble, consacré aux Mogh, et prépare des études moins importantes relatives à d'autres tribus du Pakistan Oriental—Kyang, Mro et Tipera. Les Chittagong Hill Tribes avaient d'ailleurs fait l'objet d'une première enquête de C. Lévi-Strauss (1952a) qui a consacré une étude aux systèmes de parenté propres à trois d'entre elles.

Dans le domaine américain, Amérique Centrale et Amérique du Sud, la contribution des chercheurs français maintient une tradition ancienne et brillante.

H. Reichlen, dont les enquêtes archéologiques et ethnographiques se sont poursuivies au Pérou pendant cinq ans, jusqu'en 1952, étudie (1953) l'important matériel rapporté. Il a préparé plusieurs monographies concernant l'archéologie du Pérou septentrional (qui paraîtront prochainement dans la série des Travaux et Mémoires de l'Institut d'Ethnologie) et diverses publications traitant de questions d'ethnographie et de folklore des régions andines de Cajamarca et de Chachapoyas. La liaison des deux ordres de recherches se trouve en ce cas particulièrement affirmée. J. Soustelle, dont l'enseignement à l'Ecole Pratique des Hautes Etudes prépare une nouvelle génération de chercheurs à l'étude des anciennes sociétés et cultures mexicaines,[4] a développé ses travaux personnels relatifs à ces dernières. Il a notamment précisé l'orientation de ses recherches à l'occasion du XXXIème Congrès des Américanistes qui s'est tenu au Brésil. Et il vient de publier une importante synthèse concernant "la vie quotidienne chez les Aztèques" (1955). C'est également en Amérique du Sud, au Pérou et au Brésil, que A. Métraux a poursuivi ses plus récentes enquêtes sur le terrain (1953–1954). Il eut la direction de la mission réalisée dans le cadre du programme d'aide aux Indiens andins. Au Brésil, il séjourna chez les Indiens Kayapo de la région du Xingu et dans la tribu des Kubenkrankey récemment pacifiée; il put ainsi réunir un matériel mythologique abondant ainsi que de nombreuses données sur la structure sociale. Les travaux de R. Bastide (1952a), qui sont d'orientation purement sociologique, rencontrent fréquemment l'ethnologie. Tel est le cas avec ses recherches sur les Noirs brésiliens, les cérémonies et rituels du *Candomblé,* avec ses enseignements sur le problème des interpénétrations de civilisations. Il en est encore de même avec l'enquête que R. Bastide vient de réaliser, à Paris, sur les étudiants africains séjournant dans la capitale.

En Océanie, les traditions de recherche établies par M. Leenhardt ne deparaissent pas. F. Girard, qui se trouve actuellement en Nouvelle Guinée, effectue une large recherche ethnographique chez les Buang, tribu montagnarde de l'arrière-pays de Lae. P. Métais a eu l'opportunité de retourner, en Nouvelle-Calédonie, pour poursuivre son inventaire intensif de la société canaque; des indications intéressantes sont ainsi apportées sur les problèmes de démographie (1954a) et sur l'évolution sociale néo-calédonienne (1954b). Il faut aussi ajouter l'étude remarquée que P. Métais a consacrée à une monnaie archaique: la cordelette de coquillages, dans l'un des derniers numéros de l'*Année Sociologique.* Les travaux de J. Guiart, qui

[4] Cours de l'année scolaire 1953–1954 et 1954–1955.

visent à un inventaire social de la Nouvelle-Calédonie et des îles Loyalty, manifestent au mieux l'importance de la recherche scientifique française au niveau de cette région du monde. J. Guiart (1952, 1953, 1954) s'est attaché à préciser, pour chaque groupe, la constellation des relations sociales et plus particulièrement le degré de permanence des relations d'ordre traditionnel. Dans un ouvrage en préparation, il analyse les incidences sur le plan des réalités mythiques et des activités religieuses "d'un siècle et demi de contacts culturels à Tanna." Une approche dynamique ajoute ainsi à nos connaissances concernant cet ensemble de sociétés, et les renouvelle dans une très large mesure.

LA MÉTHODOLOGIE ET L'ÉLABORATION THÉORIQUE

Nous n'avons pu évoquer que de manière partielle, et incomplète quant à la liste des chercheurs les plus valables, l'éclatement à travers le monde de l'activité ethnologique française. Il nous reste à préciser les orientations qui, au cours des dernières années, se sont révélées les plus déterminantes dans le domaine de la méthodologie et de l'élaboration théorique.

Les recherches de C. Lévi-Strauss sont celles qui se sont le plus engagées en cette voie et qui ont, notamment du côté des sociologues, déterminé les réactions les plus intenses. A partir de sa formulation d'une théorie générale de la parenté (1949), C. Lévi-Strauss a été amené à définir la notion de structure sociale et à étendre le domaine auquel il applique l'analyse structurale. En dressant, en 1952, un "panorama de l'ethnologie," Lévi-Strauss précise justement qu'il "cherche à définir les structures à l'aide de constantes qu'il demande simultanément à une analyse intensive de cultures globales et à certaines formes de la pensée mathématique moderne de contribuer à dégager."[5] Mais c'est dans l'ouvrage collectif dû à A. L. Kroeber *et al., Anthropology Today,* qu'il réalise l'approche la plus complète de cette notion (Lévi-Strauss 1953a). Il y montre notamment que les structures sociales n'ont rien à voir avec la réalité empirique mais seulement avec les "modèles" construits à partir de cette dernière; il y précise que le but des études de structure sociale est de *comprendre* les relations sociales grâce à l'aide des modèles; il y souligne toute l'importance du problème de la communication entre individus et groupes, du problème de l'agencement et de "l'ordre" des éléments constitutifs des structures sociales. Il élargit le domaine d'application de la notion de structure en préparant, principalement à l'aide de matériel nord-américain, un ouvrage sur l'analyse structurale des mythes; s'engageant ainsi en un champ de recherches que G. Dumézil avait abordé en traitant le matériel mythologique indo-européen.

L'appel à la collaboration des mathématiciens est l'un des aspects les plus caractéristiques—et aussi le plus controversé—de l'activité scientifique de C. Lévi-Strauss. C'est sur son initiative, et sous sa direction, que fut organisée à Paris (1952–1954) une recherche interdisciplinaire entre mathématiciens et spécialistes des sciences humaines et sociales. C'est à lui qu'il est demandé d'apporter une contribution introductive—sur le thème: "Les mathématiques de l'homme"—à un récent numéro[6] du *Bulletin International des Sciences Sociales.* D'un autre côté, par l'attention minutieuse attachée au problème de la communication—fondement des sociétés humaines—Lévi-Strauss se trouve conduit non seulement à retenir les enseignements de la linguistique moderne (phonologie et linguistique structurale)[7] mais encore a retrouver ceux qu'apportent les recherches mathématiques et physiques étudiant les faits de communication. Et même un ouvrage destiné à un large public, comme l'est *Race et Histoire* (Lévi-Strauss, 1952c), reste assez technique en portant la marque incontestable de la théorie des jeux. Ces indications suggèrent la position particulière de Lévi-Strauss par rapport aux ethnologues français, elles ne signifient pas

[5] Lévi-Strauss, C. 1952, "Panorama de l'Ethnologie," *Diogène,* No. 2.

[6] "Les mathématiques de l'homme," *Bulletin International des Sciences Sociales,* Vol. 6, No. 4, 1954, pp. 643–653.

[7] Référence dans l'article de *Diogène* cité ci-dessus.

qu'il ait pour autant renoncé à developper l'enseignement de M. Mauss.

L'oeuvre de M. Griaule, assisté d'un groupe de chercheurs au premier rang desquels se trouvent Mmes. G. Dieterlen et S. de Ganay, constitue l'un des secteurs de recherche les plus spécifiques de l'ethnologie française actuelle. Résultat d'une longue tâche méthodique, le système mythologique, philosophique et symbolique de certains peuples soudanais devient compréhensible—et se multiplient ainsi les aperçus nouveaux sur le problème de la pensée dite primitive. M. Griaule et G. Dieterlen viennent de donner, dans un chapitre de l'ouvrage *African Worlds* (1954), la plus explicite des revues d'ensemble quant à leurs travaux communs consacrés aux Dogon du Soudan. Les rapports entre la cosmogonie et l'organisation sociale y sont examinés en fonction de certaines institutions fondamentales. Mais on doit tout de suite préciser que ces relations sont plus celles par lesquelles les initiés dogon définissent leur société, que celles définies objectivement par un observateur extérieur à la société dogon. Il y a risque de glissement de l'un à l'autre de ces points-de-vue. Le décalage est particulièrement apparent dans l'étude où M. Griaule s'attaque à un vieux problème d'ethnologie africaine—le rôle et la place de l'oncle utérin (Griaule, 1954), et dans celle où G. Dieterlen analyse les rites du mariage chez les Bambara du Soudan (Dieterlen, 1954). On s'aperçoit combien les perspectives habituelles à l'approche de tels problèmes ont été renversées; les éléments de l'explication "indigène" tendent à prévaloir absolument.

Cette dernière remarque aide à comprendre que certains aspects de la réalité socio-culturelle—les représentations, les symboles, les valeurs—se voient attribuer une position privilégiée; c'est essentiellement à partir d'eux que l'analyse est entreprise, si bien qu'elle pénètre profondément la mentalité dogon, mais ne saisit pas la société dogon dans toute sa profondeur, en négligeant notamment les assises matérielles et économiques qui la fondent. Dans un article consacré au problème de la culture noire (1953), M. Griaule s'efforce de re-situer les civilisations africaines à leur juste place et souligne, en les exaltant, les apports propres à la pensée profonde des Noirs et à la conception du monde que cette dernière révèle. Il est en train de préparer, avec la collaboration de G. Dieterlen, le premier volume d'une vaste "Ethnologie des Dogon" qui commençera à présenter, après une introduction méthodologique, le corpus des mythes et l'analyse compréhensive que celui-ci impose.

Par rapport à ces deux tendances de l'ethnologie française, qui sont l'une et l'autre nettement caractérisées, il convient de signaler l'existence de divers courants qui expriment des réactions variées vis-à-vis de la démarche ethnologique. Le Dr. A. Ombredane, à la suite de ses enquêtes en milieu congolais, et à partir de son expérience de psychologue praticien, reconnaît la difficulté à établir une délimitation précise entre l'approche du psychologue et celle de l'ethnologue. Dans un livre récent, où il rapporte les résultats d'une épreuve projective: le Congo T.A.T.,[8] il révèle ce caractère d'ambiguité; tout en soulignant que le psychologue est conduit à "dépasser les données que peut lui fournir la méthode d'investigation de l'ethnologue . . . à depister des facteurs de différenciation sur le fond d'une mentalité en apparence homogène." Ce dépassement que M. Griaule demande à la connaissance intime des métaphysiques, A. Ombredane l'attend d'une "exploration" des différences individuelles. R. Bastide, dont les études afro-brésiliennes avoisinent la recherche ethnologique, et qui situe souvent son examen dans une perspective inter-disciplinaire,[9] s'attache à réaffirmer les droits de la sociologie (et de l'ethnologie sociale) devant les empiètements de l'ethnologie culturelle. Il le fait encore récemment (Bastide, 1954b), encritiquant la confusion qui tend à s'établir entre "société" et "culture," en se demandant si l'ethnologie culturelle ne se

[8] En dehors de son ouvrage cité dans la bibliographie, cf. Ombredane, A., "Principes pour une étude psychologique des noirs au Congo belge," *Année Psychologique*, 50–51, pp. 521–547.

[9] Cf. Bastide, R., 1950, *Sociologie et Psychanalyse*. Paris: Presses Universitaires de France.

ramène pas "à la sociologie des rapports entre sociétés globales." Et R. Bastide ajoute, à propos des phénomènes d'acculturation, que ces derniers ne peuvent être examinés, en vue "d'atteindre le domaine de l'explication," qu'à travers les structures morphologiques.

Au cours des dernières années, P. Mus (1952) a démontré avec le plus extrême éclat comment les connaissances du philosophe et de l'ethnologue asiatiques peuvent contribuer à l'analyse des plus actuels problèmes. Son approche compréhensive du conflit franco-vietnamien atteint les ensembles psycho-sociologiques les plus significatifs. Elle introduit ou manifeste certains rapports (entre tradition et révolution, notamment), notions (paysage ethnologique) et processus (mutation sociale) d'importance capitale; elle démontre les relations et le heurt existant, au niveau des civilisations, entre une civilisation "analytique" (la française) et une civilisation "agglutinante" (la viet-namienne). P. Mus, dans un ouvrage tout récemment publie (1954), poursuit son analyse critique des problèmes coloniaux tels qu'ils s'expriment dans la perspective française. Il élargit ainsi le champ d'action d'une démarche qui s'est d'abord appliquée au cas vietnamien. C'est dans un double sens également que s'orientent les recherches poursuivies par G. Balandier à la suite de ses enquêtes en Afrique centrale. Elles visent à aborder les problèmes *actuels* les plus spécifiques, et dans une perspective qui échappe au formalisme auquel l'ethnologie des contacts et changements culturels a fini par s'abandonner. Cela explique l'attention critique que Balandier (1952, 1954a) a accordé aux notions de "situation coloniale ou de dépendance" et "d'effets de domination." Cela explique aussi la place qu'il donne aux considérations proprement sociologiques, visant à établir une sociologie de la dépendance qui accorde une attention nouvelle à la part "clandestine" de la vie sociale (démarches ambiguës, dynamismes à effet indirect, initiatives visant à l'opposition ou à la dérobade). Balandier s'attache maintenant à l'analyse des phénomènes et procès de changements sociaux et culturels; il le fait en définissant de nouveaux cadres conceptuels, en suggérant des indices d'évaluation et repérant des corrélations qui constituent une première démarche en vue d'une théorie des changements (Balandier, 1955b). Il le fait aussi à l'occasion de l'enquête internationale, visant à l'analyse critique et à l'évaluation de la littérature consacrée à ces problèmes, dont il assure la gestion en tant que directeur du Bureau International de Recherche sur les Implications Sociales du Progrès Technique.

Telles sont les indications qu'il paraît possible de rapporter dans le cadre d'une étude générale. Elles sont révélatrices de la diversité de tendances et de l'activité de l'ethnologie française au cours des trois dernières années. Elles montrent à quel point cette dernière n'est pas toujours estimée à sa juste valeur. Les crises même, qu'elle a pu connaître, furent moins signes de faiblesse que signes de réflexion devant les problèmes qui s'imposaient à elle sitôt apres guerre; problèmes que créaient et la disparition de deux grand maîtres, L. Lévy-Bruhl et M. Mauss, et l'ouverture brutale à des courants de pensée, ceux qu'animent notamment les chercheurs nord-américains, jusqu'alors mal connus. Mais, nous venons de le montrer, l'ethnologie française a pu reconstituer ses cadres et prendre un nouveau départ, qui annonce un développement original où ses caractéristiques propres ne sont pas abolies par les influences extérieures.

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The Netherlands and Belgium

An Anthropological Review for 1952-1954[1]

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THE NETHERLANDS

SOON after World War II, which left the educational system disorganized, most associations including those in the scientific field crippled by years of inactivity, and our museums stripped of many treasures, practical minds set to work restoring and renovating these debris. The present trends in anthropology principally are the product of this renovating spirit. Relevant reflections best are divided into its influence on education, on research, on a wider diffusion of instruction and enlightenment to youth, mostly sponsored by museums, its effect on practical applications, and organizations and activities on an international level.

EDUCATION

To indicate to the government the lines along which to proceed in renewing university education, a committee of over ninety members was established. An important feature for anthropology in the committee's 1949 report was the suggestion for establishing an interfaculty "De Mensch" (Man), embracing all subjects that bear any relation to man and occupying a central position in the university. In further developing the idea the suggestion was made to incorporate the combination in a still greater central faculty, with philosophy, psychology, and pedagogy as its leading subjects. So far these ambitious plans have not materialized, nor does it seem likely to happen in the near future.

Practical effect, however, was given to another suggestion of the committee, which was prompted by the motive to guard the student against one-sidedness and to provide facilities for his wider development: universities and colleges, including the Technical University of Delft, have in general proceeded to establish a "Studium Generale," mentioned here for the reason that it often deals with anthropologically important subjects.

In reviewing the other projects of the bulky report from an anthropological point of view, it is found that the renovations in particular concern the teaching of sociology and its allied subjects. Even before the committee published their advice, many universities and colleges as a matter of fact had been active in this direction, whereby the University of Amsterdam had taken the lead by instituting a new faculty with political and social sciences as its main subjects. When this matter came up for

[1] The author has much pleasure in acknowledging her indebtedness to the many persons who have been so good as to furnish information for the compilation of this outline.

discussion in the relevant section of the committee, it appeared that, although the majority of the members regarded social and political sciences as organically one, they rejected the institution of a separate faculty, and were in favor of setting up an "interfaculty," to which the legal, economical, literary, and any other faculties could contribute. Colleges such as the Schools of Economics at Rotterdam and Tilburg could then depend for cooperation on universities established elsewhere in the country.

The faculty of Amsterdam consists of three sections: (1) for political and social sciences; (2) for sociological and sociographical sciences; and (3) for socio-psychological and socio-pedagogical sciences. Amsterdam before the war was breaking new ground for sociology in Holland, which had lagged behind other countries. At that time sociology was taught exclusively as part of the curriculum for the socio-geographer, while today in Amsterdam the accent of the studies of the prospective geographer is on sociology. Since World War II the position is such that all universities and the eligible colleges have two chairs of sociology. It is quite well possible that the studies of a sociologist ultimately will include ethnology.

The Roman Catholic School of Economics at Tilburg in 1954 extended its training facilities to enable students to take the doctor's degree in economic administrative sciences on national or international lines.

Both in the case of the prospective sociographers—except the trainee for the teaching profession—and in the case of the student of the new Amsterdam faculty, the tendency is to make practical work compulsory, in addition to the field work that forms part of the studies of both. Field work is meant to be included also in the training program of the studies of ethnology; it is thereby realized that the university courses should give the student the necessary qualifications for it.

It is a matter of appreciation that the authorities agree with this plan, and that the fund of the "Zuiver Wetenschappelijk Onderzoek" (Z.W.O.—Organization for Pure Research) makes for its realization. The government will, moreover, create positions for such trainees; the outposts as yet are mainly situated in New Guinea and Africa. Of the student's training program the lectures on sociology are compulsory. Under the latest regulations, dating from 1953, the subjects of the B.A. examination also include "Introduction to Physical Anthropology," which subject Professor Fischer of Utrecht University would like to make more comprehensive than the same subject presented to socio-geographers. The change in political relations has demanded a further adaptation of education. Thus the training of Indologists, such as was given at Leiden University, is no longer required; it was replaced in 1952 by the study for non-Western sociology, with ethnology as a compulsory subject. As the Indologists trained under the old system already have been examined in this subject, they are simply required to take a supplementary doctor's degree in sociology on their return from Indonesia to acquire the title of non-Western sociologist. Some of them return to Indonesia, and take up the post of staff-manager, a position that was totally unknown there in the old days. That Leiden University has adapted to the new opportunities afforded by the decree of 1952 is proved by the appointment in 1954 of Professor G. W. Locher as "Professor Extraordinarius of Sociology and the Culture of Southeast Asia and the Pacific Area."

Though the structure of all Dutch universities is the same, and thus in each of them education and research go hand in hand, this by no means implies that in all of them the accents run parallel. This is apparent in the anthropological subjects, as the above-quoted examples of Leiden University show. It is in fact only Amsterdam University that has professors of physical anthropology, viz., since 1950, Professor Bergman,[2] who holds a special chair of the "Koninklijk Instituut voor de Tropen" (Royal Tropical Institute), and, since 1954, Professor De Froe as ordinary professor. The former not only lectures at the Medi-

[2] Former anatomist in Indonesia; not comparative anatomist as indicated in *International Directory of Anthropological Institutions*, p. 156.

cal Faculty, but also for future socio-geographers. Professor De Froe assumed his appointment after a stay in Baghdad; his inaugural address intimated that his lectures will instruct the prospective physician in the anthropological knowledge he will need for the application of "constitution therapeutics."

The University of Amsterdam is distinguished further for its Department of Phonetics—as part of the physiological laboratory—under the direction of the University Lecturer Dr. Louise Kaiser, who holds the view that speech is an important socio-physiological function. She maintains that the term "phonetics" often is used in a narrow sense, indicating only the chapter of grammar dealing with pronunciation. However, in our day, it has been recognized that "phonetics" may designate a much larger field only partly connected with linguistics. Other parts are connected with anthropology, typology (phonotypology), psychology, and sociology. Communication and information theories use phonetical data, says Dr. Kaiser. The recent researches in her laboratory, as yet in progress, include studies of the speech of children of varying ages, of speech melody, of primitive means in speech, and of the characteristics of so-called experimental poets from a phonetic and a literary point of view.

The fact that the other universities have no chairs of physical anthropology does not mean that they do not cater to this subject. At Leiden, Utrecht, and Nijmegen the professors of anatomy, Dankmeyer, Mijsberg, and Lammers, respectively, are responsible for this subject. The considerable additions of a recent date to the laboratory of Leiden University also have been most beneficial to its anthropological department. Of the experiments recently conducted, we mention the research into finger patterns by Dr. De Wilde, who is proceeding with his studies with the help of data Dr. Julien compiled in Africa. In the dissecting-room of Leiden University the measurements of each body are taken for later comparison with those of the skeleton-parts to determine correlations and sex dimorphism.

The anthropological department of Utrecht University was created by the anatomist Professor Mijsberg and his colleague Dr. Huizinga, who lectures for those training for the medical profession as well as for future socio-geographers, and who in 1954 made a study tour to Africa. This department, on the one hand, collaborates with the State Service for archeological investigations; on the other, it concerns itself with genetic questions. Professor Lammers, attached as anatomist to the medical faculty of Nijmegen University, intends to introduce anthropology, particularly for the use of factor-analysis, into the curriculum of the faculty.

"Man" constituted the focal subject in a series of lectures on "Man in Science" given by the "Studium Generale" of the Free University of Amsterdam for 1953–1954. In his address on "Man in Biology," Professor Lever discussed the origin of man, thereby presenting the orthodox-confessional point of view with regard to man's evolution. An interfaculty course of lectures for 1953 at the University of Groningen treated the question of overpopulation; for 1955 the curriculum of this University comprises "Man from the Biological and the Cultural Points of View."

A chair of anthropogenetics was instituted at Groningen University in 1951; it is held by Professor Polman; a laboratory is available for this study. The same subject is presented at Amsterdam University by Professor De Froe, at Leiden and Utrecht by Dr. Waardenburg.

The needs of prehistorical and archeological research at Groningen University for a long time have been supplied by the bio-archeological institute and the museum attached to it, both being under the direction of Professor Van Giffen. Since the latter has been succeeded by Professor Waterbolk, an expert on pollen analysis, the accent scarcely is likely to shift at this University. Just before his retirement Professor Van Giffen had succeeded in making a modest start with an archeological center in Amsterdam.

In Utrecht Professor Von Koenigswald is responsible for the training in prehistory; his special concern is the theoretical study

of teeth, and problems of evolution in general. In the linguistic domain two figures are prominent, viz., Professor Wils at Nijmegen, and Professor Berg at Leiden; originally a morphologist, the former now has taken his stand on phonology with due recognition of psychological and social influences. Under the co-direction of Professor De Froe, investigations are in progress into the heredity of the voice-type. Professor Berg is of the opinion that the number of linguistic communities is falling, and that both language and culture are in the process of effacing anthropological bounds.

With the educational institutes also should be classed the training center for Protestant and Roman Catholic missionaries, whose training today is directed to instruction in modern ethnological ideas with regard to native cultures.

Before concluding this short and surely inexhaustive reflection on education, it should be noted that the post-war drive for greater activity on an international level resulted in the institution of the "Netherlands Universities Foundation for International Cooperation" (NUFFIC). The NUFFIC organized summer-courses, the one for 1954 treating the subject of "Trends in Modern Civilization," and created the Institute of Social Studies. The latter Institute set up a center for training students from every corner of the world for an M.A. degree; it is housed in a former royal palace in The Hague. The focal point of the curriculum is constituted by the problems of the intensified contact of different civilizations. The Institute, which has not yet attained its definite form, moreover has planned a six-month advanced course for 1955, leading to the diploma of public administrator.

RESEARCH

In contrast to the specialized institutes, the "Koninklijk Instituut voor de Tropen" (Royal Tropical Institute) in Amsterdam covers a whole complex of subjects. Of its four sections, the Department for Cultural and Physical Anthropology is of primary interest in the scope of this report, while the incorporation of the sections for "tropical products" and for "tropical hygiene and geographical pathology" in the entire structure of the Institute may be said to be a matter of congratulation to the Institute. The general department will be dealt with in the section on "Museums." After the change in the political relations between the Netherlands and Indonesia, the Institute extended its duties and services to the whole of the tropical belt. The Institute owes many of the acquisitions in replenishment of its collections, both those intended for purposes of study and for exhibition in the museum proper, to the travels to Central America of the Honorary Associate Dr. Feriz, and to those Dr. Paul Wirz made to Australian New Guinea, as well as to Dr. Van Beukering's stay in the Gold Coast. A tendency has been noticeable in the Institute to send its more closely attached workers out on field work and other activities: in 1954 Dr. Kunst, the musicologist, after having finished the supervision over Mantle Hood's thesis, traveled to South and North America, and the linguistic collaborator M. Mellema went to Pakistan. The director of the Anthropological department, Professor Dr. Bergman—whose contributions are concerned with physical anthropology—aims at the coordination of the staff's activities on the problem of acculturation.

In addition to the University centers, anthropological research is taken up by the Central Laboratory of the Blood-transfusion Service in Amsterdam, as well as in the genetic department of the "Nederlands Instituut voor Praeventieve Geneeskunde" (Netherlands Institute for Preventive Medicine) at Leiden, where another department has started investigations into the physical, social, and mental aspects of adolescents.

The study of gerontology has been increased in the Netherlands since World War II, for which the organization "Toegepast Natuurwetenschappelijk Onderzoek" (T.N.O.—Applied Natural Science Research) has a correlative function: thus investigations are in progress in various centers on endocrinology, coronary sclerosis,

arteriosclerosis, and the cholesterol content in the blood, while demographical and social statistics are under consideration as well. Further plans embody investigations with the help of general practitioners and a research team appointed in a home for old people, and research into the relations between constitution, nutrition, career, and the causes of illness and death.

The scientific center for prehistory and archeology was established in 1952 at Amersfoort under the name of State Service for Archaeological Investigations. Excavations that in former times freely could be executed by private enterprise, now can only be undertaken in concert with this Service. Investigations into carbon 14 are conducted centrally in the Netherlands by Professor H. De Vries of Groningen, while fluorine, which was initially determined microchemically at the Technical University of Delft, is now being ascertained through radiology by Professor Van Der Vlerk at Leiden.

A coordinating function is held by the Centrale Commissie voor het Nederlandse Volkseigen (Central Committee for National Characteristics of the Dutch Population) of the Royal Netherlands Academy of Sciences. Under the Committee's control are: a Committee for Dialects, one for Folk-lore, and one for Typonymy and Anthroponymy; these three committees entertain relations with scientific organizations in Belgium, and are seeking contact with Danish and German scientists. The aforesaid three committees more or less are supplemented by the autonomous Foundation for the Documentation in Picture and Sound of the Motorical Expression Forms of the Dutch Population.

A fourth organization is the Institute for Social Investigations into the Dutch Population (ISONEVO), which up to 1947 worked as an autonomous body. In contrast to other similar organizations whose objectives are often of a commercial nature, this Institute not only is centered on practical applications, but also on scientific questions; consequently, it rejects commissions of purely regional importance. The ISONEVO for instance[8] published the results of the inquiry Miss Diels instituted among brides as to their views on the size of their prospective families; it further accepted a grant of the Z.W.O. (Organization for Pure Research) for investigations into social mobility, and at the request of the United States National Academy of Sciences, Washington, D. C., undertook the compilation of a report on the flood disaster that struck the south of the Netherlands in 1953.

Similarly a grant of the Z.W.O. has enabled the International Institute for Social History at Amsterdam to issue its *Bulletin* on sociological matters.

The Foundation "Grotius Seminarium" in The Hague was formed in 1951 for the furtherance of international cooperation through the teamwork of sociologists, socio-psychologists, and cultural anthropologists; to that end it has set up four teams responsible for the study of (1) national prejudices, (2) war phenomena viewed in the light of social sciences, (3) social man, and (4) a Russia team collaborating with the Russian Institute of Columbia University, New York. Since 1947 there also has been in operation in The Hague the Institute for the Psychology of Nations, which is associated with the Institut Havrais de Psychologie des Peuples.

The study of socio-psychology forms, with the study of socio-physiology, phonetics, economics, and folklore, the program of the Foundation for Population Research in the Zuider Zee Territory; this foundation has been able to make observations from their beginnings on settlements in a previously uninhabited territory. The first of an English series of collections, containing summaries of ten of the numerous publications already printed in Dutch, was issued in 1954. Though the so-called directed scientific research will thus more or less replace the former purely scientific investigations, closer relations recently have been established with the direction of the

[8] For a more detailed recent survey of sociological institutions in the Netherlands see Groenman and Vollema (1954).

polders in the interest of new research preparations.

When in 1952 the Royal Philological Geographical and Ethnological Institute complied with the request of the Governor of New Guinea to conduct the linguistic research Dr. Anceaux was to make under a Z.W.O. grant, it took the fundamental decision to include henceforth research work in its activities. Since then it has sought cooperation with other organizations such as the Royal Tropical Institute and the WOSUNA.

The young Foundation, Stichting Wetenschappelijk Onderzoek van Suriname en de Nederlandse Antillen (WOSUNA—Scientific Research in Surinam and the Netherlands Antilles), an organization financed by the Netherlands Government, provides facilities to Dutch students for field work in the territories that are within the Foundation's province; preparations are in progress to send a few linguistic research workers to the area. The Dutch Scientific Center for the Near East intends to set up offices at Istanbul for carrying out its plans; this center is yet in an embryonic stage. Meanwhile the establishment of an autonomous Institute for the Near East in Amsterdam has been planned.

Museums

In the Netherlands, museums, including those covering the anthropological field, are under the control of the Bureau of the Government Inspector for Movable Monuments. For the furtherance of museum technique the Bureau cooperates with the Vereniging Museumdag. One of the activities of the Bureau was the preparation of the second edition of the booklet *The Dutch Museums,* published in 1954. For anyone wishing to study a certain subject by visiting museums, reference to this handy guide is recommended. The object of the Bureau is to enable the museums better to achieve their educational task; it is a matter for congratulation to the Bureau to have succeeded in general in raising the standard of the smaller museums—the so-called "antique rooms" especially devoted to folklore.

In addition to the museums mentioned in the *International Directory of Anthropological Institution* (1953), there are in Holland a number of museums of special importance for anthropology. First among these are the National Museum for Antiquities at Leiden (Director: Dr. W. D. Van Wijngaarden), which opened a newly arranged department of Egyptian sculptures in 1952; the Allard Pierson Museum in Amsterdam (Director: Professor Dr. C. H. E. Haspels) is devoted to the archeology of Central Asia and of Greek, Roman, and Egyptian civilizations; the Museum of Asiatic Art (Curator: H. F. E. Visser) includes stone casts, products of art in bronze, lacquer ware, and paintings from India, Indonesia, Burma, Thailand, Indo-China, Nepal, Tibet, China, Japan, and Korea. One of the outstanding exhibits is a dancing Siva in bronze. This Collection of Asiatic Art since 1952 has been housed in the National Museum in Amsterdam, which also counts a collection of costumes among its important treasures. The national costumes, which are the property of H.R.H. Princess Wilhelmina, are exhibited in the National Folkloristic Museum "Dutch Open-air Museum" at Arnhem (Director: Dr. Win. Roukens) which further comprises specimens of popular culture, such as farmsteads, industries, and handicraft equipment, occasionally put into operation. The museum aims to cooperate with Belgian and German folklorists; occasionally, folklore demonstrations in the museum grounds are organized.

What the Open-air Museum is for the Netherlands as a whole, the National Institute of the "Zuiderzee Museum," established in the "Peperhuis," a former warehouse, at Enkhuizen (Director: S. J. Bouma), is for the Zuider Zee area; the object of the museum is to record everything about the culture of the population around the Zuider Zee, for which the progressive reclamation of part of this inland sea must necessarily work drastic changes. It is only a young institution, but with fast-growing collections, among them a considerable number of ships in a wide range of types, and a collection of various costumes. The

archeological finds at the bottom of the former Zuider Zee are collected in the Museum of Antiquities for the East Polder, housed in the old little church of the former Isle of Schokland.

Objects, both prehistorical and protohistorical, found elsewhere in the country are exhibited in regional museums,[4] such as the National Museum "KAM" at Nijmegen (Director: H. J. H. Van Buchem), the National Museum "Twenthe" at Enschede, which prides itself on the possession of a Saxon farmstead (so-called "loshoes"), the Museum of the Bio-archeological Institute at Groningen (Director: Professor Dr. H. T. Waterbolk), and the Municipal Museum of Antiquities at Heerlen.

The museums of the larger towns of Holland, such as those of Utrecht, Assen, Bois-le-Duc, and Groningen, also have, in addition to their other collections, prehistorical and/or archeological sections. The Frisian Museum at Leeuwarden, modernized in 1952, has a general collection, while the recently restored "Princessehof Museum," apart from storing regional finds, is a true treasure-house of Eastern archeology and ceramics. The Geographical and Ethnological Museum at Rotterdam now has been administratively separated from the Maritime Museum "Prins Hendrik," though under the same Director, Dr. C. Nooteboom. Although Rotterdam is primarily a port and commercial town, it is the earnest wish of its leading citizens in the trade world that their city shall not lag behind in cultural matters; this they desire to demonstrate by the development of the museum.

Of the smaller museums especially devoted to ethnological finds, we mention the Museum of the Royal Military College at Breda (Curator: Sj. Nauta), and the Mission Museums at Teteringen and at Steyl; the latter museum has ceded exhibits to the Vatican.

In Amsterdam also are stored the collections of the Jewish Historical Museum under the Curators, L. Morpurgo and Dr. J. Meyer, and those of the Dutch Anthropological Museum. The possessions of the latter institution, comprising prehistorical implements, a few "pierres-figures" found by Prince Yuritzky near Paris, skeletal material, and a small library, have provisionally been put into the Royal Tropical Institute. With regard to these objects the Museum intends to come to an arrangement similar to that of the Musée de l'Homme in Paris—with the exclusion of the ethnological department—either in a separate building, or in larger premises to be shared with a number of other institutions with allied objectives. The provisional result of efforts in this respect was that in 1954 a Foundation was formed in the presence of Professor A. Querido and Professor Sj. Hofstra, professors of the University of Amsterdam, in cooperation with the Foundation for Population Research in the Zuider Zee Territory and with the Foundation for Documentation in Picture and Sound of the Motorical Expression Forms of the Dutch Population. Of the smaller specific museums in Amsterdam are to be mentioned the Biblical Museum of Antiquities (Director: A. Otter) and the former Museum of Labor, now called the Netherlands Institute for Industry and Technique (Director: W. Heldoorn). Of the great number of museums that emerged from World War II dishevelled and dismantled many had recovered by 1952, while in nearly all of them the collections are steadily growing either by new purchases, by exchange, or by loans. All of them at present are bent on creating greater interest with the public by organizing various exhibitions, by conducting visitors, and through lectures. In their report on museum attendance the relevant Committee in 1953 submitted to the Minister of Education, Arts, and Sciences an expression of their satisfaction at the gradual, but noticeable, awakening to the social function of museums. The Committee further emphasized the preservative, scientific, and esthetic duties of these institutions and suggested the promotion of closer contact along American lines between museums and the general public. For educational purposes both the National Ethnological

[4] See *Museum*, UNESCO, 1953, pp. 198–199.

Museum at Leiden and the General Department of the Royal Tropical Institute in Amsterdam have certain objectives in common, although the latter has an advantage over the Leiden Museum in that its three departments make it functionally suitable for educational purposes. A scientific and an educational museum *a priori* have specific requirements to fulfil; the educational purposes properly find their fulfilment in the Education Museum in The Hague, while both the Amsterdam and Leiden institutions have set up an educational department in their premises. These have their own classroom, where the objects the pupils' own teachers need in the discussion of a certain subject are near at hand. Pupils of secondary schools in Amsterdam thus have an opportunity to become acquainted with the use of a documentation department, photographic archives, and a library; a children's library is available for younger pupils. In centers outside Amsterdam, work collections may be arranged, i.e., collections loaned for a certain period for the use of the several schools in a locality. Teachers, in groups of forty, previously are instructed by assistants of the Royal Tropical Institute and are provided with a handbook. Places situated too far distant from Amsterdam or other centers can either borrow or purchase a "unit"; this is a large suitcase containing the objects and a number of slides relating to one certain subject, together with textbooks for the pupils. Another aspect of the Institute's instruction of the young consists of lessons given by its assistants dealing, within the scope of the children's esthetic education, with products of the national art of the tropics.

PRACTICAL APPLICATIONS

After World War II, with the aid of the Rockefeller Foundation, clinical psychosomatics began to develop. It was taken up by a team including the anthropologist, Dr. D. Brouwer, in collaboration with the psychiatrist, Professor L. Van Der Horst, whose reputation stems from his book on anthropological psychiatry published in 1946. Anthropology found another application in typology, since this science has the special attention of the workers of the young National Aero-medical Center at Soesterberg, as appears from a recent publication of its director, Professor Van Wulfften Palthe. A third application of physical anthropology may be found in the book *De juiste maat* (The Right Measurement) by J. Sittig and H. Freudenthal, written at the request of one of the large Dutch stores, "de Bijenkorf," for the use of the women's tailoring trade; a similar book on measurements taken of men is in preparation.

Ethnology has found important application in the missions of the Protestant Church (Kamma, 1953), and of the Roman Catholic Church (Boelaars, 1953); noteworthy too is that the Netherlands Government appointed an ethnologist in the person of Dr. Van Baal as Governor of New Guinea. A parliamentary commission went in 1953 to that part of the world to inform themselves, among other subjects, on the question of acculturation; as a result they recommended that ethnologists be sent to conduct that area's development.

The majority of practical applications concerns sociology, often consulted by the authorities before giving effect to plans of greater or lesser importance. Of the major projects, we mention the reclamation of the Zuider Zee, and the reconstruction in the southwestern part of the Netherlands after the great flood disaster of 1953. Sociology also will play a part in the so-called "Delta-plan," i.e., the closure of the deltas of Southwest Holland. Where sociological applications affect family life, the government intends to set up a Family Welfare Council. This subject was discussed by the Second International Conference of European Social Workers, held in the Netherlands in 1954. Social work in industry formed an item of the agenda of the conference, which was organized as a result of the cooperation of two ministries with the Netherlands Association for Social Work, under the sponsorship of the European Headquarters of United Nations and the International Labor Organization.

Human relations, one of the objects of a study tour through the Netherlands un-

dertaken in 1954 by a Parliamentary Commission, places special problems before sociologists with regard to establishing industries in the midst of an agrarian community.

ORGANIZATIONS

Considering the general predilection of the Dutch for forming smaller communities, it is small wonder that in the wide field of the anthropological sciences numerous societies exist; an exhaustive enumeration additional to the few organizations mentioned in the *Directory*[5] is therefore out of the question. Each of the specific aspects of anthropology is represented by at least one society; there are even four for genetics. Additionally there are numerous groups concerned with a certain geographical area. Of the vast majority of these societies and groups, the membership is open to every one by mere application for it. Needless to say, their activities vary in extent; practically all of them arrange for scientific lectures. Some of them, such as Ex Oriente Lux and the Oriental Institute, to which the Kern Institute and the Oriental Society at Leiden are allied, also issue publications.

CONCLUSIONS

Recent anthropological trends in the Netherlands coincide with those in science generally. In spite of the impoverished conditions with which the country was faced after World War II, the principal aim was to maintain a proper qualitative level. The Netherlands indeed has managed fairly well in this, as evidenced by the Congress on "Freedom and Restraint in Science," held in The Hague in September 1954 on the occasion of the 200th anniversary of Columbia University of New York. Here the view was expressed that no subject as such falls outside the realm of science, and that the boundaries hemming in science are set by human intelligence, financial circumstances, and the scope of previous progress.

The government has realized that more than ever before there is need for financial aid; its support has made possible the establishment of funds such as the "Z.W.O.," the "T.N.O.," and the Foundation for Cultural Cooperation (STICUSA), all three of which often serve anthropological interests. It is a matter of appreciation that the government claims no say for itself in the dispensation of the subventions, but leaves to scientific authorities decisions on profitable investments. Besides granting material assistance to the sciences, the government since World War II has shown a keen interest in cultural matters.

The widely perceptible drive for greater international contact likewise is recognizable in the domain of science. This has been demonstrated lately by the traveling international archeological congress which in 1954 visited the Netherlands. The Netherlands Universities Foundation for International Cooperation (NUFFIC) in 1954 instructed Dr. Prins at Groningen to inquire into the pursuit of cultural anthropology in Holland, in order that NUFFIC be prepared for a possible international appeal for its cooperation.

Education is characterized by a tendency to stimulate the self-activity of pupils and students; in this scope ethnological field work is to be organized by Professor Fischer, who, to that end, is visiting New Guinea early in 1955. In that island, too, culture is undergoing a change, and present tendencies in the Netherlands are focused on becoming familiar with its evolution.

The so-called Vienna School in Ethnology is in Holland represented by Professor Bellon, who lectures on Religious History at Nijmegen University, and by the ethnologist Professor Mohr, of the same university, whose special subject is Bantu philosophy and the ethics of primitive peoples. Mohr does not repudiate the idea of functional influence, and recognizes fixed laws such as the rise, bloom, and decay of a culture.

It is difficult to describe in so many words

[5] The Netherlands Anthropological Society already had a twofold object before 1951 and was not exclusively concerned with physical anthropology as noted on page 158 of the *International Directory of Anthropological Institutions* (1953).

the trends of the other Dutch ethnologists. They are mostly directed to general comparative ethnology, and are often found to be influenced by modern American trends, with a leaning toward sociology. To introduce the term "cultural anthropology" to replace the notion of "ethnology" may cause misapprehensions with regard to the American interpretation of the term cultural anthropology. There are no indications in Holland that in its development anthropology will embrace theology and philosophy, although in sporadic cases the pursuers of the latter two sciences will employ the name (Roels, 1954).

Trends in physical anthropology are expressed in the frequent pleas advanced by Dr. Kaiser for improving the facilities for the pursuit of sociophysiology dealing with questions of food, clothing, labor, sports, traffic, traveling, air-conditioning, fatigue, etc. It is indeed a remarkable phenomenon that such subjects are brought to the notice of anthropologists in these days, whereas they were subjects of study as early as a century ago (Hoeven, 1851–1855) under the name of "Anthropological Research."

Phonetics is developing toward semantics, in which information theory makes its appearance. International conferences on semantics are of regular occurrence in the Netherlands.

The sociological sciences, as mentioned above, did not begin to develop fully until after World War II. The government has supported investigations into criminality and morality in the Netherlands during the war, although so far no results have been published. In view of the country's over-population the authorities also have set up a Commission for Birth investigations.

Characteristic of the Netherlands may be said to be the Agricultural Economic Institute in The Hague, whose object is socio-agrarian research. With regard to sociography in the Netherlands the opinion is expressed by Den Hollander and Kruyt[6] that this science stands in jeopardy of being too much dominated by the natural-philosophic trend of thought; to offset this they would accent so-called aspect-sociography, and parallel to this a synthetic sociography specializing toward descriptive sociology. That this need not exclude a synthetic description of "the country and its people" may appear from the ten monographs that have been published since 1948. A publication (Goubitz, 1954) of the Contact Group for Increasing Productivity pressed for the desirability of a more efficient stimulation and organization of research on human relations in industry and emphasized the necessity of closer cooperation among social scientists, consultants, and leaders.

In the development of sociology, the Netherlands stood out among other countries in that sociology showed an approach to philosophy, whereas elsewhere it was dissociating itself from philosophical trends. In the Netherlands one might say sociology has a cultural scientific orientation.

Toward the end of 1954 the Dutch organizations engaged in social-cultural activities were seriously concerned about the demarcation of their operational field from that of social workers. Within the scientific organizations for anthropological sciences the same reserve manifests itself as that fostered by pursuers of the inexact sciences toward those of the exact branches, a remarkable feature indeed in a country where nine of the ten Nobel Prize winners are natural philosophers and medical men (in Belgium two of six). Characteristic in this respect is the fact that the initiative for the institution of the as yet immaterialized, university faculty of "Man" arose with the medical section of the Commission for Reforming University Education, and that the NUFFIC in its research work turns exclusively to the cultural anthropologists. In ethnological quarters an occasional voice is raised urging the desirability of creating in the Netherlands an organ for the benefit of New Guinea similar to IRSAC in Belgium. A possible materialization of this ambition would mean the attainment of collaboration between physical and cultural anthropologists.

[6] Statement to the Congress of the International Sociological Association, Liège, 1953.

BELGIUM

EDUCATION

After a period of little activity physical anthropology recently has been taken up again in two university centers, viz., Brussels and Liège. In the capital it is Professor Twiesselmann, a medical man as so often happens among anthropologists, who is in charge of university education, and who in 1954 included the subject of genetics in the curriculum. Ethnology, it may be said, is passing through its first period of bloom in Belgium. In no small measure this is due to the change brought about in the training program of missionaries, many of whom have always been of Belgian stock. Whereas in former times their approach to the mission work was unscientific, the present-day prospective missionary is scientifically qualified for his future task. This education is given chiefly in the parent institutions in Belgium and usually supplemented in the centers set up in the missionaries' field of operation. Ethnology also is taught at the universities, with the exception that only at Liège University is ethnology part of a rounded anthropological training, together with physical anthropolgy and sociology. Neither Liège nor the other universities, where ethnology is part of the curriculum for art history, offer facilities for the training of professional ethnologists. Louvain University qualifies students only for African ethnology.

As with ethnology, so with linguistics, which also owes its progress to the mission, and previously was approached on unscientific lines. At present it forms one of the subjects of the university curriculum with far more variety than the limited scope of the Louvain University training.

In Belgium as in Holland, sociology is in the process of a dynamic development, and higher education is keeping pace with it. In so far as socio-psychology is concerned, Louvain and Brussels universities offer the best facilities for the pursuit of this science. At the latter, professors of psychology point out the social aspects to the students of psychology. The relations the university entertains with the Institut de Sociologie (SOLVAY) are extremely important for research as well as for educational purposes. At Louvain University the lectures of two readers in socio-psychology are compulsory for students of political and social sciences, of psychology, and of pedagogy; they are optional for those studying philosophy and criminology; the prospective psychologist has, on the other hand, to master the introduction to sociology. The University further provides courses in industrial psychology, general psychology, and psychology of individual structure; they treat the social aspects of each of the three foregoing subjects, hence human relations as well.

Liège University in 1947 set up the Centre Interfacultaire du Travail de l'Université with the primary task of giving supplemental instruction to university graduates. Three courses have been arranged at Ghent,[7] viz.: "Outline of Sociology," "Sociology," and "Fundamental Questions of Sociology." In October 1954 the university obtained an Institute for Social Sciences to the State University of Ghent; this Institute's program comprises the organization of "social days" and the publication of a year-book. Sociology is also one of the subjects taught at the Institut Universitaire des Territoires d'Outre-mer.

Since World War II the Collège d'Europe, founded by private initiative in connection with European integration, has been established at Bruges. University graduates from the member countries can take a twelve-month training course for posts with various top organizations. The training has a more or less contemplative character with the accent on history; every year another theme is broached.

Prehistory is taught at Liège University by Professor Danthine and at Brussels by Professor Mortelmans, a pupil of Breuil. Ghent and Louvain are training centers

[7] Ghent University was not founded by a king of Holland (*International Directory of Anthropological Institutions*, p. 159), but by a king of the Netherlands, which at the time embraced both Belgium and Holland.

for archeology, in particular dealing with the archeology of Africa.

RESEARCH

As is the case with the universities of practically all other countries, Belgium's centers for higher education are also research centers. Research is indeed Professor Twiesselmann's major concern, in which he is assisted by a staff consisting of the mathematician Defrise and an assistant for pollen analysis. His recent activities include a statistical arrangement of indices and coordinations, useful in preparing graphs of the degree of racial kinship, and in comparing prehistorical and recent forms. To satisfy the need for standard material that has arisen, Professor Twiesselmann is collecting average characteristics of 100 Belgian males and 100 females. Material of the dissecting-room is unsuitable, as at Brussels University this material is not operated anatomically, but by the topographic-anatomical method. For the near future an investigation has been planned into the results of the cross-breeding of Belgians and natives in the Congo, and, in addition, a comparative study between mixed groups living in Belgium and those residing in the Congo, with this latter category divided between a group living under partly European conditions and one dwelling in purely native centers. Professor Twiesselmann also has instituted an exhaustive investigation among school children, partly with the help of his own characteristics, to solve questions regarding their growth and food-conditions. His laboratory also is used for research into material produced in the excavations by the Service de Cartographie de Sol, among other places in the caves of Spy. Blood-group research is undertaken by Dr. Mouront of Liège, Dr. Hubinont of Brussels, and Dr. Hiernaux; the latter, with the assistance of IRSAC, has taken up the question of sickle-cells.

Whereas the Fonds National de la Recherche Scientifique has so far concentrated its activities on other branches of knowledge, the sciences of anthropology and in particular ethnology owe much to the Institut pour la Recherche Scientifique en Afrique Centrale (IRSAC), founded in 1947. This gesture of joint government and private initiative, as also with the recent progress of ethnology, may be said to originate in the rapid development of the Congo since World War II. IRSAC has sought the collaboration of the Royal Museum of the Belgian Congo, whose activities are also directed to building up ethnological documentation, both arranging incoming literature and collecting data by correspondence. Thus a source of material of great use is being created for the compilation of monographs of limited scope and treating a certain geographical area. These data, sometimes disseminated in publications of the International African Institute, are meant primarily for a group of readers in the relevant African district, who are expected to fill any gaps in order to make a more exhaustive work on the subject possible for later publication. Other activities of IRSAC, whose section for anthropological sciences is under the direction of Professor Olbrechts, are the organization of expeditions open to representatives of a wide range of sciences. Thus in 1954 a team was at work in the Congo, consisting of four ethnologists, two linguists, an economist, and a physical anthropologist. This kind of research, however, does not involve any prehistorians; together with protohistorians and geologists they, however, will do field work in the Congo under the direction of Egr. Bequart, whose base in the home country is the Royal Museum of the Belgian Congo. Research on finds from the Belgian soil has been entrusted to the Service des Fouilles.

A mixed technical Committee has been set up responsible for carrying out the objectives of the Belgo-Dutch Cultural Agreement; its Belgian sector is working in cooperation with the Dialect Committee of the Royal Netherlands Academy of Sciences on publication of an atlas of the languages of the North and South Netherlands, as well as the issue of the magazine *Language and Dialect*. The University committee for Toponymy and Anthroponymy entertains relations with the Belgian Com-

mittee for Toponymy and Dialectology; the two organizations are jointly concerned with the activities to the Comité International de Sciences Onomastiques.

A keen scientific interest is displayed in linguistics in Belgium, as appears from practically every number of *Kongo Overzee*. Much in this field is due to missionaries and, though in former times they may not always have followed a scientific line of action, their contributions, including a number of dictionaries, are very useful works. The biennial Philological Congress always includes a section for African linguistics besides its ethnological section, while linguistics likewise constitutes a subject of one of the study groups of the Institut SOLVAY.

The Society for Folklore and Maurits De Meyer, a member of the Flemish branch of the National Commission for Folklore, together with the Folklore Committee of the Netherlands Academy of Sciences, are compiling a Dutch-Flemish folklore atlas. Belgian towns and villages, possibly more than before the war, are outdoing one another in folklore manifestations, partly of purely indigenous origin, partly traceable to Spanish influences. Folklore traditions are most strongly cherished in the industrial districts, although national costumes practically are no longer worn.

A recognized authority on musicology is Paul Collaer, who, in addition to products of foreign origin, studies Flemish ethnological music tracing it to its very origin.

For its sociological studies, the University of Brussels greatly benefits by having the Institute SOLVAY at its doorstep. Considerable activity is developed in some of its departments, such as the department for colonial studies, for the study of national accountance, of sociography and the study of questions of employment, of enterprise and of labor, sometimes taking the form of colloquia or inter-university days.

Research also figures in the curriculum of the much younger Center Interfacultaire du Travail in Liège. Research work is further stimulated by the Royal Colonial Institute of Belgium, resembling an academy of sciences in structure, which will initiate prize subjects mostly concerning socio-ethnological questions; its publications are mentioned alongside those of the Royal Colonial Museum of Belgium in the periodical list issued by the Colonial Office. The Seminary for Sociology at Ghent is intensively engaged in research work, in which the accent of late has been on social stratification.

MUSEUMS

Museums in Belgium are not centrally controlled; they are either national, provincial, municipal, or private institutions. The Ministry of Information's small guide-book under the title *Répertoire des Musées des Beaux Arts,* though its title may imply that the book also deals with collections of anthropological interest, does not claim to be exhaustive in this respect. For example, it does not mention the Natural History Museum in Brussels, which possesses a department for prehistoric finds, comprising casts and for the greater part remains of skeletons and artifacts from Belgian soil. In 1954 excavations were in progress near Godarville, Rosmeer, and Spiennes, carried out by the Service des Fouilles under auspices of the Royal Museum of Art and History. Soon this institution hopes to extend its numerous, well-stocked sections with a musicological department under Paul Collaer. In its social task the institute is assisted by the organization "Discover the World," whose object is to give scientifically justified guidance and information to the public, with the laudable result that with the money received from entrance fees it can pay its way. The organization has the approval and support of the government in so far that the material support consists only of providing accommodations.

In keeping with its intensified public activity the Royal Museum of the Belgian Congo intends to publish a *Revue-Congo-Tervueren* to serve as liaison with contributors in Africa on a two-way principle, i.e., the publication will enclose questionnaires on anthropological subjects and others.

The "Vleeshuis" at Antwerp since 1953 has been the headquarters, so to speak, of

five municipal museums, and as such is simultaneously the office of the director, Dr. F. Smekens. The four sections housed outside this ample building are a Navigation Museum (the "Steen" building), a Folkloristic Museum, a Museum for Glass-paintings and Sculptures, "Brouwershuis," and a Museum for Ethnography, yet in the making, "Orteliushuis."[8] The latter museum already possesses large collections for exhibit; these are to be completed before the museum is thrown open in a few years' time to the public. The accommodation in the "Vleeshuis" is such as to allow the sections already housed under its roof, including a very fine set of period rooms, to be augmented with a section for prehistory and one for musical instruments; the necessary collections are for the greater part already available. This museum, as well as other Belgian museums, is used for temporary exhibitions.

Further valuable ethnographical exhibits are found in some monasteries, of which may be mentioned the Museum at Braine le Comte and the Museum of the Fathers of Scheut, who made China their specialty with regard to products of arts, languages, and archives. An education museum is established in Ghent, while Antwerp possesses a center which loans collections to schools, but without attending experts, however. The Tuesday-afternoon of Belgian pupils is only in name a half-holiday, as the youngsters have to keep that time open for excursions, conducted visits to film performances, exhibitions, and museums, for which, more often than not, they are prepared by introductory lectures with film strips. Preparations for an open-air museum at Bokrijk under the direction of Dr. Weyns are in an advanced stage.

For numerous other museums with collections concerning archeology, popular art, and folklore, which for lack of space were not dealt with in the *Directory* or in this outline, we refer to the aforesaid *Répertiore.*

[8] Kloosterstraat 11, *International Directory of Anthropological Institutions,* p. 161.

PRACTICAL APPLICATIONS

Professor Van der Vael of Liège University takes an active part in identifying war victims. Dr. Massa of Brussels University works on anthropological lines in his orthodontic research into growing phenomena and in pressure tests on femora. For experiments with educational methods the services of Professor Twiesselmann have been solicited. In the domain of gerontology it is Dr. Brull of Liège University who is the outstanding figure.

In the universities and the University Institute for Overseas Territories, as also in the parent-homes of the missions, the teaching of ethnology and sociology, partly in the former and entirely in the latter, is directed to practical application in the colonies; many statesmen of Belgium have had university training in political and sociological sciences, mostly in Brussels and Louvain. By its very origin the Institute SOLVAY has been instrumental in operational practice; a single glance at the spheres of operation of its study groups, and at the *Revue* will suffice to show the reader that the Belgian sociologist is also keeping abreast with his time in practical applications; in this respect the Institute may be said to have shown from the outset—as early as 1902, when sociology was yet in its infancy—great far-sightedness.

ORGANIZATIONS

Belgium's activity in the international—scientific sphere called for national societies to enforce the necessary disciplinary control.[9] In contrast to the Netherlands the Belgian institutions are less variegated. There are, indeed, a number of local societies, concerning themselves with the prehistorical and archeological treasures embodied in the soil, but in Belgium the situation is such that the owner of a plot of land is at once owner of what its soil

[9] Under *"Other Activities"* of the "Société royale belge d'anthropologie et de préhistoire" a misprint occurs on page 162 of the *International Directory of Anthropological Institutions;* the name should be Hamal Nandrin.

contains; no one else's consent is needed to start excavations than the owner's. The local organizations mostly consist of laymen under the direction of a few experts; sometimes their excavations are supported by the corporation or the County Council. Organizational control is needed moreover for the numerous folklore manifestations.

CONCLUSIONS

In their present stage of development, ethnology and physical anthropology in Belgium are yet in their infancy; their pursuit, initially a matter of private initiative, was greatly stimulated partly by the training of missionaries and partly by the rise of the Congo. Then the Government gradually awakened to the fact that in this field, too, a task was awaiting them. The results of this cooperation are laudable and testify to the high level science has reached.

As regards physical anthropology it is Professor Twiesselmann's aim to come to the subtlest possible distinction in larger and smaller groups, including those of prehistory, both as regards the mutual relations of the groups and in the relationship of the individual to the group.

Egr. Bequaert's special interest is tracing social relations in prehistoric times. In interpreting the finds he is opposed to the evolutionist view that the grosser specimens should necessarily be the older. In the remains from ancient times he hopes to trace characteristics of present-day Belgium; thus the Iron Age produces traces that are characteristic of a country in the transitional state.

Except for Father Vaast Van Bulck, there are among ethnologists no followers of the School of Father Schmidt; their views are directed towards history, sociology and economics, and to an approach including the widest possible range of allied subjects. Field work for ethnologists is not recommended during their studies, only for later. In collecting ethnographical objects for museums, science may at times have been placed second to esthetical requirements; this does not matter as long as the selection is justified; a less beautiful object merely gives an idea of its use, a fine specimen will moreover demonstrate the maker's skill.

Compared with the Netherlands, folklore is no doubt passing through a more flourishing period, and general interest is keener. In Belgium the maintenance of folklore customs need not require bolstering to the extent that is deemed desirable in some places of Holland. It seems on the contrary necessary to guard against degeneration; tourism may rightly be geared to folklore demonstrations, but not the other way around. Where the difference between Belgium and the Netherlands in folklore aspects is probably to be found in the people's national character, there are numerous circumstances that will affect the trend of anthropological questions in the two countries; of these may be mentioned the considerably faster growth of the population in the Netherlands than in Belgium; the fact that the Belgian nation is a combination of two population components, each with its own tongue; the contrast in religious configuration; the difference in geographical conditions; and the fact that after World War II Belgium saw the Congo rise rapidly to great prosperity, whereas Indonesia dissociated itself from the Netherlands.

ACTIVITIES ON AN INTERNATIONAL LEVEL IN BELGIUM AND THE NETHERLANDS

In general it may be said of both countries that, whenever an opportunity offers, affiliation is sought to organs of UNESCO. Their attendance of, and participation in, international congresses, as well as representation on governing bodies of such assemblies almost may be taken for granted. Both Belgium and the Netherlands contribute toward the originally Belgian *Institut International des Civilisations Différentes* (INCIDI) and to the International African Institute, which has a national center in both countries, while one of the consultative directors of the London center is a Belgian. Both Belgium and the Netherlands were invited to collaborate in the Organization for Comparative Social Re-

search. The vice-chancellors of the universities in the countries of the Brussels Treaty Organization at set times arrange meetings among themselves.

Belgian and Dutch cooperation resulted in the establishment of the Social Psychological Library, an organization proposing the publication of scientific treatises; for 1955, the following issues may be expected in this series: Dr. Hutte on industrial psychology; Dr. Winsemius on the psychology of propaganda; and Dr. 't Hart on the psychology of international relations.

Instead of having a national center, as is the case in the Netherlands, in Belgium the French Institut Havrais de Psychologie des Peuples is represented by "correspondent-members."

Belgium is to be credited with re-establishing after World War II the International Association for Social Progress; the Netherlands is also represented on this Association. An International Documentation Office is run by the Institute SOLVAY under the name of "Intermédiaire Socioloque." Professor De Bie for the International Sociological Association and Professor Nuttin of Louvain University were, with others, responsible for preparing the UNESCO publication *Les Sciences Sociales dans l'enseignement supérieur,* 1954. Belgium figures among the members of the Royal Central Asian Society, while the Netherlands assigned to the Royal Netherlands Academy of Sciences the task of holding a seat on the Pacific Science Association. The standing Committee for Anthropology and Social Sciences of the latter body includes a Dutch representative as well. Further, the Netherlands is one of the members of the South Pacific Commission. When this Commission instituted an inquiry into depopulation phenomena, and a possible masculinization, they selected New Guinea for their field of operation; Dr. Kooyman, the ethnologist, went there in 1953, and Dr. H. J. T. Bijlmer was placed at the head of a group of doctors responsible for solving bio-medical aspects of the problem.

Dr. Meertens, head of the cooperating commissions of the Royal Netherlands Academy of Sciences, was requested to draft a questionnaire for the European Ethnological Atlas, proposed by the Commission Internationale des Artes et Traditions Populaires to be issued with UNESCO.

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Great Britain and Eire

An Anthropological Review for 1952-1954

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ANTHROPOLOGY in the British Isles now comprises so many special disciplines that most universities and colleges have either abandoned or decided against any attempt to control the subject through one department. University College, London, with a single Professor of Anthropology, (Dr. Daryll Forde) is an exception, as also is the University College of Wales at Aberystwyth, where Professor Bowen, carrying on the tradition of broad scholarship established by Professor H. J. Fleure, presides over the teaching of both geography and anthropology in all their aspects. Yet, although in recent years research has become progressively more specialized, there is general agreement that it would be disastrous if all links were to be broken between the several branches of anthropology. Fortunately, there are in the British Isles powerful influences which help to keep the subject intact.

First and most important is that of the Royal Anthropological Institute, which, through its *Journal* and still more through its monthly *Man,* succeeds in keeping a healthy balance among all branches of the subject. *Man,* it is true, lately has received complaints of a disproportionate interest in Africa, but it has never been accused of favoritism toward physical, social, or any other special type of anthropology. Section H of the British Association for the Advancement of Science also maintains the nineteenth-century tradition of expecting anthropologists and archeologists of every description to combine for instruction and debate. The meetings of such societies usually are far more unpredictable and provocative than the more domestic gatherings of the Prehistoric Society, for example, or the recently formed Association of Social Anthropologists.

A few more informal societies also help to maintain a broad interest in the whole subject. The oldest of these is the Oxford University Anthropological Society, which was founded in 1909, just after the success of the famous series of six University lectures on *Anthropology and the Classics* (Marett, 1908). The 500th meeting of this Society, held in February, 1953, was made a commemorative occasion, at which one of the speakers was Professor Gilbert Murray, O. M., who gave one of the original 1909 lectures on *Anthropology and the Classics,* while another who contributed to that series, Sir John Myres, although too infirm to attend the meeting, sent an address recalling his memories of Sir Edward Tylor. The proceedings of this meeting, which have been privately published (Anonymous, 1953a), recall the close links between early Oxford anthropology and the School of Literae Humaniores, a tradition which some would like to keep alive.

Again, although the British student of anthropology nowadays usually has in prospect some limited topic of research, most universities insist that he first should undergo the discipline of a general course in anthropology. In this way, the day-to-day

teaching keeps specialized departments in regular communication.

Lastly, the personal influence of a few teachers whose memories go back to the spacious days of Marett, Haddon, and even Tylor, has in some degree counteracted the tendency towards excessive specialization. Among these a leading place was occupied until recently by Sir John Myres, whose death on March 6th, 1954, was a grievous loss to the subject, and probably the most significant single event for British anthropology in recent years. A memorial issue of *Man* for March, 1954, carried warm tributes to his genius from many colleagues. Quite apart from the inspiration he gave so liberally as a teacher of three generations, British scholarship owes him an inestimable debt for his fresh and imaginative yet always practical gift for administration, which through half a century powerfully influenced the fortunes of the Royal Anthropological Institute, the British School at Athens, the Palestine Exploration Fund, the Oxford Faculty of Anthropology and Geography, and much besides. Perhaps most important of all, he reserved his keenest energies for the cause of international academic collaboration, in which he had an intense faith. British anthropology had little chance to become specialized or insular while his spirit was in it.

Social anthropology, the youngest branch of the subject in the British Isles, is now easily the most thriving, whether judged by teaching strength, numbers of students, or resources for research. As it has gained in strength, so it has become more detached from the other branches of anthropology, and moved closer to sociology.

In the period under review, two important statements of theory have defined the outlook of the schools of social anthropology at Oxford and Cambridge. Professor Evans-Pritchard's broadcast lectures were published in 1951. In them the author took his stand on the side of history rather than science; a study in social anthropology, he said, should describe patterns rather than search for laws. A critical reply to this theory was set out in Professor Fortes' inaugural lecture (1953a) at Cambridge, where he held (p. 35) that his task as a social anthropologist is to define the regularities or laws in social organization which are "independent of period or place."

Professor Radcliffe-Brown, whose collected essays lately have been published (1952a), made the same point in an intervention (1952b) in the long correspondence in *Man* which followed Professor Evans-Pritchard's Marett Lecture of 1950. Professor Radcliffe-Brown argues that when he speaks of "laws" and Professor Evans-Pritchard of "patterns," they mean in fact exactly the same. An appeal which Professor Radcliffe-Brown makes in this important letter indicates a possible future trend in British social anthropology. He takes up the argument he has already set out in his Huxley Memorial Lecture for 1951, that the "ethnographic" studies, the descriptive analyses of small communities, which now occupy so much of the energy of social anthropologists, do not constitute social anthropology. They are only the first steps, the necessary collection of data. The real and distinctive task of social anthropology is to assess this material comparatively for the discovery of general laws of social behavior.

Perhaps partly as a result of this approach, social anthropologists have in the last two years shown a revived interest in comparative studies. Generally they have approached the topic timidly. Professor Schapera, for example, in a paper to a Supper-Conference of the Wenner-Gren Foundation (1953), criticized modern comparative theses both for their random choice of examples and for their failure to define the size and nature of the societies which they compare. He suggests that a more modest beginning would be safer, and advocates comparative investigations of particular institutions within a limited region, such as Professor Evans-Pritchard's account of the political organization of the Nandi-speaking folk, or his own studies of law among the people of Tswana speech.

This type of scholarship, however, is not on the scale which Professor Radcliffe-Brown has in mind, and he would recognize a closer approach to the kind of search

for general laws of social behavior which he proposes in a paper by Professor Fortes (1953b) on the structure of unilineal descent groups. Professor Fortes puts forward certain valid generalizations about the function of lineages, not, it is true, universally, but at least throughout the bulk of Africa. He demonstrates, for example, that in Africa lineages are institutions of a political character, kinship being simply a convenient qualification for membership; and also that marriage regulations, laws of homicide, and the like are only relatively obligatory, according as the individuals concerned are considered more closely or more distantly connected through their lineages.

This kind of work, which spurns all conjecture and must consider the whole context of a custom before attempting a comparison, is by nature painfully slow and tentative. Moreover, it has not so far produced any but the broadest generalizations, and Professor Fortes admits in his thesis that his method cannot explain why the same ritual function is performed in different ways by different communities.

At the same time, there are some senior British anthropologists who, while being by no means unaware or neglectful of the importance of seeing a custom in its social setting, are prepared to risk comparisons without waiting for detailed analyses of contexts. Four important contributions of this nature have appeared recently: E. W. Smith's account (1952) of African symbolism, Professor J. H. Hutton's study (1951) of caste in India, Professor E. O. James' book on *Marriage and Society* (1952a), and Hocart's essays (1952), published posthumously under the title of *The Life-Giving Myth.* Such works often have to take a heavy barrage of criticism from the modern school of social anthropology. Yet, although some of their comparisons may not be as firmly supported by studies of contexts as ideally might be wished, they at least serve to keep in mind the quantity of manifestly similar customs whose resemblances have yet to be fully explained. It may be that if the efforts of the modern social anthropologists to agree on a comparative approach to their subject end in paralysis, the methods of the older school still will have something to teach.

Classical scholarship at least has by no means abandoned Frazer's methods, and in January, 1954, Professor J. A. R. Cormack, of the Chair of Classics in the University of Reading, presented to the Osler Club a scholarly paper in the Frazerian manner on "Black Magic in the Graeco-Roman World" (Anonymous, 1954a). This lecture was read at a commemorative meeting to mark the centenary of Frazer's birth (Fleure, 1954), an occasion which aroused keener public interest than might have been expected in view of the general consignment by modern social anthropologists of *The Golden Bough* to an academic limbo. *The Listener* (1954b) for example, recalled the wide and profound influence of Frazer's writings, due partly to the moving power of his stately measured prose. The B.B.C. arranged a series of three lectures on the occasion: Gilbert Murray, O. M., remembered (1954) the shock of the first appearance of *The Golden Bough;* the Rev. Victor White, after pointing to some of the later criticisms of Frazer's comparative method, concluded (1954) that the reaction may have gone too far, and that it may be time to reconstruct at least some of Frazer's hypotheses; Professor Alexander Macbeath (1954) praised Frazer's inspiration of later workers, and contended that a comparative system such as he proposed, provided it does not harden into dogma, is essential for the health of the subject. Clearly Frazer's influence is by no means dead, and the King of the Grove survives as stubbornly in modern scholarship as he did in the popular religion of ancient Rome.

Not only Frazer's comparative method, but also his bold evolutionary hypotheses are anathema of course to most social anthropologists nowadays; though he doubtless would have replied to their strictures that he made the same criticisms of his own work, and constantly pointed out that the simple evolutionary scheme was only a convenient temporary framework on which to arrange his examples, and that he expected it to be demolished and replaced

by a sounder structure as knowledge and theory advanced.

There are indeed some signs of a renewed interest in this problem, for in addition to their excursions into the field of comparative studies, social anthropologists lately have extended their explorations into the realm of what is generally now called "social change." Here too they are taking only short and hesitant steps, and seem to be following a number of different and possibly divergent trails.

Professor Fortes, for example, speaks (1952a, pp. 42–43) of the view of three successive generations and their differences which any observer must necessarily see when he visits a community, and considers this kind of study to be a first step toward a dynamic type of social anthropology. Professor Radcliffe-Brown, on the other hand, has always maintained that the only scientific way to study social evolution is to compare two structural analyses of the same community made at a space of several years. A promising enterprise of this sort is the visit of H. A. Powell, of University College, London, to the Trobriand Islands, where Malinowski did his classic work forty years ago. Professor Firth also has been able to make a comparison of this sort by revisiting Tikopia, the site of his early field study. He has come to think (1953) that social change can best be understood by an appreciation of changing moral values. He refers (1951) to the changes in social relations, due to individual acts of choice and decision, by the phrase social organization; though on this point he has been challenged by Professor Radcliffe-Brown, who points out (1953) that every society has an organization, but that this does not imply that it is in course of change.

The Department of Social Anthropology at Edinburgh, under the direction of Dr. K. L. Little, is specializing in a field where change is so rapid and revolutionary that there is hardly opportunity to study it at an interval of years, namely the revolutions of custom among selected communities in West Africa and the West Indies resulting from their contacts with Europeans, both locally and through emigration to Great Britain. Dr. Little defined and illustrated his work in a communication to the Royal Anthropological Institute in 1953. The researches of this department involve, on the one hand, work among West African and West Indian immigrants of every sort in Great Britain, and, on the other, studies of tribal and industrial communities in the colonies where conditions are rapidly changing. In the first field, recent work has included M. P. Banton's study (1953) of the social groupings of some West African workers in Britain, in which he noticed that despite the expected disintegration of tribal organization among these immigrants, the Ijo and Kru elements in particular have retained a fair measure of tribal discipline among their members. Other studies have been made of the social organization of colonial students in London, Oxford, and Cambridge, of Negro immigrants in Manchester, of Negro and Arab communities in Tyneside, and of the colored social élite in London. In colonial territory, the Edinburgh department has investigated social change among the Birom people of the Bauchi Plateau, and among the Ewe people of the Gold Coast, and has studied the tribal organization of Freetown and the social organization of workers in an iron ore mine in the Sierra Leone Protectorate.

In much the same sphere, Dr. F. Henriques of Leeds recently (1953) has published his work on *Family and Colour in Jamaica*. He finds that the population of African origin had lost its tribal organization before arrival on the island, that all classes tend to despise things African, and that the present social hierarchy is based almost entirely on shades of skin color.

Apart from these new, and at present experimental, "dynamic" studies, most of the routine field work concerned with structural analysis of the type characteristic of British social anthropology has lately been carried out in various parts of Africa, where Oxford pays special attention to the east, Cambridge and University College, London, to the west, and Manchester and the London School of Economics to the center and south; though these "spheres of in-

fluence" overlap in several instances. In the last few years the International African Institute has attempted to consolidate these ethnographic studies, partly through the bibliographical and reference publications of the Ethnographic Survey of Africa, and partly through larger collections like the recently published *African Worlds* (Forde, 1954). The African work based on British universities tends to be purely academic and planned according to the strategy of research of the various departments of social anthropology; though naturally some of this research, for example Professor M. Gluckman's investigations into the workings of Barotse law, may be of interest to administrators. By contrast, the studies undertaken from the African colleges have inclined, while retaining their academic style, to deal with subjects which are of direct concern to the administration. Many of the Colonial Research Studies recently issued from Makerere College in Uganda are of this sort.[1]

Outside Africa, research in social anthropology has been less intensive, though Dr. Leach is beginning to organize work in Ceylon based on Cambridge; the London departments, through the teaching of Professor Firth and Dr. Kaberry, have close contacts with Melanesia. The small department at Durham is concerned mostly with African anthropology, though it has recently acquired the George Brown Collection of ethnographic objects from Oceania.

In 1953 I. 'R. Whitaker sent a note to *Man* in which he criticized modern British social anthropology, first on the score of its habitual neglect of material culture, and second, for its concentration on exotic peoples to the neglect of much pressing and worthwhile work nearer home. The first charge is fair, and may be linked with the common continental criticism that British field workers show too little interest in environmental considerations. The second charge, however, has been considerably weakened by developments over the last few years, when many British social anthropologists have been attracted to studies in their home country. In the universities of Wales and Ireland, of course, which have never sponsored much foreign work, this is only the continuation of an old tradition. At Aberystwyth, for example, a recent project has been the social survey of five sheltered and remote areas of Wales, like the southwestern parts of Cardiganshire. This will be published late in 1955. These studies appear to show little survival of medieval Welsh customs, though mid-Victorian conditions still linger. At the Queen's University of Belfast, a study has just been completed of social relations and attitudes in the rural area of Ballygawley, while work is going forward on seasonal migrations, on country architecture, and on the evolution of types of rural settlement.

In England and Scotland, however, such local work is comparatively new, and by contrast with that in Ireland and Wales, it is concerned mainly with city-dwelling and industrial communities, though an important exception is A. Curle's study (1952) of kinship structure in an English village. The London School of Economics has undertaken the study of work-groups in a Dutch factory, and of the kinship structure of an Italian community in London. The University of Leeds has been investigating a mining community, and that of Glasgow has done research in a printing works, in a camp at a hydro-electric plant, and in the general office of a large engineering works. Another research worker has been studying a big London store. The aim of these investigations is to describe the organization and functioning of small groups in industrial and urban settings by the same methods as have been applied to the study of primitive communities. In particular, it is hoped to find out how groups with common interests and attitudes originate and prosper, and how these groups influence each other. This sort of problem already has been attacked by sociologists in this country, but they approach it with very different methods, which usually involve the laborious accumulation and analysis of statistics. For some years now the Delegacy for Social

[1] Cunnison, I., 1953; Mair, L. P., 1952; Epstein, A. L., 1953; and Cory, H., 1953.

Training at Oxford has been engaged on such a survey of the City of Oxford. The methods of the social anthropologists will certainly be quicker and cheaper, and presumably less rigid and impersonal. It would be interesting to have independent surveys of the same community by the two methods to see how closely they concur.

As yet such studies in Britain are in a very experimental state. The possible range of their application, however, if they should prove successful, is immense—in the fields for example of industrial organization and trade union administration. Already, too, some anthropologists are beginning to explore the prospects of using these techniques for the review of social questions which concern public health and nutrition. A stimulus for this new range of research may be expected from the operations of a society which was born in 1952, and is known as the Friends of the Royal Anthropological Institute (Anonymous, 1952a, p. 1). These are mainly businessmen and industrialists who wish to support anthropological work in general, and in particular research among industrial communities of the British Isles. The Friends will apparently themselves decide which undertakings they will sponsor, with the advice of a committee appointed by the Council of the R.A.I. This innovation is largely due to the enterprise of Mr. I. M. Sieff, a member of the Council of the R.A.I., and Sir Robert Hyde, founder and, until lately, Director of the Industrial Welfare Society.

The most important recent British undertaking in the field of technology is a five-volume *History of Technology,* whose production is to be endowed by Imperial Chemical Industries Limited. The first volume has already appeared (Singer *et al.,* 1954). Publications on the technology of present-day primitive people, however, continue to be few, and British anthropology may ultimately regret that at a time when so much attention was given to recording the institutions and beliefs of colonial peoples, the study of their crafts was so neglected. It is true that the technology of a community may have little bearing on such of its customs as the social anthropologist usually studies. It is also true that examples of most simple tools and equipment already have been collected. At the same time, records which would be of value to the ethnologist, of how an implement is made, by whom, with what materials, for what purpose, and with what ritual accompaniment, are lamentably rare; and since, on sophistication, people usually abandon their crafts even more quickly than their customs, the chances of finding such information rapidly are becoming fewer.

However, much is expected of the recently founded museums in West and East Africa, and a good portent for the future is the publication of *The Tribal Crafts of Uganda* by M. Trowell and K. P. Wachsmann (1953). This is primarily a compilation, with descriptions of each variety of craft and its distribution, on the basis of which the authors make tentative ethnological conclusions. The book contains a particularly thorough study of musical instruments.

From Nigeria, A. M. Foyle (1953) has given plans of a typical mud palace of a chief of Benin, which provide a fine example of the wide value of this sort of study; for while the partitioning of the house among different members of the family must concern the social anthropologist, the ethnologist will find in the plan of the rooms, clustered round large central courtyards, clues to outside contacts, probably Portuguese, possibly even Roman. These Benin houses rapidly are becoming more rare, apparently, and there is no doubt that much evidence of this sort is disappearing unrecorded.

Among the few other technological notes published from the colonies in this period is one more from Nigeria; M. D. W. Jeffreys (1953) describes a ring-shaped pottery vessel which was in the keeping of a divine Umrundi king, and which the author would derive ultimately from ancient Egypt. From the Madura district of South India, L. Dumont (1952) has recorded a peculiar technique of making pottery which consists in first turning and then beating the vessel, the second process being intended to widen the sides and to close the rounded base.

He mentions similar types of pottery in the megalithic culture of Brahmagiri, and suggests that the beating may be a survival, retained for reasons of sentiment, of a technique which normally would have been superseded when the wheel appeared. A. Ghosh (1953) points out that this beating technique is found all over India, and that there is evidence for it in excavations from all historic sites, though not as far back as the Harappa period.

Notes such as these, unfortunately, are rare and it is clear that the main strength of British technology has not been deployed lately in field work abroad. In fact, much of the recent achievement of British technology has lain in the unspectacular work of cataloguing and arranging museum objects. British ethnological museums had their most active phase of collecting between the two wars of this century, when so many missionaries, administrators, and servicemen were able to send material from different parts of the Empire. Over this period, accessions often were too numerous to be described adequately, and the delay was increased further in the case of the British Museum by the storage of collections during the last war. Now that, with changes in political geography, accessions are arriving more slowly, museums are taking the opportunity to consolidate their records and indexes. However, there have in addition been two significant new developments in British technology; first, an extension of the experimental method for understanding ancient techniques; second, an energetic movement to collect and record examples of rural crafts from within the British Isles.

In its teaching of technology, the Pitt Rivers Museum at Oxford places great faith in the experimental method, and for some years has been producing "Occasional Papers on Technology," each of which presents a past or present technological process in such a way that the reader could repeat the work and obtain the results described. One is Sir Francis Knowles' book, *Stone-Worker's Progress* (1953), which to the deep grief of British anthropology had to be published posthumously, and which incorporates the result of a lifetime's research, with the stimulating collaboration of the late Professor A. S. Barnes, into the problems of flint flaking. His account of ancient techniques may be compared with that by Miss B. M. Blackwood (1950) of a modern stone-age people. Knowles always tried to appreciate from a flint artifact the aims, methods, difficulties, failures, and successes of the artisan at each stage in its manufacture. As the old trust in typology grows weaker, this method of teaching prehistory may become more widely appreciated outside Oxford.

The Pitt Rivers Museum also has applied itself to the problem of finding what techniques were used by ancient workers in bronze. This is done through examination of the micro-structure of the tool, which by various signs shows the processes it underwent in the course of manufacture. Thus a dendritic or branched pattern of crystals shows that the surface has been left as cast, while if the crystals have been rearranged on a more homogeneous design, this in an indication that the tool was reheated; again, "twinned" crystals in the structure are a proof of cold hammering. Certain theoretical conclusions of this sort have been tested in practice. For example, with the aid of Dr. Voce (1951) of the Copper Development Association, a copper cast was made in a prehistoric bronze mould of a type which it had been thought could only be used for shaping wax models for the *cire-perdue* process.

At present the Pitt Rivers Museum, with the aid of Messrs. Stewarts and Lloyds, is devising scientific tests for detecting the method of manufacture of ancient iron implements. The aim is to find out how much the early smiths knew of carburization (the beating of carbon into the iron), of annealing, tempering, and other processes. This investigation naturally will be more difficult than that concerning copper and bronze tools, which are usually better preserved, but results so far achieved show that it will be amply worth pursuing. Meanwhile, the Curator has published (Penniman, 1952a) another instance of the application of modern science to the study

of technology, in a paper showing how to recognize different types of bone and ivory from micro-photographs.

Work in deciphering the technology of ancient bronze implements is also being carried out by the Ancient Mining and Metallurgy Committee of the Royal Anthropological Institute, though its first object, as indicated by Professor Childe (1952) in a note in *Man,* is to conduct quantitative analyses of British copper and bronze tools with the aim of finding out where the ores for the metal were obtained. Also, by comparing the analyses of Continental implements, it is hoped to test the theories, which so far rest only on formal comparisons of certain metal tools, concerning trade in the Bronze Age between the British Isles and the Continent. Recently the Committee has published two preliminary reports (Coghlan, 1953; Case, 1954), from which certain tentative suggestions already can be made. For example, copper-arsenical alloys are far more commonly used than metal from gray copper ores or nearly pure coppers. Some at least of the British halberds made from copper-arsenical alloys were of Irish manufacture, while others, with analyses similar to some from the Dieskau hoard, may have come from Central Europe. So far there have been no signs from these analyses of trade in metals between Britain and Scandinavia or Western Europe.

For rapid and approximate chemical investigation of metals, a new method of X-ray analysis has been devised by Dr. E. T. Hall of the Clarendon Laboratory at Oxford. This uses only secondary radiation, and does not require a fragment from the specimen. It will be valuable therefore for the examination of rare objects like coins, but it is not likely to become accurate enough for the kind of analysis of copper and bronze tools which technologists require.

Another current application of scientific method to the study of technology is the petrological classification of stone axes, first begun about twenty years ago by the Council for British Archaeology, with the aim of identifying the sources of the raw material of the axes, and hence the routes along which it was carried. Many accurate results have already been produced, especially by the South-Western and West Midland groups of museums.

Recent enthusiasm for preserving the traditional crafts of rural England was echoed in three of the series of six public lectures on "Man in Britain" which were arranged by the Royal Anthropological Institute in the Spring of 1954. Professor Adam Curle, in an address on "The Rural Community" examined the profound revolution in the life of country districts in the last century; Mr. Ffransis G. Paine gave a historical account of "Ploughs in Britain"; and Professor H. J. Fleure, in opening the series with a lecture on "The English Heritage: its study and demonstration," made a strong appeal for the founding of a National Folk Museum or Museum of English Life and Traditions, on the lines of the Nordiska Museum in Stockholm. Several kindred studies, as Professor Fleure showed so lucidly in his recent *Natural History of Man in Britain* (1951), are combining to give a picture of the origins and evolution of English civilization, and it is now time to enrich the picture with a national collection of the work of British craftsmen. The Royal Commission on National Museums and Galleries recommended in 1929 that such a museum be set up, and the urgency of the need has been stressed since in the Reports of the Standing Committee on Museums and Galleries. So far no commitment has been made, though the British Ethnology Committee of the R.A.I. will doubtless continue to press for support for the project.

Meanwhile a group of provincial museums is helping to inspire an appreciation of traditional crafts in different parts of the country. Among these are Blaise Castle House at Bristol, the Castle Museum at York, the recently founded Buckland Abbey Museum near Plymouth, and above all the Welsh Folk Museum at St. Fagan's, Cardiff. This last specializes in preserving old Welsh buildings which are in danger of decay, by dismantling them and re-erecting them in their own grounds. It has recently published (Anonymous, 1952b) an

illustrated account of *Farmhouses and Cottages in Wales.*

The most important recent enterprise in this field is the Museum of English Rural Life at Reading (Higgs, 1952). This was established, as was fitting in a university which has a high reputation for its teaching of agriculture, to preserve farm tools, farmhouse equipment, and examples of rural craftsmanship. The museum was founded in the Spring of 1953 as an independent department of the university, and is housed in Whitenights Park where there is a large house with ample grounds for erecting shelters for large acquisitions like wagons and threshing machines. Under the energetic and imaginative direction of Mr. J. W. Y. Higgs, the museum has already attracted wide public attention and sympathy, particularly through its exhibitions at the annual Royal Show of the Royal Agricultural Society. This popular support doubtless will grow after the public opening of the exhibitions on April 27, 1955. The museum will not only collect and preserve objects, but, where possible, record them in use. It is intended also to carry out research concerning the history of agricultural techniques, and to put together a glossary of colloquial and dialect technical terms. English farming now is being mechanized rapidly; the number of horses on English farms has halved since 1939, while over the same period the number of tractors has increased six-fold. It seems likely therefore that this museum has been established only just in time to preserve the memory of a whole group of doomed crafts (Fussell, 1952).

While British technology has just found its most thriving subject of research on home ground, British archeology recently has been prospecting in a new and promising local field, the study of the deserted villages of medieval England. There was in England a period of intensive rural colonization during the 400 years preceding the Norman conquest. Between the eleventh and fifteenth centuries, however, many villages were abandoned, either as a result of the acquisition of land for royal forests, of evictions to make room for Cistercian monasteries, of the general decline in population in the fourteenth and fifteenth centuries, or of the sheep enclosures of the fifteenth century. The sites of the ruined villages have been covered and overgrown, but many can be recognized from the study of documents, from examination of air photographs, and from search on the ground. Clearly this is a field in which a number of disciplines usefully can combine to discover the sites and to profit from their excavation. Early in 1953 the formation was announced (Anonymous, 1953b) of the Deserted Mediaeval Village Research Group, whose first aim is to compile a list of known villages, with such information about each as can be found from historical records and modern exploration. Later, a plan of campaign will be made for excavation. At present over 1,000 sites are known, of which about 30 have been at least partly uncovered (Beresford, 1954).

British archeologists usually have taken good account of the surroundings in which their cultures were found, but recently they have turned special attention to environmental research. For example, the Queen's University of Belfast, with the support of a grant from the Nuffield Foundation, has embarked on a project of research into Quaternary ecology, under which a paleobotanist, glaciologist, and an archeologist together will survey selected areas of bogland to see how human occupation affected the vegetation and soils at different periods. G. F. Mitchell of the Department of Irish Archaeology at Trinity College, Dublin, is doing similar work in Eire. In one recent paper (1953) he has prepared, from the identification of plant fossils in late-glacial deposits, a list of plants which are associated with human influence; and in another (1954) he has correlated features in a pollen-diagram from Lough Gur with the characteristics of prehistoric human occupation in the area as discovered by Professor Ó Ríordáin (1954a). This is the site on which the Department of Archaeology of University College, Dublin, recently has concentrated most attention, since it completed in 1953 the excavation of the Rath of the Synods at Tara (Ó Ríordáin, 1954b).

The head of this department (Ó Ríordáin, 1953) has recently issued a new edition of his book on Irish archeology.

In London, the Institute of Archaeology has set up a Department of Environmental Archaeology, with a staff of three, to teach and apply methods of judging the climate, fauna, and flora of any particular level in an excavation by an examination of the soil which is preserved there. Such work demands acquaintance with a whole range of sciences—chemistry, botany, biology, and geology, as well as pedology. As Dr. Cornwall pointed out (1954) in a recent description of the work of the department, much can be learned about climatic conditions from a simple examination of soil color and texture, though for more intensive work on shells, bones, and plant remains contained in the soil, the specialist must generally be invited to help.

A contribution to environmental archeology with a broad range has lately been written by Professor Clark, who has for long encouraged this outlook in his subject. His *Prehistoric Europe: the Economic Basis* (1952) is built around a set of distribution maps. These are interpreted by comparison with the map of ecological zones, each with its characteristic plants and animals, and by considering such practical matters as routes of trade and sources of raw materials.

Another senior British archeologist, Dr. O. G. S. Crawford, who was a pioneer of the school of archeology which emphasized the physical setting of cultures, has recently published (1953) a triumphant vindication of his methods, *Archaeology in the Field.* The book recalls the wide geographical range of the author's achievements, and his success in showing archeology how much help it could find and effort it could save by using photographs of landscapes, especially those taken from the air. Such methods were new when Dr. Crawford pressed them into service after the First World War. Now they are commonplace, but their usefulness is by no means exhausted, even in a country as well explored as Great Britain, as was shown recently by J. K. St. Joseph's plotting (1951) of hitherto unknown Roman defense works in Southwest Scotland. Many novel discoveries probably will come from the perusal of the new series of Cambridge Air Surveys, of which the first volume (Knowles and St. Joseph, 1952) has appeared.

There is of course a danger that too much attention to environmental studies may blind the archeologist to the broader considerations of cultural diffusion. Sir Mortimer Wheeler used the occasion of his Presidential Address to the Royal Archaeological Institute in 1953 to remind his audience of the wide foreign fields which still remain unexplored. He recalled the enterprise of Sir Flinders Petrie, the centenary of whose birth fell in June, 1953, and he appealed to young archeologists to think like Petrie on an international scale.

The works of Professor Childe in particular have in this generation reminded British archeologists of the debt of their country to the continent, and the evidence is so clear that they never have been able to neglect the study of cultural diffusion. In the last few years, however, many have begun to consider not only when and where diffusion occurred but how and why. To find answers, it has been thought best to look first to the well-documented instances of diffusion in comparatively recent times. Thus Sir Mortimer Wheeler in his Marett Lecture of 1952 described different occasions when India has made contact with Europe and Western Asia, through Hellenistic colonists, Roman traders, or Islamic invaders, and considered in each case how much India learned from the meeting, how the knowledge was applied, and how long its influence lasted.

Professor Hawkes also has suggested on several recent occasions that the archeologist, especially in considering questions of diffusion, would be better advised to work backward from historical times rather than forward from prehistory. He has advocated (1951) a new "cognitional system of nomenclature for prehistory," whereby periods will be named, according to their progressive distance from historic times, "protohistoric," "penehistoric," "parahistoric," "telehistoric," and "antehistoric." Professor Hawkes followed this argument in an ad-

dress he gave in America (1954), in which he suggested that archeology should begin by mapping the diffusion of cultures and techniques in the better known periods, and work backward through time, discovering successively earlier areas of diffusion, some due to human migration (what he calls "primary diffusion"), some to indirect contacts ("secondary diffusion").

Two recent finds which captured public attention recalled forcefully the debt of early England to distant civilizations. One was the discovery in the autumn of 1954 of the Roman Mithraeum in Walbrook in the heart of the City of London. The other was a remarkable instance of how obvious evidence may be for long overlooked. In the summer of 1953, R. J. C. Atkinson was photographing a seventeenth-century inscription on a monolith at Stonehenge when he noticed through his viewfinder the outline of an axe and dagger incised on the stone. Close inspection revealed similar markings on other stones, and one outline of the Breton box symbol. The type of axe depicted is the flanged bronze axe, probably of Irish origin, with crescentic blade and broad or pointed butt, while the dagger has a broad pommel and a blade with short "horns" at the base, and may be compared with one from Shaft Grave VI of sixteenth century Mycenae (Atkinson, 1952). Dr. Crawford (1954), however, is not so confident of this last identification.

The most notable recent discovery in British prehistory is the early occupation layer in La Cotte de St. Brelade in Jersey. Below the famous Mousterian level explored by the late Dr. R. R. Marett, the Rev. C. Burdo (1953, 1954) and members of the Société Jersiaise, re-commencing work in 1950, first found four feet of sterile clay, sand, and peaty strata, and then a layer at least fourteen feet thick containing the tools, both hand-axes and flakes, of an Acheulian culture dateable to the beginning of the last interglacial period. Stratified Acheulian deposits of course are extremely rare. Only five other caves are known to have been inhabited by Acheulian man, and of these only two contain the remains of flint workshops, the Et-Tabun cave on Mount Carmel and La Pech de l'Aze in the Dordogne valley.

Two major works of collation have recently been published on British archeology, Professor Piggott's *Neolithic Cultures of the British Isles* (1954) and *The Stone Age in Scotland* by A. D. Lacaille (1954).

Outside their own country, British archeologists have recently achieved important results at Jericho, where Miss Kenyon is continuing her excavations of the Neolithic levels which produced the remarkable "sculptures" of clay modelled over skulls, as in modern Melanesia; in Malta, where Dr. Ward Perkins and J. D. Evans have at last dated and ordered the megalithic temples, and traced the earliest Neolithic settlers to Sicily; in Turkey, where Seton Lloyd's excavations at Beyce Sultan promise to reveal links between the Hittite power of the Anatolian plateau and the contemporary civilizations of the Aegean in the late second millennium B. C.; and in Cyrenaica, where a Manchester University expedition led by Mr. Alan Rowe has been investigating early Egyptian contacts with the coasts of Libya.

Much archeological attention also has been focused recently on Africa. In the early history of that continent, the Sudan must attract special notice, since it provides the main link between tropical Africa and the Mediterranean world. A. J. Arkell's new publication (1953) of his work at a Sudanese Neolithic site therefore will be especially welcomed in this field, as also will be the first issue of *Kush,* a new annual archeological journal issued by the Sudan Antiquities Service. East Africa until recently has been virtually unexplored archeologically, but new work by the Rev. Gervase Mathew (1953) and E. C. Lanning, although only on a modest scale, has shown how potentially important this region is for excavation, and how archeology here may supplement the findings of historians and ethnologists.

An experiment of great importance was a joint meeting in London in April 1953 of the Prehistoric and Folk-Lore Societies, to discuss "Prehistoric religion in archeology and folk-lore." The two societies had

very different approaches to the same topic, but through their combination fresh light was shed on old problems, such as that of the religion of the builders of the megalithic monuments.

Although Great Britain in the last century was a pioneer in the study of folklore, the word itself being a British invention, other European countries for many years now have shown far more enterprise in this branch of anthropology. Recently here, however, there have been many encouraging signs of a revival of enthusiasm for the study.

This is particularly the case in Scotland and Ireland. In Edinburgh University a new research department, known as the School of Scottish Studies, has begun collecting and ordering information about the cultural and traditional life of Scotland, and takes account not only of folklore but also of dialects and material culture. In the Im Thurn Lecture for 1952, Professor E. O. James (1952b), after pointing to the limitations of the current ethnographic method of social anthropology, made a strong plea for the revival of the old comparative and historical approach to the study of folklore, and showed in particular how a knowledge of a people's material culture can help in the understanding of their folklore. This appeal doubtless helped to inspire the International Conference on Celtic Folklore, organized in Stornoway and Oban in October 1953 by the British Council and the University of Glasgow. Here Professor R. Th. Christiansen of Oslo presented a comparative essay on "The impact of Norse upon Gaelic tradition"; recitals were arranged of folktales and folksongs; while the material culture of Lewis was illustrated in a special exhibition drawn from the museums of Edinburgh, Fort William, and Kingussie.

In Dublin the Irish Folk-lore Commission under the direction of Professor J. K. Delargy of University College, Dublin, has been active since 1935, far longer than the School of Scottish Studies, and limits itself more strictly than its Scottish equivalent to the study of folklore. This Commission is the most active and highly-organized institution in the British Isles for the collection of folklore and songs; in addition to employing on the average five full-time and twenty-five part-time collectors, it keeps in touch with about three hundred questionnaire correspondents. Much of its work is carried out in and through schools, by the aid of the Department of Education. The Commission is planning to publish a series of studies of which it is hoped the first, Professor R. Th. Christiansen's *Studies in North-European Folktales* will appear in 1955. *Béaloideas,* the Journal of the Folklore of Ireland Society, edited by Professor Delargy, has since 1927 printed Irish folklore findings, mainly in the form of Gaelic texts.

In Northern Ireland there was formed in 1954 a Committee on Ulster Folk Life and Traditions, supported by funds granted over a four-year period by the Northern Ireland Ministry of Finance. The Chairman is Professor E. E. Evans, and the Research-secretary, Miss R. L. Harris, has already begun a collection of folk beliefs on many topics from the six counties of Northern Ireland.

By contrast, the collection of folklore in England is much more unofficial and haphazard. Probably Mr. Allan Gomme had the Scottish and Irish organizations in mind when in two forceful presidential addresses to the Folk-Lore Society (1952, 1953) he pleaded for a more systematic plan for folklore studies in England, and in particular proposed a Folk-Lore Survey Council of England, with state or academic support, to train and organize collectors. Mr. Peter Opie in a paper read to the Royal Society of Arts in March 1953 also stressed the penury of England in active folklorists and the urgency of the need for renewed activity if the subject is not to stagnate.

The response to such appeals is unlikely to be immediate or spectacular. But in London, University College has already shown its sympathy in practical fashion by providing space for both the library and the headquarters of the Folk-lore Society, and in the Michaelmas Term of 1954 arranged a series of five public lectures on folklore. The English Departments of both

University College and King's College in London are turning attention to the subject, and have plans for setting up their own folklore archives.

In the provinces, an area of special activity is the central borderlands of Wales, Radnorshire, Montgomeryshire, and Shropshire. Here the Shropshire Local History Council has joined forces with the University Extramural Departments of Birmingham and Aberystwyth, which have made valuable collections after lectures to country people. The Oxfordshire and District Folk-Lore Society continues to inspire enthusiasm in the south Midlands, and publishes an annual record of proceedings and notes.

It is encouraging that the B.B.C. has, especially since 1952, turned some of its resources to folklore subjects, and now engages two experienced folklorists to do almost full-time collecting for its programs. The B.B.C.'s plan for making recordings is worked out in close collaboration with institutions such as the Leeds University's Dialect Survey, the English Folk Dance and Song Society, and the Folk-Lore Society. The richest regions for work of this sort are Northern Ireland and Scotland, but in England too there have been unexpected discoveries, such as the Midgley Pace-Egg drama, performed at Hebden Bridge near Halifax and recorded at Easter, 1952. Such recordings themselves will be of permanent value, while their broadcast undoubtedly will win many new enthusiasts for the subject.

An important recent publication is Professor R. M. Dawkin's *Modern Greek Folktales* (1953). The author sketches the distribution of each story, and its origin, so far as this can be deduced. The plots remain the same, but the details take different forms to suit the character of each country. No one of course is better fitted than Professor Dawkins to translate the fresh spirit of inquiry with which these tales have been imbued by the Greek genius.

Most recent work in British physical anthropology has been concerned with the inheritance and distribution of physiological features, especially blood groups. At the same time, research has not neglected the more traditional racial features which are expressed in cranial and body measurements. The Oxford Department of Physical Anthropology, continuing the tradition established by Thomson and Buxton, is examining what relation variations in human physique have to factors of climate, topography, and diet. For the most part existing statistics are relied upon for this work, though in the autumn of 1953 Dr. Roberts was able to visit the Sudan to collect further data. In this type of study, measures of immigrant populations are particularly valuable, since in favorable cases these may show the rate of physical adjustment to local conditions. Results which have appeared lately (Roberts, 1952, 1953) have shown a significant correlation between climatic conditions and rates of metabolism, despite which, the major groups of mankind are still distinguishable on this basis.

In the study of constitutional typology, most recent progress has been achieved in research on typical constitutional development. Hammond (1954) has studied the body types of children; Parnell (1953, 1954), how university students of different physiques tend to choose different faculties, and to achieve different measures of success in their degrees.

At the Duckworth Laboratory in Cambridge, a notable recent acquisition is the mandible of a young Neanderthal woman, excavated in the Haua Fteah cave near Derna in Cyrenaica in 1948 (McBurney, *et al.*, 1953). This can be proved, from a carbon 14 analysis of charcoal from an overlying hearth, to be over 34,000 years old. The Cambridge department concentrates much of its research on the measurement of human remains—a collection from St. Bride's in Fleet Street, for example, has recently been carefully recorded—and Dr. Trevor (1953) has used data of this sort in his new study of race-crossing. The author proposes two firm conclusions: first, that if means be considered, a feature of a hybrid population lies between those of its two parental stocks, and approximates most closely to that of the parental popula-

tion which made the greater contribution to the cross; second, that a hybrid stock does not show any specially marked tendency to variation. A similar line of research is being pursued at University College, London, by Dr. N. A. Barnicot, whose subject is inheritance of skin-color in Negro-White crosses.

A new powerful aid to British physical anthropolgy is the Nuffield Blood Group Centre which was established at the beginning of 1952 (Anonymous, 1952a, pp. 4–5; 1953c, p. 4; 1954c, pp. 3–4). So far, the Centre has spent most of its energies in the routine tasks of indexing material already published and in preparing unpublished data for use. In addition, its Honorary Adviser, Dr. A. E. Mourant, has published a major work (1954) summarizing the conclusions of the Centre's Blood Group Reference Laboratory, and indicating further lines of investigation. One of these concerns research in Eastern Asia. Another is a national survey of Great Britain, which is planned with the co-operation of the official Blood Transfusion Services. Eight of the twelve Blood Transfusion Centres in England and Wales and all the five centers of the Scottish National Blood Transfusion Association are helping by sending record cards of their new blood-donors. These records have been arranged geographically with advice from the Post Office on a system of coding postal addresses, and a first analysis has been made by counties. A later classification into small areas is proposed.

Wales has received particular attention. Dr. A. M. Pantin, assisted by J. P. Garlick, has completed for the Nuffield Centre a blood-group survey of the Black Mountain area of Carmarthenshire, while the Department of Geography and Anthropology at the University College of Wales, Aberystwyth, has organized similar tests in those parts of moorland where in the early years of this century Professor Fleure recognized Upper Paleolithic types in the population. In 1952 Dr. J. M. Watkin published some conclusions of these researches in Wales, one of which was that blood group B is significantly common in the Plynlymon and other mountain districts where a Paleolithic foundation has been suspected in the population.

Important new lines of research are now being followed, mainly by clinical workers, on the subject of the protective advantages of the different blood groups (Aird, *et al.*, 1953, 1954).

Thanks to recent British work, the racial significance of the sickle-cell trait in the blood has become clearer. It appears to be a Veddoid rather than a Negroid character (Lehmann, 1953), and it has been suggested that it was introduced into Africa by the shorthorn zebu cattle-herders who came in from Southwest Asia (Brain, 1953). The trait has not been found in pure Arabs or Berbers (Allison, 1953). A suggestion that it affords protection against malaria has been followed by Dr. Allison (1954), though some of his findings have aroused controversy.

One recent specialization of the Oxford Department of Physical Anthropology has been the experimental study of human physiological responses to heat, by the Climate and Working Efficiency Unit of the Medical Research Council (Weiner and Macpherson, 1953; Weiner, 1954). There are similar units in Cambridge and Singapore. This work of course will be of wide practical value, particularly to special arms of the services which have to operate under exceptional physical conditions; it also will be of theoretical interest in the study of human adaptation to climate.

In the sphere of human paleontology, the exposure of the Piltdown fraud early in 1953 by Drs. Weiner and Oakley and Professor Le Gros Clark was an achievement which removed one long-standing difficulty. In addition, an important advance has been made toward understanding the place of the Australopithecines in the scheme of evolution of the hominids. Dr. K. P. Oakley (1954), who visited the various South African sites late in 1953, would place *Australopithecus africanus,* represented by the finds from Taung, Sterkfontein, and Makapan, in the first inter-pluvial phase. *Australopithecus robustus* of Swartkrans, however, who had evolved further in an ape-like

direction, belonged to the second pluvial period. From the evidence of the Telanthropus II jaw from Swartkrans, and from the know age of the first pebble-tools, Dr. Oakley thinks that true man may have been contemporary with *Australopithecus robustus.*

Ethnology is, as T. K. Penniman concludes in the new edition (1952b) of his *A Hundred Years of Anthropology,* the unifying discipline to which all the branches of anthropology must contribute. Unfortunately, it receives at present little attention in the British Isles, and only occasional monographs appear with the historical outlook of traditional British ethnology; recent examples are M. D. W. Jeffrey's notes (1952) from Nigeria, and Lord Raglan's study (1953), in an uncompromising diffusionist spirit, on royal ritual.

There, however, has been one outstanding and very encouraging recent achievement in British ethnology, the Conference on African History organized by Dr. R. A. Oliver at the School of Oriental and African Studies in July 1953, under the chairmanship of Professor G. H. Philips. Archeologists, historians, and technologists spoke of the main questions their work had raised and the inferences they recently had drawn. Each contribution treated a limited topic or area, but when they were all combined, certain broad conclusions emerged concerning the peopling of Africa, the movement and mixing of its races, and the evolution of present tribal economies, customs, and institutions. Perhaps more importantly, the conference showed that the study of African history requires methods peculiar to itself, calling for the co-operation of practical archeology, the study of documents, and the interpretation of traditional tribal histories and genealogies. It is hoped to publish the proceedings of this conference in the Spring of 1955.

In his presidential address to Section H of the British Association for the Advancement of Science in 1954, Sir Mortimer Wheeler showed how urgent is the need to organize the preservation and study of antiquities in our African colonies. If, as may now be expected, more museums and archives are to be set up in Africa, the clues which appeared at the Conference on African History soon may lead to firmer findings. Social anthropology for long has chosen Africa as its principal field of work, physical anthropology is already active there, and it now seems that in Africa there lie the most hopeful prospects for the useful collaboration of all the subdivisions of British anthropology.

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Scandinavia

An Anthropological Review for 1952–1954

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DURING the Wenner-Gren Foundation's 1952 International Symposium on Anthropology in New York, we had the opportunity of emphasizing that in the Scandinavian countries "anthropology" is not regarded as a single science (Tax *et al.*, 1953, p. 68). The practical consequences of this view were very much apparent when Dr. Helge Larsen undertook the task of writing on Scandinavian institutions for the *International Directory of Anthropological Institutions* (Thomas and Pikelis, 1953, p. 181). Now, when facing the problem of giving an account of Scandinavian activities in "anthropology" we are confronted with similar difficulties. Where are the limits to be drawn? Do papers on, for instance, emmer in Early Dynastic Egypt, or on a problem in Greek syntax, or on Celtic tradition in the Roman Iron Age of Denmark belong to the subject? They must be included, of course, within anthropology taken in its widest sense, for they are all parts of the study of man. On the other hand, themes of this kind would take us far beyond reasonable limits of what we consider the main topic. In the following we omit not only the prehistory and archeology of Europe and the early Middle East, but also European folklore and European physical anthropology; only in a few exceptional cases is there mention of Indo-European linguistics.[1] The reader is requested to bear in mind these limits.

DENMARK

In Denmark, ethnologists have always considered close connections with both archeology and geography of paramount importance (Birket-Smith, 1952a). Also, Danish scientists, for obvious reasons, have been particularly interested in Eskimo research. Their achievements in this field cover the entire area from Greenland to Alaska and include both field work and publications dealing with physical anthropology, linguistics, archeology, and ethnology.

Firstly, attention should be called to three works on physical anthropology.

[1] I gratefully acknowledge the valuable information supplied by Dr. Ragnar Numelin, former Finnish minister in Vienna; Professor Kaarlo Hilden, Helsingfors; Professor Gutorm Gjessing and Dr. Johs. Falkenberg, Oslo; Professor K. G. Izikowitz, Göteborg; and Dr. Ernst Manker, Stockholm.

J. Balslev Jørgensen (1953) has investigated the skeletal material from Greenland in addition to revising the material brought back from the Central Eskimo regions by the Fifth Thule Expedition. His principal conclusion is that, while the Eskimo of northeast Greenland are believed to be closely related to those of the Central Thule culture, the Inugsuk people of west and southeast Greenland were derived directly from the bearers of the Birnirk culture of northern Alaska. This view is in gross inconsistency with all archeological facts, which clearly show that the Inugsuk phase is an outgrowth of the Central Thule culture, and the author's interpretation is hardly tenable.

Erik Skeller's work (1954) on the Angmagssalik Eskimo is based upon an investigation of 860 living persons. Unlike Balslev Jørgensen, who claims a gradual development of the Eskimo racial type from the Siberian Neolithic, he refrains from expressing any opinion as regards the origin of the Eskimo race in view of the scanty material available from Siberia and the North American Indians.

Finally, P. O. Pedersen (1952) has given a summary of his previously published, detailed description of the East Greenland Eskimo dentition. In East Greenland and the southernmost district of West Greenland he has undertaken a clinical examination of about 3200 persons, to which is added a study of 525 skulls, plus casts and X-ray investigations. The Mongoloid character of the dentition definitely seems to be borne out.

Within the linguistic field, the most important work was carried out in Alaska, where L. L. Hammerich, in continuation of his previous study of the Nunivak dialect, succeeded during 1953 in establishing the boundaries among the principal dialect groups between the Yukon and Kodiak. So far, however, his material has not been published. On the other hand W. Thalbitzer (1952), in a paper read in 1949 at the XXIXth Americanist Congress in New York, took up the old question of relationship between Eskimo and Indo-European. However, though finding not only verbal similarities but even striking parallels in the morphology, he did not arrive at a definite solution of the problem.

Alaska has, on the whole, played a prominent part in Danish Eskimology ever since Knud Rasmussen visited the northern part of the territory in 1924. Unfortunately, his untimely death prevented him from working up his own material, and various unfavorable circumstances delayed its publication until 1952, when it was edited by the late Rev. Ostermann. In addition to notes on hunting methods, ceremonials, etc., it includes a great number of tales, of which those from the inland tribes of the Colville and Noatak perhaps are of particular significance. This work concludes the whole series of reports of the Fifth Thule Expedition, in all numbering ten large volumes, eight of which deal exclusively with the Eskimo between Hudson Bay and Bering Strait.

One of the results of the Fifth Thule Expedition was the establishment of close co-operation between the National Museum of Denmark and United States institutions. This was initiated in 1933, when Frederica de Laguna and Kaj Birket-Smith carried out an archeological and ethnological survey of Prince William Sound; but not until 1953 was the latter able to publish an ethnological description of the Chugach Eskimo, to which was added a detailed analysis of their culture. The Danish-American co-operation became particularly intimate after 1939, when Helge Larsen began a long series of excavations. The first results, dealing with his and Froelich Rainey's explorations at Point Hope, were criticized by Henry B. Collins, who believes that the Old Bering Sea culture is older than Ipiutak; but in a recent paper Helge Larsen (1954) rightly maintains that Collins's dating rests on very unsatisfactory evidence. Helge Larsen's views were borne out by his 1948–1950 field work in Alaska, but so far the results of these investigations are available only in preliminary reports.

Not until 1954 was the work initiated by the Fifth Thule Expedition in Arctic Canada resumed by Danish archeologists. J. Meldgaard, in collaboration with the

University of Pennsylvania Museum, has been excavating in the area around Fury and Hecla Strait and has reported (1952) the discovery not only of numerous house sites and graves from the Dorset culture, but also from a period previous to the latter and apparently much older than anything so far found in the eastern Arctic.

In spite of the work carried out in Alaska and Canada, Greenland has not been neglected. Erik Holtved (1953) added a third volume to his work on the archeology of the Thule District, dealing with his 1946–1947 excavations at Nûgdlît. Otherwise, archeological activities largely have been concentrated on the Paleo-Eskimo stage, the occurrence of which in West Greenland remained an open question until Meldgaard (1952), on the basis of a small find made by an amateur archeologist at Sarqaq in Disko Bay, was able to prove both that it did exist and that the find in certain respects differed from the Dorset phase. This resulted in a new archeological survey of the Disko Bay region during 1953 by Helge Larsen, P. V. Glob, Meldgaard, and G. Nellemann. They succeeded in locating numerous sites of undoubtedly Paleo-Eskimo age and in proving stratigraphically that the Sarqaq phase is older than the Dorset. For our knowledge of the Paleo-Eskimo stage in northeast Greenland we are indebted to Count Eigil Knuth (1952, 1954) who continued his earlier investigations in Peary Land. A full description of the archeology of this region still is lacking, but preliminary accounts have been published. In 1948, Meldgaard and the Swiss archeologist H.-G. Bandi undertook excavations farther south on Clavering Island and have now described the results in a joint publication (Bandi and Meldgaard, 1952).

The general outlines of the Neo-Eskimo period of West Greenland are rather well known and therefore have not attracted much attention. It should be mentioned, however, that in 1952 Meldgaard made an archeological survey of the Godthaab District, where he located a great number of sites and investigated a burial cave with natural mummies from the seventeenth century.

Our knowledge of the ethnology of West Greenland, on the other hand, still is deficient, and at the same time the old culture is rapidly disappearing. Under these circumstances the National Museum of Denmark began an extensive investigation in 1948 by means of thirteen comprehensive questionnaires printed in Danish and Greenlandic. In 1952 the work was in charge of Meldgaard. To date nearly 500 more or less complete answers have been received so that the demand has been approximately met for four of the most important districts. On the whole the Eskimo perhaps, are better known than any other people of the Arctic, but it is still safe to say that there are serious gaps in our knowledge. We here refer to our discussion (Birket-Smith, 1952b) of the Eskimo problem at the meeting of the XXIXth Americanist Congress in New York.

Danish contributions to Americanist studies outside the Eskimo area are few, yet one very important work has appeared. In the monumental series *Corpus Codicum Americanorum Medii Aevi,* E. Mengin (1952a) has published a facsimile reproduction of the so-called "Cakchiquel Annals" kept in the University of Pennsylvania Museum's Library in Philadelphia; these annals, except for the famous "Popol Vuh," are without any doubt the most valuable document preserved from the Highland Maya. In the same series Dr. Mengin (1952b) published the third part of the *Historias Originales de los Reynos de Culhuácan y México,* and he has also written (1952c) a detailed commentary to the *Codex Mexicanus* Nos. 23–24 in the National Library of Paris. In the Summer of 1954 he carried out linguistic field studies in Mexico; also an ethnological expedition in charge of Jens Yde is at present in British Guiana.

In the last two decades Central Asia has become a principal field of research among Danish anthropologists. The results of some of the earlier expeditions are now gradually appearing: for instance, C. G. Feilberg's study (1952) of the Papi in Luristan and Martha Boyer's description (1952) of Mongol jewelry. In continuation

of the Third Danish Central Asian Expedition to Afghanistan and the Himalayas, H.R.H. Prince Peter of Greece and Denmark has proceeded with his ethno-sociological studies among Tibetan refugees in Kalimpong and has also had the opportunity of undertaking anthropometric investigations of a very great number of persons. A few short reports have been published, including an account of Tibetan Moslems (Peter, 1952) and a provisional list of 205 names of noble families in Central Tibet (Peter, 1954a). Though without direct connection with these expeditions, attention may be called to Kaare Grønbech's papers (1952, 1953) on Turkish kinship terms and on personal names among the Turks.

In 1953 there was resumed the work which had been left unfinished in Afghanistan due to the untimely death in the field of Henning Haslund-Christensen; Prince Peter took over the organization of the new expedition. The main objects of the latter were the completion of the study of the population of Nuristan and an investigation of originally Mongol tribes such as the Hazari, Chahar Aimaq, etc. The members of the expedition, Lennart Edelberg and Klaus Ferdinand, left for Afghanistan in the Spring of 1953, and their work is planned for conclusion, in the Spring of 1955. Prince Peter (1954c) has given a brief account of the first part of the expedition, and a preliminary report on the Hazari probably will be published in the near future.

In India, Werner Jacobsen, who has resided there during the whole period in question, has studied the primitive tribes of Travancore and made extensive collections for the Danish National Museum. During a 1952–1953 journey Hans Hendriksen made linguistic and folkloristic investigations of the Pahari language around Simla and of the dialect of the Maldive Islanders.

Although the archeology of the Middle East is considered as outside the scope of this paper, nevertheless mention may be made that a final description is now under way of Islamic pottery unearthed at Hama during the 1931–1938 Danish excavations, and that another archeological expedition, sponsored by the University of Aarhus, worked in the Bahrein Islands during 1953–1954 and is expected to start a new campaign in 1955.

Central Asian cattle-breeders are so closely related culturally to the nomads of North Africa that it is deemed proper to take up certain problems concerning North Africa. After some previous visits to this region, including one to the Tuareg during 1951, Johannes Nicolaisen made another journey to the Ahaggar region in 1952 and during 1954–1955 resumed his Tuareg studies, which are planned to include the southern tribes. Some of his previous results are available in preliminary reports (Nicolaisen, 1954).

The South Seas, an entirely new field for Danish ethnologists, recently have been approached, particularly in J. Prytz Johansen's work on Maori religion, which is an investigation of the interaction between religion and society and of the Maori's own cultural ideal, based upon an investigation of the original texts. It may be added that an account of Birket-Smith's ethnological observations on Rennell Island is in prepation, whereas some notes on the Igorot of Luzon have been published (1952c).

FINLAND

Two facts characterize ethnological and linguistic research in Finland: one is the linguistic position of the country, which has naturally emphasized Finno-Ugrian studies, the other is the great influence of the late Professor Westermarck, which has resulted in the stress laid upon sociology and the foundation of the Westermarck Society in Åbo (Turku).

The importance of the former appears clearly from the comprehensive linguistic and folkloristic bibliography for the years 1945–1949 edited by Sulo Haltsonen (1952). The early history of the Finnish language was traced by Lauri Posti in a paper (1953) on the development of the consonant system, showing that the most thorough changes are due to influence from Proto-

Baltic and, at a later period, from Proto-Germanic. Y. H. Toivonen (1952) takes us back to still more remote times in an attempt to answer the question of the cradle of the Finno-Ugrian peoples. It seems that the Finns came to their present country from the southern coasts of the Gulf of Finland as late as the first century A. D., but both linguistic and archeological evidence suggest that the original home of the whole Finno-Ugrian group was situated in eastern Russia near the middle course of the Volga and its tributaries, Oka and Kama.

An interesting work on the Lapps is the rather brief description of their original religion by Rafael Karsten (1952) otherwise best known for his extensive studies among South American Indians. Apparently this deviation from his usual line of research does not imply that he has given up his old field since, in 1952, he returned to Ecuador, though the results of this journey remain unpublished.

The sociological aspect is more or less apparent in the greater part of the remaining works. In his paper on historical dating in ethnology, Ragnar Numelin (1954) criticizes the theory of primitive monotheism while, on the other hand, emphasizing the necessity of the historical viewpoint in sociology. Purely sociological are Börje Hanssen's paper (1953) on fields of social activity and their dynamics; Rolf Lagerborg's 1953 essay on the essence of morals, in which he points out the difference between the ideas of Durkheim and Westermarck; as well as the work of Sakari Sariola on social conditions in Costa Rica. To some extent it is true also of Wikman's paper (1953b) on the structure and function of popular divination and his essay (1953a) on Yrjö Hirn as an anthropologist.

Finnish works on physical anthropology are omitted since they concern the population of Finland only and thus fall outside the limits of this paper.

NORWAY

In Norway, Lapp research occupies a position comparable to Eskimology in Denmark. The efforts of Norwegian ethnologists in this field have been aptly set forth by Gutorm Gjessing on an earlier occasion (1948); more recently, Knut Bergsland and Reidar Th. Christiansen (1952) have given an account of linguistic and folkloristic achievements from the same point of view. One of the most important series in this respect is the *Studia Septentrionalia,* of which two volumes were published in 1953 on the centenary of J. Qvigstad. Apart from a brief collection of Lapp courting stories by Qvigstad himself, they include linguistic contributions by Konrad Nielsen, Nils Lid, and Knut Bergsland; on Scandinavian loan words and culture elements among the Lapps by Asbjørn Nesheim; on sealing and sealing taboos and a description of a remarkable stone fence for reindeer hunting by Nesheim and Vorren; on reindeer pack saddles (in Lappish with Norwegian translation) by Hans J. Henriksen; and on the Lapp kinship system by Johs. Falkenberg. Gutorm Gjessing compares shamanistic ecstacy with that of the so-called Læstadian revival which a century ago played a prominent part in northern Scandinavia. In his paper on ecstasy and Arctic religion Reidar Th. Christiansen deals with the circumpolar zone as a whole.

In another publication, *Samiske Samlinger,* A. Steen (1952) gives a detailed genealogy of the Kautokeino Lapps, and in the *Acta Borealia,* edited by the Tromsø Museum, Ernst Manker and Ø. Vorren (1953) describe stone fences and pit systems for reindeer trapping in the Varanger district in a paper planned to be the first in a series on similar structures throughout Norway. The paper is based upon the regular field work undertaken by the Tromsø Museum for the purpose of investigating Lapp remains, partly in collaboration with the corresponding Lapp survey in Sweden (*vide infra*). Among the still unpublished results of the 1954 Summer campaign are those of the excavation of sites in the Varanger district filling out, so to say, the gap between the Late Stone Age and the Early Iron Age.

Besides contributing to Lapp linguistics, Knut Bergsland also has been engaged in

the study of Aleutian and Eskimo. A full report of his field studies has not yet appeared, but in a short paper (1952) he has essentially furthered the understanding of the relations between nouns and verbs in these languages.

Different aspects of linguistics and ethnology outside the Arctic are discussed in a number of works. Georg Morgenstierne (1952) has continued his pioneer studies of the Kafir language in some notes on the dialects of Wāmā and Tregām in Nuristan, and it may be added that he also has undertaken the preparation of the linguistic material from this region collected by the formerly mentioned Danish expeditions. In 1951 Fredrik Barth carried out sociological investigations in southern Kurdistan, and the results are now available in a comprehensive work (1953) dealing with subsistence and kinship, political and non-political organization, the village system, etc. Within the field of Semitic linguistics H. Birkeland has given an account (1952), partly based upon a half-year stay in Egypt, of the growth and structure of the Egyptian Arabic dialect and thus shown its development from classical Arabic through successive stages, each with its own special structure.

Thanks to the activities of Norwegian missionaries, Madagascar also has become an important field of research among Norwegian linguists and ethnologists. While the results of Kjell Falck's 1950–1951 ethnological expedition to the island still are unpublished, Otto Chr. Dahl (1952) has discussed the phonology and phonetics of the Malgachian language.

Thor Heyerdahl's impressive work (1952) on American Indians in the Pacific provides the background of his famous Kon-Tiki Expedition. On the basis of a great number of more or less well-founded parallels between Oceania and the New World he ardently advocates his theory of the origin of the Polynesians as a result of two successive immigrations from Peru and the northwest coast of America.

While the preceding works all deal with somewhat limited subjects, two works of a general character also must be considered. One is a rather short paper by Alf Sommerfelt (1954) on the origin of language, in terms of a critical survey of previous theories, emphasizing the difference between language as a social phenomenon and speech, which is individual. The other work is Gutorm Gjessing's monumental *Mennesket og kulturen* (1953a). Volume I, subtitled, "a comparative ethnology," discusses problems such as environment and economy, habitat, social life, religion, art, etc., whereas volume II is subtitled "the forms of culture" and gives descriptions of various cultural types according to their climatic and economic conditions.

To those afore-mentioned studies, the results of which still are unpublished, may be added the 1950–1951 investigations by Johannes Falkenberg among the natives of North Australia. In conclusion, the field work in progress at the close of 1954 deserves mention: Fredrik Barth is pursuing sociological studies in Swat, Pakistan; another sociologist, Dagfinn Sivertsen, is taking part in a British expedition sponsored by UNESCO in Mysore; while two young ethnologists, Alv Alver and Henning Siverts, are working in Tunisia and Chiapas, respectively. It would be premature, however, to given an opinion on their results.

SWEDEN

Needless to say, Lapp research in Sweden is a "national" science similar to that in Norway. Every summer since 1948 the Nordiska Museet in Stockholm, in collaboration with the antiquarian surveys of the kingdom and the provinces, carries out field work in the Lapp districts under the direction of Ernst Manker, investigating ancient camp sites, cult places, graves and remains from the hunting period previous to the introduction of reindeer nomadism. The results gradually are being published in the magnificent series *Acta Lapponica,* of which volume VII, 1953, written by Manker, gives a detailed description of the Mountain Lapp *siida* organization (migration groups), nomad life, and migratory routes as well as a complete account from the year 1945 of thirty-five Lapp districts.

Of paramount importance is the dictionary of the Lule-Lapp dialect by H. Grundström (1952–1953) of which the last two parts, now issued, conclude a work of nearly 2000 pages, vital to all students of the Lappish language. For an excellent, semi-popular description of the Lapps, based upon the previously published American edition, we are indebted to Björn Collinder (1953), and for a statement of their physical anthropology to Bertil Lundman (1952b), who stresses their racial specialization while at the same time pointing out the affinity, according to blood groups, of the Scandinavian Lapps to the population of western Europe, in contradistinction to the eastern Lapps who seem to be racially closer to the Samoyed. With his starting point among the Lapps, John Granlund (1953) traces the distribution of birdskin caps throughout Siberia and northern North America, proving they are an extremely old circumpolar culture element.

Central Asia is another field where Swedish research has an old tradition, reaching its climax in the great 1927–1930 Sino-Swedish expedition under the leadership of Sven Hedin. Numerous works describing the results have appeared previously; recently, Toni Schmid (1952) has pictured a Tibetan poet-saint's life, while Gösta Montell (1952) has given a brief summary of the extensive archeological explorations carried out during the expedition. Steffan Skallsjö (1952) describes a peculiar Mongolian game; and a large collection of carved, semi-precious stones from East Turkestan, ranging from Hellenistic times to the beginning of the Turkish period, and now kept in the Ethnographical Museum of Stockholm, is carefully described and catalogued by H. H. von der Osten (1952). From the southern parts of Asia there is but a single paper, the late Tobias Nordlind's statement (1953) of the distribution of a certain Indonesian type of stringed instrument of which parallel forms occur in China and India.

The old university town of Upsala, in later years, has become a prominent center of African studies, and several highly interesting works have from time to time appeared in the great series *Studia Ethnographica Upsalensia*. Volume IV, by the late missionary Karl Laman (1953) is the first part of an extensive work which, in spite of its title, "The Kongo," does not deal with the Bakongo proper but with the neighboring tribe, Basundi. Volume VI, by another missionary, Efraim Andersson (1953), is likewise planned to be the first part of a greater monograph about the Bakuta describing their material and social culture, to which are added chapters on West African secret societies in general and on the cultural affinities of the tribe. In the same series are published Birger Lindskog's 1954 work on African leopard men and related subjects, as well as H. von Sicard's *Ngoma Lungundu* (1952), the interesting drum palladium of the Bavenda in South Rhodesia, the idea of which forms a remarkable parallel to the Ark of the Covenant and is traced back to Ethiopia.

In Olof Petterson's "Chiefs and Gods" (1953), a study of the kingship among the southeastern Bantu, the chief is shown to be the "father" of the tribe and representative of the ancestors, thus himself a sacred person since the Supreme Being is regarded as the common ancestor and/or the culture hero of the people. In another work (which has also appeared in French translation) Harry Tegnaeus (1952) discusses the institution of blood-brotherhood with special reference to Africa, and Sture Lagercrantz (1952, 1954) has analyzed the African ideas in connection with the Milky Way and with hunting trophies and hunting magic in an attempt to refer them to specific culture forms. The musical instruments of the Babembe are the subject of a small paper by Bertil Söderberg (1952).

The New World again is a field where Swedish ethnologists have been particularly active ever since the days of Erland Nordenskiöld. From North America are not only Åke Hultkrantz's comprehensive work (1953) on Indian conceptions of the soul and the same author's notes (1952) on the Arapaho sun dance, but also the linguistic studies of Nils M. Holmer on Iroquoian (Seneca) and Ojibway and Tor Ulving's

description (1953) of the peculiar consonant grading in Eskimo. It is, however, Latin America which always has proved most attractive to Swedish students. A short report on the little-known archeology of Guerrero was published by Sigvald Linné (1952), who has now succeeded Gerhard Lindblom as director of the Ethnographical Museum in Stockholm. Henry Wassén (1952a) continued his important studies of the Cuna, translating and commenting upon a new collection of Cuna myths, and, in collaboration with Professor Holmer (1953), publishing a revised edition with translation and comments of the complete picture manuscript of Mu-Igala (the Way of Muu), a Cuna medicine song used in connection with childbirth. As pointed out by Wassén (1954) it is a highly interesting but as yet unexplained fact that the closest parallel to the Cuna concepts of pregnancy is found among the Lapps and a few North Asiatic tribes. The same authors (1953b) have given an account of the divisions of the Guaymí and have shown that the so-called Bogotá visited by Erland Nordenskiöld in 1927 belong to this group. To Holmer we also owe a translation of a Cuna text (1952c), a rather comprehensive Cuna dictionary (1952a), and a short note on some semantic problems in Cuna and Cágaba (1953g), as well as contributions to the linguistics of Sierra Nevada de Santa Marta (1952d, 1953b) and the Yahgan of Tierra del Fuego (1953c). Finally, within the field of Andean archeology should be mentioned Stig Rydén's preliminary report (1952) on Chullpa-Pampa, a pre-Tiahuanacan site in the highlands of Bolivia, and Linné's paper (1953) on prehistoric Peruvian painting, mainly a description of textiles with symbolic designs and more or less dramatic pictures.

Somewhat isolated in Swedish ethnology are two papers on Polynesia by Bengt Danielsson (1952a, b), a former member of the Kon-Tiki Expedition, who has become interested in the Tuamotus. One of them describes a recently discovered sacred structure (*marae*); the other gives an account of Tuamotuan kinship terms and shows their close affinity to those of the Marquesas group.

Two works of a general character remain to be mentioned: Holmer's paper (1953d) on comparative semantics and Bertil Lundman's highly concentrated text-book (1952a) on physical anthropology, with numerous instructive maps, describing the living races of mankind.

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Deutschland

Eine Ethnologische Revue für 1952–1954

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EIN Bericht über die Forschung einer Wissenschaft sollte im allgemeinen ein Stück Wissenschaftsgeschichte sein, insofern er zeigt, welchen Richtungen oder zumindest welchen Fragen das bevorzugte Interesse innerhalb eines bestimmten Forschungszweiges gilt. Jedoch kann ein Bericht, der nur den Zeitraum weniger Jahre umfasst, keine verbindliche Aussage über die haupsächliche Entwicklungsrichtung einer Wissenschaft machen, da sich zu viele Zufälligkeiten, die eben in der zeitlichen Begrenzung gegeben sind, als Schranken vor das Gesamtbild stellen. Dies gilt nicht nur für die reine Forschung, sondern auch für die Lehre und die der Anschauung in weiteren Kreisen dienende Museumsarbeit. Es kann sich deshalb im folgenden nur um die Bestandsaufnahme von Tatsachen handeln, die die Leistungen und Geschehnisse innerhalb der deutschen Völkerkunde während der Jahre 1952–1954 aufzeigen.

Zur Zeit ist Deutschland politisch in zwei Staaten gegliedert, die "Bundesrepublik Deutschland" und die "Deutsche Demokratische Republik." Dieser Wissenschaftsbericht umfasst beide Teile gleichmässig.

FELDFORSCHUNG

Innerhalb der deutschen Völkerkunde tritt deutlich hervor, das die Feldforschung, von der die deutschen Ethnologen seit dem Beginn des zweiten Weltkrieges für ein gutes Jahrzehnt abgeschnitten waren, als vordringlichste Forderung anerkannt wird. Die in der Literatur schmerzlich fühlbar gewordene Lücke persönlicher Beobachtungen im Felde, die den Grundstoff für die Erforschung von Naturvölkern liefern, sowie die Tatsache, dass Lokaluntersuchungen in erster Linie die Gewähr dafür bieten, dass sich die Konturen der ethnischen Zustände, Vorgänge, Zusammenhänge und Verschiedenartigkeiten nicht in verallgemeinernden oder überspitzten theoretischen Spekulationen verwischen, hat die "Deutsche Forschungsgemeinschaft" (vgl. International Directory of Anthropological Institutions, 1953, p. 213) bewogen, das Schwergewicht in der Unterstützung der völkerkundlichen Wissenschaft auf die Expeditionstätigkeit zu legen. Ihrer grosszügigen Hilfe ist es zu danken, dass in den letzten Jahren eine Reihe von Forschungsunternehmungen in Afrika,

Amerika und Indonesien durchgeführt werden konnten. Darüberhinaus hat die Deutsche Forschungsgemeinschaft zusammen mit Vertretern der deutschen Völkerkunde im Frühjahr 1953 ein Forschungsprogramm aufgestellt, das in einer aufeinander abgestimmten Zusammenarbeit "Feldforschungen zur kulturhistorischen Einordnung der Hirtenvölker in ihrer Beziehung zum Wildbeutertum und den niederen und höheren Bodenbaukulturen, sowie die Untersuchung unerforschter Wildbeuterstämme als ältester Schicht naturvölkischer Kulturentwicklung" vorsieht. Von fast allen Zentren völkerkundlicher Lehre Westdeutschlands werden in diesem und den beiden kommenden Jahren Expeditionen diesen Fragestellungen nachgehen. Es ist vorgesehen, die Ergebnisse der Untersuchungen in einer geschlossenen Publikationsreihe zu veröffentlichen.

Die feldforschende ethnologische Tätigkeit in AFRICA begann bereits 1950 mit einer Expedition des Frobenius-Institutes, Frankfurt a.M. (Leitung Prof. Dr. Jensen, weitere Teilnehmer Frau E. Pauli, Dr. W. Schulz-Weidner, Dr. E. Haberland) zu Stämmen im südwestabessinischen Bergland und in den südlichen Steppen, die 1952 abgeschlossen wurde. Neben der Charakterisierung des Lebensstiles der z.T. noch unbekannten Gruppen stellte sich das Problem des Verhältnisses von Viehzüchtern zu Ackerbauern als besonders wichtig heraus. Erstmalig wurden im südwestabessinischen Gebiet anthropologische Messungen in grösserem Umfange durchgeführt (vgl. W. Schulz-Weidner in Homo, Bd. 3, pp. 162 ff.). Desgleichen wurden Kopien von Felsbildern in der Provinz Harrâr aufgenommen (Expeditionsbericht vgl. Ad. E. Jensen, Ztschr. f. Ethnol. Bd. 77, pp. 57 ff.).—Eine zweite, im Herbst 1954 begonnene Reise desselben Institutes (Prof. Dr. Jensen, Frau E. Pauli, Dr. E. Haberland, Dr. H. Straube als Ethnologen und Dr. W. Kuls als Geograph) in benachbarte Gebiete gilt einer Vertiefung der Forschungen über südabessinische Hirten- und Bauernvölker.—Dr. Erika Sulzmann und Student der Ethnologie W. E. Müller, Universität Mainz, unternahmen von November 1951 bis Februar 1954 eine Reise zu den südwestlichen Mongo-Stämmen (Ekonda etc.) im Kongogebiet, bei der das Hauptgewicht auf einer monographischen Erfassung dieser Stämme lag, jedoch auch anthropologische und linguistische Untersuchungen vorgenommen wurden.—Von Februar 1952 bis Januar 1953 konnte Dr. K. Krieger, Museum für Völkerkunde, Berlin-Dahlem, eine monographische Untersuchung der Zamfarawa, einer Untergruppe der Hausa, in der Stadt Anka in Nordnigerien durchführen (vgl. K. Krieger, Sociologus, Bd. 3, pp. 67 ff. und Geographische Rundschau, 6. Jg., Nr. 10, pp. 387 ff.).—Prof. Dr. H. Baumann, Universität Mainz, wandte sich von Frühjahr bis Herbst 1954 dem Studium von Viehzüchterstämmen in Südwest-Angola (z. B. Kuvale, Muscho) zu und unternahm mit seinen Begleitern, dem Botaniker Dr. G. Boss, Wiesbaden, und dem Studenten der Geographie, M. Topp, Mainz, auch naturwissenschaftliche und prähistorische Forschungen in diesem Gebiet. Es konnten u.a. bislang noch unbekannte Felsbilder in Südwest-Angola aufgenommen werden (vgl. H. Baumann, Paideuma, Bd. VI, pp. 41 ff). Anschliessend führte die Reise in das östliche Angola zu den Ngangela und Tschokwe.—Vom Institut für Völkerkunde an der Universität Göttingen reiste 1952 Dr. R. Herzog zu Forschungszwecken nach Marokko und Rio de Oro, 1953–1954 nach Ägypten und Nubien.—Die im Herbst 1954 begonnene Reise von Dr. K. Dittmer, Hamburgisches Museum für Völkerkunde und Vorgeschichte, in das Obere Voltagebiet, wo er insbesondere die wirtschaftliche und kultische Rolle der Viehzucht in gemischtwirtschaftlicher Wirtschaftsweise untersuchen will, und die er zusammen mit Dr. J. Zwernemann, Universität Mainz, durchführt, der sich linguistischen und religions-ethnologischen Studien widmen wird, ist noch nicht abgeschlossen.

Mehrere Reisen zur Untersuchung afrikanischer Sprachen wurden von den Mitarbeitern des Seminars für afrikanische Sprachen der Universität Hamburg ausgeführt. Nachdem bereits 1950–1951 Prof. Dr. A. Klingenheben nach Liberia ausge-

reist war, um die Sprache und Schrift der Vai zu erforschen, schloss Prof. Dr. J. Lukas seine 1951 begonnene Reise nach Nordnigerien zur Erforschung der tschadohamitischen Sprachen, sowie nordnigerianischer Klassensprachen in Mittelnigerien und seine Untersuchungen zu den Sprachen der Primitivstämme des Mandaragebirges in Nordkamerun ab.—In den Jahren 1953–1954 unternahm Prof. Dr. E. Dammann eine Sprachexpedition nach Südwestafrika zum Studium der dortigen Bantusprachen, der Sprache der Hottentotten (Nama) und Buschmänner.

Ethnologische Forschungsreisen in SÜDAMERIKA galten vor allem dem nördlichen Urwaldgebiet. Von 1951–1954 arbeiteten Dr. Karin Hissink und der Maler A. Hahn vom Frobenius-Institut, Frankfurt a.M., in Bolivien bei den Chimanen am Rio Maniqui, sowie den Chama und Tacana im Gebiet zwischen dem oberen Rio Beni und Madidi zur Aufnahme einer völkerkundlichen Monographie dieser Stämme, speziell ihrer geistigen Kultur.—Dr. H. Kelm und Dr. G. Mary, Bonn, sind im Herbst 1954 zu völkerkundlichen und geographischen Untersuchungen bei den Sirionó nach Ostbolivien aufgebrochen.—Dr. H. Becher, Universität Hamburg, arbeitet seit dem Frühsommer 1954 am mittleren Amazonas.—Im südlichen Venezuela, am oberen Orinoco, befinden sich seit Beginn des Jahres 1954 Dr. O. Zerries und Student der Ethnologie, M. Schuster, Frobenius-Institut, Frankfurt a.M., zum Studium von Jäger- und Pflanzervölkern.—Am Orinoco-Delta arbeitet cand. phil. J. Wilbert, Köln, bei den Winikina, einer Untergruppe der Mariusa.—M. Rauschert, Bonn, der bereits 1951/52 eine Reise nach Süd-Guayana mit zoologisch-archäologischen Zielen durchführte (vgl. Zeitschr. f. Ethnol. Bd. 78, pp. 293 ff.), ist im Herbst 1954 erneut nach Guayana ausgereist, dieses Mal zu völkerkundlichen Studien und Sammelzwecken.—Dr. U. Oberem, Universität Bonn, ist im Oktober 1954 zu ethnologischen Forschungen, bei denen Akkulturationsfragen im Vordergrund stehen, nach Ost-Ecuador aufgebrochen.—Auf einer Reise von August 1952–August 1953 führte Dr. H. Nachtigall, Universität Mainz, völkerkundliche Untersuchungen bei dem Indianerstamm der Paez im südcolumbianischen Bergland durch und unternahm archäologische Forschungen in San Augustin und Tierradentro (vgl. Nachtigall, Ztschr. f. Ethnol. Bd. 78, pp. 138 ff. und 210 ff.).—Archäologischen Ausgrabungen widmeten sich auch Prof. Dr. H. Ubbelohde-Doering, Museum für Völkerkunde, München, an der peruanischen Küste in den Jahren 1952 bis 1954 (Bericht s. Bulletin de la Soc. Suisse des Américanistes, Musée d'Ethnographie de Genève, Sept. 1953, Nr. 7, pp. 9 ff.) und Dr. H. D. Disselhoff, ebenfalls vom Museum für Völkerkunde, München, von 1953–1954 in Peru und Ecuador, dessen spezielles Ziel es war, die Inka-Strassen hinsichtlich ihrer Bedeutung für die staatliche und wirtschaftliche Struktur des Inka-Reiches zu erforschen.

Prof. Dr. F. Termer, Hamburgisches Museum für Völkerkunde und Vorgeschichte, wandte sich auf einer Reise nach MITTELAMERIKA von 1953–1954 archäologischen und geographischen Forschungen zu.—In San Salvador führte 1954 Dr. Haberland von demselben Museum archäologische Untersuchungen durch.

Jägerstämme im Kimberley-Distrikt des nordwestlichen AUSTRALIEN sind das Forschungsziel zweier Expeditionen, die z.Z. noch im Feld arbeiten: Einmal Dr. H. Petri und Dr. Gisela Odermann, Frobenius-Institut, Frankfurt a.M., zur Aufnahme ethnologischer und linguistischer Bestände, zum anderen Dr. A. Lommel, Museum für Völkerkunde, München, und Frau K. Lommel zu ethnologischen Forschungen und der Aufnahme von Felsbilderkopien.—Im Arnhemland ist Frau A. Schulz, Frobenius-Institut, Frankfurt a.M., gleichfalls mit der Aufnahme von Felsbild-Kopien beschäftigt.

Dr. G. Koch hat vom Institut für Völkerkunde, Göttingen, aus, zur Aufnahme ethnographischer Zustände und zu vergleichenden Studien von Oktober 1951 bis Juni 1952 auf den TONGA-INSELN, Samoa und Fidschi gearbeitet. Das Hauptziel der Reise war ausser dem Erwerb von Sammlungsstücken die Untersuchung des europäisch-tonganischen Kulturkontaktes und des

durch diesen ausgelösten Kulturwandels.—Dr. W. Lang vom gleichen Institut unternahm 1952 eine Reise nach dem IRAK. Dr. W. Funke, Universität Köln, führte 1953 eine sechsmonatige Forschungsfahrt nach SÜD-SUMATRA zur Klärung der kulturgeschichtlichen Stellung der Abung durch (vgl. Funke, Ztschr. f. Ethnol. Bd. 78, pp. 96 ff.).

Die vor dem Kriege von deutschen Archäologen unternommenen Grabungen im VORDEREN ORIENT, zu denen vor allem die Ausgrabungen in Uruk zu rechnen sind, konnten wieder aufgenommen werden. Prof. Dr. H. Lenzen vom Deutschen Archäologischen Institut in Berlin gräbt seit 1952 in Uruk-Warka, der Direktor des Deutschen Archäologischen Institutes in Istanbul, Prof. Dr. Karl Bittel, ebenfalls seit 1952 in Bogazköy. An den deutsch-türkischen Ausgrabungen in Sinope beteiligte sich 1952 Dr. L. Budde, Münster, während Dr. F. Dörner, Münster, in den Jahren 1953–54 in Arsameia grub.

Dieser langen Liste von Forschungsunternehmungen mit ethnologischen, linguistischen, anthropologischen und archäologischen Aufgaben zu naturvölkischen Gruppen und althochkulturlichen Gräberfeldern schliessen sich geographische Expeditionen an, über die laufend in der Zeitschrift "Petermanns Geographische Mitteilungen," Gotha: Justus Perthes, unter dem Titel: Forschung im Felde, berichtet wird.

Abschliessende Publikationen über die wissenschaftliche Bearbeitung der während der Jahre 1952–1954 angestellten Feld-Untersuchungen stehen noch aus. Bisher liegen lediglich einige vorläufige Berichte über die Resultate vor. Die Ergebnisse der Reise von G. Koch sollen im kommenden Jahr unter dem Titel "Der Kulturwandel bei den Tonganern und der Versuch einer Deutung dieser Entwicklung" veröffentlicht werden.

In den Berichtsjahren sind nur Veröffentlichungen erschienen, in denen die Ergebnisse früherer Forschungsreisen verarbeitet sind (s. Bibliographie: A. Lommel, H. Niggemeyer, E. Nowack, H. Petri, C. Rathjens).

ANTHROPOLOGIE

Entgegen der in angelsächsischen Ländern üblichen gemeinsamen Bezeichnung "Anthropology" für die Ethnologie, Anthropologie und Vorgeschichte hat sich in Deutschland diese wissenschaftliche Dreieinigkeit zu Spezialfächern auseinandergelebt. Es seien daher im folgenden nur kurz einige Bemerkungen zu diesen beiden "Nachbarwissenchaften" gemacht. Die Anthropologie, soweit sie sich nur mit der statischen Morphologie des menschlichen Körpers befasst, rangiert unter den Naturwissenschaften. Jedoch wird man sich immer mehr der Erkenntnis bewusst, dass die physische Anthropologie allein keine Aussagemöglichkeit über den g a n z e n Menschen hat, sondern dass zu seiner Erfassung auch die Bezüge zu seiner kulturellen Umgebung wesentlich sind, was innerhalb des prähistorischen und ethnologischen Bereiches was zwangsläufig einmal wieder zu einer Annäherung der drei genannten Fächer zurückführt oder zumindest die Bemühung hervorruft, ihre Forschungsergebnisse aufeinander abzustimmen und zu verbinden, zum andern aber auch die Forderung enthält, die menschliche Psyche in den Forschungsbereich der Anthropologie einzubeziehen. Die Notwendigkeit dieser Forderung hat F. Keiter in seinem Aufsatz "Krise und Zukunft der Anthropologie" mit Nachdruck herausgestellt.—Unter den deutschen Anthropologen steht der Mainzer Anthropologe E. von Eickstedt mit seiner Arbeitsweise, die den Menschen als den Träger der Kultur sieht, der völkerkundlichen Wissenschaft am nächsten. In seinen neuesten Publikationen wendet er sich den menschlichen Verhaltensweisen zu, unter der Einsicht, dass die Anthropologie alle Aspekte des Menschlichen gleichermassen zu betreuen habe, also auch die Psychologie zu den Aufgaben der Anthropologie gehöre. Dies zeigt die 1954 erschienene 13. Lieferung seines grossen Werkes "Die Forschung am Menschen."

An anthropologischen Zeitschriften seien genannt:

Homo, Organ der Deutschen Gesellschaft für Anthropologie, Hrsg. E. Frh. von

Eickstedt, Göttingen: Musterschmidt—1952, Bd. 3; 1953, Bd. 4; 1954, Bd. 5, Heft 1.

Zeitschrift für Morphologie und Anthropologie. Hrsg. Hans Weinert, Stuttgart: E. Schweizerbarth—1952, Bd. XLIV; 1953, Bd. XLV; 1954, Bd. XLVI.

Anthropologische Literatur vgl. weiter Bibliographie unter: H. Baumann, E. von Eickstedt.

PRÄHISTORIE

Wie die Anthropologie, so ist auch die Erforschung der Prähistorie, besonders derjenigen Gebiete, die mit den Bereichen heutiger Naturvölker in genetischer Beziehung oder in Kontakt stehen, von eminenter Wichtigkeit für die Ethnologie, und es zeigt sich dasselbe Bild wie bei der anthropologischen Wissenschaft, dass die vorgeschichtlichen Forschungsergebnisse für die Aufhellung naturvölkischer Zustände von Jahr zu Jahr wichtiger werden, wie umgekehrt, die Untersuchungen der Völkerkunde den vorgeschichtlichen Forschungsbefunden zunutze kommen.

Die Ausgrabungstätigkeit in Deutschland selbst konnte in den Berichtsjahren wieder in grösserem Umfange aufgenommen werden. Über Grabungen an frühgeschichtlichen Siedlungen im vorderen Orient s. S. 600.

Karthographische Darstellungen der prähistorischen Zustände der Alten Welt, ihre Entwicklung, Ausbreitung, Kontaktzonen und Wechselbeziehungen finden sich in verschiedenen Atlanten, z.B. "Grosser Historischer Weltatlas," bearbeitet von H. Bengston und V. Milojcic, dessen I. Teil "Vorgeschichte und Altertum" durch einen Erläuterungsband ergänzt wird, der in gedrängter Form alles zur Auswertung der Kartenthemen Dienende enthält und Literaturhinweise gibt.

Die Kunst des europäischen Paläolithikums ist heute zu einem der aktuellsten Themen geworden (s. Bibliographie unter H. Kühn).—Einen Ausschnitt aus der Fülle afrikanischer Felsbilder bringt das Buch von H. Rhotert, "Libysche Felsbilder," eine Zusammenfassung der auf zwei Expeditionen des Frobenius-Institutes, Frankfurt a.M. erarbeiteten Ergebnisse und darüberhinaus die Einbeziehung dieser Bilder in den grösseren Rahmen der Felsbildkunst des nördlichen Afrikas. Über neue Felsbilderfunde in Angola vgl. H. Baumann, Paideuma, Bd. VI, pp. 41–45.

An Zeitschriften aus dem Gebiet der Urgeschichtsforschung seien genannt:

Prähistorische Zeitschrift. Hrsg. Kurt Bittel, Ernst Sprockhoff, Wilhelm Unverzagt, Berlin: de Gruyter—1953, Bd. XXXIV/V, 2. Hälfte von 1949/50.

Germania. Anzeiger der Römisch-Germanischen Kommission des Deutschen Archäologischen Institutes. Schriftl. G. Bersu, W. Schleiermacher, W. Wagner, Berlin: de Gruyter—1952, Jg. 30; 1953, Jg. 31; 1954, Jg. 32. Enthält eine ausführliche Bibliographie.

Eiszeitalter und Gegenwart. Jahrbuch der deutschen Quartärvereinigung. Hrsg. im Auftrage des Vorstandes Paul Woldstedt. Öhringen/Württ Hohenlohe—1952, 2. Bd.; 1953, 3. Bd.

Quartär. Jahrbuch der Hugo Obermaier-Gesellschaft für Erforschung des Eiszeitalters und seiner Kulturen. Hrsg. L. Zotz. Bonn: Röhrscheid—1953, 6. Bd., 1. Halbband; 1954, 6. Bd., 2. Halbband.

Weitere Literatur über ur- und frühgeschichtliche Themen s. "Historia Mundi," Bd. I u. II, und Bibliographie unter Grahmann, Kirchner, Narr, Smolla.

Obwohl die beiden Wissenschaften der Anthropologie und der Prähistorie in Deutschland im vergangenen Jahrhundert in engster Verbidnung mit der Ethnologie standen, ist heute die Abgrenzung zwischen diesen drei Fächern eindeutig gegeben. Eine Zeile Zwischenraum anders verhält es sich mit jenen Wissenschaftssparten, die sich dem Studium der schriftbesitzenden Hochkulturen der Alten Welt zuwenden, wie die Ägyptologie, Assyriologie, Indologie, Sinologie usw. Hier ist die Grenze nicht scharf umrissen, sobald die Forschungen das rein philologische Gebiet überschreiten. Einige Arbeiten, die sich auf den Alten Orient und Hoch-Asien beziehen und solche Grenzfälle darstellen, sind in der Bibliographie mit aufgeführt. Es sei jedoch ausdrücklich erwähnt, das es sich nur um

wenige Arbeiten handelt und die Ergebnisse dieser Spezialfächer eine eigene Literatur darstellen. Dasselbe gilt für die europäische Volkskunde.

WELTGESCHICHTE

Die Einsicht, dass bei der heutigen Kenntnis ur- und frühgeschichtlicher Kulturen auch die naturvölkischen Bereiche mit ihrer ungeschriebenen Geschichte nicht mehr als Nebenprodukt am Rande einer egozentrisch gesehenen europäischen Geschichtsbetrachtung abgetan werden können, sondern dass ihre Entwicklung in geistiger und materieller Hinsicht ein nicht zu übersehender Bestandteil des Weltgeschehens ist, hat dazu geführt, sie in das "Buch der Weltgeschichte" aufzunehmen. Mehrere fast gleichzeitig erschienene Publikationen sind Zeugnis dafür, so die von dem verstorbenen Historiker Fritz Kern ins Leben gerufene und von F. Valjavec unter Mitwirkung des Institutes für Europäische Geschichte der Universität Mainz herausgegebene "Historia Mundi," die auf 10 Bände geplant ist und von der bisher drei Bände erschienen. Sie umspannt die geschichtlichen Fakten des menschlichen Erdendaseins im weitesten Sinn, indem sie die durch anthropologische, prähistorisch-archäologische, ethnologische Forschung verfügbar gemachten Kenntnisse ebenso wie die schriftlich dokumentierten Vorkommnisse des Geschichtsablaufs von einem international ausgewählten Mitarbeiterkreis nach dem neuesten Wissenschaftsstand der Öffentlichkeit übergibt.

An der Behandlung anthropologischer, prähistorischer und ethnologischer Themen arbeiteten folgende deutsche Wissenschaftler mit: H. Baumann, E. von Eickstedt, F. Kern, A. Moortgat, K. J. Narr, A. Rust, I. Schwidetzky, H. Sedlmayr, K. Tackenberg, H. Trimborn.

Bei dem von R. Oldenbourg herausgegebenen "Abriss der Weltgeschichte" stehen die politischen Geschehnisse im Vordergrund. Für den Ethnologen sind in diesem Lieferungswerk einige Abschnitte des Teiles II von Belang, der—allerdings in sehr knapper, stichwortartiger Darstellung—die aussereuropäischen, naturvölkischen und althochkulturlichen Verhältnisse, sowie die Geschichte der Länder nach der Kolonisation angibt. Von diesem Teil sind bisher folgende Lieferungen erschienen:

A. Afrika, Islam. (Die Kulturgeschichte in den naturvölkischen Bereichen Afrikas hat H. Baumann dargestellt, die geschichtlichen Fakten nach dem Eintreffen der Europäer E. Ritter) (pp. 1–34).
B. Indien, Indonesien, Tibet.
D. Amerika, Australien, Ozeanien, Arktis. "Süd- und Mittelamerika bis zum Untergang der indianischen Kulturen" bearbeitete H. D. Disselhoff, pp. 5–11, eine kurze Darstellung der australischen Eingeborenen-Geschichte gibt W. von Barloewen, pp. 52–54.

Der noch ausstehende Abschnitt C umfasst Innerasien, Mongolei, China, Korea.

ETHNOLOGISCHE FORSCHUNG

Die ethnologische Forschung der letzten Jahre beruhte in erster Linie auf der Auswertung der vorhandenen Literatur. K. Dittmer veröffentlichte eine "Allgemeine Völkerkunde." In der erweiterten Neuauflage des von H. A. Bernatzik herausgegebenen Werkes "Die Neue Grosse Völkerkunde" haben die deutschen Ethnologen H. Findeisen "Nordasien" (II, pp. 57–72), Th. Körner "Indonesien" (II, pp. 288–349) und H. Nevermann "Südsee" (II, 350–442) bearbeitet. (Über die Bearbeitung der anderen Kulturen vgl. Österreich.)

Neben diesen, die naturvölkischen Kulturen der Welt in ihrer Gesamtheit darstellenden Werken beschränkt sich die weitaus grösste Zahl der Publikationen auf themenmässig oder resional ausgewählte Arbeitsstoffe. Bestimmten Themen, ohne Begrenzung auf ein geographisches Gebiet, widmeten sich folgende Autoren:

Ein kulturhistorisches Thema aus dem Bereich des Wirtschaftslebens der Naturvölker bearbeitete E. Werth "Grabstock, Hacke und Pflug," der sich im Laufe seines langen Lebens mit der Kulturgeschichte des Landbaus beschäftigt hat und in diesem

Band eine Gesamtschau seiner Forschungen vorlegt.—H. Pohlhausen sieht in seiner Arbeit "Das Wanderhirtentum und seine Vorstufen" in dem Rentierbegleiten des Frühmesolithikums im Ostsee-Küstenraum den Beginn der Rentierzucht und damit den Ursprung der Herdentierzucht. Weitere Literatur über kulturhistorische Stadien bei Naturvölkern s. Bensch, Narr.

Für die Bearbeitung methodologischer Fragen sei auf folgende Autoren verwiesen: H. Baumann, J. Glück, R. Mohr, W. E. Mühlmann, H. Petri.—Allgemein soziologisch-historischen Problemen gingen u.a. J. Glück, W. E. Mühlmann, R. Thurnwald, psychologischen Fragestellungen F. Herrmann, W. E. Mühlmann, H. Reuning nach.

Die ethnologische Sprachforschung sich in Deutschland vornehmlich der Untersuchung und Bearbeitung afrikanischer Sprachen, für die das Zentrum das Seminar für Afrikanische Sprachen in Hamburg ist (vgl. S. 607). Über Sprachforschungen Polynesien s.H. Kähler; Indonesien: H. Niggemeyer.

Die ethnologische Rechtsforschung, eine von den grossen deutschen Rechtsethnologen des vorigen Jahrhunderts begonnene Richtung, erhielt durch die Gründung der "Gesellschaft für Rechtsvergleichung" (Tübingen 1950) mit der gleichzeitigen Gründung einer "Fachgruppe für vergleichende Rechtsgeschichte, orientalische Rechte und ethnologische Rechtsforschung" einen neuen Impuls. Die erste Veröffentlichung dieser Fachgruppe, deren Leitung Prof. Dr. H. Trimborn, Bonn, übernommen hat, enthält Vorträge, die auf ihrer ersten Tagung in Köln, im September 1951, gehalten wurden. Sie ist von H. Bünger und H. Trimborn herausgegeben: "Religiöse Bindungen in frühen und in orientalischen Rechten" und bringt u.a. Beiträge von U. Oberem "Religion und Staat in Mikronesien," E. Possosz "Die Begründung des Rechts im Klan," H. Wintzer "Religiöse Bindungen im Rechte Alt-Mexicos."—Die Untersuchung der "Frühgeschichte des Eigentums" ist ein auf vier Jahre berechnetes Forschungsvorhaben, das von fünf Mitarbeitern unter der Leitung von Prof. Dr. H. Trimborn, Bonn, durchgeführt wird.—Vergleichende Rechtssoziologie gehört zu den Arbeiten des Ethnologischen Institutes der Universität Leipzig.—Einzelprobleme aus dem Bereich des ethnologischen Rechtes werden in der seit 1953 wieder erscheinenden

Zeitschrift für Vergleichende Rechtswissenschaft einschliesslich der ethnologischen Rechtsforschung, Hrsg. Erich Pätsch, Stuttgart: Ferdinand Enke—1953 Bd. 56, 1954 Bd. 57

behandelt. Vgl. auch Bibliographie unter: Gräf, Höfner, Nippold, Oberem, Schott, Trimborn.

Immer sichtbarer wird die Tendenz, die Kunst der Naturvölker in Publikationen und musealen Ausstellungen herauszustellen. Gegenüber der Vorkriegszeit legen die meisten Völkerkunde-Museen grösseren Wert auf kleinere Wechselausstellungen—eine Lösung der Ausstellungstechnik, die allerdings zu einem Teil auch durch die Raumnot bedingt ist, bei denen die Vorliebe in der Wahl der "Kunstthemen" in die Augen springt (vgl. Celle, Frankfurt a.M., Heidelberg, Köln, Mannheim, München). Reich illustrierte Kunstbücher präsentieren die schönsten Plastiken aus den Beständen der Museen. Literatur über die Plastik der Naturvölker siehe Bibliographie unter: Herrmann, Heydrich und Froehlich, Hummel, Kutscher, Schlosser, von Sydow, Tischner, Ubbelohde-Doering. Über naturvölkische Musik vgl. S. Borris, Sociologus, Bd. 2; W. Danckert, Zeitschr. f. Ethnologie, Bd. 77; K. Reinhard, ebenda Bd. 79; M. Schneider, Tribus, Bd. 2 u. 3. Filmforschung siehe Göttingen S. 607.

REGIONALE ETHNOLOGIE

Der Umfang ethnologischer Forschungen und die Erweiterung unserer Kenntnisse zwingen immer mehr zu einer Spezialisierung der ethnologischen Untersuchungen auf ein regional begrenztes Gebiet. Es sei für diese geographisch begrenzten Forschungen, ausser auf die Beiträge in den deutschen Fachzeitschriften, auf die Bibliographie verwiesen und zwar für:

AFRIKA unter Baumann, Dammann, Dindinger, Drost, Hagel, Heydrich und

Froehlich, Höfner, Ittmann, Jensen, Kähler-Meyer, Klingenheben, Köhler, Krieger, Lehmann, Lukas, Nowack, Rhotert, Sölken, Straube, von Sydow, Wagner, Westermann, Wilhelm.

Die Zeitschrift "Geographische Rundschau" Hrsg. J. Wagner. Braunschweig: Westermann, 1954, 6. Jg., Nr. 10 behandelt ausschliesslich Themen über afrikanische Naturvölker. Mitgearbeitet haben: H. Abel, E. von Eickstedt und I. Schwidetzky, Ad. E. Jensen, K. Krieger, K. M. Sedlmeyer, P. Schebesta, D. Westermann, D. J. Wölfel.

Für afrikanische Sprachforschung sei besonders auf die Beiträge in der Zeitschrift "Afrika und Übersee" und die Arbeiten des Seminars für Afrikanische Sprachen der Universität Hamburg hingewiesen (vgl. S. 607).

AMERIKA unter Barthel, Disselhoff, Haberland, Krickeberg, Kutscher, Lips, Maximilian Prinz zu Wied, Müller, Ruben, Sahagun, Termer, Trimborn, Ubbelohde-Doering, Zerries, Zimmermann.

ASIEN unter Benzing, von Farkas, Findeisen, Gräf, Hentze, Hummel, Korvin-Krasinski, Kussmaul, Loehr, Nachtigall, Narr, Niggemeyer, von Oppenheim, Pritsak, Rathjens, Ruben, Sell, Stübel, von Wissmann, von Wissmann und Höfner.

OZEANIEN unter Damm, Günther, Kähler, Laufer, Lommel, Mühlmann, Nevermann, Oberem, Petri, Schlesier, Tischner.

ETHNOLOGISCHE ZEITSCHRIFTEN

Da die Kenntnis der deutschen ethnologischen Zeitschriften vorausgesetzt werden kann, sind in der Bibliographie nur einzelne Aufsätze von allgemeinem Interesse aufgeführt. Die bibliographischen Angaben über diese Zeitschriften: *Afrika und Übersee:* Hamburg; *Baessler-Archiv:* Berlin; *Ethnographisch-Archäologische Forschungen:* Berlin; *Jahrbuch des Museums für Völkerkunde zu Leipzig:* Leipzig; *Paideuma:* Frankfurt a.M.; *Sociologus:* Berlin; *Tribus:* Stuttgart; *Zeitschrift für Ethnologie:* Deutsche Ges. f. Völkerkunde und die monographischen Serien sind jeweils an dem Ort ihrer Herausgeberschaft erwähnt (s. S. 604 ff.). Es sei hier noch auf einige Zeitschriften hingewiesen, die, obwohl nicht Fachorgane ethnologischer Wissenschaft, auch Arbeiten aus dem Gebiet der Völkerkunde und ihrer Nachbarwissenschaften publizieren, wie z.B.

Forschungen und Fortschritte. Nachrichtenblatt der deutschen Wissenschaft und Technik. Hrsg. im Auftrage der Akademien der Wissenschaften zu Berlin, Göttingen, Heidelberg, Leipzig, München und Wien. Berlin: Akademie-Verlag.

Saeculum. Jahrbuch für Universalgeschichte. Hrsg. Georg Stadtmüller. Freiburg i.Br.—München: Karl Alber.

Studium Generale. Zeitschrift für die Einheit der Wissenschaften, ihrer Begriffsbildungen und Forschungsmethoden. Hrsg. eine Reihe von Wissenschaftlern verschiedener Disziplinen. Berlin, Göttingen, Heidelberg: Springer-Verlag.

Ural-Altaische Jahrbücher. Fortsetzung von "Ungarische Jahrbücher." Hrsg. Julius von Farkas. Wiesbaden: Harrassowitz.

Zeitschrift der Deutschen Morgenländischen Gesellschaft. Im Auftrage der Gesellschaft hrsg. von Hans Robert Roemer. Wiesbaden: Franz Steiner.

Zeitschrift für Missionswissenschaft und Religionswissenschaft. Veröffentlichung des Instituts für missionswissenschaftliche Forschungen. Münster i.W.: Aschendorff.

VÖLKERKUNDLICHE INSTITUTIONEN

Über die Tätigkeit völkerkundlicher Institutionen in Deutschland und ihre Organisation, gegliedert nach Universitätslehre, Museen, Instituten und Gesellschaften gibt der "International Directory of Anthropological Institutions" 1953, pp. 205 ff. Auskunft, so dass hier nur über die Tätigkeit dieser Einrichtungen während der Jahre 1952–1954 zu berichten ist und Änderungen innerhalb ihrer Zusammensetzung, sowie Ergänzungen anzufügen sind. Verhältnisse, die sich seit den Angaben im "Directory" an den einzelnen Universitäten, Museen und Instituten nicht geändert haben, bleiben unerwähnt.

Die Zentralvereinigung der deutschen Ethnologen, die DEUTSCHE GESELLSCHAFT FÜR VÖLKERKUNDE hat während der Berichtsjahre zwei Tagungen abgehalten, und zwar die erste 1952 vom 17.–20. April in Köln (Tagunsberichte s. Zeitschr. f. Ethnol., Bd. 77, pp. 270 f. und Tribus, N. F. Bd. 2 und 3, pp. 482 ff.). Das Schwergewicht bei der Wahl der Vortragsthemen bildete das Problem der Beziehungen zwischen der Völkerkunde und ihren Nachbarwissenschaften (vgl. W. Koppers, Ztschr. f. Ethnol. Bd. 78, pp. 1–16 und Mühlmann, Paideuma, Bd. V, pp. 207–219). Auf der zweiten Tagung vom 14.–17. Juni 1954 in Bremen stand die Berichterstattung über kürzlich abgeschlossene Expeditionen im Vordergrund. Es berichteten H. D. Disselhoff, München (Peru), F. W. Funke, Köln (Sumatra), E. Haberland, Frankfurt a.M. (Abessinien), R. Herzog, Göttingen (Nordafrika), K. Hissink, Frankfurt a.M. (Bolivien), H. Nachtigall, Mainz, (Columbien), E. Sulzmann, Mainz (Kongo), F. Termer, Hamburg (San Salvador, Guatemala) (vgl. Feldforschung, S. 597 ff.). W. Bierhenke, Hamburg sprach über seine Studienreise dürch Südund Westspanien, die er 1952 zur Untersuchung der dortigen Bauernkultur durchgeführt hat und K. Schlosser, Kiel, über heidnisch-christliche Mischreligionen in der Südafrikanischen Union nach Untersuchungen auf einer Studienreise im Jahr 1953. Ein Tagungsbericht erschien im *Sociologus,* Jg. 4, Heft 2.

Die jeweils vier Jahre umfassende Präsidentenschaft der Gesellschaft wechselte von Prof. Dr. Ad. E. Jensen, Frankfurt a.M., auf Prof. Dr. M. Heydrich, Köln, über.

Prof. Dr. Leonhard Schultze Jena wurde anlässlich seines 80 Geburtstages am 28. Mai 1952 zum Ehrenmitglied der Gesellschaft ernannt.

Das Organ der Gesellschaft ist die *Zeitschrift für Ethnologie.* Hrsg. von der Deutschen Gessellschaft für Völkerkunde e. V. Braunschweig: Limbach Verlag.

Es erschienen 1952, Bd. 77, Heft 1 u. 2; 1953, Bd. 78, Heft 1 u. 2; 1954, Bd. 79, Heft 1.

Über die Tätigkeit der örtlich gebundenen Institutionen wird in alphabethischer Reihenfolge nach Städten berichtet:

BERLIN:

An der Freien Universität in West-Berlin hatte Prof. Dr. R. Thurnwald den Lehrstuhl für Sozialpsychologie und Ethnologie bis zu seinem Tode am 19. Januar 1954 inne. Mit der kommissarischen Leitung des völkerkundlichen Institutes wurde bis zur Klärung der Nachfolge Frau Prof. Dr. S. Westphal-Hellbusch beauftragt, die als ausserplanmässiger Professor in den Lehrkörper aufgenommen wurde. Einen Lehrauftrag für Amerikanistik erhielt Dr. G. Kutscher. Die Bibliothek von R. Thurnwald wurde von der Freien Universität erworben.

Bis zu seinem Tode gab Prof. Dr. Thurnwald die von ihm 1952 begründete Zeitschrift *Sociologus,* Zeitschrift für empirische Soziologie, sozialpsychologische und ethnologische Forschung," Fortsetzung der "Zeitschrift für Völkerpsychologie und Soziologie"—"Soziologus" heraus. Jetzige Herausgeberin: Frau Hilde Thurnwald. Berlin: Duncker und Humblot.

Es erschienen 1952, Bd. 2, Heft 1 u. 2; 1953, Bd. 3, Heft 1 u. 2; 1954, Bd. 4, Heft 1 u. 2.

In Zusammenhang mit dem "Sociologus" erscheinen in zwangloser Folge: *Forschungen zur Sozialpsychologie und Ethnologie.* Berlin: Duncker und Humblot.

Die *Ibero-Amerikanische Bibliothek* (im Directory: Latein-Amerikanische Bibliothek) nahm 1954 wieder ihren alten Namen an. Sie gibt ausser der monographischen Serie *Quellenwerke zur alten Geschichte Amerikas,* aufgezeichnet in den Sprachen der Eingeborenen," Stuttgart: Kohlhammer (vgl. Sahagun) seit 1954 eine neue Serie heraus: *Monumenta Americana.* Berlin: Gebr. Mann, die in internationaler Zusammenarbeit unbekanntes und schwer zugängliches Material aus den Kulturen Amerikas, vor allem der Archäologie und der Kunstgeschichte, in Tafelwerken und Monographien veröffentlichen wird (vgl. G. Kutscher).

Das Museum für Völkerkunde in Berlin-

Dahlem hat in den Jahren 1952–1954 die Dauerausstellungen "Ostasien" und "Altamerika" eröffnet. Der Direktor des Museums, Prof. Dr. W. Krickeberg, ist nach Erreichung der Altersgrenze am 1. Oktober 1954 von seinem Posten zurückgetreten. Die Leitung übernahm Dr. H. D. Disselhoff, der bis dahin am Museum für Völkerkunde in München tätig war. W. Krickeberg ist in Verbindung mit den Wissenschaftlern des Museums Herausgeber der Zeitschrift *Baessler-Archiv*—Beiträge zur Völkerkunde. Berlin: Dietrich Reimer, Sie erscheint seit 1952 wieder in einer Neuen Folge:

1952, N. F. Bd. I (XXVI. Bd.); 1954, N. F. Bd. II (XXVII. Bd.).

An der Humboldt-Universität in Ost-Berlin hatte Frau Prof. Dr. S. Hellbusch bis zu ihrem Fortgang im Sommer 1953 die Leitung des 1952 gegründeten Institutes für Völkerkunde. Anschliessend wurde Dr. phil. habil. H. Kothe mit der kommissarischen Leitung beauftragt und im April 1954 zum Professor mit Lehrauftrag berufen. Nach seiner Überwechslung zur Deutschen Akademie der Wissenschaften in Berlin ging die kommissarische Leitung in die Hände der Kaukasiologin Frau Prof. Dr. Pätsch über. Vorlesungen über Afrika werden von Frau Dr. Hintze gehalten, die Ethnologie der anderen Erdteile lehren Assistenten und Aspiranten, d. h. Studenten, die vor ihrer Promotion stehen. Prof. Dr. Kothe vertritt weiter die Wirtschaftsethnologie und Doz. Dr. Voigt die Volkskunde. Während an den anderen Universitäten Deutschlands Völkerkunde und Volkskunde getrennte Lehrbereiche sind, sieht der Studienplan der Humboldt-Universität eine gemeinsame Grundausbildung in beiden Fächern vor.

Vom 25.–27. April 1952 fand die erste Tagung für Völkerkunde der Humboldt-Universität statt. Die Tagungsvorträge sind unter dem Titel *"Völkerforschung"* in Band V der "Veröffentlichungen des Institutes für deutsche Volkskunde" erschienen. Berlin: Akademie-Verlag, 1954, 199 pp. Ethnologische Beiträge lieferten: A. Friedrich, S. Hellbusch, R. Herzog, F. Hestermann, U. Hintze, W. Jacobeit, H. Kothe, E. Lips, W. Ruben. Eine zweite Tagung für Volks- und Völkerkunde folgte im September 1953, bei der die Betonung auf der Volkskunde lag. Ein Tagesbericht liegt bisher nicht vor.

H. Kothe und K. H. Otto geben seit 1953 die Zeitschrift *Ethnographisch-Archäologische Forschungen* heraus. Berlin: Deuscher Verlag der Wissenschaften, 1933, Bd. 1.

Die Beiträge stammen von R. Herzog, W. Jacobeit, H. Kothe, K. H. Otto, R. Weinhold, und D. Treide.

BONN:

Über die Tätigkeit auf rechtsethnologischem Gebiet an der Universität Bonn unter der Leitung von Prof. Dr. H. Trimborn, siehe "Rechtsethnologie" (S. 603). H. Trimborn und G. Eckert sind Herausgeber der Serie *"Kulturgeschichtliche Forschungen."* Braunschweig: Limbach Verlag. 1954 erschienen die Bände IV (s. Pohlhausen) und V (s. Petri).

BREMEN:

Während der Jahre 1952–1954 wurden im Übersee-Museum die Abteilungen "Fischerei der Naturvölker," "Australien" und "Alt-Ägypten" neu aufgestellt, die Abteilungen "Südsee" und "Schiffahrt der Naturvölker" erweitert. An Sonderausstellungen fanden statt:

Bremische Forscher in Übersee (Winter 1953/54).
Alt-Peru (Frühjahr 1954).
Bremen und die Völkerkunde (Juni bis September 1954).

CELLE:

Im Schloss ist ein Teil der Bestände des Museums für Völkerkunde, Berlin-Dahlem, untergebracht. Von August bis Oktober 1952 wurde eine Ausstellung "Indonesien, Kunst und Handwerk" veranstaltet. Den Ausstellungskatalog schrieb Dr. Horst Hartmann, der die Sammlungen betreut. Celle: Ströher. 48 pp.

FRANKFURT A.M.:

In der Serie *Studien zur Kulturkunde,* Wiesbaden: Steiner, herausgegeben vom Frobenius-Institut an der Johann Wolfgang Goethe-Universität, erschienen 1954 die

Bände XI (s. Zerries) und XII (s. Müller), Band XIII (s. Straube), Band XIV (s. Mühlmann) und Band XV (s. Müller) sind im Druck.—Über Expeditionsveröffentlichungen des Frobenius-Institutes vgl. Lommel, Niggenmeyer, Petri, Rhotert. Das Institut ist ferner Herausgeber der Zeitschrift *Paideuma,* Mitteilungen zur Kulturkunde. Wiesbaden: Harrassowitz. Es erschienen 1952, Bd. V, Heft 4 u. 5; 1953, Bd. V. Heft 6; 1954, Bd. V, Heft 7/8 und Bd. VI, Heft 1.

Sammlungsteile aus dem Felsbilder-Archiv des Frobenius-Institutes wurden 1954 in Ausstellungen in Amsterdam und Rotterdam gezeigt.

Die Sammlungen des Museums für Völkerkunde sind in einem Luftschutzbunker, geographisch geordnet, als Studiensammlungen benutzbar. Als Gast im Senckenberg-Museum veranstaltet das Museum jährlich Wechselausstellungen. 1952: Afrika, 1953: Melanesien, 1954: Kunstsinniges Indonesien.

Seit Kriegsende besitzt die Stadt- und Universitätsbibliothek die Bücherbestände des ehemaligen Reichs-Kolonialamtes, Berlin, die zum grössten Teil ethnologische Literatur enthalten und ca. 25,000 Bände umfassen. Mit Unterstützung der Deutschen Forschungsgemeinschaft ist es der Stadt- und Universitätsbibliothek möglich, Völkerkunde und Geographie als Sondersammelgebiete zu pflegen.

GÖTTINGEN:

Das Institut für Völkerkunde an der Universität hat seine ethnographischen Sammlungsbestände weiter ausgebaut. 1954 wurde ein Führer durch die Schausammlungen "Die Kulturen der aussereuropäischen Erdteile in Übersicht" Hrsg. H. Plischke: Göttingen, Deuerlichsche Buchhandlung, 101 pp. publiziert.

Das Institut für den Wissenschaftlichen Film verfolgt die Aufgabe, Forschungs- und Hochschul-Unterrichtsfilme herzustellen und zu verleihen. Sachbearbeiter für völkerkundliche Filme ist Dr. G. Spannaus. Als Ziel ist angestrebt, eine Enzyklopädie des ethnologischen Films anzufertigen, in der das aus in- und ausländischen Filmen gesammelte Material, nach bestimmten Themen und Gesichtspunkten geordnet, vorgelegt werden soll. Daneben besteht eine Kartothek über in- und ausländische Filme, sowie eine Bibliographie über die Literatur des wissenschaftlichen Films. Das Institut veröffentlicht Jahresverzeichnisse mit den Titeln der Filme. Für Unterrichtsfilme werden Beihefte voröffentlicht, die neben einer ausführlichen Beschreibung der Vorgänge im Film eine Einführung in die wissenschaftliche Problematik (mit Literaturangaben) bieten.—Kurzlehrgänge in Filmaufnahmetechnik unter besonderer Berücksichtigung von Expeditionsverhältnissen werden durchgeführt.

HAMBURG:

Als Nachfolger von Prof. Dr. A. Klingenheben ist Prof. Dr. J. Lukas zum Direktor des Seminars für Afrikanische Sprachen an der Universität ernannt worden. Die Arbeit des Seminars erstreckt sich auf die Erforschung, Bearbeitung und Lehre von Einzelsprachen Afrikas, auf die Erforschung der Beziehungen zwischen den Sprachen und Sprachgebieten Afrikas, ihrer typologischen Charakteristika und der Gliederung der afrikanischen Sprachen und bezieht auch die Geschichte, Kultur, Dichtung und Schrift der afrikanischen Völker in den Forschungs- und Lehrbetrieb ein.

Als Folge der "Zeitschrift für Eingeborenen-Sprachen" veröffentlicht das Seminar die Zeitschrift *Afrika und Übersee*—Sprachen, Kulturen. Hrsg. A. Klingenheben, J. Lukas, E. Kähler-Meyer, E. Dammann. Berlin: Dietrich Reimer.

Es erschienen 1952, Bd. XXXVI, Heft 1/2, 3, 4: 1953, Bd. XXXVII, Heft 1, 2, 3, 4; 1954, Bd. XXXVIII, Heft 1, 2, 3, 4.

Das Hamburgische Museum für Völkerkunde und Vorgeschichte hat 1952 und 1954 die Schausammlungen "Europa" und "Südsee" wiedereröffnet. 1954 fand eine Sonderausstellung "Mit George Catlin bei den Indianern" statt. Das Museum gibt folgende Serien heraus, die alle im Selbstverlag erscheinen: *Mitteilungen aus dem Museum für Völkerkunde* in Hamburg (s. Rathjens); *Monographien zur Völkerkunde* (s. Lommel); *Beiträge zur mittelamerikanischen Völkerkunde* (s. W. Haberland,

G. Zimmermann); *Wegweiser zur Völkerkunde.* 1952, Heft 2, A. Hermann, Die Welt der Fellachen. Einführung in die Schausammlung "Neuägyptische Volkskunde" 39 pp.—1954, Heft 3, Ulla Johansen, Die Ornamentik der Jakuten, 205 pp., 71 Abb. u. 13 Taf.

Über die Sammlungen des Museums aus der Romania berichtete W. Bierhenke in der Ztschr. f. Ethnol., Bd. 78, pp. 276–292.

HANNOVER:

Im "Landesmuseum" werden seit 1954 die völkerkundlichen Sammlungen (Afrika, Ost- und Mittelasien, Peru, Südsee), die seit dem Kriege magaziniert waren und vorher zu der Abteilung Urgeschichte gehörten, als Sonderabteilung geführt und von Dr. G. Koch bearbeitet. Es besteht der Plan, die völkerkundliche Abteilung des Museums im Jahre 1955 zu eröffnen.

HEIDELBERG:

Aus der völkerkundlichen Sammlung der "Josefine und Eduard von Portheim-Stiftung" (Leiter: Dr. F. Herrmann), die im ganzen noch nicht wieder eröffnet ist, wurden in Sonderausstellungen der Öffentlichkeit zugänglich gemacht:

Ozeanische und Afrikanische Plastik.
Masken exotischer Völker.
Kunst Indonesiens.
Meisterliches Kunsthandwerk fremder Länder.
Götter und Kulte Asiens.

JENA:

Der Lehrstuhl für Anthropologie und Völkerkunde ist mit Prof. Dr. B. Struck besetzt. Assistent ist Dr. D. Drost. Das Institut besitzt eine kleine Sammlung anthropologischer und ethnologischer Gegenstände. Aus Anlass des 65. Geburtstages von B. Struck erschienen in der "Wissenschaftlichen Zeitschrift der Friedrich-Schiller-Universität Jena" (Jg. 3, 1953/54, Math.-naturwissenschaftliche Reihe, Heft 1) mehrere Aufsätze ethnologischen Inhaltes, die dem Jubilar gewidmet sind und zwar von H. Bellmann, D. Drost, K. Günther, F. Hestermann, O. Köhler, K. Schlosser, D. Westermann. J. Bescherer berichtete ebenda pp. 3–12 "Zur Geschichte des Institutes für Anthropologie und Völkerkunde an der Friedrich-Schiller-Universität Jena in den Jahren 1936 bis 1953."

KIEL:

Das Museum für Völkerkunde der Universität hat 1952 mit der Herausgabe einer neuen Serie begonnen: *Arbeiten aus dem Museum für Völkerkunde der Universität Kiel.* Kiel: G. Mühlau. (s. Schlosser).

KÖLN:

Das Rautenstrauch-Joest-Museum für Völkerkunde de Stadt Köln konnte 1952 einen Teil seiner Schausammlungen wieder eröffnen. In den Jahren 1952–1954 fanden folgende Sonderausstellungen statt:

Exotische Plastik aus der Sammlung K. Clausmeyer.
Älteste und neueste chinesische Kunst.
Die Kunst des Schwarzen Erdteils.
Indische Kunst (in Verbindung mit der "All-India Fine Arts and Crafts Society, New Delhi).
Exotische Textilien (Knüpfen, Weben, Färben).
1954 erschien Beiheft 1 der *Ethnologica* (s. Heydrich und Froehlich).

LEIPZIG:

Das Ethnologische Institut an der Universität, dem Prof. Dr. J. Lips bis zu seinem Tode im Januar 1950 vorstand, wird seit 1952 von Frau Dr. E. Lips kommissarisch geleitet. Es ist mit dem Institut für Vergleichende Rechtssoziologie verschmolzen und trägt jetzt den Namen "Julius Lips-Institut für Ethnologie und Vergleichende Rechtssoziologie." Die speziellen Forschungsgebiete sind Völkerkunde Amerikas, unter besonderer Berücksichtigung Nordamerikas und die Erforschung des primitiven Rechtes. Das Institut besitzt eine kleinere Studiensammlung ethnographischer Gegenstände.

Das Museum für Völkerkunde, Direktor Dr. S. Hummel, hat 1952 mit der Wiederaufstellung der Sammlungen begonnen. Anlässlich des 85jährigen Bestehens des Museums im Oktober 1954 wurden die Schausammlungen "Ozeanien" und "Indonesien" wieder der Öffentlichkeit zugänglich gemacht.

Das Museum gibt das *Jahrbuch des Museums für Völkerkunde zu Leipzig,* Leipzig:

Harrassowitz heraus. Es erschienen 1952, Bd. X (1926/51); 1953, Bd. XI (1952); 1954, Bd. XII (1953).

Die Bände enthalten Berichte über die Tätigkeit des Museums, sowie Aufsätze, die in Beziehung zu den Sammlungen des Museums stehen, darüberhinaus auch Arbeiten ethnologischer Problemstellungen.

MAINZ:

Das Institut für Völkerkunde der Universität hat 1952 mit der Herausgabe einer Serie begonnen: *Mainzer Studien zur Kultur- und Völkerkunde,* Bd. I, 1954 (s. Korvin-Krasinski); Bd. II, G. Rudnitzky: Die Aussage über das Auge des Horus. (Maschinenmanuskript, 102 pp.).

Prof. Dr. H. Baumann hat einen unbezahlten Lehrauftrag für Völkerkunde an der Universität, Prof. Dr. W. E. Mühlmann, der als Soziologie liest, dessen Forschungen jedoch weitgehend mit der ethnologischen Wissenschaft verknüpft sind, erhielt 1954 eine Diäten-Dozentur für Soziologie.

MANNHEIM:

Aus den völkerkundlichen Sammlungen der Städtischen Museen (Zeughaus) wurde von 1952–1954 eine Sonderausstellung "Kunstwerke aus der Südsee" gezeigt. Zur Zeit wird mit Hilfe der Carl Reiss-Stiftung das Zeughaus zu einem Museum ausgebaut, in dem alle Museumsschätze Mannheims vereint werden sollen. Die anthropologisch-völkerkundlichen und urgeschichtlichen Bestände werden in einem Stockwerk dieses zukünftigen "Reiss-Museums" neuzeitlich aufgebaut. Die Eröffnung ist für Mai 1955 geplant.

MÜNCHEN:

Prof. Dr. H. Ubbelohde-Doering, der Direktor des Museums für Völkerkunde, hat eine Honorarprofessur für Völkerkunde an der Universität. Dr. H. D. Disselhoff übernahm am 1. Oktober 1954 die Leitung des Museums für Völkerkunde in Berlin.—Nachdem das Museum in Zusammenarbeit mit dem Amerika-Haus zwei grössere Ausstellungen in den Berichtsjahren zeigen konnte: 1952 "Kunst der Südsee" und 1953: "Afrikanische Kunst," wurde 1954 in den wiederaufgebauten Sälen des Museums die Ausstellung "Asiatische Kunst" eröffnet. Zu allen drei Ausstellungen liegen illustrierte Kataloge vor.

OFFENBACH:

Das Deutsche Ledermuseum verfügt über ethnographische Lederarbeiten aus Amerika, Asien und Afrika. Darüberhinaus ist in diesem Museum besonders eindrucksvoll die ca 5000 Figuren umfassende Sammlung früher Schattenspiele aus China, Siam, Indien und Indonesien.—Im Sommer 1954 wurde gemeinsam mit dem Museum für Völkerkunde, Frankfurt a. M., eine Ausstellung "Kunsthandwerk aus Afrika" gezeigt.

STUTTGART:

Das Museum für Länder- und Völkerkunde, Lindenmuseum, konnte im Dezember 1954 den Wiederaufbau seines Gebäudes beenden. Von 1952–1954 wurde die Sonderausstellung "Naturvölker im Britischen Commonwealth" gezeigt, zwei neue Ausstellungen: "Die Naturvölker Gesamtamerikas" und "Tibet" sind zur Zeit in Vorbereitung. Das seit 1951 in Neuer Folge erscheinende *"Jahrbuch des Linden-Museums"* hat ab 1952 seinen Titel geändert: *Tribus*—Jahrbuch des Lindenmuseums Stuttgart. Hrsg. Julius F. Glück und Fritz Jäger. Stuttgart: Museum für Länder- und Völkerkunde und Württembergischer Verein für Handelsgeographie 1953 N. F. Bd. 2/3 (1952 u. 1953), 559 pp.

Band 4/5 befindet sich im Druck.

Generalkonsul Dr. Th. Wanner, der Vorsitzende des Württembergischen Vereins für Handelsgeographie, der Träger des Museums ist, schied aus Altersgründen aus. Neuer Vorsitzender wurde Kultusminister a. D. Dr. Th. Bäuerle.

ULM:

Im Museum der Stadt Ulm befindet sich eine kleine Sammlung afrikanischer Ethnographica, die von dem Ulmer Kaufmann Weickmann im 17. Jahrhundert zusammengetragen wurde. Sie ist zur Zeit nicht zugänglich, soll jedoch im Laufe des Jahres 1955 ausgestellt werden.

WEIMAR:

Das "Staatliche Museum für Ur- und Frühgeschichte Thüringens" besitzt eth-

nographische Bestände aus Afrika (Togo, Kamerun, Angola, Westafrika), Peru, Australien und Ozeanien. Die Aufstellung hat 1953 mit den Abteilungen "Ozeanien" und "Australien" begonnen.

WITTENBERG:

Das Naturkundlich-völkerkundliche Museum J. Riemer besitzt ethnographische Sammlungen aus Afrika und der Südsee.

Die deutsche Ethnologie hatte in den Berichtsjahren den Tod zweier hervorragender Wissenschaftler zu beklagen. Unerwartet traf die Nachricht vom Tode Dr. Günther Wagners die Fachkollegen, der als Regierungsethnologe am 21. August 1952 aus dem Leben schied. Die Zeitschriften "Afrika und Ubersee," Bd. XXXVII, Heft 2, "Zeitschrift für Ethnologie," Band 78, Heft 1, und "Sociologus," Bd. 2, Heft 2, würdigten ihn und seine Arbeit.—Am 19. Januar 1954 starb Prof. Dr. Richard Thurnwald, Berlin. Würdigungen seines Lebenswerkes brachten die Zeitschriften "Sociologus," Bd. 4, Heft 1, und "Zeitschrift f. verge Rechtswissenschaft," Bd. 57.

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Austria and Switzerland

A Review of Anthropology, Ethnology, and Prehistoric Archeology for 1952-1954

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AUSTRIA [1]

IVth INTERNATIONAL CONGRESS OF ANTHROPOLOGY AND ETHNOLOGY

THE outstanding event in the period in question was the Congress held in Vienna in September, 1952. While the *Proceedings* of the first three sessions of the Congress (London, Copenhagen, Brussels) contain only brief abstracts, the editorial committee of the IVth Congress decided to publish in full length those papers of which manuscripts were submitted in time. The first volume, dealing with anthropological subjects, has been published (Heine-Geldern, Koppers, and Weninger, eds., 1954), while the second (general ethnology, regional ethnology of America, Oceania, and Asia) is in press. The third volume will contain papers on the ethnology of Africa and Europe, on the prehistory of Eurasia, and on linguistics, as well as the proceedings of the symposium on urgent research needed in order to save for science data on cultures and languages threatened by disappearance in the near future. The latter will be issued also as a separate publication.

[1] In the present paper the terms "anthropology" and "ethnology" will be applied according to Continental European usage: "Anthropology" stands for "physical anthropology," while "ethnology" comprises all subjects dealing with culture.

ANTHROPOLOGY

The first volume of Father Schebesta's work on the Negritos of Asia (Schebesta, 1952b) deals with the geographic distribution, the surroundings, demography, anthropology, physiology, and pathology of Andamanese, Semang, and Aeta. Apart from the results of his own field work among the two last-named groups, the author has made ample use of the literature on the subject. The book includes chapters by Margarete Weninger (1952a) on the dermatoglyphics and by R. Routil (1952a) on the blood-groups of the Negrito and on Negrito craniology and osteology. Schebesta points out that none of the Negrito groups is pure-blooded and that there is evidence of ancient hybridization with Australoids, Melanesoids, etc. Furthermore, he comes to the conclusion that African Pygmies and Asiatic Negritos are not racially related. This was confirmed by M. Weninger (1952a, 1953a, b) on the basis of her studies of hand and finger prints and by M. Hohenegger (1952, 1954) who com-

pared the measurements and the growth of Negritos, Pygmies, and Bushmen.

The Anthropological Society of Vienna held a symposium on the biological and morphological problems concerning human and animal pygmy races (Weninger, M., ed., 1954b). An important paper on the morphology of Bushmen and Hottentot teeth by Anna Kiernberger is in press and will be published by the Austrian Academy of Sciences. For a preliminary note see Kierenberger, 1954.

In the course of his expedition to Central India in 1938–1939, W. Koppers took anthropological measurements of several hundred men and women of the Bhil, Nahal, Korku, Baiga, and Gond tribes, as well as numerous photographs of racial types. This material was analyzed by M. Weninger (1952b), who came to the conclusion that all the tribes concerned are related to the Veddas of Ceylon and should be classed as Proto-Australoids with a slight and probably very ancient Mongoloid strain.

In a study (1953a) of Northwest African anthropology, Josef Weninger distinguishes two main dolichocephalic types, one of which is said to be related to the Cro-Magnon race. The same author deals with the anthropology of the Mingrelians, using material obtained in prisoner-of-war camps during the First World War (Weninger, J., in press). In another article (1952) Professor Weninger discusses the problem of brachycephalization in Europe and Southwest Asia and shows that it must be due to biological causes since in most cases change from the prevalence of dolichocephaly to that of brachycephaly does not correspond to any change of population. H. Zwiauer (1954) came to similar results with regard to American Indians, i.e., that the latters' gradual brachycephalization, observable in skulls dating from the first millennium A. D. and greatly accelerated after 1000 A. D., is due, not to the immigration of some new racial type from Asia, but to biological causes.

Research in the field of paleoanthropology concerned chiefly Bronze Age material. Josef and Margarete Weninger investigated the skeletal remains from the Early Bronze Age cemetery of Schleinbach, Lower Austria (Weninger, J., 1954; Weninger, M., 1954). For further reports on Bronze Age human remains see Jungwirth (1952) and Routil (1953). J. Weninger (1953b) described a young noblewoman's skull from Ephesus, dating from about the beginning of our era. A paper on an Avare mandible with a torus mandibularis, by M. Weninger, will be published in *Homo,* Vol. V. Wilhelm Ehgartner is working on an important series of human remains from the Early Bronze Age cemetery of Hainburg, Lower Austria, and on another from the famous cemetery of Hallstatt.

A paper on the variability of the human iris, read by J. Weninger at the meeting of the German Anthropological Society in Münster, 1954, will be published in *Homo,* Vol. V. For another paper on the same subject see Gürtler (1954).

A considerable amount of work was done on dermatoglyphics (Weninger, M., 1952a; 1953a, b, c; Routil, 1952/53). Weninger (1953d) came to the conclusion that there is no statistically discernible correlation between the quantitative values of the typical dermatoglyphic patterns and the various blood groups.

The main interest of the Anthropological Institute of the University of Vienna concerns genetics. For that purpose a large-scale investigation of twins is being made, showing the similarity in the reactions and gestures of identical twins.

Papers in the field of genetics were contributed by Routil (1952b, 1954) and by Thums and Rieger (1954). R. Zdansky (1954) discussed the problem of evolution from the point of view of experimental biology. For research on blood-groups see Speiser and Mohl (1953) and Speiser (1954a, b).

ETHNOLOGY

The Vienna School of Ethnology

According to a widespread but erroneous notion the terms "Vienna School of Ethnology" and "Kulturkreis Doctrine" are thought to be practically synonyms. It must be emphasized that a "Vienna School" in

that sense has been non-existent for a good number of years. Father Schmidt, who was the main propounder of the "Kulturkreis" theory, left Vienna in 1938. Koppers, who originally accepted that theory, became more and more doubtful of its correctness ever since 1931, and in the end abandoned it. Heine-Geldern never accepted it and was one of its early critics. Haekel and Jettmar contributed substantially toward disproving its validity. At present, it has not a single advocate left among Austrian ethnologists.

This does not affect the historical character of the present Vienna School. On the contrary, being freed from the fetters of the "Kulturkreise," it was better able to develop along truly historical lines. Its principles were clearly stated by Koppers (1952b, 1953/54, 1954). They agree in the main with those of the majority of Central European and Scandinavian ethnologists and a good number of American ethnologists, particularly of the older generation.

As stressed by Koppers, Austrian ethnologists, while maintaining that the historical approach should remain the backbone of ethnological theory and methods, admit that other views and aspects (social anthropology, functionalism, culture patterns, etc.) are in themselves fully justified (Koppers, 1954, p. 143). Students were repeatedly advised to go to England for a term or two in order to become acquainted with lines of thought and methods other than those which they are taught in Vienna.

The Vienna School's historical point of view implies, of course, the necessity of close collaboration between ethnology and archeology. For that reason prehistoric archeology, excepting only that of Europe, is included in this section on ethnology. Most of the work of Heine-Geldern and Jettmar and a good deal of that of Haekel and Wölfel is concerned as much with archeological as with ethnological facts and methods. From the theoretical point of view the question of cooperation of ethnology and prehistoric archeology was discussed by Koppers (1952b, 1953, 1954). In his appraisal of the Wenner-Gren Foundation's 1952 International Symposium on Anthropology he pointed out to what extent integration of ethnological and archeological research has been achieved in America (Koppers, 1953/54, pp. 48–57).

During the period covered by the present *Yearbook* the Vienna University's Institute of Ethnology (Institut für Völkerkunde) regained that international character of its student body which it had before the war. While the number of students at the University as a whole has fallen to half of what it was in 1948, that of students of ethnology has been increasing constantly, due in part to the relatively large number of registrations of foreign students (from Egypt, Germany, India, Italy, Holland, Yugoslavia, etc., and particularly from the United States). At present the Institute is attended by seventy students, more than two-thirds of whom intend to write their Ph. D. theses on ethnological subjects. A great stimulus to study and research was given by the foundation of the "Völkerkundliche Arbeitsgemeinschaft," an association corresponding to students' anthropology clubs at American universities, but also comprising in its membership many of the Institute's alumni. It publishes a bi-annual journal, *Wiener Völkerkundliche Mitteilungen,* with articles in German and English.

The Institute published Volumes IX and X of its main series, "Wiener Beiträge zur Kulturgeschichte und Linguistik." Volume IX, *Kultur und Sprache* was dedicated to the IVth International Congress of Anthropological and Ethnological Sciences and, thanks to a grant from the Wenner-Gren Foundation, was distributed free to the members of the Congress. Volume X contains one of the last works of Father Schmidt, dealing with pregnancy and birth customs. Volume XI, a book by F. Hančar on the horse in prehistory and early history, is in press and is to be published in June, 1955. Furthermore, the Institute published Numbers 3 and 4 of its second series, "Acta Ethnologica et Linguistica" (Weninger, M., 1952b; Stillfried, 1953). Number 5, to be published in 1955, will contain a report on new research among the Negritos by Father Rahmann, professor at the University of Cebu, Philippines.

In 1954, the Institute celebrated its twenty-fifth anniversary. This is to be commemorated by an anniversary volume comprising thirty papers in English, German, French, and Italian by the Institute's alumni. Publication has been delayed, but the manuscript is ready, and it is hoped that it can go into press in the near future.

General Ethnology

Writing on the problems of matrilinear societies, J. Haekel (1953/54) came to the conclusion that matrilinear traits and even full-blown matrilinear societies may have originated from a variety of different causes and that there is neither proof of Father Schmidt's theory according to which they originated from the private possession of land by the women, nor the existence of a world-wide matrilinear "Kulturkreis." In an article on totemism, Haekel (1953a) establishes its different types in order to provide a firm basis for future research. He tends to assume a polygenetic origin of the various phenomena comprised in the term. In a third paper (1953b), he discusses the meaning of such terms as "manitu" (Algonkian), "wakonda" (Sioux), "ingal" (Melanesia), "teo-tl" (Aztec), etc., and their implications for our understanding of religious concepts.

Koppers' *Primitive Man and his World Picture* (1952a) is not a mere translation of his *Der Urmensch und sein Weltbild,* but a revised edition. It contains excellent chapters on primitive religion, based largely on the author's own research in India and Tierra del Fuego, and, among others, a stimulating and suggestive sketch of the history of Indo-Aryan and Hindu religion as seen from an ethnologist's point of view.

It is well known that certain cosmological concepts, found in the Old World as well as in America, establish a definite relation between world directions and certain colors. The subject has been investigated by Karl Anton Nowotny who made a comprehensive survey of the various systems concerned and studied their interrelations. His book, *Farben und Weltrichtungen,* is in press and will be published as a supplement to the "International Archives of Ethnography," Leiden, in 1955.

R. Meister (1952) deals with the origin and development of education in prehistoric and early historic cultures as seen from an educator's and philosopher's point of view. W. Svoboda (1954) wrote on the same subject as an ethnologist and discussed the various theories that have been proposed. In another paper, Svoboda (1953) emphasizes the importance of collecting and studying the historical traditions of non-literate peoples, supporting his argument with documentary evidence from Africa.

H. Manndorff (1953b) gave a brief survey of the origin and age of cultivated grains. Using both ethnological and archeological evidence, K. Jettmar (1952/53) refutes the theory that the domestication of the reindeer preceded that of cattle and of the horse. Reviewing the various theories concerning the origin of domestication, he shows (1953a) that the problem is far more complicated than either Eduard Hahn or Father Schmidt had assumed. He thinks, however, that both Hahn's and Schmidt's theories contain ideas that still may prove useful, though only in a strongly modified form. See also Jettmar (1954b) on the origin and spread of domestication in prehistoric Asia.

Erich Drobec, who is both a physician and an ethnologist, contributed several papers on primitive medicine (Drobec, 1952; 1953a, b; 1954a, b).

Studying records made in New Guinea by Rudolf Pöch half a century ago, W. Graf (1952) demonstrates the importance of the individual in primitive music and points out variations due to the personality of the performer. In another article Graf (1954) gives a survey of comparative ethnological research in the field of music done by Austrian scholars. H. Bernatzik (1953) made interesting experiments in order to establish the intensity and character of artistic talent among various ethnic groups of southeastern Asia. However, his conclusions are unacceptable, due to his having overemphasized the importance of race and

given insufficient attention to stylistic tradition.

For an interesting attempt to determine ancient cultural strata in the Mediterranean region, Africa, and Europe, see Wölfel, 1954.

America

K. A. Nowotny (1954) contributed to Bernatzik's "Neue Grosse Völkerkunde" a volume on American ethnography. H. Zwiauer's survey (1952) of American archeology was written in order to give students of European prehistory a general idea of the subject.

Pursuing his study of Northwest Coast cultures, a Wenner-Gren Foundation project, J. Haekel (1954c) completed articles on the supreme deity of Northwest Coast tribes, on initiation rites and secret societies, and on the disposal of the dead. Two other papers deal with the problem of correlations between prehistoric and recent cultures in North America (Haekel, 1953c, d). In an article on the belief in an "alter ego" or "double" in the higher civilizations of America, Haekel (1952) comes to the conclusion that it was derived from the soul concepts of American Indian hunting tribes. However, he considers it as possible that its representation in art may have been influenced by Chinese art of the Shang and Chou periods.

K. A. Nowotny's catalogue of Mexican codices, with interpretations of their contents, has been completed and will be published in the series "Monumenta Americana," Berlin.

One of the Vienna Ethnographical Museum's most precious possessions, a finely plaited belt completely covered with beads made from snail shells and with a grotesque human face in the center, had always been thought to be of ancient West African origin. In an excellent little treatise, based on historical, technical, and stylistic research, Annemarie Schweeger-Hefel (1951/52) showed that it comes from the West Indies, that it dates from the sixteenth century, and that it must have been brought to Austria in the time of Charles V.

Haekel's attempt (1952/53) to establish a sequence of cultural strata in Brazil is of considerable interest, even though he himself emphasizes the provisional character of his results; see also Baldus' criticism (1954) and Haekel's reply (1954a). Etta Becker-Donner (1951/52; 1953) continued her publication of the Vienna Ethnographical Museum's important archeological collections from northwestern Argentina. In 1954, she did field work in southwestern Brazil. F. Hampl (1952) analyzed the traditions concerning the origin of the Inca Dynasty.

Continuing his research on pre-Columbian trans-Pacific relations, a Wenner-Gren Foundation project, Heine-Geldern (1954a) demonstrated close correspondences between Asiatic and South American metal objects and metallurgical processes and concluded that South American metallurgy was of Asiatic origin. Revising South American chronology according to the results of carbon 14 datings, he tried to establish a tentative sequence of Asiatic and South American contacts for the period from 700 B. C. to the beginning of our era. An article dealing with the problem of Old and New World relations from the point of view of general principles of ethnology is in press and will be published by the Austrian Academy of Sciences. For contacts between Polynesia and South America see Heine-Geldern, 1952.

Australia and Oceania

Haekel (1954b) investigated the correlation between prehistoric and recent cultures of Australia and tried to establish a relative chronology. H. Manndorff (1954a) contributed a brief ethnography of Australia. Käthe Hye-Kerkdal (1954) deals with boomerang throwing, kangaroo rat, and similar Australian games. S. Wurm (1954a, b) wrote two brief papers on languages of Papua.

Irmgard Moschner's description of the Vienna Museum's important collection of Oceanian objects brought back by Cook and purchased in London in 1806, is ready for the press and will be published in Vol. X of "Archiv für Völkerkunde" in 1955.

B. Stillfried (1953) analyzed the social

systems of Micronesia and came to the conclusion that an older stratum, corresponding to Polynesian social institutions, was overlaid by Indonesian and Melanesian influences which never reached the Polynesian islands.

Heine-Geldern (1952) refuted Heyerdahl's theory of the American origin of the Polynesians, as well as the wide-spread notion according to which the Polynesians accomplished some of their long-range voyages with the help of rafts. At the same time he tried to give an explanation for the introduction of American cotton plants into Polynesia in pre-European times.

Asia

The second volume of Father Schebesta's work on the Negritos, dealing with their economy and their social institutions, is not yet available in Vienna at the time of writing (Schebesta, 1954). A paper on Negrito shamanism by E. Stiglmayr (1954) deserves mention.

The Vienna University's Institute of Ethnology owns one of the largest Japanese libraries in Europe. Dr. Alexander Slawik, who is in charge of it, and his students specialize in research on the ethnology and archeology of the Far East, using mainly Japanese sources and thus making their contents accessible to western scholars. Slawik (1952) dealt with the social and religious significance of Ainu and Gilyak bear-cults and showed that the problems involved are far more complicated than had been realized. In another paper (1954), he discussed certain ancient Japanese socio-religious customs and their parallels in Eastern and Southeastern Asia, and in Oceania. His manuscript on the cultural history of the Ainu is ready to go into press. H. Melichar (1952) wrote on the prehistoric archeology of Formosa and Botel Tobago. Erika Purse-Stanek (1953) dealt with stone implements from these same islands which, according to local traditions, are said to have been used for agricultural purposes. Her paper (1954) on recent research among the Yami of Botel Tobago, based on a Japanese report, is particularly welcome in view of the scarcity of information on that island in Western literature. Professor Nobori Kaneko, a guest scholar at the Institute, contributed an interesting paper (1954) on the oldest music of Japan.

Father Frick, formerly a missionary in the West China border-land, published a book and several papers dealing with that region (Frick, 1954a, b, c).

R. Nebesky-Wojkowitz spent almost three years (1950–1953) in the Sikkim Himalayas, studying Lepcha culture, doing research on Tibetan Buddhist and pre-Buddhist religion, and collecting and translating Tibetan and Lepcha books (Nebesky-Wojkowitz, 1952a, b, c, d; 1953a, b, c; 1954). His book, *Oracles and Demons of Tibet; the Cult and Iconography of Tibetan Protective Deities,* is in press.

While engaged in an UNESCO project in southern India, H. Manndorff (1954b) investigated the social structure of Canarese villages. Ghaus Ansari, a Mohammedan from India studying ethnology in Vienna, wrote an able paper (1954) on caste among Indian Muslims, a subject hitherto almost totally neglected.

An article by Heine-Geldern on the end of the Harappa culture and the coming of the Aryans, a Wenner-Gren Foundation project, is ready to go into press. The destruction of the ancient cities of the Indus region by the invading Aryans is being dated between 1200 and 1000 B. C.

Vienna is fortunate in having two scholars who are thoroughly familiar with the relevant Russian literature, F. Hančar and K. Jettmar. Both have contributed toward making the results of Russian scholars accessible to western readers and toward clearing up many intricate problems of Central and North Asiatic archeology and ethnology. Both Hančar and Jettmar have shown that horse nomadism, far from being as old as Father Schmidt and other scholars thought, originated only in the first millennium B. C. Hančar (1952a) stressed the importance of the high development of horse breeding in ancient Bactria and Sogdiana for the ethnic and political history of Central and East Asia. Jettmar

(1953b; 1954a) showed that riding spread into the steppes from Europe and Transcaucasia in the early part of the first millennium B. C., with the result that peaceful tribes of agriculturists and shepherds changed into those warrior nomads who were the terror of Asia and Europe. Both Hančar and Jettmar interpreted some of the famous finds from the Pasyryk kurgans in the Altai mountains (Hančar, 1952b; Jettmar, 1952c). Jettmar (1954b) traced the gradual spread of stock-raising from the first center of domestication in southwestern Asia through Asia and eastern Europe in the course of the third and second millennia B. C. (see also Jettmar, 1952/53; 1953a). Other papers by Jettmar (1951/52; 1952a, b; 1954c) deal with the oldest traces of Indo-European peoples in Central Asia, with the origin of the Tungus and their culture, with the social system of the Selkup of Siberia, and with the much discussed problem of the origin of the Huns. He comes to the conclusion that the bulk of the Hun people comprised elements of various ethnic origin, but that their leading class can be traced back to Mongolia and was in some way connected with the Hsiung-nu. To Hančar (1953) we owe a comprehensive treatise on the paleolithic cultures of Caucasia, Armenia, and Russian Turkestan.

An important article by the late Robert Bleichsteiner (1951/52) deals with ceremonial drinking customs among Turks and Mongols and their social and cosmological background. No less interesting is the same author's paper (1953) on the cult of certain goddesses, comparable to the German "Perchta" or "Frau Holle," still surviving from pre-Islamic times among the Iranians and Turks of Russian Turkestan and the Pamirs. A third treatise (1952) concerns masked dances and performances in Caucasia.

Africa

W. Hirschberg's ethnology of Africa (1954a) deserves the first place among Austrian publications on that continent, not only for its size and wide scope, but also for its stimulating discussions of the various historical problems involved. The same author commented (1954b) on the impoverishment of Bushman culture as compared to its older aspect, known through prehistoric finds.

Father Schebesta (1952a) came to the conclusion that the Bira-Sua and Balese-Efe language groups of the Ituri region contain an ancient element probably derived from the original Pygmy language. At the time of writing Father Schebesta again is in Central Africa in order to complete his research on the Pygmy languages.

Kenneth Honea (1954), one of the Institute's American students, analyzed an intricate section of Dinka religion and its connection with the tribe's socio-political system. Walter Svoboda's thesis on the history of the Galla tribes will be ready for publication in the near future.

Anna Hohenwart-Gerlachstein (1952) investigated the institution of brother-sister marriage in ancient Egypt and in Negro Africa, pointing out its mythological and cosmological background. In another paper (1954) she shows that several waves of megalithic cultures entered Egypt in prehistoric and historic times, and observes various megalithic traits in Egyptian religion. Mohamed Riad (1954), an Egyptian student at the Institute, gave an interesting description of modern Egyptian funerary rites and tried to show that certain of their features are survivals from ancient Egypt. At the time of writing he is doing field work in the Sudan in order to collect material for his thesis on kingship among Sudanese tribes. Walter Hirschberg is at present engaged in the study of Egyptian influence in Negro Africa, exercised through the intermediary of the kingdoms of Napata and Meroe.

Father Ernst Bannerth, a specialist in Arabic language and culture, paid several visits to Morocco and Algeria and did research on the dialects, history, social organization, and religion of North African Arabs. A brief trip to northern Morocco gave H. Manndorff (1953a) the opportunity for observations concerning the similarity of Rif Kabyle culture to the alpine culture of Europe.

Although written for the general public, L. Zöhrer's book (1954a) on his expeditions into the Sahara contains valuable information on the various groups of Tuareg among whom he spent more than three years. On the basis of the numerous ancient rock engravings in the Sahara, he tried to elucidate the paleoethnology of that area (Zöhrer, 1952/53). A special study (1953) deals with Tuareg swords, many of which have blades of European origin dating from the sixteenth and seventeenth centuries.

Two of the Institute's students, Peter Fuchs and Andreas Kronenberg, visited the Tuareg of the Hoggar mountains in 1952, studying particularly their social and political organization (Fuchs, 1953; Kronenberg, 1953a). In 1953, Kronenberg spent several weeks in an Algerian village of Shilha-speaking Berbers, studying their social institutions and the local remnants of pre-Islamic religion (Kronenberg, 1953b). In 1954, he visited Tibesti, one of the least known regions of Africa, and achieved valuable results. A detailed report will be included in his Ph. D. thesis, but for a preliminary note see Kronenberg (1954).

Europe

Keen interest in the remnants of old European folk culture, still alive in many parts of Austria, is shown not only by professional scholars, but by large sections of the public, school teachers, parish priests, local officials, etc. A bibliography of the relevant literature from only one of the nine provinces of Austria lists 155 titles for only one year. It would be a hopeless task to attempt in the space available a reasonably complete survey of the work done in this field. Only a few of the more important works will be mentioned.

Österreichische Volkskunde für Jedermann contains chapters by its editor, Adolf Mais (1952), and several other authors on practically every aspect of Austrian folk culture. Although written for the general public, it may be recommended as a first introduction into the subject. A. Haberlandt's *Taschenwörterbuch der Volkskunde Österreichs* (1953a) consists of concise and scholarly articles arranged in dictionary form and abounding in important information. *Kultur und Volk,* an anniversary volume dedicated to Gustav Gugitz, contains valuable papers on the folk culture of Austria, Bavaria, and Switzerland (Schmidt, L., ed., 1954). Wopfner's book (1951/54) on the peasants of the Tyrol, of which so far only two sections have been published, will, when completed, rank among the standard works on the alpine region of Europe.

Ilka Peter (1953) deals with the more or less institutionalized custom of young men's nocturnal visits at their girls' windows, its rules, its connection with the bachelors' associations, the legends referring to it, and the poems recited by the men and the girls. K. Klier (1953) describes the ceremonial pulling of tree trunks by the young men or the girls, or both. Derived from some pre-Christian ritual and therefore frowned upon by the Church in medieval times, it was formerly widespread in Europe. It survives in easternmost Austria where it is performed in case no marriage took place in the village in the preceding year.

A. Haberlandt (1953b) gave an account of research on rural houses in Austria and added observations concerning connections between prehistoric and recent house-types. A. Mais (1954) stressed the importance of cooperation between research on folk culture and archeology.

Three important collections of Austrian folk tales were published during the period in question, all three with scholarly commentaries and annotations (Gugitz, 1952a; Beitl, 1953; Haiding, 1953).

An inventory, village by village, of the myths, legends, and old customs of the South Tyrol and the province of Salzburg, made by R. Wolfram, is nearing completion. To judge by the small sample published so far (Wolfram, 1952) the material collected is of unusual interest.

Maps showing the distribution of various elements of folk culture will be included in six provincial atlases (Salzburg, Upper Austria, Lower Austria, Styria, Carinthia, Burgenland) now in course of preparation. For the system employed in the preliminary

survey see Burgstaller (1952). Moreover, a committee has been appointed which is to prepare and publish an atlas of folk culture covering the whole of Austria.

The works cited so far concern Austria alone. The following are of wider scope, touching upon European subjects in general

H. Koren's *Volkskunde in der Gegenwart* (1952) is an excellent statement of the principles, methods, and problem of research and interpretation of European folk culture. The same author (1954) investigated certain death rites (funeral repast, feeding the poor, etc.), their pre-Christian origin, their original meaning, and the way they changed under the influence of Christianity. G. Gugitz (1952b) showed that the custom of engaging in contests, such as wrestling, near certain churches and places of pilgrimage at certain times of the year is derived from pagan ritual contests connected with the cult of the dead. L. Schmidt's investigation (1952a) into the magic and religious significance of harvesting tools, scythe, sickle, and hone, will be found of great interest. No less valuable is the same author's paper (1953) on the distribution, history, and symbolic significance of certain kinds of spades. In another article (1952b) Schmidt deals with a mythologic motif: an animal killed and eaten by supernatural beings is found alive and intact again, save for a small piece of flesh or a bone, eaten or lost by a human who had been invited to partake of the meal. The author shows the wide distribution of the myth in Europe and Asia and thinks that it spread west from the Caucasus.

Herbert Melichar visited the island of Sardinia in 1952 and 1953, doing ethnographical research and recording samples of Sardinian dialects and music—among others, improvised songs of the mountain dwellers of the interior dealing with the Trojan War and the adventures of Odysseus. The tape-recordings were deposited with the Austrian Academy of Sciences (Melichar, 1953; Melichar and Pöldinger, 1953). Herta Blaha (1954) visited the nomadic Lapps of Sweden and studied their reindeer economy and material culture. Professor R. Wolfram did field work in Spain and southern France, collecting material for his book on European sword dances and men's organizations.

Applied Ethnology

Two of the Institute's alumni held UNESCO positions during the period in question. Ludwig Zöhrer was charged with the promotion of adult education, the study of the problem of women's education, and experiments concerning the improvement of living conditions in Fezzan, Libya (Zöhrer, 1954b). Hanns Manndorff participated in a nine-months' training program in Mysore. This included research on the social organization and economy of Dravidian villages and the implementation of experiments in order to introduce improvements in agriculture, handicrafts, and hygiene (Manndorff, 1954b).

Austrian Ethnologists Abroad

Austrian ethnologists living permanently in foreign countries have not been included here since it is assumed that their works will be mentioned in the reports concerning anthropological research in the respective countries. However, in view of the importance of their achievements, the names at least of some of them may be listed here: Father Matthias Eder, Professor at Nanzan University, Nagoya, Japan; Dr. Omar Rolf von Ehrenfels, Professor at the University of Madras; Dr. Hans Feriz, Amsterdam; Father Stephen Fuchs, Bombay; Dr. Christoph von Fürer-Haimendorf, Professor at the University of London; Father Martin Gusinde, Professor at the Catholic University of America, Washington, D. C. Father Wilhelm Schmidt's work is being dealt with in the section on Switzerland.

PREHISTORY OF EUROPE

General

The publication of Professor Pittioni's great compendium of Austrian prehistory (1954) is the outstanding literary event in this field. The author has succeeded in

mastering and interpreting an almost incredible amount of facts. Some of the new terms he wishes to introduce will hardly meet with general approval, but this is of little consequence as far as the value of the work as a whole is concerned. There can be no doubt that his book is one of the most important contributions in the field of European prehistory made in recent years and that it will remain the standard work on the prehistory of Austria for many years to come. In another book Pittioni (1952a) attempts to decide what conclusions can be drawn from archeology concerning the mentality, the social and political organization, and the religion of ancient men for the various periods from the Paleolithic to the Iron Age.

The soil of Austria is rich in prehistoric remains, ranging from the Mousterian period to the beginning of history. The large number of finds constantly being made, as well as the large number of reports and articles published year by year preclude any attempt to give a complete survey of the work of Austrian archeologists in the space available. Only a few of the more important discoveries and publications will be listed. For the rest, we refer to Pittioni's 1954 volume and to the various periodicals, above all to *Archaeologia Austriaca,* published by the Institutes of Anthropology and Prehistory of Vienna University, further to *Mitteilungsblatt der Urgeschichtlichen Arbeitsgemeinschaft* and to *Nachrichtenblatt der Urgeschichtlichen Arbeitsgemeinschaft,* both published by a subsection of the Anthropological Society of Vienna. See also Modrijan (1953a) for a report on excavations in the Province of Styria.

Paleolithic and Mesolithic

Excavations in the Salzofen Cave near Aussee, Styria, revealed an alpine dwelling place of Paleolithic man at an elevation of 6600 feet. The apparently intentional arrangement of skulls and bones of *Ursus spelaeus* seem to indicate some kind of cult. The site dates probably from the Mousterian period (Ehrenberg, 1953). W. Angeli (1952/53) described the finds from the famous Aurignacian camp of mammoth hunters at Langmannersdorf, Lower Austria. For other Late Paleolithic sites, see Felgenhauer (1952a) and Gulder (1952); for a discussion of Paleolithic problems in general, Felgenhauer (1952b). The report on an Aurignacian site near Krems, Lower Austria, recently excavated by Franz Hampl, has not yet been published. Gulder (1953) studied the artifacts from the few Mesolithic sites so far known in Austria.

Neolithic

In two brilliant papers (1954a, b), F. Schachermeyr proves that a constant stream of migrations and cultural influences, emanating from the Neolithic and Chalcolithic cultures of the Near East, gave rise to the Sesklo Culture of Greece and to the Early Neolithic cultures of the Balkan and Danubian regions; further, that at a much later date, a migration from eastern Hungary (Tisza and Bükk Cultures) and western Transylvania entered Greece from the north and there gave rise to the Dimini Culture.

M. Hell (1954) dealt with the Neolithic of the province of Salzburg; Pittioni (1953a) with Neolithic finds from Styria. Foltiny and Ohrenberger (1952) described Late Neolithic pottery from Neusiedl, Province of Burgenland.

Bronze and Iron Ages

Hell (1952a) and Felgenhauer (1952c) described Early Bronze Age material from Salzburg and Lower Austria. Hetzer and Willvonseder (1952) and Berg (1952) reported on the discovery and excavation of sites of the Urn Field Culture. W. Modrijan (1953b) combined his description of the contents of urn field graves from Styria with a discussion of Late Bronze Age swords. A treasure trove, containing gold jewelry, from the alpine region of Lower Austria is ascribed to the Late Bronze Age by Pittioni (1952c).

Karl Kromer is preparing the publication of all finds from the famous cemetery of Hallstatt, kept in the museums of Vienna,

Linz, and Hallstatt. His work is sponsored by the International Society of Classical Archaeology.

For Late Iron Age (La Tène) finds from Austria see Hell (1952b), Ladenbauer-Orel (1953), and Zeilinger (1953). For several years now, Osmund Menghin has been excavating at Birgitz, near Innsbruck, Tyrol. He expects to continue until 1957. The site belongs to the very end of the prehistoric period and the time of the first occupation by the Romans. K. Willvonseder (1953) and R. Heuberger (1954) deal with the paleoethnology of Austria during the last centuries B. C., corresponding to the La Tène period.

Prehistoric Mining and Metallurgy

Studying the problem of the origin of copper metallurgy, Maczek, Preuschen, and Pittioni (1952–1953) point out that large deposits of pure copper occur in Iran at no very great distance from Tepe Sialk where some of the oldest, if not the oldest, copper tools known have been found. The question of whether the knowledge of copper came to Europe from the Near East or was acquired independently is touched upon, but left open. The authors stress the necessity of spectral analyses in order to determine the provenience of prehistoric copper objects. A map shows the geographic distribution of copper ores in the Carpathian and Balkan regions and that of copper axe-adzes. A general survey of the problems concerned is given by Pittioni (1953b).

Investigation of prehistoric copper mines has been going on for several decennia and is a practically unique feature of Austrian archeological research. Preuschen and Pittioni (1954) published a well documented report on their excavations of Late Bronze Age copper mines near Kitzbühel, Tyrol. They succeeded in obtaining important information concerning the various methods used by the ancient miners and metallurgists. Apart from bronze objects and pottery, they found a considerable number of wooden implements, among them large wooden troughs and fragments of wooden buckets. See also Pittioni (1952b) and Preuschen and Pittioni (1953). Mühlhofer (1952) and Pittioni (1952c) reported on traces of Bronze Age copper mining in southeastern Lower Austria. F. Hampl (1953) excavated several smelting places of the Late Bronze Age near Prein, in the alpine region of Lower Austria. The most interesting among his finds were earthen vessels which obviously had been parts of bellows similar to those still used by African tribes (Mayrhofer, 1953). An ancient smelting place for iron ore, tentatively dated in the 8th century B. C., was discovered in Styria (Modrijan, 1953a, pp. 9–13).

SOME MAIN TRENDS AND INTERESTS: A SUMMARY

Anthropology: Apart from regional studies, research on twins and use of dermatoglyphics for the determination of racial relations or differences. Study of the Pygmy problem.

Ethnology: Emphasis on the development of historic methods, particularly the combination of ethnology and archeology. Regional studies concerning all continents. Use of Russian sources for Central Asia and Siberia (Hančar, Jettmar), or Japanese sources for the Far East (Slawik and his school), and of Tibetan sources for Tibet and the Himalayan region (Nebesky-Wojkowitz). Study of interconnection of cultures, migrations, and diffusion, including relations between Old and New World cultures. Study of the origin and spread of ancient high civilizations.

Prehistoric Archeology: Schachermeyr's final proof of the Near Eastern origin of the Greek, Balkan, and Danubian Neolithic cultures, and Pittioni's, Preuschen's, and Hampl's research on copper mining and metallurgy will be considered as the most important Austrian contributions in the field of European prehistory during the years from 1952 to 1954. As far as excavations and the study of previously excavated material from Austria is concerned, preponderance of the Late Paleolithic, Late Bronze Age, and Hallstatt periods.

Anthropological and ethnological research is practically concentrated in Vienna, with the University Institutes, the Museums, and the Anthropological Society as main centers. Prehistoric research is less centralized, with the Institute of Prehistory of Innsbruck University and the museums in the provincial capitals participating in it. Research on Austrian folk culture is even more decentralized, the Universities of Graz and Innsbruck, as well as the provincial and numerous local museums, taking an active interest in the field.

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SWITZERLAND

ANTHROPOLOGY

THE Anthropological Institute of Zürich University was reorganized under the direction of Professor Adolf H. Schultz. Its museum and study material were augmented by the incorporation of Professor Schultz's private collections. The Institute specializes in research on primates (Schultz, 1951/52; 1952; 1953a, b; 1954a, b; Boné, 1953). Professor Schultz is working on a Handbook of Primatology which is to comprise four volumes.

J. Hürzeler in Basel is investigating the remains of *Oreopithecus bambolii,* found near Florence, Italy, more than eighty years ago. He came to the conclusion (1954) that Oreopithecus is neither a cercopithecoid, as was usually assumed, nor an anthropoid, as some scientists thought, but a hominid. If this proves correct, as seems not unlikely, the ancestry of man will be pushed back to the Miocene—to about ten million years ago—a fact that is apt to revolutionize our ideas about human phylogeny.

Paleo-anthropological research on Neolithic human remains from western Switzerland is being carried on at the Anthropological Institute of the University of Geneva. Two papers concern the structure of fossil bones (Baud and Morgenthaler, 1952; Baud, Durif, and Morgenthaler, 1954). Hélène Kaufmann (1953/54) dealt with a problem of anthropometry.

In the field of regional anthropology Sauter's book (1952a) on the races of Europe is of primary importance. Schlaginhaufen (1952; 1953/54) wrote on the various brachycephalic elements in the population of Switzerland. Hägler (1953/54) dealt with the anthropology of the people of Vals, Grisons. P. A. Gloor (1952) reported on the results of his anthropological research in Palestine. Marguerite Lobsiger-Dellenbach (1952) took some anthropological measurements during her expedition to Nepal. Two articles by Schlaginhaufen (1953, 1954) concern the anthropology of Melanesia. A Ph. D. thesis from Zürich University (Oschinsky, 1954) deals with the racial affinities of the Baganda and other East African Bantu tribes. A considerable amount of work was done on the morphology and biology of African Pygmies (Pittard, 1952; Adé, 1953/54, 1954; Sauter and Adé, 1953; Kaufmann and Adé, 1953; Périer and Adé, 1953). R. Bay described Eskimo skeletons from northeastern Greenland in Bandi and Meldgaard's volume (1952, pp. 73–78).

Extensive research is being done on blood-groups, particularly on those of the Rhaeto-Romance-speaking Grisons and of the Walser, German-speaking people whose original home was the Swiss Canton Wallis, but who today are found in some of the highest and least accessible valleys of Cantons Grisons and Ticino. It is hoped to obtain valuable results concerning the anthropological significance of blood-groups and the effects of endogamy (Kaufmann, 1952, 1954; Huser, 1953a, b; Knoll, 1953a, b; Liechti, 1953; Schudel, 1953; Weissenbach, 1953; Hägler, 1953/54).

ETHNOLOGY

General

In 1954, Swiss, no less than Austrian, ethnology suffered a severe loss through the death of Father Wilhelm Schmidt (Koppers, 1954). Although a citizen of Austria and still in close contact with Vienna, Father Schmidt had lived in Switzerland since 1938, and had taught at the University of Fribourg until 1951. Therefore he is included in this section on Switzerland. A complete list of Father Schmidt's works, comprising 645 titles, appeared in *Anthropos* (Bornemann, 1954a). The same issue contains a detailed appraisal of Schmidt's linguistic work by A. Burgmann (1954b). Volumes X and XI of Schmidt's *Ursprung der Gottesidee* deal with the religions of Siberian peoples (Schmidt, 1952a, 1954a). Volume XII, on pastoral peoples of Asia and Africa, is almost ready for publication. A volume of lectures on primitive religions and one containing essays in various ethnological and linguistic subjects were placed in the Anthropos micro series (Schmidt, 1954e, f; Bornemann,

1954b, c). To *Historia Mundi* Schmidt (1952b) contributed a chapter on the most primitive among the extant cultures of hunters and food-gatherers. Apart from primitive religion, it was the problems of matrilinear societies which held his main interest during the last years of his life (1952c, 1954b). His book (1954g) on pregnancy and birth customs has been published as Vol. X of "Wiener Beiträge zur Kulturgeschichte und Linguistik."

The puzzling title of Oskar Eberle's book, *Cenalora,* is taken from the name of a mimic play of the Yamana in Tierra del Fuego. The book (1953/54) deals with the dances, mimic plays, and theatrical performances of primitive hunters and food-gatherers: African Pygmies, Veddas and Negritos of Asia, Indians of Tierra del Fuego, Tasmanians, and several Australian tribes. Unfortunately, the author seems to be unduly impressed by certain obsolete theories. Thus we are told that the Pygmies of Africa are living in a "Wood Age" which is said to be older than even the oldest known Stone Age cultures. The inclusion of the Veddas of Ceylon among the Negritos will come as a shock to anthropologists. However, these and various other errors and unfounded assertions do not seriously impair the book's merit. The author has succeeded in proving the great antiquity of "theatrical" performances and in calling to the attention of ethnologists an important aspect of primitive culture which had been much neglected.

A brief but excellent paper by A. Bühler (1952a) deserves special notice. While stressing the necessity of close cooperation between ethnology and psychology, Bühler cautions psychologists against the uncritical use of ethnographic material, mostly taken from second-hand sources and all too frequently misunderstood. He cites a few striking examples from Freud and others. The warning may be particularly appropriate in Switzerland, the home of Jung and his school. Bühler's statement concerning the historical point of view of Swiss ethnologists applies equally to Austrian ethnologists.

This chapter on Swiss ethnology would be incomplete without referring to Switzerland's excellent ethnographical museums, particularly those of Basel, Zürich, Bern, and Geneva. Foremost among them is that of Basel. Professor Bühler's illustrated reports on its activities and new acquisitions, published yearly in *Verhandlungen der Naturforschenden Gesellschaft in Basel,* excel by their scientific value. The Zürich Museum, ably administered by Professor A. Steinmann and owning collections of high quality, suffers badly from lack of space. Its reports are published in *Geographica Helvetica.* The ethnographic section of the Bern Historical Museum, although less known, has many objects of great rarity, among others a whole collection brought back by one of Cook's companions in the eighteenth century. The Museum at Geneva, administered by Dr. Marguerite Lobsiger-Dellenbach, is doing exemplary work in the field of popularization of ethnological knowledge and is a real center of cultural activities.

America

H.-G. Bandi published the results of excavations of ancient Eskimo sites in Northeast Greenland in which he had participated (Bandi and Meldgaard, 1952). He also reviewed (1953) the present status of our knowledge of Eskimo archeology.

In Geneva, considerable attention is being paid to problems concerning the improvement of American Indian economic and social conditions. This may be due in part to Professor Pittard's teachings and in part to Geneva's being the seat of international organizations. We may cite an excellent article by George Lobsiger (1952) on the indigenist movement and an able paper by M. Paranhos da Silva (1952) on the methods of acculturation to be employed in the tropical forest region. Both authors stress the necessity of inviting the cooperation of professional ethnologists.

Australia and Oceania

Father Schmidt's book (1954c) on totemism in Oceania and Asia has been published in the Anthropos micro series. In

an article on Australian beliefs concerning conception (1952d) he criticizes Ashley Montagu for having maintained that all Australian aborigines lacked the knowledge of any connection between sexual intercourse and conception. He shows that, far from being universal, this ignorance is restricted to certain tribes, above all the Aranda, and gives good reasons for assuming that it is due to a relatively late and localized development. Additional arguments for this are adduced in a paper (1953b) on sexuality and myth in North Australia, essentially a critical, but sympathetic, appraisal of Ronald and Catherine Berndt's *Sexual Behavior in Western Arnhem Land* and *Kunapipi.*

An interesting article by M. Lobsiger-Dellenbach and G. Lobsiger (1953) deals with New Caledonian engravings on bamboo representing Europeans and European objects. Some of the better designs, made prior to the degeneration of indigenous art, would do honor to any Western cartoonist. Like Mrs. Lobsiger-Dellenbach's previous papers on New Caledonian bamboo engravings, this one too adds to our understanding of primitive art and its psychological background.

Paul Wirz published (1952a) the ethnographic description of a tribe in the Mount Hagen area, New Guinea, as well as papers (1952b, c) on musical instruments from the same region and on diffusion of cultural elements in New Guinea. Rohrer (1951/52) and Steinmann (1952) made interesting observations concerning the meaning and style of the sculptured ceremonial stools from the Sepik Valley. The Museum für Völkerkunde (Ethnographic Museum) in Basel showed a magnificent exhibition of Papuan sculptures and paintings from the Sepik region and the Prince Alexander Mountains, New Guinea (Wirz, 1954).

Father Schmidt's comparative analysis (1953a) of Micronesian religions and myths excels by the author's usual acumen and ingenious interpretations. However, since his arguments are to a considerable extent based on his "Kulturkreis" theory, his conclusions hardly can be accepted without further corroboration.

In the field of linguistics, Father Schmidt's book (1952e) on the Tasmanian languages and several papers by Burgmann (1953a, b, c, d, 1954a) on Papuan languages and on the language of Yap may be cited.

Asia

Ever since the days of Paul and Fritz Sarasin, Swiss scholars have taken a keen interest in the anthropology, ethnology, and prehistoric archeology of Indonesia. In a brief survey of Indonesian collections in Swiss museums, Steinmann (1953) points out that the Basel Ethnographic Museum alone owns over 14,000 items, while Zürich and Bern have more than 2,000 each. In recent years, the Basel Museum received an important addition, a collection from Sumba, acquired by A. Bühler during his half-year's stay on that island. Bühler's scholarly and well illustrated description (1951/53) of his acquisitions ranks among the best publications on Indonesian material culture. We further owe to him an interesting article (1952b) on the megalithic monuments of Sumba with magnificent photographs. For a number of years, Swiss scholars have been specializing in research on the textile arts of southern and eastern Asia. Two new papers in that field have been published. Steinmann (1952/53) studied the various tools and methods used in the batik techniques of India, China, Indo-China, and Indonesia. Bühler (1952c) comes to the conclusion that the processes used in tie-dyeing in West Africa, Indonesia, and Japan must have spread to these areas from India, although they may have been preceded locally by simpler varieties of the same technique.

Marguerite Lobsiger-Dellenbach participated in a Swiss expedition to Nepal in 1952. In a well-documented paper (1953) she described the settlements, houses, methods of transport, and agriculture of the valley of Katmandu. Moreover, she succeeded in acquiring from that same valley an excellent collection, which is now on display in the Musée d'Ethnographie in Geneva. (Lobsiger-Dellenbach, 1954).

In a brief, but scholarly article, J. Hen-

ninger (1954) examines Strabo's and al-Buhari's reports on polyandry in ancient Arabia. He comes to the conclusion that the existence of polyandry in pre-Islamic Arabia cannot be denied, but that it certainly was not universal.

Africa

Father Schmidt's book (1954d) on totemism in Africa was published in the Anthropos micro series. Hinderling's notes (1952/53) on his observations in Togo concern some little-known tribes whose cultures contain megalithic elements.

During his expedition to the southwestern Sahara, Jean Gabus visited the Nemadi, a small Moorish tribe of hunters. His report (1951/52) is brief, but of considerable interest in view of the possibility that the Nemadi, even though repeatedly reinforced by fugitives from the sedentary or pastoral population, may contain a nucleus descended from the ancient Stone Age hunters of the region.

The Zürich Ethnographical Museum received as a permanent loan the important collection of the late Alfred Ilg who had been Minister of State of Emperor Menelik of Abyssinia. Among others, it contains the famous crown and other royal insignia of the sacred kings of Kaffa.

At the time of writing, Dr. Elsy Leuzinger of the Zürich Museum and Miss Yolanthe Tschudi are doing research in northern Nigeria.

Europe

The most important undertaking in this field is the publication, now in progress, of the atlas of Swiss folk-culture (Atlas der Schweizerischen Volkskunde). So far, five sections have appeared (Geiger and Weiss, 1955).

Sooder (1952) deals with Swiss apiculture and its folklore, Strübin (1953) with the folk-culture of Canton Basel and the changes it underwent during the last centuries.

For further information, see the various periodicals: *Schweizerisches Archiv für Volkskunde, Schweizer Volkskunde,* and *Folklore Suisse,* all published in Basel by the Schweizerische Gesellschaft für Volkskunde.

PREHISTORY OF EUROPE

The Proceedings of the IIIrd International Congress of Prehistory and Proto-History, held in Zürich, 1950, were published in 1953 (Vogt, ed., 1953).

In a magnificently illustrated volume, H. G. Bandi and J. Maringer (1952) describe and interpret the Paleolithic art of Europe and the early, but post-Pleistocene, art of the European Arctic region. For treatises on prehistoric art from the psychological point of view, see Breuer (1953) and Giedion (1953).

Bandi (1952a) wrote on the Solutrean of France and the problem of its origin, while Spahni (1954) listed and discussed the paleolithic sites of Austria containing remains of *Ursus spelaeus.*

Sauter (1953) gave an overall picture of the Swiss Paleolithic. Nothing older than Mousterian has been found. No Aurignacian site has yet been identified with certainty. There is no Solutrean, and the Magdalenian is represented only by its late phases. Bay (1950/52) and Bandi (1952/53) reported on Magdalenian sites and artifacts. A. Jayet (1952) finds indications of seasonal migrations of the Magdalenian people, conditioned by those of the reindeer. R. Wyss (1952, 1953) studied the transition from the Late Magdalenian to the Mesolithic. E. Vogt (1952) described a bone harpoon head from the Swiss Mesolithic.

Jayet and Sauter (1953) showed that an extensive layer of red earth found in southwestern Switzerland and the adjoining regions of France is not of Pleistocene origin, as had been assumed, but is Holocene and contemporary with the local Neolithic. Bandi (1952b), Sauter (1952b, c), Wyss (1954), Guyan (1953), and Elisabeth Schmid (1953) reported on Neolithic discoveries, Th. Ischer (1952) on two interesting Neo-

lithic objects, a wooden club and a spear-thrower. According to E. Vogt (1953a) the Neolithic Michelsberg Culture of southern Germany and Switzerland was not of West European origin, as had been universally assumed, but was an offshoot of the Funnel-Necked Beaker Culture (Trichterbecherkultur) of North Germany, Denmark, and the Baltic region.

In an important paper, Vogt (1953b) discussed the problems of the Swiss Neolithic and Bronze Ages. The particular interest of Switzerland in this respect lies in the fact that, due to its position in the center of Europe, it was reached by cultures coming from various directions, cultures which eventually ousted or overlaid each other, thereby providing clues for the relative chronology of prehistoric Europe.

B. Frei (1952), R. Laur-Belart (1952), and J. Speck (1953) excavated Late Bronze Age dwelling sites. Verena Bodmer-Gessner (1953) dealt with Late Bronze Age ornamental designs, and J. Pokorny (1953) with the origin and spread of the Celtic peoples in prehistoric Europe.

It has been suggested that the famous lake-dwellings of Switzerland were neither lacustrine, nor erected on piles, but originally stood on the shore and were submerged only at a later date when the surface of the lakes rose as the result of a change of climate. The subject is being debated with great ardor by Swiss archeologists and has given rise to new excavations (Bandi, 1952b; Bandi and Wyss, 1952/53, pp. 145–151; Speck, 1953; Rais, 1954; Wyss, 1954; Strübin, M., 1954).

Two books of wider scope deserve special notice. One, by O. Tschumi (1953), deals with the prehistory of Canton Bern. The other, by Guyan (1954), is of particular interest, being a prehistory of Switzerland as seen from a geographer's point of view.

For further information, see the reports by Keller-Tarnuzzer (1952) and Keller-Tarnuzzer and Fischer (1953).

SOME MAIN TRENDS AND INTERESTS: A SUMMARY

Anthropology: The Anthropological Institutes of Zürich and Geneva Universities are the main centers of research. Particular interest is taken in primatology (Zürich), in the Pygmy problem (Geneva), in morphological and anthropometrical questions (Geneva), and in regional anthropological studies. The large-scale research on the blood-groups of isolated communities in the Grisons Canton, in which several universities and institutes participate, promises to yield important results.

Ethnology: In general, Swiss ethnologists adhere more or less to the same principles of historical ethnology as their Austrian colleagues. As far as regional studies are concerned, Indonesia, New Guinea, and Melanesia hold the first rank. Recently, Nepal has been added as a field of major interest (Geneva). Swiss scholars (together with some of their Dutch colleagues) are still leading in research on South and East Asiatic weaving and dyeing methods. Main centers of ethnological research are the Universities and Museums of Basel, Zürich, and Geneva, and the Anthropos Institute in Posieux, Ct. Fribourg. The latter, of course, is international, rather than Swiss, in character and excels as a center of publication of international ethnological and linguistic literature. Until recently, it was dominated by the great personality of its founder, Father Wilhelm Schmidt, whose death marks the end of a period in European ethnology.

Prehistoric Archeology: The Universities and Museums of Basel, Bern, Geneva, and Zürich (Schweizer Landesmuseum) and the Institut für Vor- und Frühgeschichte der Schweiz in Basel are the main centers of research. During the period in question, considerable advance has been made in research on the Late Paleolithic of Switzerland. Interest centers largely on the much discussed problem of lake-dwellings.

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Yugoslavia

An Anthropological Review for 1952-1954

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INTRODUCTION [1]

IN Yugoslavia, as in many other Central European countries, "anthropology" is understood as physical anthropology, whereas the other anthropological sciences are comprised under "ethnology" and "archeology." Consequently research and teaching in the various aspects of anthropology was organized in different places (faculties, museums, public health service, etc.) at different times. In Beograd and Zagreb, ethnology and archeology were taught even before World War I, and museum collections were organized, not only in Zagreb and Beograd, but also in smaller cities (Ljubljana, Sarajevo, etc.).

After World War I, the University of Ljubljana was founded, and, during the twenty-one years of peace between the two world wars, lectures in ethnology, archeology, and physical anthropology were given there.

After World War II, two more universities (Sarajevo and Skopje) were founded, and research work in all anthropological sciences has increased greatly, though not at all universities on the same level. For example, archeology has separate chairs (departments, institutes, seminars) in Beograd, Zagreb, and Ljubljana; ethnology in the above cities and in Skopje; physical anthropology in Ljubljana only. In Zagreb, an institute of physical anthropology (Antropološki institut) exists within the Faculty of Medicine; in Ljubljana, the Institute of Anthropology (with emphasis on physical anthropology) is organized within the Faculty of Sciences, whereas the archeological and ethnological seminars are in the Philosophical Faculty. It is a pity, however, that, up to the present, anthropology nowhere can be studied within the frame of one faculty according to a plan comprising all fields of anthropology.

After World War II, anthropology also received new opportunities in the institutions and departments of the academies of

[1] The author wishes to express his warm gratitude to his colleagues who assisted him in preparing this survey on anthropological activities in Yugoslavia by giving references, reading the manuscript, helping him to find the appropriate sources of information, and allowing for tiresome interviews during which the author found out that there is much more done than published. The author feels particularly indebted to Dr. S. Brodar, Professor of Paleolithic Prehistory, University of Ljubljana; to Dr. M. S. Filipović, Vice-Director of the Ethnographical Institute of the Serbian Academy of Sciences, Beograd; to Dr. J. Korošec, Professor of Archeology, University of Ljubljana; to Dr. V. Novak, Assistant of Ethnology, University of Ljubljana; and to Mr. B. Orel, Director of the Ethnographical Museum, Ljubljana. The order of the names is alphabetic, and it would be really unfair to arrange them another way as, in the author's sincere conviction, they all did their best to assist him.

sciences and arts (Beograd, Zagreb, Ljubljana). Physical anthropology has its division within the Section of Archeology only in Ljubljana. Whereas studies in folklore were organized in some of these institutions, there are also separate ones devoted to such studies in Ljubljana, Zagreb, Sarajevo, and Skopje. In Sarajevo, there exists an Orientalist Institute (interested preferably in Turkology) within the Land Museum (Zemaljski Muzej).

An important role in the anthropology of Yugoslavia is played by the museums, in which collections mainly from Yugoslavia itself are very well organized. One of the oldest, and perhaps the largest, of all museums is the one of Sarajevo (Zemaljski muzej), with excellent archeological and ethnographical collections. From the archeological point of view, no less important are the museums in Beograd, Zagreb, Skopje, Ljubljana, and Split. Yugoslavia is particularly rich in folklore and archeology. Basically Slav since the sixth century, Slovenia and the northern parts of Croatia are distinguished by their Central European background. Dalmatia, Montenegro (Crna gora), Serbia, Bosnia and Hercegovina, and Macedonia, though Slav in culture, have different traits; Dalmatia participating in the Mediterranean; Bosnia and Hercegovina, and Macedonia in Oriental (Moslem) cultures. All over the country, archeological finds, from Paleolithic to Classic and early medieval Slav sites, are rich and, partly at least, abundantly represented in the above-mentioned museums of the republic capitals, and partly also in local museums, e.g., Zadar, Pula, Ptuj, Novi Sad, to mention only a few.

With respect to physical anthropology the Public Health Service also has to be mentioned. In the so-called Homes of Public Health, as well as in the Central Insti-

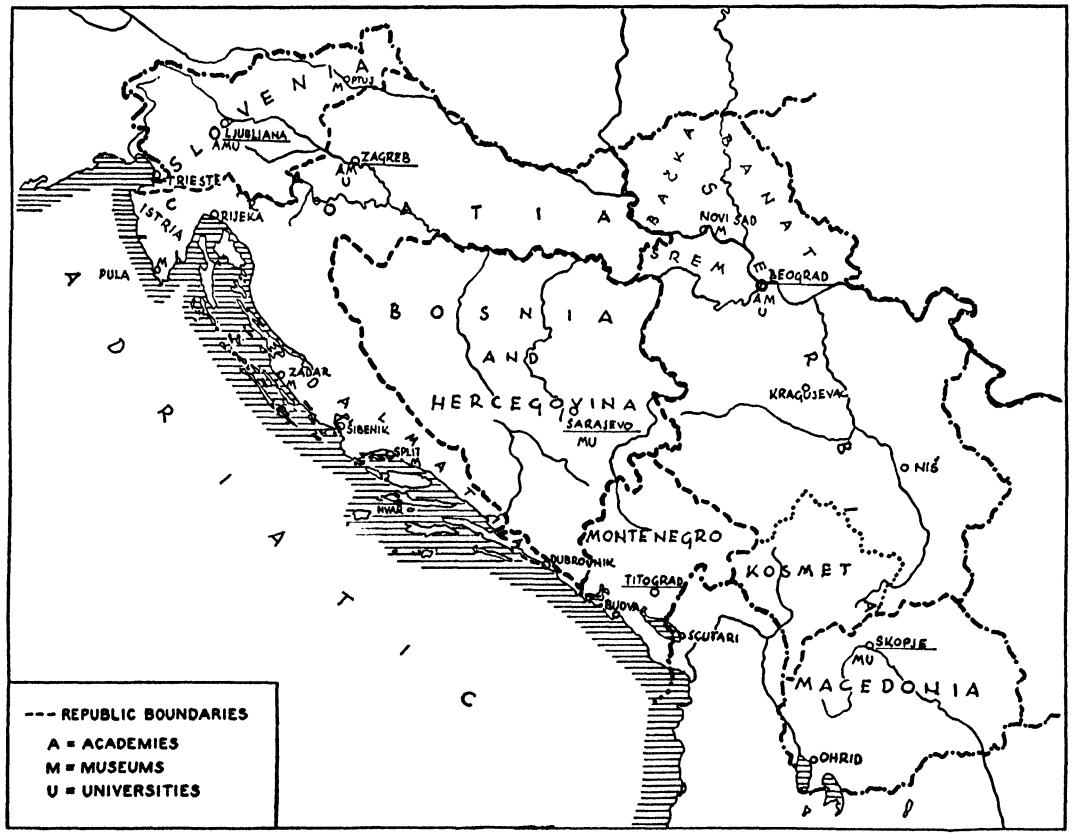


FIG. 1. THE REPUBLICS OF YUGOSLAVIA AND LOCATIONS OF ANTHROPOLOGICAL INSTITUTIONS

tutes of Hygiene and in specialized School Polyclinics, anthropometrical studies concerned with the development of children and with nutrition problems are carried on.

Let us now consider the work done in the main fields of anthropology in Yugoslavia during 1952–1954.

ARCHEOLOGY

After the First Congress of Yugoslav Archeologists (Niška Banja, Serbia, 1950),[2] activity increased in all fields of archeology. This is true for field work (excavations) as well as for work in laboratories and museums; in many publications, periodical as well as others, regular reports appear on the work done at home and abroad, so that Yugoslav archeologists are well informed about the pertinent literature. Some contributions of Yugoslav scientists appear also in foreign periodicals, some in foreign languages at home; almost all original papers and monographs are issued with summaries in English, French, or German.

[2] Korošec, J., *Arheološki Vestnik,* Vol. II, No. 1, 1951, pp. 73–80. Ljubljana.

Paleolithic

In this field, the lack of scientists is the most difficult problem. Almost all sites discovered so far are in Slovenia, the "classical" territory, to date, of Paleolithic cultures in Yugoslavia. During the past three years, work was done on Betalov Spodmol, Županov Spodmol, and Parska Golobina (Brodar, M., 1954); all three caves lie south of Ljubljana, near Postojna, in the typical Karst region, some 1800 feet above sea level. The cultures of Betalov Spodmol belong to the oldest so far discovered in Yugoslavia; there were found many thousands of stone implements from Acheulo-Mousterian

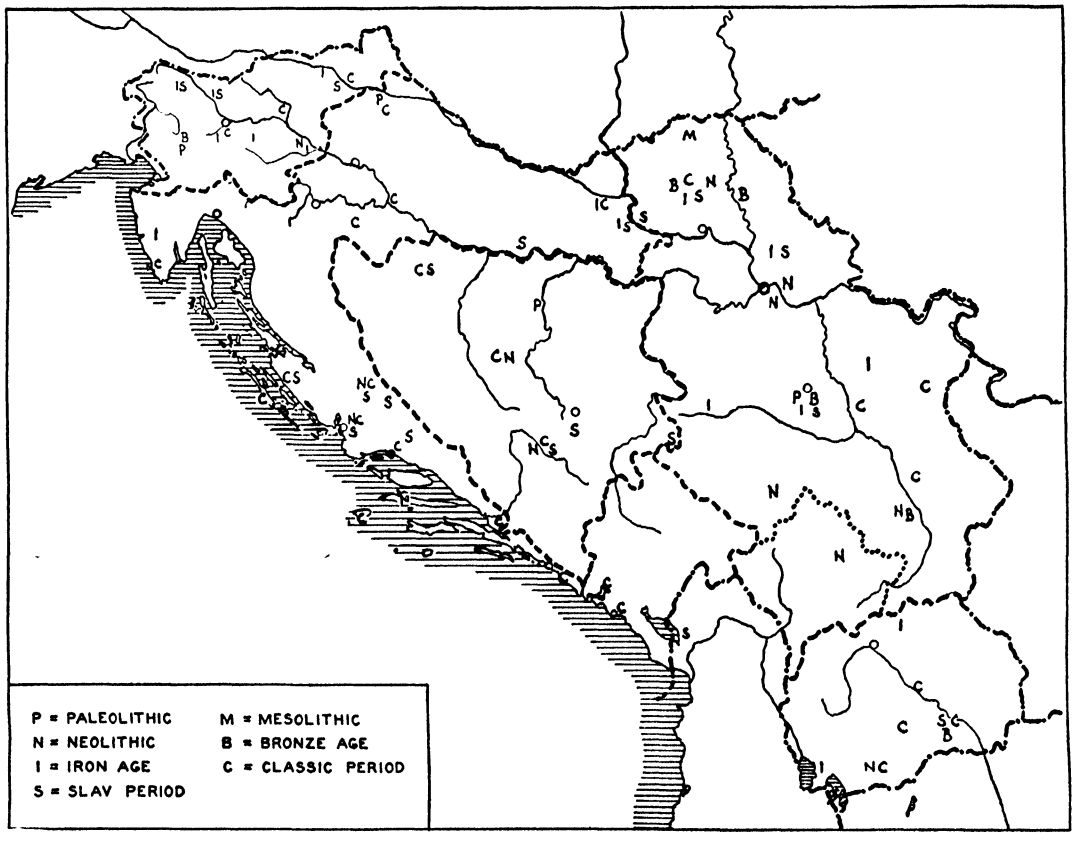


FIG. 2. IMPORTANT ARCHEOLOGICAL SITES OF YUGOSLAVIA

to Upper Paleolithic types, particularly Aurignacian. Parska Golobina yielded Mousterian and younger implements, whereas Županov Spodmol belongs to a still younger period, at least according to its stratigraphy. It must be stressed, however, that the cultures in the Slovenian territory agree more with the Central European Paleolithic implements (of the Alpine region) than with the classical French ones. This is due partly to different raw material, partly to different techniques. It is clear that dating has to be based on stratigraphic conditions (including fauna and flora) rather than on the form (typology) of the implements themselves.

There are four more Paleolithic sites in Yugoslavia. In the cave at Vindija near Varaždin (Northern Croatia), excavations continue. In Bosnia, a site (Crkvina II on the Usora River) of Paleolithic implements was discovered near Doboj (Basler, 1953; Brodar, 1953a), yielding Mousterian and younger (up to Epi-Paleolithic) implements; however, lack of stratigraphy makes precise dating impossible. In Serbia, some three years ago, in a cave (Pećina) near Kragujevac, Mousterian culture was excavated, whereas last summer, near Arandjelovac, amidst a Pleistocene fauna, traces of a Protolithic bone culture were discovered; in the latter case, no stone implements have been found as yet.

To Mesolithic phases belong, apparently, some implements from Crkvina II (Bosnia) and Budjak near Subotica in the Slavonian flatland (Pannonia).

The discovery in Yugoslavia of additional sites of Pleistocene Paleolithic cultures is to be expected. In Slovenia only, nearly twenty sites are known so far, whereas in the remaining, and far larger, territory only six sites so far have been established. Farther south and east in the Balkans, no Paleolithic sites have been discovered. Certainly the Balkans played an important role in the migrations of Paleolithic man from, or to, Asia and the Near East. The lack of scientists and skilled workers, far more than the lack of funds, has prevented more work being done. The Adriatic coast with its innumerable islands should demand far more interest in the near future. So far at least, the Slovenian Paleolithic yields a link between Central European and Italian Paleolithic sites.

An important event was the First Yugoslav Congress of Speleology (January 21–24, 1954) at Postojna, Slovenia, at which papers on the role of caves during the prehistory and history of man were delivered by Professors S. Brodar and J. Korošec.

Neolithic

Work on Neolithic sites, as well as on Neolithic material in laboratories, is far more frequent than work on Paleolithic cultures, though this does not apply equally to all parts of Yugoslavia. In Slovenia, where Paleolithic studies are most developed, work so far on Neolithic cultures has been less intensive, not so much owing to the lack of scientists as due to the lack of sites. However, the lack of properly trained scientists is considerable, for a great deal of excavated material still awaits study.

Most important are the studies on Starčevo (Körös-Starčevo Culture), excavated prior to World War II and still only partly published (Garašanin, D., 1954). The famous culture of Vinča (Serbia) is still under discussion (Korošec, J., 1952a, 1953b). A new site of Mala Grabovnica near Leskovac (Serbia) yielded—besides Vinča Culture—implements and tools typical of the Aegean Bronze Age. Further, there is the Neolithic site of Novi Pazar (Sandjak) with Neo-Vinčan material suggestive of the same phase in the Morava Valley. New finds of prehistoric monuments come from the territory of Kosovo-Metohija (near Priština and Valače) which, though apparently independent of Vinča, show some affinities to the Vinča Culture.

In Macedonia, only the material of Crnobuki (near Bitolj) has been partly studied (Garašanin, M., 1953); it belongs to the end stages of Neolithic and to the beginning of Bronze cultures. At any rate, more must be discovered to obtain a clear picture of the Neolithic in Macedonia.

At Matejski Brod (near Novi Bečej, Banat), a site was excavated belonging to the Tibisco Culture; strata belonging to the

Starčevo Culture and up to the Slav period also were discovered (Nagy, 1953; Rašajski, 1952).

In Bosnia, traces of the Butmir Culture were found at some new sites, which opened new views on this culture. Nebo, near Travnik in the Bila Valley, yielded not only rich material for the reconstruction of the way of living, but also, partly at least, for a synthesis considering the origin of this Neolithic culture (Benac, 1952, 1953). Near Lisičići, in the Neretva valley (Hercegovina), there is another site, interesting because it does not belong to the Butmir Culture, but to the Culture of Hvar, an Adriatic island south of Split and almost precisely west of the site of Lisičići (Benac, 1954).

On the island of Hvar, work on its particular, and yet not thoroughly known, culture is carried on at Pokrivenik (Mirosavljević, 1952) and other sites, whereas in continental Dalmatia, the newly discovered site of Danilo, near Šibenik, and other sites near Knin show a different culture. These are composed not only of local implements, but also those typical of the Hvar and Butmir Cultures, as well as imports from Greece and Italy.

In Croatia, a new site of the Longyel Culture was unearthed (Cerje Tužno), whereas in Slovenia, only the formerly excavated material of Ajdovska Jama (Longyel Culture also) near Krško was studied and published (Brodar, S., 1953b; Korošec, J., 1953a).

Eneolithic and Bronze Age

Some excavations of local importance only are to be mentioned from Slatina near Leskovac, and Medvedji (both in Serbia), both belonging to the Hum-Bubanj Culture. The partly discovered necropolis of Nosa (Bačka), very probably belongs to the Eneolithic, whereas Feudvar is of the Bronze Age (Rašajski and Šulman, 1953). To these periods may be attributed, partially at least, also some other finds, e.g., Dobrača near Kragujevac (Serbia), Gaj (Banat), Demir Kapija (Macedonia), and some tumuli from Dalmatia. Intensive work was done in Istria where, in one of the newly discovered sites, some graves with skeletons in flexed position were unearthed. The aim of these diggings was to find the continuity between the older "Castillieras" and the Bronze Age. In Slovenia, Predjama belongs partly to this period; new discoveries of pile dwellings were made in the Ljubljansko Barje. The importance of these lies in some new implements and in a new method to solve the problem of building pile dwellings (Jesse, 1954; Korošec, J., 1953c, 1954b).

Iron Age

With new finds and the elaboration of already excavated material, the bases for the chronology as well as for the typology of the Iron Age in Yugoslavia became much better founded. Until recently, Iron Age chronology and typology depended very much on the finds and views of Central Europe. However, because of its geographical situation, our territory had connections with the South and Southeast, particularly true during the Illyro-Hallstatt Period in Slovenia, where influences from Central Europe and Northern Italy met with influences from Hungary and the Balkans. There are new finds at Ruše, Dobova, Pobrežje, Brinjeva Gora, in the courtyard of the Slovene Academy of Sciences and Arts (Ljubljana), at Bled, Stična, and Kranj, which yielded graves with complete inventories from the early Iron Age.[8]

In Serbia, systematic work was done by the Archeological Institute of the Serbian Academy of Sciences (Beograd) on the tumuli at Kriva Reka and at Ražani, which yielded skeletal and burned burials. The metal inventory of these sites reminds one of the Glasinac Culture, whereas the pottery shows apparently archaic, local, and even Neolithic characteristics. There are less important finds at Titovo Užice and Dobrača (Hallstatt D), whereas the finds of Pljosna Stijena are reminiscent of some Bosnian "Castillieras." In Macedonia, at Vučidol, an Illyric Iron Age necropolis was discovered, and work on the previously excavated necropolis near Ohrid (Trebinište)

[8] Korošec, J., 1954a; Pahič, 1954; Pahič and Lorber, 1954; Stare, 1953, 1954a, b.

was carried on. At Vukovar (Croatia-Slavonia), skeletal and cremation burials (Vinski, 1953) and in Osijek, graves from the Hallstatt and LaTène periods were discovered. New sites of the older Iron Age are to be mentioned also from Istria (Rogatica, Stari Gočan, Prujani, and others).

There is less to tell about the LaTène period from which mostly incidental finds became known. The work on formerly excavated material (e.g., Židovar, Mošorin, Vukovar), however, helped to clarify the problems of this period in Yugoslavia.[4] In Slovenia, the site of Vintarjevec, near Litija, yielded, among other material, relics of homes from the fifth to second centuries B. C.

Classical and Post-Classical Periods

Among all prehistoric ages in Yugoslavia, classical and post-classical archeology retains an important place in scientific and public interest. In all parts of our country, new excavations, new sites, new studies, and new publications show intensive work, particularly in Roman archeology, whereas Greek archeology is somewhat neglected, partly due to the lack of specialists.

In Serbia, work continues on Carićin Grad, near Leban, where an early Christian basilica, some capitals with monograms, and mosaics were discovered during the past few years; however, it is still uncertain whether these monograms belong to Justinian or Anastasia, and therefore the question of Carićin Grad as Justiniana Prima still remains open. In the center of the city, between the Acropolis and the Central Square, systematic excavations yielded remains of residential buildings, shops, and home industry, as well as those of aqueducts and sewerage from the early Byzantine period (sixth century A.D.). Further, there are excavations in Dubravica-Margum (where, besides prehistoric, Roman, and medieval materials, Greek pottery also was discovered), Gamzigrad near Zaječar (a Roman *castrum* from the fifth century A. D.), Jagodina Mala near Niš (a basilica from the fifth century). By chance, at Kuzmin (Syrmium-Srem), Roman graves were unearthed (Slavnić, 1952).

In Southern Macedonia, the rich site of Stenae near Demir Kapija is still the center of interest. Among other material, the excavations at Čepigov near Prilep yielded six male statues. There are some more new finds from this period, e.g., a double grave at Dobri Dol, mosaics at Herakleja, Roman graves at Dračevo, a Roman village and graves near Titov Veles.

In Bosnia and Hercegovina, among other finds (Polačište, Klobuk, near Konjic, and near Prijedor), at Lisičići, in an antique settlement, frescoes with human figures were discovered for the first time in Bosnia. New sections of Roman highways have been unearthed.[5]

On the Adriatic coast of Montenegro, near Risanj (Boka Kotorska), a part of a temple, and, near Budva, Roman material as well as a Roman necropolis have been excavated. In Dalmatia, excavations have taken place in and near Zadar, near Knin, in Salonae (near Split), in the surroundings of Metković, and near Cavtat. Remarkable finds from Greek and Roman times were reported from the islands of Vis, Dugi, Ugljan, yielding some graves with Greek pottery, and some Roman *villae* (one with a mosaic), fragments of architecture, sarcophagi, church inventories, etc. However, the most important seems to be the site at Danilo near Šibenik, where antique *villae rusticae,* mosaics, many monuments with as yet unknown Illyric names, various architectural objects, and an antique necropolis were unearthed. On the islands of Brioni, a Byzantine *castrum* was under research; at one spot, eight architectural periods could be distinguished. On the mainland of Istria, some work was done at Barbariga.

In Croatia, at Varaždinske Toplice, parts of Roman *thermae* and its big pool, etc., were discovered. Other antique remains were found at Topusko, Sisak (the ancient Siscia), and at Osijek (the ancient Mursa).

In Slovenia, systematic research on the antique temple at Celje (the ancient Celea),

[4] Gavela, 1952b; Vinski, 1953; Rašajski and Šulman, 1953.

[5] Čremošnik, 1953, 1954a, b; Pašalić, 1953; Sergejevski, 1954.

in Ptuj (the ancient Poetovio), and some minor work in Ljubljana (the ancient *castrum* of Emona) was carried on. The most important site discovered in the last few years, however, is Šempeter, west of Celje, where Roman *ediculae,* with many architectural fragments, inscriptions, sculptures of Roman provincial art, etc., render possible very satisfactory reconstructions, as well as a precise dating of second century A. D. At any rate, Šempeter is one of the richest finds of the Classic period in Central Europe, if not for a still larger area (Klemenc, 1953, 1954).

There is little to be told about the finds from the period of the so-called transmigration of nations, partly because, up to the present, it was of minor interest to our archeologists. Most of the finds from this period were incidental. Interesting, however, are the archeological finds of the peoples who inhabited the area partly under the Roman occupation and prior to the arrival of the Slavs into the present-day Yugoslavia. These inhabitants, e.g., the Sarmats, Yazighs, Langobards, and others, and their cultures were certainly important for the history of some Yugoslav regions at least, and deserve more interest and systematic research in the near future. During the past few years, it is only in Bačka and Banat that systematic work was carried out. At Tavankut, a Sarmato-Yazigh necropolis with many graves and typical burial inventory was discovered (Šulman, 1952). Also at Masarykovo and Mošorin, some objects of this period have been unearthed.

During the last three years, work in numismatology has been of little importance.

The Slav Period

After the Liberation (1945), the interest of our archeologists shifted to ancient Slav archeology. The Slavs came into our territories in the sixth century A. D. From this early Slav period many necropoles were discovered in Slovenia and elsewhere in Yugoslavia. Even though the largest sites were unearthed mainly prior to 1952, field work as well as laboratory research has been carried on systematically, and many results published during the past three years. New views on the ancient Slavs' social organization, housing, trade, home industry, warfare, religion, and burial customs are the main achievements of this systematic study. It is quite clear that, though the ancient Slavs came peacefully into a relatively uninhabited territory in the eastern Alps, they were by no means—as some German archeologists and historians (apparently according to their nationalistic and racialistic viewpoints) prefer to characterize them—just peasants without a genuine organization and knowledge of warfare.

Most work was done in excavating and studying necropoles; only in Dalmatia was church architecture also systematically studied. There is, of course, far more to do considering settlements and fortifications.

In Serbia, one of the most important finds is the necropolis of Dobrača, from the thirteenth to the fourteenth centuries, which is characterized by typical earrings with beads. In Macedonia, too, many ancient Slav graves have been discovered, the largest necropolis (about a hundred graves) being at Demir Kapija. In Bosnia and Hercegovina, at Blažuj, a church from the twelfth to the thirteenth centuries, and a residential building (the first one in Bosnia) were unearthed; there was also a necropolis. In Hercegovina, at Lisičići, a church and graves were found. At Prijedor and Zecovi, other ancient Slav sites were discovered (Čremošnik, 1953, 1954b; Korošec, P., 1952). All these finds have not as yet been dated. Also, their respective culture groups are still under discussion.

The Avaro-Slav culture (Velenrajter, 1952) is represented by the sites at Aradac (Banat), Bogojevo (Bačka), Brodski Drenovac (Slavonia). The systematically excavated necropolis of Turnišče near Ptuj (Slovenia) yielded characteristic specimens of a mixed Avaro-Slav and Bijelo Brdo Culture (Korošec and Korošec, 1953).

The site of Mošorin (Bačka) was dated as of the Bijelo Brdo Culture period; the first pottery kiln in Yugoslavia was discovered there. In the vicinity there was also a settlement probably from the tenth to the thirteenth centuries (Veselinović, 1952, 1953). The sites of Taraš and near Vukovar

belong in the same period; Vukovar, besides, yielded many hundreds of graves from the ninth to the eleventh centuries (Vinski, 1953).

Much archeological work was done in the field of the Dalmatian Culture Group, mostly by revising previously excavated sites. Besides architectural remains, other archeological objects have been taken into consideration. At Biskupija near Knin, the church architecture of Crkvina was stated to belong to the period from the tenth to the eleventh centuries (Gunjača, 1952a). Other finds worth mentioning in this connection are those of Stupovi, Lopuška Glavica, Bukorovića Bašta, Pridraga (a church with six apses and parts of the monastery). At Sveti Spas (Cetina), an extensive necropolis, near Sinj a small one from the thirteenth to the fourteenth centuries, and a church with an angular apse and ecclesiastical inventory were investigated (Gunjača, 1952b). Some successful excavations were done at the Cetina springs.

During the work at the Roman remains at Danilo near Šibenik, a necropolis of the Dalmato-Croatian Culture Group was unearthed. Under similar circumstances, two small medieval churches, built on adapted antique foundations, were discovered and examined on the island of Ugljan and near Zadar on the mainland. In Istria, major excavations were carried out at Stari Joćan; there were found some residential buildings, the foundations of a church, part of the bulwark, and the watch tower in the center of the town where ancient Slavs had settled prior to the tenth century.

Remains of the Köttlach Culture were discovered in the necropolis of Kranj (Slovenia), reminiscent, partly at least, of the finds at Bled, unearthed during 1948.

To conclude this by no means exhaustive survey of Yugoslav archeology, it should be stressed that, though there was intensive work in almost all fields and periods of archeology going on, there remains still very much to do: to train more scientists, specialists, to employ new methods, to bring together specialists from various fields of anthropology. As yet there has been no possibility to establish an exact chronology by the Carbon 14 method; there is a lack of specialists in paleobotany and paleozoology; there are not enough physical anthropologists specialized in osteology and able to assist the archeologists, though some work was done in this field, particularly in Slovenia.[6] Although some success could be reported in studying paleosociology and paleodemography, there remains much more to do on these certainly very tempting questions which can be solved only by teamwork. In this respect, the conditions are better in Slovenia than in any other part of Yugoslavia, because there, at least, are some specialists who can help the archeologists, and because there, as a rule, the archeologists ask for their assistance. This certainly successful practice has extended but slowly to the other republics of Yugoslavia, where only some archeologists, in excavating necropoles, have called for the assistance of a physical anthropologist. But, even so, it was not always possible to supply their need, because of a lack of trained physical anthropologists. On the other hand, it is clear that a physical anthropologist who excavates has to collaborate with an archeologist. At any rate, the collaboration of specialists is quickly improving by regulations of the law of preservation of national monuments and by resolutions of home congresses and assemblies of archeologists. Yugoslav archeology is developing quickly, and the riches of this country in archeological sites, from Paleolithic to Medieval times, is stimulating. The practical and theoretical results which have been achieved in a relatively short time are certainly important, not only from a local viewpoint but from a European one as well.

Periodicals and Monographs

Apart from many articles and reports in various non-archeological scientific and popular reviews, magazines, and newspapers, technical papers on archeology appear more or less regularly in the following

[6] Hadži, 1953; Rakovec, 1952. As to papers in physical anthropology, *cf.* the pertinent section.

periodicals, which are partly dedicated also to history, history of art, and ethnography:

Archaeologia Jugoslavica, Arheološko Društvo FNR Jugoslavije, Beograd, published in foreign languages only;

Starinar, Serbian Academy of Sciences, Beograd, for archeology and history of art;

Istorijski Glasnik, Istorijsko Društvo NR Srbije, Beograd, publishes papers chiefly on history;

Muzeji, Muzejsko Društvo FNR Jugoslavije, Beograd. This is the official review of the Museological Society of Yugoslavia, dedicated particularly to museology;

Glasnik Srpske Akademije Nauka, Serbian Academy of Sciences, Beograd, publishing some archeological papers;

Rad Vojvodjanskih Muzeja, Vojvodjanski Muzej, Novi Sad, mainly archeological;

Glasnik Zemaljskog Muzeja, Zemaljski Muzej, Sarajevo, comprising archeology, history, ethnography;

Vjesnik za Arheologiju i Historiju Dalmatinsku, Arheološki Muzej, Split, publishes papers on archeology, history, history of art;

Starohrvatska Prosvjeta, Yugoslav Academy of Sciences and Arts, Zagreb, covers the same fields;

Historijski Zbornik, Povijesno Društvo Hrvatske, Zagreb, publishes occasionally archeological papers;

Numizmatika, Numizmatično Društvo, Zagreb;

Arheološki Vestnik (Acta Archaeologica), Slovene Academy of Sciences and Arts, Ljubljana, dealing with archeology and auxiliary sciences, publishing also reports and reviews;

Zgodovinski Časopis, Zgodovinsko Društvo, Ljubljana, devoted chiefly to history.

There are other, more or less local, technical reviews of various contents, publishing archeological reports or shorter papers.

During 1952–1954, there appeared monographs on some sites and particular cultures, e.g., on Nebo and the problem of the Butmir Culture (Benac, 1952), on the Starčevo Culture (Garašanin, D., 1954), on the Celtic *oppidum* of Židovar (Gavella, 1952), on the antique sculptures in Croatia (Gorenc, 1952), on the prehistoric site of Vače (Stare, 1954d), and on the Illyric finds from the Iron Age in Ljubljana (Stare, 1954c). In addition, there were issued two short guide-books dealing with the technique of excavating sites (Garašanin and Garašanin, 1953; Grbić, 1953), and a short introduction to prehistoric archeology, especially to Paleolithic, Neolithic, Bronze Age, and Hallstatt (Gavela, 1952). Also, the monograph on dental caries in ancient Slavs (V. Krušič, 1954), with very important hints on the culture and way of living as well as on demographic problems, deserves mention. Finally, the first Yugoslav textbook on the material culture of the early medieval Slavs was published (Korošec, J., 1952b).

ETHNOLOGY (CULTURAL AND SOCIAL ANTHROPOLOGY)

Though Yugoslavia is an eminently "ethnographic" territory, thrilling everyone who visits it, the lack of scholarly trained ethnologists and social and cultural anthropologists is greatly felt. On the other hand, however, there is a fairly broad interest in almost all parts of the country in collecting ethnographic objects; there are also many local museums, some of them very well organized. The central museums of the republic capitals and some others are also centers of organizing and schooling collectors, who collaborate by recording folk songs, folk dances, folk poetry, folk tales, social relations, national customs, and photographing, drawing, and painting national costumes, houses, tools, etc.

Ethnology and ethnography is taught in all universities except Sarajevo. Though there are basic courses in general ethnology and in non-European peoples, the main interest is concentrated on the peoples of Yugoslavia itself. The aim of this regular curriculum is not to train specialists in non-European cultures, but to give them a thorough erudition for research work and museology at home, where certainly there is still very much to do to protect the quickly disappearing customs and to preserve the

typical objects of handicraft and folk art for the museums.

There are some particular features of interest in the six republics of Yugoslavia. In Serbia, in the Serbian Academy of Sciences, there is an Ethnographic Institute (founded after the Liberation) with three divisions, one of which (Anthropogeography, according to old traditions from the times of the late geographer and ethnologist, Jovan Cvijić) is devoted to the study of the settlements and origin (lineage) of the inhabitants of Serbia. For this purpose, in 1954, there were organized field trips to Prizren, into the district of Takovo, to Popovo, and into Hercegovina. The Division of Ethnology concentrates on investigating the way of living and national customs. During the period 1952–1954, material was collected in the surroundings of Raška, and, in the region of Peć, wedding customs of the Serbs were investigated by questionnaires. The Division of Folk-Lore is chiefly interested in folk art of all kinds. In 1954, the Serbian Academy of Sciences issued the thirty-fourth volume of *Naselja* (Settlements), and the Ethnographical Institute is printing D. J. Popović's monograph on the Serbs in Banat. In addition to the three above-mentioned divisions, there are two departments in the Ethnographical Institute, one of folk architecture, and the other one of national medicine and physical anthropology.

In the new building of the Ethnographic Museum in Beograd, there was a temporary exhibition in 1954 on magic and quacksalvery, of objects which previously had been collected in the field. The Museum of Vojvodina at Novi Sad organized an Ethnographical Archive of Vojvodina.

The Yugoslav Academy of Sciences and Arts in Zagreb has no particular ethnographic institute, though research in folklore is carried on under the Committee on Folk-Lore and Anthropogeography as well as in the Institute of Literature and Linguistics. Scientists are interested, e.g., in the various dialects and in folk songs, collecting them by means of tape recording, analyzing, and comparing them. The comprehensive Susak project is a joint investigation of the little island of Susak in the Northern Adriatic by representatives of some institutes of the Yugoslav Academy of Sciences and of the Universities of Zagreb and Ljubljana. The island of Susak is particularly interesting because of its language (an old coastal Croatian dialect), its women's national costumes, its way of living and economy, and from many other points of view, including those of human biology.

One of the big events in 1952 was the issuing of the late Matija Murko's ample monograph (in two volumes) *On the Traces of the Serbo-Croatian Folk Epic,* translated from the Czech manuscript, and edited by the Yugoslav Academy of Sciences and Arts. The first volume of this monograph is devoted to the synthetic description of the great Slavist's and ethnographer's travels in the Yugoslav Balkan regions for taking phonograms, recording and studying the Serbo-Croatian epic songs and recitations, the results of which are perhaps the richest source ever published in this field; the second volume consists of photographs of folk singers ("guslari") and their music instruments ("gusle"), one-stringed instruments, sometimes beautifully and fancifully carved.

Besides very good national collections, the Ethnographic Museum of Zagreb has also Yugoslavia's largest ethnographical collections from abroad, particularly from Africa and Asia, which serve the students in ethnology from all over Yugoslavia. Also, this Museum organizes field trips to various parts of Croatia.

In the republic capitals of Skopje (Macedonia), Sarajevo (Bosnia and Hercegovina), and Ljubljana (Slovenia), there are central museums, each devoted particularly to the ethnographic characteristics of its territory; also the little city museum of Split (Dalmatia) is to be mentioned in this connection. In all of these museums are found typical national costumes, objects of folk art, of agriculture, home industry, housing, animal husbandry, etc. Throughout the country, colorful national costumes are characteristic of almost every town, valley, and district. They are now eagerly studied

by ethnographers.[7] Also, hand-woven carpets, wood carvings, agricultural equipment (particularly the plow), and tools for spinning and weaving are given attention.[8]

The Slovenian Ethnographical Museum (Ljubljana) is collecting and intensively studying "beehive endings" (frontboards), a specialty of Slovenia. These "endings" appear on the rectangular wooden beehives, and the paintings on them show religious as well as secular motives, illustrate folk tales, reflect the feelings of the Slovenian farmer vs. the townspeople, the relations between husband and wife, etc., and are known at least from the beginning of eighteenth century. Another peculiarity, studied at present, are the skis from Bloke where they have been the basic means of winter travel since the seventeenth century. The last issues of the *Slovenski Etnograf* reflect partly the trend of interest among the Slovenian ethnographers.[9] The Ethnographical Museum of Ljubljana, though the smallest among the central museums, has perhaps the best organized, and most systematic, regional exposition of Slovenian ethnographical material, does very systematic field work each summer, and publishes the only Yugoslav periodical, *Slovenski Etnograf* (The Slovenian Ethnographer), with sections for original papers, reports, and reviews. Since 1948, there have been eleven field trips: in 1952, one to the Upper Soča (Isonzo) Valley as a sample of the Alpine region, another one to Šentjernej in the eastern lower part of Slovenia as a sample where Alpine elements intermingle with Pannonic ones. In 1953, one field trip was organized to Goriška Brda, west of the Soča Valley, as a sample of the Mediterranean region. In 1954, there was a field trip to Cerkno and its surroundings to study another area where Alpine elements intermingle with Mediterranean ones. Though no scientific report has been published as yet, these field trips furnished material for an exposition during June and July, 1953, in Ljubljana, where the methods of the field work, as well as some results and collected specimens were shown to the public. Minor expositions were organized immediately in the centers of the investigated regions to stimulate public interest in ethnographical objects and material; at such occasions, also, folk dances and popular stage plays were performed for the inhabitants of the villages under investigation.

In Slovenia, at the Slovene Academy of Sciences and Arts, the Institute of Slovenian Ethnography was founded in 1951 and began its work in rather unfavorable circumstances, considering the shortage of space and funds. It is, up to the present, almost entirely devoted to the research of folk poetry and folk prose (Grafenauer, 1953). In Ljubljana there is also a separate Institute of Folk Music, which is particularly interested in collecting and studying folk dances as well as folk songs from the Slovenian ethnic territory; it is now preparing a larger collection of folk songs, arranged by its late founder, F. Marolt.

In publishing folk songs in systematic and critical editions, there is yet much to do in all Yugoslav republics except Croatia. Though there exist collections at some of the institutes mentioned, they still await critical study, owing to the lack both of specialists and of funds. Yet all over the country, there is a considerable trend for preserving national folk dances through the organization of folklore groups, in which peasants as well as students participate. Some of these groups also have had a great success abroad (in England, France, Switzerland, Germany, and elsewhere), and folk festivals, organized every summer by those folklore groups and by local authorities, attract hosts of native, as well as foreign, onlookers and sightseers.

On its third international tour, in 1952, the reorganized Exposition of Yugoslav Folk Art, first organized during 1947–1949, visited Belgium, Holland, France, and Switzerland. This exposition comprised more than 1400 pieces of folk art and handicraft, among them thirty-two national costumes, about sixty carpets, embroideries,

[7] Kovačević, 1953; Filipović (ed.), 1953; Kirin, 1954; Marković, 1954a, b.

[8] Filipović, 1953b; Popović, 1953, 1954; Oštrić, 1953; Bratanić, 1952, 1953, 1954.

[9] Vilfan, 1952, 1953; Orel, 1953; Škerlj, 1953d.

laces, kerchiefs, pillowcases, cloths, bags, gourds, musical instruments, chests, cradles, pottery, arms, jewelry, ornamented pasch eggs, "beehive endings," etc.

Periodicals, Monographs, and Books

Though there has been considerable field collecting of ethnographic material, and though there are very good central and local ethnographical museums and exhibitions, a considerable lack of scientific publications, particularly periodicals, is felt. This is due partly to the fact that there are only few scholarly trained ethnologists. Nevertheless, at least six major periodicals and annuals are to be mentioned:

Glasnik Etnografskog Muzeja, Etnografski Muzej, Beograd;

Glasnik Etnografskog Instituta Srpske Akademije Nauka, Serbian Academy of Sciences, Beograd;

Srpski Etnografski Zbornik, Etnografski Institut, Serbian Academy of Sciences, Beograd, appearing in the four series: (1) Settlements and Lineages of Inhabitants, (2) Folk Life and Customs, (3) Folk-Lore, (4) Source Materials;

Zbornik za Narodni Život i Običaje, Yugoslav Academy of Sciences and Arts, Zagreb, dedicated to studies of people's way of living and customs;

Slovenski Etnograf, Etnografski Muzej, Ljubljana;

Bilten Instituta za Proučavanje Folklora, Institut za Proučavanje Folklora, Sarajevo.

Ethnographic papers also appear in other periodicals devoted mainly to archeology, history, history of art, and linguistics. The most important certainly is the *Glasnik Zemaljskog Muzeja,* Zemaljski Muzej, Sarajevo.

Some important books and monographs have been issued during 1952 to 1954. The ample monograph on the Serbo-Croatian folk epic by the late M. Murko (1951) has been mentioned. In 1952 the second volume of the *Ethnography of the Slovenes* (Grafenauer and Orel, 1952) and ethnographic notes on the coastal and westernmost Slovenes from Istria through Trieste, Gorica to Venetia (Turnšek, 1952) were issued. In 1953, a volume appeared on the work of the Ethnographical Museum in Beograd during the fifty years of its existence (*Zbornik Etnografskog Muzeja 1950–1951*). The monographs by the late T. Djordjević and L. Mičović appeared as the sixty-fifth (1952) and sixty-sixth (1953) volumes of the *Srpski Etnografski Zornik,* edited by the Ethnographical Institute of the Serbian Academy of Sciences in Beograd (Djordjević, 1952; Mičović, 1953). The "Matica Srpska" at Novi Sad published a monograph on Serbian national costumes in Vojvodina, with contributions by seven authors (Filipović ed., 1953), whereas the Serbian Academy of Sciences issued a monograph on the medieval costumes of the Slavs in the Balkans (Kovačević, 1953); in Zagreb, during 1954, appeared the first two volumes of a monograph series on Yugoslav national costumes in pictures (Kirin, 1954). Finally, in 1954, a monograph on the mute language in the tradition and oral literature of the Southern Slavs was issued at Skopje (Rusić, 1954).

HUMAN BIOLOGY (PHYSICAL ANTHROPOLOGY)

In the whole of Yugoslavia there is only one university at which regular lectures in physical anthropology are given, i.e., the University of Ljubljana. There are no museum expositions or important collections of skeletons or skulls, except some Ancient Slav material in Ljubljana and the very important Krapina find in Zagreb. In Yugoslavia, human biology and physical anthropology were practically unknown, simply because there were no physical anthropologists, until the late twenties. The importance of human biology as applied physical anthropology was first recognized by Professor A. Štampar, who organized the modern Public Health Service of Yugoslavia. During 1952–1954, the collaboration of physical anthropologists in archeological excavations and research work, as well as collaboration with the Public Health Service and other scientific research work carried on in the Institute of Anthropology in Ljubljana, are worth mentioning.

In collaboration with archeologists, studies were published on the Ancient Slav skeletal material from Bled, Turnišče, and Dobrača.[10] These studies also were partly devoted to paleodemography. Considering the accumulation of children's graves, e.g., a guess as to contagious diseases can be made, for the mortality of children was very high. It remains an unanswered question as yet, why many more males than females died during certain seasons of the year. The life expectancy at birth of this early population was apparently low (22–25 years). The settlements of the inhabitants who used these necropoles must have been very small and the living standards very low. By a new method, considering the orientation of graves according to the visible sunrise from the burial place, the probable dates of the burials can be estimated. It can be shown that, at Bled, very probably the death rate was highest in March and October, and very low during summer. Comparing the two necropoles of Bled, one unearthed in 1948, the other in 1949, anthropologically as well as odontologically, it appears that the users of these necropoles from the seventh and ninth centuries, respectively, did not belong to the same population. The pathology of these skeletons, which show many traces of rheumatic changes, is still under investigation. Among the Ancient Slavs at Bled and Turnišče (Slovenia), and at Dobrača (Serbia), brachycephalics were extremely rare; on the other hand, among the dolichocephalics, there are relatively many of a very heavy skeletal frame, similar to Paleo-European (or Paleo-Caucasoid) types.

Other studies carried on at the Institute of Anthropology (University of Ljubljana) are devoted to human biology, particularly to body composition and age changes (Škerlj, 1953b, c, 1954a, b, c). To overcome the expensiveness of X-raying and of calculating specific gravity of the human body by submergence, new methods employing simpler anthropometric means were developed. Studies in body volumes and body surface areas, in connection with age changes, are carried on.

Finally, there is the collaboration of the Institute of Anthropology of Ljubljana with the Susak project of the Yugoslav Academy of Sciences and Arts (Zagreb). The population of the island of Susak was studied from the physical anthropological point of view, including the reconstruction of pedigrees of the whole population (about 1400 inhabitants) for some five generations. It appears that the inhabitants of Susak are a highly inbreeding population, yet without major symptoms of degeneration. Research is still going on, and papers on the results are in preparation.

In the frame of Public Health Service, particularly in the School Policlinics of the republic capitals, school children regularly are measured anthropometrically. In addition, in Ljubljana, a thorough longitudinal study of school children was begun in 1954 by the Central Institute of Hygiene. In Zagreb, the Institute of Work Hygiene includes research on human biology (Brožek, 1954). In Beograd, studies of the Institute of Nutrition (Serbian Academy of Sciences) are devoted to investigations in national food customs.

In Yugoslavia there are no periodicals especially devoted to physical anthropology or human biology, but osteological and paleoanthropological papers are issued by the *Arheološki Vestnik,* whereas papers on human biology appear in the *Biološki Vestnik,* edited by the Prirodoslovno Društvo, Ljubljana.

CONCLUSION

One can say that in Yugoslavia, though there has been considerable accomplishment in the anthropological sciences, there is still more to be done. This, however, depends not only on the financial resources given by the State, but also on the staff of anthropologically trained workers. This latter is the most difficult problem, for the lack of adequately trained specialists and auxiliary personnel inhibits not only excavations and other field work, but also the scientific exploitation and exploration of the material collected. This lack is not so

[10] Dolinar, 1953, 1954; Krušič, 1954; Škerlj, 1952a, b, 1953a.

bad in archeology (though even there some institutions could do with many more specialists) as in ethnology and particularly in physical anthropology.

We hope, however, that these impediments will be overcome in the relatively near future, particularly by the organization of anthropology, in one of the universities at least, as a regular curriculum. At present, the conditions for such a curriculum are given in Ljubljana only. At this university, there are chairs of archeology, of ethnology, of physical anthropology and Paleolithic prehistory, the latter two the only ones in Yugoslavia. It is to be hoped that the University of Ljubljana will not overlook this unique opportunity. Of course, more opportunities for studying anthropology at the other universities are needed, also. At any rate, present developments are favorable, particularly because Yugoslavia is such a stimulating territory for anthropological research in all its fields.

RECENT CHANGES AT ANTHROPOLOGICAL INSTITUTIONS

Considering the anthropological institutions in Yugoslavia cited in the *International Directory of Anthropological Institutions,* 1953, there are only minor changes, corrections, and supplements:

In Beograd, at the chair of ethnology (University of Beograd), besides Prof. B. Drobnjaković, Docent M. Barjaktanović was installed; there is no (physical) anthropology at the Faculty of Natural Sciences and Mathematics. The director of the Ethnographical Museum is Mr. M. Vlahović.

At the Faculty of Philosophy at Skopje, there is a chair for ethnology (Docent B. Rusić); in Skopje, there is also an Ethnological Museum and a Folkloristic Institute.

In Zagreb, the director of the Archaeological Museum, Prof. Hoffiller, died, and Dr. F. Ivaniček left the Institute of Anthropology at the Faculty of Medicine in 1952.

In Ljubljana, the director of the Ethnographical Museum is Mr. B. Orel; the director of the National Museum of Archeology and Cultural History, Dr. J. Kastelic. At the Slovene Academy of Sciences and Arts, the Institute of Slovenian Ethnography (Director, I. Grafenauer) was founded in 1951. At the Institute of Folk Music (founded in 1934), the administrator is Miss M. Šuštar.

City	Republic	Chairs at the Universities	Museums	Academies	Others
Beograd	Serbia	Archeology, Ethnology	Ethnography	Ethnography	—
Ljubljana	Slovenia	Archeology, Ethnology, Anthropology, Paleolithic Prehistory	Archeology, Ethnography	Archeology, Slovenian Ethnography	Institute of Folk Music
Sarajevo	Bosnia and Hercegovina	—	Ethnography, Prehistory	—	Institute for Folkloristic Studies
Skopje	Macedonia	Ethnology	Ethnology	—	Folkloristic Institute
Zagreb	Croatia	Ethnology, Archeology, Anthropology (Institute without chair)	Ethnography, Archeology	Committee on Folklore and Anthropogeography	Institute for Folk Art

FIG. 3. THE MAIN ANTHROPOLOGICAL INSTITUTIONS IN THE REPUBLIC CAPITALS OF YUGOSLAVIA

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Eastern Europe

Bulgaria, Czechoslovakia, Hungary, Poland, Roumania
An Anthropological Review for 1952–1954

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BULGARIA

ANTHROPOLOGICAL research during the last three years has been confined largely to cultural anthropology, that is, archeology and ethnography. Practically no work in physical anthropology has appeared during this time. Investigations in cultural anthropology are organized according to a system similar to that in use in Poland. The Bulgarian National Academy of Sciences has the leading position in this work. The institutes of archeology and ethnography, as well as the museums, are under the control of the Academy.

Interest centers on the Early Middle Ages, and particularly on the formation of the Bulgarian nation in the Balkan Peninsula. The leading author in this field is I. Duičev. In addition to the work pertaining to the period of the settlement of Bulgaria by its present population, there has been considerable research on the pre-Bulgarian populations of the area, particularly the Thracians and Macedonians. An account of these studies may be found in *Izvori za starata istorija i geografja na Trakija i Makedonija* (Sofia). Whereas it was formerly believed that Albania and Macedonia were inhabited by Illyrian tribes, L. Ognenova has concluded, on the basis of extensive archeological investiga-

[1] For several reasons, we have had no direct access to the anthropological institutions or libraries of the area. The difficult task of writing this article has been facilitated by the cooperation of Dr. Franjo Ivaniček, who has reviewed the work in anthropology in Bulgaria and Poland. Foltiny sent inquiries to ten Czechoslovakian, ten Hungarian, and eleven Roumanian anthropological institutions. Czechoslovakia returned one report, Hungary, two; Roumania did not respond at all. Most of the information came from such sources as recent scientific periodicals on the subject.

The word "anthropology" is not used in these five countries as a comprehensive term for the sciences dealing with man. Instead, physical anthropology, archeology, ethnology, ethnography, linguistics, etc., each have their own institutes and laboratories; they are not even all taught within the same faculty.

tions, that in pre-Bulgarian times, Thracian tribes were widely distributed, occupying not only Bulgaria but extending even into Macedonia and Albania.

In addition to studies of the old Thracian culture, the contributions from classical Greek culture have been examined. Because of the contemporaneity of these cultures, and the extension of Greek influences into Thracian territory, it is occasionally difficult to distinguish between these two elements. Nevertheless, it is clear that during the Metal Age and before, the Thracians were the aboriginal inhabitants of the area.

The leading archeological journal in Bulgaria is *Izvestija na archeologičeskija institut* (Sofia). Among recent contributors to this publication are P. Detev and N. Petkov, who reported on their investigations of burial mounds; and V. Mikov on his studies on Thracians. V. Nikolajev contributed to the study of stone monuments of the ninth century, the period of the formation of the Bulgarian nation.

Attention is directed toward the Early Middle Ages in an attempt to elucidate the relationships of the Bulgarians and the Slavic tribes formerly living in the area of present-day Bulgaria. In this area, and at this time, we find the coexistence of two peoples, dissimilar both as to culture and biology. The final decision on this problem lies in the province of physical anthropology. Today the Mongolian phenotype has almost completely disappeared from the Bulgarian population. Nevertheless, the Mongolian spot may be observed in a certain percentage of newborn children.

Several important ethnographic contributions have appeared within recent years. Among these are studies by G. I. Kačarov, V. E. Boncov, A. Karastojanov, and R. Katsarova. These studies deal with Bulgarian national songs, home industries, and folk dances. Also worthy of mention is a recent study on minority groups in Bulgaria, particularly those of Turkish extraction.

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CZECHOSLOVAKIA

PHYSICAL ANTHROPOLOGY

The interest of Czechoslovakian scholars in physical anthropology is well known. The research activities of Matiegka and Hrdlička have not been confined to their homeland. Although many recent studies have not been available to the author, there is evidence of serious work during the last few years.

The field of paleoanthropology seems to

have been a subject of general interest. Not only a list of fossil human remains has been published (Vlček, 1952), but also studies of the phylogeny of the *Homo neandertalensis* (Jelinek, 1952), of fossil teeth (Jelinek, 1953), and of the papillary lines of the fingers of Late Pleistocene man (Vlček, 1951) have appeared.

Later periods of the prehistory of Czechoslovakia are well represented in the published reports of skeletal finds. Jelinek (1954) has reported on a skull with trepanation of the Únetice culture. An article by Chochol (1954) deals with human skeletal remains of the Knoviz-culture (Early Hallstatt Age). Further investigations have demonstrated that trepanation was known to the population of the La Tène (Mazálek and Vlček, 1953) and Roman Age (Vlček, 1953b). In another article, Vlček (1954) has discussed the problem of the Mongols and Mongoloids in southern Slovakia. It is not possible here to include the latest publications on demography. However, we wish to mention that work is being done in this field of anthropology (Hřibová, 1951).

Physical measurements on high school students have been reported from Moravia (Bednář, 1951; Ptáček, 1951). Poláček (1951) has published some contributions to the problem of brachycephalization. Prokopec has prepared an article (1951) on a method of casting in physical anthropology.

The asymmetry of the venous system of the proximal extremities (Suchy, 1951) and the anatomy of the human fingers have also been investigated (Žlábek, 1951).

ARCHEOLOGY

There has been a considerable advance in the prehistoric research in Czechoslovakia during the last five years. Archeological investigators, employing modern methods, in cooperation with experts in allied sciences, endeavor first and foremost to amplify material finds by a detailed description of the circumstances of discovery, and by study of the interrelation of these findings with each other and with the site. The researches are directed by a special commission of the Czechoslovak Academy of Sciences, which controls and coordinates all aspects of the excavations (Klima, 1954a). This teamwork has proved very successful. The discovery of three Paleolithic hut-sites is among the significant results. Many new sites of the Mousterian (Prošek, 1952; Mazálek, 1953) and Aurignacian (Prošek, 1953a, b; Klima, 1954b) cultures have been uncovered, particularly in southern Slovakia. Some reports have dealt with the Magdalenian (Böhm, 1953c; Valoch, 1953). Mazálek (1954) has called attention to the problems of the Mesolithic Age in Slovakia.

In volumes V and VI (1953–1954) of *Archeologické Rozhledy,* ten brief articles have been published on various groups of the Neolithic (corded ware, Baden Culture, the Eneolithic, etc.). These publications, however, are of local interest.

Many important studies have been devoted to the Unetice (Aunjetitz) culture. As a result of these investigations more than 450 Unetice sites are known from Moravia alone (Tihelka, 1953a). The dwellings of this culture have also been studied (Hnizdová, 1953). The burial rites of the Unetice population have been discussed in two reports (Rataj, 1954; Jüttner, 1954).

Much interest has been focused on the so-called "Věteřov-Type" in Moravia (Tihelka, 1952, 1953b; Spurny, 1953). This is a Moravian variant of the Mad'arovce culture of western Slovakia. The Věteřov-type seems to have played a significant role in the formation of the Middle Danubian Group of the Tumulus (Hügelgräber) culture of the Middle Bronze Age.

As very little is known about the Piliny culture of southern Slovakia and northeastern Hungary, Jilková's report (1954a) on new finds of this culture is significant.

The investigations of the Urnfield culture in the C.S.R. (Knovizian and Lusatian groups) have been of great importance for the prehistorians of Central Europe (Kudláček, 1953; Burian, 1954; Jilková, 1954b).

Some studies of characteristic types of the Central European Early Hallstatt Period (Adamczyková, 1953; Hrala, 1954) have been published. The ethnic and archeological problems of the Scythians have played an important part in the research activities of the Czechoslovakian anthro-

pologists (Benadik, 1953; Dušek, 1953, 1954). Several recent papers have dealt with the La-Tène Period. Filip (1953a) has directed attention to the Keltic social structure. He has devoted another study to the bi-ritual cemeteries of the Keltic population in Moravia (1953b). On the basis of the inscriptions of Biatec coins, Polák has written a linguistic paper (1954) on this Keltic tribe.

The latest archeological finds have indicated that western Hungary and southwestern Slovakia belonged to the Byzantine cultural area until the middle of the seventh century (Svoboda, 1953; Radomérský, 1953). A subject of permanent interest has been the problem of the Slavs (Pleiner, 1954; Kudrnáč, 1954; Pavelčik, 1954).

As is well known, southern Slovakia was a part of the Hungarian Kingdom for more than 1000 years; it has remained ethnically Magyar up to the present time. Medieval Hungarian archeological remains have been found in several sites of Slovakia (Krupica, 1954; Kraskovská, 1954). These finds date from the tenth to thirteenth centuries.

Aside from chronological and typological questions, the methods and theoretical problems of archeological research have been discussed in recent papers. Novák has reported (1951) on the use of the comparative geographic-cartographic method in anthropological investigations. Nečesaný has dealt (1952) with carbon analysis as a research method in the reconstruction of the post-glacial development of forests. Böhm (1953a), has studied the present status of radiocarbon 14 dating. He has also called attention (1953b) to the problem of the periodization in prehistory. He has compared the Marxist periodization principles with those of the capitalistic countries.

The author has been fortunate in obtaining information on the research activities of the Department of Prehistory and Protohistory of the Masaryk University of Brno.[2] The Department of Pre- and Protohistory has been investigating and cataloguing prehistoric and early historical forts in Moravia. A complete catalogue of these forts will certainly offer a suitable basis for the preservation of monuments and for systematic excavations. In the first phase of the work, a list of all Moravian forts hitherto known was set up. Later they were mapped and divided into groups according to their archeological age. Simultaneously, field research has been in progress for forts as yet unknown. Under the guidance of Professor Šimek, the investigations have been carried out by university students in their free time.

Two organized excavations of the Department were conducted in 1954. A considerable fortification system was uncovered in the Old Slavonic fort at Žnojmo (ninth century). Late Paleolithic sites and Late La Tène settlements were discovered in Boršice. An important study of Great Germania of Claudius Ptolemaius by Šimek was published as Number 49 of the publications of the Philosophical Faculty. This work gives a cultural and historical survey of the region between the Rhine, the Vistula, the Danube, and the Baltic Sea, at the end of the pre-Christian and the beginning of the Christian era.

ETHNOLOGY

Unfortunately, most of the latest reports on ethnology and folklore have not been available to the author. Although it is not possible here to include any recent publications, a few items pertinent to ethnology or folklore have been selected.

Suk has published (1951) a contribution to ethnical psychology. He has tried to show that mankind originated from one, and not from several, ancestors. A special subject of interest has been the customs and rites accompanying the cultivation of rice in Ceylon (Pertold, 1951).

Václavik has dealt (1951) with a folk-song used by Comenius in the early seventeenth century. To judge from a Hungarian review, Zibrt has devoted a study (1950) to the customs connected with festivals of the calendar year.

[2] We are indebted to Professor Doctor E. Simek and Professor Doctor F. Kalousek for a report on the work of their institution.

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HUNGARY

PHYSICAL ANTHROPOLOGY[3]

Dr. Nemeskéri distinguishes three main trends in the research of recent years: 1) the problems of ethnic anthropology (Raciology); 2) the investigation of certain morphological and physiological traits; and 3) anthropogenesis (paleoanthropology).

Ethnic Anthropology

During the last few years, so-called "Historical Anthropology" has held the highest interest. With the establishment in 1945 of the Anthropological Division of the Museum of Natural History as an independent institution, research in physical anthropology has made significant progress. This Division participated in all excavations directed by the Permanent Committee for Archeology of the Hungarian Academy of Sciences and by the National Museum. As a result of this activity, the Division now possesses a collection of 8300 skulls and skeletons dated by archeological methods. The same institution has carried out field research on sixty sites during the last five years. All archeological periods from the Neolithic to the twelfth century A. D. are represented by numerous skulls or skeletons. Physical anthropologists have worked together with archeologists and historians on these sites. On the basis of these coordinated investigations, it was possible to discover, for several completely excavated sites, the ethnic elements comprising the population, and the role played by the various elements in the ethnogenetic process (Nemeskéri, Lipták, and Szőke, 1953). It was also possible to reconstruct the biologic structure of small communities, and to solve some paleodemographic problems (average lifetime of individuals, distribution of sexes, infant mortality, number of generations, etc.).

A total of 1500 skulls and skeletons have been deposited in the new physical anthropological collections established in larger towns of the provinces: Győr, Székesfehérvár, Debrecen, Keszthely, Pécs, Miskolc, Szombathely, and Nyiregyháza.

Comparative analysis, made on the basis

[3] The author sincerely appreciates the assistance of Dr. János Nemeskéri, Head of the Division of Anthropology of the Museum of Natural History in Budapest, for a detailed report on the research activities of Hungarian physical anthropologists. His report has been shortened and translated by the author, who has also inserted additional bibliographical data.

of the new findings, of the populations of the Copper Age cultures in Hungary shows that the ethnogenetic process of that period is influenced by Proto-europid (elements of the Neolithic), Mediterranean (coming from the South and Southeast), and Brachycranic elements (coming from the West). Eastern brachycranic elements seem to be present in the Gáta culture of the Early Bronze Age.

A special subject of current interest is the ethnic research on the Cimmerian-Scythian problem. Excavations in Tápé-Lebő and in Szentes-Vekerzug (Párducz, 1952a) offered a good opportunity for these investigations. The findings of the earlier period represent the Mediterranean type (dolichocrania); Eastern Europid and Taurid elements (mesocrania and hyperbrachycrania) later appear in conjunction with the Mediterranean type.

Physical anthropologists also are trying to clarify the problems of Scythian-Keltic correlations. Much interest is being focused on the study of the ethnic changes in the population of Pannonia (Western Hungary) during the Late Roman Age and on the Macrocephalic problem (Nemeskéri, 1952).

The most significant investigations in the last few years have dealt with ethnic problems of the seventh to twelfth centuries. The analysis of the Avar cemeteries demonstrates that the ethnic structure of the Avars is composed of Mongolid and Europid racial elements. Certain areas show Europid character, others Mongolid (Bátai, 1952; Lipták, 1951a; Wenger, 1952, 1953). The two elements often appear together.

In connection with the excavations in Zalavár and other sites of the Árpád Age, physical anthropologists tried to solve the "Slav Problem." The outstanding event was the detailed anthropological survey of prehistoric Magyars and the Hungarians of the Conquest era (Lipták, P. 1951b, 1953a, b, 1954; Nemeskéri, Lipták, and Szőke, 1953). Europo-Siberid, brachycranic Europid (type Pamiro-Fergana), and Turanid elements are predominant in the ethnogenetic process of the Magyars of the Conquest Era. It is now maintained that the role of Eastern Baltic elements is less significant than was thought previously.

In addition, ethnic investigations of contemporary Hungarians are being conducted. The Anthropological Institute of the University of Budapest has examined about 25,000 individuals in the "Matyó" and "Palóc" areas of northern Hungary. The same institution has conducted research in the so-called "Nagykun" area (Bartucz, and Balogh, 1954). The Anthropological Institute of the University of Debrecen has begun anthropological examinations of 8,000 to 10,000 individuals in the "Barkó" area of Borsod and in the "Szamoshát." The Anthropological Division of the Museum of Natural History (Budapest) has carried out investigations in the "Rétköz" and "Bodrogköz" on 12,000 individuals. A research team of physical anthropologists, historians, sociologists, statisticians, geographers, internists, gynecologists, pediatricians, dentists, and immunobiologists joined in anthropological research (Acsádi, Csizmadia, Lipták, Nemeskéri, and Tarnóczy, 1953) on the partly endogamous population of a larger community. The purpose of the investigation was to find out how endogamy came about and to discover its consequences for heredity and biological status.

Morphology and Physiology

Aside from the problems of ethnic anthropology, special attention has been devoted to research relating to children and infants. Detailed anthropometric data of 34,000 children (three to eighteen years of age) have been collected during the last five years. Anthropological measurements have been taken on university students (Allodiatoris, 1952; Rajkai, 1954). A research team of the Museum of Natural History has determined the blood-type (ABO, MN, Rh) of 15,000 individuals. The Anthropological Institutes of the universities of Budapest and Debrecen also have conducted blood-type examinations.

Further subjects of investigation were the human voice (oscillograph diagrams), and the ability to perceive musical sounds (Tarnóczy, 1953). The result of tests given

to people residing in a completely Hungarian community and also to a group of Gypsies shows the Hungarians to be superior to the Gypsies with regard to the ability to perceive rhythm and melody. The anatomy of the hands and head were also discussed (Thoma, 1954; Malán, 1952).

Anthropogenesis

In the field of paleoanthropology, attention has been focused on *Homo aurignaciensis*. Malán has published a paper on the human remains recently found in the Cave of Istállóskő *(Homo sapiens fossilis)*. He is now working on a comparative examination of hominid and prehominid characteristics. Bartucz is writing a study on the history of paleoanthropological research in Hungary. He is also dealing with the comparative study of the *Homo neandertalensis* of Subalyuk.

ARCHEOLOGY

Among the scientific achievements in Pleistocene prehistory of the last few years, the results of the investigation in Varbó and Pilisszántó deserve mention. One of the outstanding events in Hungarian archeology has been the excavation at Varbó, in Borsod, where the oldest-known Paleolithic artifacts in Hungary have been found (Vértes, L., 1953a; Jánosy, 1953; Sárkány, and Stieber, 1953). The stratigraphy of this cave station points to the second half of the Riss-Würm interglacial period and to Würm I.

Several studies of Magdalenian finds of Pilisszántó (Vértes, L., 1951; Gábori, 1954) have interest for archeologists. Gábori (1953) devoted an article to the important problems of the Solutréan culture in Hungary. Under the strong influence of Soviet social sciences, Vértes (1953b) has tried to discuss several problems of Paleolithic society.

No significant publications dealing with archeological finds of the Neolithic are available for the last three years. There is evidence, however, of serious work in Bronze Age research. The excavations in Tószeg have been of great importance not only for Hungarian prehistorians, but also for those of Central and Southeastern Europe (Csalog, 1952; Mozsolics, 1952; Bökönyi, 1952b; Sárkány and Stieber, 1952; Reményi, K. A., 1952; Ember, 1952). Tószeg is well known for its stratigraphy, which served as a basis for the Bronze Age chronology of Hungary (in the chronology systems of Childe and Tompa). On the occasion of the last excavations, new stratigraphical observations were possible, and participating scholars collected significant data concerning the fauna, flora, and economic conditions of the Bronze Age.

Much new material has come to light in Nagybátony, the largest Bronze Age cemetery of Hungary, 1,800 to 2,000 graves being discovered there (Patay, 1954). The finds are of the Piliny culture, little known previously. Mozsolics (1953) has directed attention to the bits of bridle, made of stag's horns or animal bones, used during the Bronze and Hallstatt Periods (Bökönyi, 1953). A study has described the prehistoric fortresses of Fejér (Nováki, 1952).

The culture of the Cimmerians and the Scythians has been investigated by Párducz (1952a) and Bökönyi (1952a). They have been able to reconstruct the type of chariot, and to identify the kind of horses used by the Scythians.

Many important studies have dealt with Roman provincial archeology (e.g., Bónis, E., 1952; Járdányi-Paulovics, 1953; Pekáry, 1953; Soproni, 1954; Türr, 1953). Two "model" articles, discussing social conditions of the Roman Age, have been translated from Russian into Hungarian (Dimitrijev, 1953; Stajerman, 1953). The apparent aim of these translations was to stimulate Hungarian archeologists to follow the Marxist-Leninist interpretation.

Publications on the history of the peoples and tribes of Iranian descent belong to the greatest achievements of Hungarian archeology during recent years (Fettich, 1952, 1953; Harmatta, 1952b; Párducz, 1952a, b).

The cultural and historical role of the Huns has been a special subject of interest (Harmatta, 1952a). Not only Hungarians have participated in this work, but also the German expert, Altheim (1952). Several

new studies of the Avar Age have appeared recently, one dealing with trusses used by the Avars (Anda, 1952). In another paper (Csallány, 1953) the funeral rites of the Kuturgur-Bulgarians have been described. As Dely (1952) has pointed out, the turtle seems to have had an important role at certain ceremonies among the Avars.

Fundamental investigations have been carried out in Medieval archeology. The excavations at Zalavár have thrown new light on Frank-Slav-Hungarian interrelations (Fehér, 1953). Increasing interest in systematic Medieval research has been shown in two other articles (Méri, 1952; Balogh, 1953).

After World War II, one of the chief trends in archeological research was toward Hungarian-Byzantine intercultural relations.[4] The "Byzantine Problem" had a significant place in the first Five Year Plan, prepared for the period 1950–1954 by the Permanent Committee for Archeology of the Hungarian Academy of Sciences. According to this plan, the task of Hungarian Byzantinologists was to find out what correlations existed between Byzantium and Hungary. Another problem was to elucidate the connecting areas. The Byzantinologists were asked to try to solve the problem by new excavations (Magyar Tud. Akad. II. Társ.-Tört. O. Közl. 3., Muzeol. sor. I, Budapest, 1951, 9).

As a result of this planned research, Csányi has pointed out that Byzantine influence is present not only in the peculiar ground-plan of the basement of the temple of Feldebrő, but also in the ornamentation of many Hungarian architectural monuments (Magyar Tud. Akad. II.o. közl. 3., II. 1., pp. 24–40). Two Hungarian scholars, each independently from the other, claim the presence of the influence of a mosaic of the Hagia Sophia in the iconography of the so-called "Porta Speciosa" in Esztergom (Ney and Kádár, 1949; Bogyay, 1951). These claims, however, are not accepted unanimously by Hungarian scholars (Bercsényi's review: *Művészettörténeti Értesitő,* Budapest, 1953, Nos. 1–2). In addition, Bogyay (1954) recognizes the effect of the "deesis-scene" of Byzantium in another door-ornament of the former cathedral of Esztergom.

Moravcsik's significant work "Bizánc és a magyarság" (1953) gives the first modern and complete representation of the Hungarian-Byzantine correlations (Reviews: *Századok,* Vol. 87, p. 682 and *Művészettörténeti Értesitő,* 1954, Nos. 1–2.)

Györffy's study (Magyar Tud. Akad. Társ.-Tört. O. Közl., 1953) on the inventory of the possessions and properties of the Greek monastery of Szávaszentdemeter in the twelfth century has called the attention of Byzantinologists to several sites where ecclesiastical buildings of Byzantine character might have existed. Following the publication of this volume, J. Csemegi, Gy. Györffy, and Z. Kádár, members of the research team of the Academy of Sciences, carried out a topographic survey in the area between the Danube and the Tisza, and in Veszprémvölgy.

Protohistoric findings also are being compared with contemporaneous Byzantine material. D. Csallány has recently (1952) dealt with the problem of Byzantine money in Hungary during the Avar Age, and with some objects of Byzantine metallurgy (1954).

ETHNOGRAPHY

In Hungary, the word "ethnography" is used as a comprehensive term for folklore and ethnology. Ethnographic research plays an important role in the countries of Central and Southeastern Europe. Folk music, dance, songs, poesy, tales, myths, customs, proverbs, and sayings are present among peasants and laborers. In Hungary, active interest in folklore dates back into the early nineteenth century and has continued to the present time.

One of the characteristic deficiencies of Hungarian ethnography has been that scholars have shown little interest in the problems of general theory. During the last few years, several ethnographers have re-examined the fundamental principles, meth-

[4] The author expresses deep appreciation to Dr. Zoltán Kádár, Head of the Department of Ancient History and Archeology, University of Debrecen, for a report on Byzantine archeological research in Hungary. This report has been translated and condensed by the author.

ods, and theoretical problems of their own field (Diószegi, 1954a; Ortutay, 1953; Vajda, 1954).

Another major event has been the publishing of the first two volumes of the Collection of the Hungarian Folk Music, edited by B. Bartók and Z. Kodály. The publication of the full collection is planned to comprise twenty volumes and to include all motifs of Hungarian folk music (Vargyas, 1953; Rajeczky, 1954).

A huge volume of folk-poetry, historical lays, and soldiers' songs collected by L. Kálmány, has also appeared recently (Marót, 1953).

Studies of Finno-Ugric problems have continued to be of particular interest (Korompay, 1953; Diószegi, 1954b). As shamanism played a part in the spiritual life of ancient Hungarians, some papers have dealt with this form of religion (Diószegi, 1953).

The lime-burning industry of peasants, its social and economic significance have been discussed in a publication (Bakó, F., 1953.).

Only a few data are available on ethnological research activities. An article has described the initiation rites and ghost-cult in the Astrolabe region, New Guinea (Bodrogi, 1953). Vajda has published (1953) a study of some problems of the ethnology of religion in the Kilimanjaro area.

Ethnographic observations, describing the changes resulting from the formation of a new socialistic village, have been made by Szolnoky (1953).

Since ethnography reflects many national characteristics, courses in Marxist ideology have been held for all ethnographers in Hungary and in the other countries of Eastern Europe. The purpose of these lectures was to present the Soviet interpretation of ethnographic phenomena, and Marxist scientific methods. As a report of the Hungarian Academy of Sciences shows, the result of the courses has been unsatisfactory. "Much deficiency appears in the liquidation of the ideology of the past and in using Marxist methods. . . . The ideological level of the scholars, the application of Soviet methods and results is insufficient and formal." (*Ethnographia,* Budapest, 1953, p. 388; translated by the author).

LINGUISTICS

At times it is difficult to separate ethnography and linguistics. Publications of linguists may be of great interest for ethnographers, particularly if they deal with the idioms or dialect of a district (Gunda, 1953a), or with the history of meaning of certain words (Gunda, 1953b; Király, 1953). A number of such studies have been published recently.

It is self-evident that problems of the Uralic and Altaic languages have continued to hold the highest interest in linguistic investigations (Beke, 1954; Moór, 1952; Sebestyén, 1952, 1953; Vértes, E., 1953).

In spite of the Western orientation of Hungary through many centuries, the English language was rarely known even by the educated. The first modern Hungarian-English Dictionary, published by A. Yolland, an English scholar, contained 58,000 entries. The shortcomings and defects of this work have been eliminated by a new dictionary containing 88,000 words (Reményi, J., 1954).

Attention has been devoted to the topic of pauses of speech (Hegedüs, 1953). Uray (1953) has carried out some research on Ancient Tibetan verbal morphology.

Unfortunately, a large number of recent reports have not been available to the author. Therefore, this survey may not be considered as complete in any respect.

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POLAND

Anthropology in Poland is well advanced, both as compared with anthropology in other Slavic countries, and as compared with European anthropology as a whole. Ample evidence of this is provided by the numerous institutions, dealing with all branches of the field, listed in the recent *International Directory of Anthropological Institutions.* The names of individual leaders in the field are also well known, both in Europe and throughout the world, as the founders of various schools of anthropology. Particularly prominent are E. Loth and J. Czekanowski.

Since the war, and especially in the past three years, there has been a concentration on investigations dealing with the development of the Old Slavic civilization, with emphasis on the study of Old Polish culture. There has also been systematic research in the paleoanthropology of the Pleistocene, as well as in physical anthropology, ethnography, and sociology.

ARCHEOLOGY AND PREHISTORY

The results of archeological studies in cultural anthropology are, of course, of interest to all students of Slavic history and prehistory, restricted though they are by geographical considerations to tracing the development of Old Slavic groups. These studies take on special significance because they deal with groups which have completely disappeared, or are in the process of becoming absorbed into other Slavic or into foreign (especially German) populations. The tribes under investigation lived along the shores of the Baltic sea, and along the upper, middle, and lower reaches of the Elbe and Oder rivers.

Specifically, the area under discussion was that occupied by the Veneti or Lausitz. These peoples inhabited what is today northwest Poland and the northeastern and central part of East Germany. When the Polish nation was founded during the early Middle Ages, the part of this population living in Poland was quickly assimilated into the body of the Polish nation. In the case of the Veneti living in what is now German territory, assimilation was not as complete, and traces of the old Slavic nation are still seen in geographical names, language, customs, and physical type. Typical Slavic place-names may be identified by the endings *-au* and *-itz*, so that the ancient boundaries of the Venetian territory in Germany may be traced in this way.

Particularly important contributions to the knowledge of the prehistory of the Veneti have been achieved in the past two years by excavations along the shores of Lakes Biskupińske, Weneckie, Biate, Skrzynka, and Godawskie, all located about ninety kilometers northeast of Poznań.

Extensive test excavations in the immediate vicinity of these lakes, during the last two years, have revealed the presence of at least forty sites, usually within a kilometer or two of the shores of the lakes. The archeological horizons represented include Mesolithic, Neolithic, Bronze Age, Hallstatt, La Tène (Late Iron Age), Roman, Early Medieval and Medieval. Some of the sites show continuous occupation through several periods, and several have been occupied until historic times, even until the present.

One of the most important of these Old Slavic sites is located on a peninsula extending from the south shore into Lake Biskupinske. For many years, it was thought that this was an island, but a recent lowering of the lake level reveals a connection with the shore. This site was first examined in 1934 by J. Kostrzewski, who found remains of an old Slavic city, occupied from Hallstatt times to the Middle Ages. Systematic excavation of the site continued until the beginning of World War II, although it was hindered by the intermittent flooding of the site with variations in the lake level. Work on the site was stopped during the German occupation of Poland. Realizing the importance of the site to both Polish and Slavic history, systematic examination of the site was resumed on a larger scale after the war, with extensive support by the Polish Government and by many Polish scientific agencies. Recently the area surrounding this site has been put

under Government protection as a national monument, under the title of archeological reservation. Since this time over a half-million artifacts have been recovered from the site, in addition to the remains of wooden building materials which had been preserved by carbonization and partial mineralization. The preservation of the pine and oak logs used for construction is so complete that it is possible to determine the ground plan of the buildings, the city wall, and the location of the log-paved streets. Under the most recent city, belonging to the Middle Ages, are signs of earlier occupations. The oldest remains are from Hallstatt times. The city evidently had been destroyed repeatedly by fire, invasion, and flooding, and each time the inhabitants had covered the ruins with earth and rebuilt the city. The evidence indicates that the Hallstatt period (Old Iron Age) at this site can be dated between 700 and 400 B. C.; the La Tene (New Iron Age) at 400 to 1 B.C. This is followed by objects indicating contacts with the Romans, from 1 to 400 A. D. The first historic mention of the city occurs in documents of the twelfth century. Finally, the city was abandoned, apparently around the fifteenth century.

Islands in lakes were selected as sites for settlement in early times for two main reasons: their strategic value and the economic conditions of the times. Lake-dwellings are typical of many Neolithic European agricultural groups, and occupation of such easily defended sites continued into later times, especially in low, level country such as that around the Baltic Sea.

Human skeletal remains from the earliest period at Biskupinske are lacking. However, pottery jars containing ashes, found among the houses, suggest that cremation was extensively practiced. This funeral custom is typical for this period throughout Europe, in contrast to the Neolithic practice of burying the body in a flexed position. Skeletal remains are rare until the Late Iron Age. Thus there is little material from this period for the physical anthropologist to study. With the coming of Christianity, funeral practices changed; cremation was gradually abandoned, and islands were selected as burial places; for example, the islands in Lake Lednickie, near this area. There are, therefore, large numbers of skeletons from the Christian era. Nevertheless, some information about the physical type of the Metal Age people can be obtained. Frequently the cremated bones were only partially destroyed, and the fragments—datable by the jewelry and other objects among the ashes—show no apparent change in osteological morphology between Neolithic and Christian times.

In addition to the cemeteries containing skeletons, there are ash cemeteries. Although the earliest funerary urns were very primitive, later jars are decorated. In the latest jars, the upper portion of the urn is decorated with human faces. In the ash cemeteries, urns containing ashes are accompanied by urns containing gifts, often ornaments and jewelry, as well as food and objects in daily use. From these ornaments, cultural and commercial connections with all parts of Europe may be traced, especially with Asia Minor and the Balkan and Apennine peninsulas.

Work in the archeological aspects of cultural anthropology, dealing with old Slavic sites in Poland such as those described above, has predominated in Poland since the war and particularly in the last two years. In addition to the sites in northwest Poland, described briefly, there have also been extensive investigations of a similar character in southwest Poland, in the vicinity of Katowice and Wrocław in Silesia. Because of the cultural homogeneity of the populations in prehistoric and early historic times, the findings for all of the sites investigated are essentially the same.

The leading archeological publications are *Wiadmości archeologiczne* (Warsaw), *Przegląd Zachodni* (Wrocław), and *Przegląd Antropologiczny* (Poznań). In addition, most archeological museums have their own publications, as well as guides to their collections and reports of work in progress. The most important authors of publications during the past two years are J. Czekanowski, J. Kostrzewsky, and W. Hensel. The majority of monographs recently published deal with archeology rather than

physical anthropology. The most important authors in this connection are Z. Rajewski, W. Hensel, K. Majewski, and M. Piaszykowa. Although the periods studied range from Neolithic to Late Medieval times, emphasis is upon the Middle Ages.

PALEOANTHROPOLOGY

Work in paleoanthropology since the war has enjoyed a prominence similar to that of archeology, but has not attained the same degree of success as work in investigations of culture history. Systematic investigations of over 100 caves, mostly in the Carpathian Mountains in the south, failed to reveal any skeletal remains of fossil man. In some of these caves, however, tools and artifacts from Acheulian to Aurignacian times were found. The latter are of especial value because they form a new contribution to the knowledge of Aurignacian culture. It is known that most of Poland was covered by glaciers many times, with loess deposits being laid down in warmer interglacial periods, during which early man may have been present. Sporadic discoveries of materials pertaining to early man in loess deposits suggest that the loess areas may also be worthy of investigation. The materials discovered in this type of deposit have been tools, found by chance; skeletal remains of early man have not yet been found in Poland, although loess deposits in other parts of Europe have yielded bones.

Among the most important authors in the field of physical anthropology, besides J. Czekanowski, are M. Ćwirko-Godycki, F. Wokrój, M. Wolanski, and K. Jażdżewski. An important contributor to anthropological methodology and bibliography is A. Wrzosek. The society contributing most heavily to physical anthropology is Towarzystwo antropologiczne in Poznań, which also has an interest in other branches of anthropology. This society publishes *Przegląd antropologiczny,* the leading journal, containing papers in physical anthropology.

CULTURAL ANTHROPOLOGY

As is well known, the recent Polish state is included among those countries in which dialectical materialism forms the basis for the interpretation of cultural and social phenomena. As one would expect, this new attitude is reflected in the new interpretations of anthropological data, and the new directions in which anthropological research has turned. The actual work being done is basically the same as earlier work—for there is a limit to the number of ways in which work can be done. However, there are many ways of approaching problems and ways in which data may be interpreted. It is in this area that the new anthropological developments may be found. For example, one may cite the work of Midarski in his recent discussion of the new form of Polish anthropology. From his paper one may see that the plan of work lies in five fields: anthropogenesis, methodology and anthropological systematics, ethnogenesis, dynamics of human development, and applied anthropology. Anthropogenesis consists of critical analysis and elimination of false anthropological theories; comparative anatomy of higher vertebrates, including the hominids; and Pleistocene research, with particular attention to the problem of fossilization. Methodology and anthropological systematics take in many fields: Critical classification of earlier methods from the standpoint of dialectical materialism; critical evaluation of earlier anthropological typology; and unification of anthropological nomenclature. Particularly important areas here are the problem of the relationship between somatological and osteological types, and the effect of environment on the development of certain anthropological characteristics, with special emphasis on the development of appropriate methods for investigating these problems. Finally, there is the search for a method of determining a natural systematics of human races. Ethnogenesis is concerned with research on migrations of certain ethnic groups and races in prehistoric and early historic times. This work is to be done in collaboration with the newly founded Institute of Material Culture. Also included under ethnogenesis is physiographical anthropological research on recent Poland. Dynamics of human development includes

the effects of certain environmental factors, including education, sports, and occupations, as well as investigations connected with sex, age, and health. In the field of applied anthropology lie questions of economics and social problems.

From this and other recent publications, one may see a trend toward integrated programs requiring the collaboration of many specialists from a diversity of disciplines, and an emphasis on the solution of practical social and economic problems, as well as the broader interpretive aspects. The same systematic analysis as that outlined above for physical anthropology is applied to other branches of anthropology, as, for example, ethnography. The Council of Polish Museums has outlined a plan of research in ethnography, also based on dialectical materialism. The special divisions of research are on folklore, folk arts, folk music, dances, national costumes, and home industries. In this connection a new Institute of Folklore has been established. Also involved in this work is the Polish Central Institute for Culture, which directs the coordination of all work in ethnography. The most important names in Polish ethnography are A. Fischer and J. Moszynski, both of whom were well known before the war. In this connection the ethnographical society Polskie Towarzystwo Ludoznawcze, along with its publication *Lud* should be mentioned. Both existed before the war, but are now under new direction. Another important recent publication in this field is A. Fischer's *Ethnographic Atlas of Poland.*

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ROUMANIA

PHYSICAL ANTHROPOLOGY

Data on Roumania have been very difficult to obtain. Unfortunately, no recent publications on physical anthropology have been available to the author. Vallois (1953) has listed only findings previously known.

ARCHEOLOGY

Although it has not been possible to examine all recent publications, and some of them are known to the author only from reviews, it seemed to be worthwhile to try to give as complete a survey as practicable. During the last few years, new studies on the Neolithic of various areas in Roumania have been undertaken. Petrescu-Dâmboviţa (1953a, b) has recorded important observations on the Gumeniţa-Ariuşd (Erösd) culture. It is interesting to note that he has found traces in this culture of the influence of the Körös-Starčevo group. The Usatovo culture was also represented in Stoicani. Vulpe (1953) and Dumitrescu (STUDII, 1952) have carried out investigations on the Cucuteni culture.

Several reports have indicated new material of the Late Bronze- and Hallstatt Ages. The finds of a large cemetery of the Hallstatt Period havee been published by Petrescu-Dâmboviţa (1953c). The excavations of Horedt (1953) and Niţu (1953) have thrown new light on the cultural interrelations among the Scythian tribes in Roumania, Hungary, and Podolia.

Vulpe (1953; STUDII, 1952) has examined the La Tène findings of Poieneşti and Piroboridava. Mitrea (1953a) has conducted a study of several coins of the Roman Republic found in Sfinţeşti. A similar find of Işalniţa also has been discussed (Mitrea, 1953b).

A wide variety of special investigation in Roman Provincial archeology may be of interest to anthropologists (Floca, 1953a, b, c; Tudor, 1953). A number of reports have appeared on the archeological problems of the Dacians (Tudor, 1953; Vulpe and Daicoviciu in STUDII, 1952).

Some attention has recently been given to Byzantine research (Tudor, 1953).

Berciu has published (1953) a detailed description of the archeological findings of

the Museum of Turnu-Severin. A research team under the direction of J. Nestor has identified the archeological age of seventy-three settlements in the Jijia Valley (STUDII, 1952). Horedt (1953) has dealt with the Slav settlements of the Maros (Mureș)-Kolozsvár (Cluj) area. Nestor has examined the Medieval forts of the Suceava region (STUDII, 1952).

ETHNOGRAPHY

Virtually nothing recent is available from Roumania in this field of Anthropology. To judge from a review in a Hungarian periodical (Dégh, 1954), the chief emphases in the folklore of Transylvania are on historical periodization and folklore of laborers. Many Hungarian folksongs and folktales recently have been collected.

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Union of Soviet Socialist Republics

During 1954 every effort was expended by the editors to obtain a Yearbook contribution reporting on the significant anthropological activities during 1952–1954 in the Union of Soviet Socialist Republics. As with other contributed articles to this section entitled "Regional Round-up," our basic principle was that each review be first-hand-authored by a scholar from within the country or region being reported upon. Our original invitation to participate in the Yearbook was extended on February 18, 1954, to Dr. S. P. Tolstov, Director of the Institute of Ethnography of the Academy of Sciences of the U.S.S.R. A second invitation was sent May 10, 1954, registered airmail, return receipt requested; such receipt was signed in Moscow on May 20. A third letter of inquiry was sent on June 23. On October 15 a memorandum of suggestions to authors, including a reminder of the December 15 deadline, was airmailed, registered, return receipt requested; such receipt was signed in Moscow on October 27, 1954. Since no reply to any of our four invitations and inquiries nor a manuscript was received, the editors, during the last month before publication, secured permission from Dr. E. S. Carpenter, of the University of Toronto, Canada, to reprint in full and exactly as it appeared, the following article from issue No. 3, August, 1954, pages 83–88, of the publication, Explorations, of which he is Editor. While the title indicates that a full coverage of all aspects of anthropology was not attempted, at least it is a summary report as seen from the eyes of Russian scholars. For a brief, but significant, account of archeological activities in the Soviet Union, see pages 80, 81, 85, 86, 89 of the Yearbook article on "Old World Archeology and Prehistory." The Yearbook stands ready, in a future volume, to include a longer, more comprehensive, and up-to-date report should one be forthcoming from a scholar in the U.S.S.R.

Soviet Ethnography

I. POTEKHIN AND M. LEVIN

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ETHNOGRAPHY, like all other branches of science in the USSR, gets the fullest support and attention of the Soviet Government.

During the very first years of Soviet power, a number of measures were carried out aimed at promoting the all-round development of ethnographic research in the country: several ethnographic institutions were set up; departments of ethnography were opened at universities; and numerous expeditions were fitted out to various parts of the country. Local residents who knew their native parts well began to be drawn into the scientific work in ethnography on a broad scale. And this became the first important feature specific to the work of Soviet ethnographers.

During the period of formation of the multi-national Soviet state a second characteristic feature of Soviet ethnography became defined—its connection with the problems of Socialist transformation of the culture and life of the peoples of the USSR.

To determine the state boundaries of Central Asian republics in conformity with the national composition of the population, to set up national areas in the Far North inhabited by a great many ethnic groups, and to carry out other such important measures of Soviet power, it was necessary to make a profound study of the ethnic composition of the population and the specific national features of their culture.

From year to year the work in ethnography grew in scale, theoretical research became more profound, and new personnel swelled the ranks of the country's ethnographers, in particular, from among the various nationalities which only under the Soviet system had given rise to their own national intelligentsia.

THE CENTRES OF ETHNOGRAPHIC RESEARCH IN THE USSR

The main scientific centre of ethnographic research in the USSR is the Miklukho-Maklai Institute of Ethnography of the USSR Academy of Sciences. The director of this Institute is corresponding member of the Academy of Sciences of the USSR S. P. Tolstov. The Institute is comprised of a number of sections: the Slavic-Russian, the non-Slavic peoples of Europe, the Near and the Middle East, the Caucasus, Siberia, East and South Asia, Africa, America, Australia and Oceania. Besides, there are sections devoted to ethnic statistics and cartography, and anthropology, and a plastic anthropological reconstruction laboratory headed by M. M. Gerasimov, whose work in restoring the facial features of man from the skull is no doubt the most successful of its kind in world anthropology (a monograph by Gerasimov called *Restoration of the Facial Features from the Skull,* which was published back in 1949, is now coming out in a second, considerably enlarged edition).

Functioning in Leningrad is a Branch of the Institute of Ethnography and the Peter the Great Museum of Anthropology and Ethnography, which is the country's biggest repository of ethnographical, anthropological and primeval archeological collections. In post-war years the museum has resumed publication of the special collections of materials on anthropology and ethnography that it had been putting out ever since 1901. In Leningrad too there is a State Museum of Ethnography of the Peoples of the USSR.

Functioning within the framework of the Miklukho-Maklai Institute is the comprehensive Khorezm archeological and ethnographical expedition, whose discoveries are known to world science. The results of the expedition's work are dealt with in a number of publications, notable among which are the monograph by S. P. Tolstov, *Ancient Khorezm,* that merited a Stalin Prize First Class and the first volume of works of the expedition that came out in 1952.

There are ethnographic institutions in all sixteen of the constituent Soviet republics (within the framework of the Academies of Sciences in the republics or the Branches of the Academy of Sciences of the USSR) and in most of the autonomous republics and regions. A number of the republics and regions have museums of ethnography containing valuable exhibits.

The central printed organ of Soviet ethnographers is the journal *Soviet Ethnography,* published by the Academy of Sciences of the USSR. The Miklukho-Maklai Institute regularly publishes scientific researches in ethnography and anthropology. Among the publications of recent years mention should be made of the following: *Ancient Khorezm* by S. P. Tolstov, *Restoration of the Facial Features from the Skull* by M. M. Gerasimov, *Ethnic Boundaries and Ethnic Territories* by P. I. Kushner, *Tribal Society* under the editorship of S. P. Tolstov, and *The Origin of Man and the Ancient Distribution of the Human Race* under the editorship of M. G. Levin. Current research of the institute is dealt with in special issues of *Brief Communications of the Institute of Ethnography of the Academy of Sciences of the USSR.*

The results of the work of other ethnographic institutions are presented in the numerous publications of the Academies of Sciences in the republics, of the universities, and other establishments. Thus, the work

of a group of Georgian ethnographers headed by G. S. Chitai, for example, has been published by the Academy of Sciences of the Georgian Soviet Socialist Republic, and the work of Professor N. I. Vorobyov on the ethnography of the Tatars has been put out by the Kazan Branch of the Academy of Sciences of the USSR. Research work in ethnography is published in Yakutsk. Abakan (center of the Khakass Autonomous Region). Nukus (capital of the Kara-Kalpak Autonomous Republic), Syktyvkar (center of the Komi Autonomous Republic) and in other centers of once backward outlying districts of the country.

THE MAIN PROBLEMS ON WHICH SOVIET ETHNOGRAPHERS ARE NOW WORKING

As distinct from the history of culture, functional and psychological schools that are the most widespread in the capitalist countries, the Soviet school of ethnography proceeds from recognition of the decisive role of material production in the history of society and the identity of paths that all the peoples of the world have traversed and are now traversing in their development. In studying one or another element of material culture, one or another phenomenon in social and spiritual life, Soviet ethnographers discern in them first and foremost a reflection of a definite stage of development of society. This in no way excludes but on the contrary presupposes a profound study of the concrete history of the given phenomenon, of the way it spread and changed in form among different peoples. Not denying the role of the influence of the culture of one people upon the culture of another people, Soviet ethnographers cannot however attach to this factor the inordinate importance that the supporters of the diffusion trend in ethnography attach to it. Alien to Soviet ethnographic science are the principles of the psychological school, a school that builds up 'cultural models' for the different peoples, denies common lines of development of the human race and revives in this way the ideas of racism, ideas most inimical to the spirit of progress and humanism.

In the USSR research in the field of ethnography is closely bound up with the most urgent tasks in the development of Soviet society. In their latest researches Soviet ethnographers devote a great deal of attention to a study of the new forms of culture and conditions of life which are being created among the various peoples of the Soviet land in connection with the Socialist forms of economy. At present a number of monographs devoted to this subject are being prepared for publication.

A big series of researches is connected with the study of the origin, ethnic history and the history of the culture of the various peoples inhabiting the Soviet Union. These researches have now acquired special significance in connection with the work of Soviet historians in preparing courses of the history of the peoples who until the October Revolution did not have their own written history, and in some cases their own written language as well. In this series of researches mention should be made among others of *Essays on the History of the Altai People* by Professor L. P. Potapov, which merited a Stalin Prize; the researches of B. O. Dolgikh, who for the first time restored on the basis of extensive data the picture of the settlement of the tribes and peoples of Siberia in the 17th century, and the *Essays on the Historic Ethnography of the Karakalpakians* by T. A. Zhdanko.

Study of the history and modern culture of the peoples involves the collection of field data. From year to year the Institute of Ethnography of the Academy of Sciences of the USSR and other scientific institutions of the country fit out expeditions to various parts of the Soviet Union. Thus in 1953, for example, the Institute of Ethnography alone organized the following expeditions: the Khorezm, Kirghiz, Daghestan, Sayano-Altai (the Tuva Autonomous Region), the Russian (which worked in the districts of Central Russia), the Baltic (which worked on the territory of the Latvian, Lithuanian and Estonian Soviet Socialist Republics) and the Moldavian. Of the expeditions of past years mention should be made of the North-Eastern, which worked over a period of several years on Chukotka, Kamchatka

and the Amur, and also the Taimyr and the Tajik expeditions.

Concentrating their main attention on the study of the ethnography of the peoples of the USSR, Soviet scientists are at the same time devoting part of their research to study of the ethnography of the peoples of the countries abroad, and in particular of the peoples of the colonial and dependent countries. The researches in the field of the history and modern culture of these peoples carried out by Soviet ethnographers fully reveal the complete groundlessness of the view widespread in capitalist countries that the colonial peoples are incapable of independent development. Facts show that the cause of the present backwardness of these peoples lies by no means in their innate mental abilities like certain bourgeois scientists claim but mainly in the conditions which have been created for them by the colonial powers.

For a number of years now the Miklukho-Maklai Institute of Ethnography has been preparing for publication a work in many volumes called *The Peoples of the World* (under the general editorship of corresponding member of the Academy of Sciences of the USSR S. P. Tolstov), which will give an ethnographic characteristic of the peoples of all parts of the world. Due to come off the press shortly are the volumes: *The Peoples of Africa* under the editorship of Professors D. A. Olderogge and I. I. Potekhin, *The Peoples of Australia and Oceania* under the editorship of S. A. Tokarev, and *The Peoples of Siberia* under the editorship of Professors L. P. Potapov and M. G. Levin. In collaboration with the Department of Ethnography of Moscow University, a textbook on general ethnography has been prepared under the editorship of Professor N. N. Cheboksarov.

Parallel with work on the aforementioned problems, Soviet ethnographers are directing their efforts to a further study of the history of primitive society. Much attention is being paid to research on the problem of matriarchy. A book by Professor M. O. Kosven called *Matriarchy* is devoted to this problem. Soviet scientists are also continuing to give thought to such problems as the origin of exogamy, the beginning of dual organization, and the historical relation of the clan and the tribe.

Soviet ethnographers highly value the heritage left them by progressive ethnographers of the past, among whom they pronounce the name of Lewis Morgan with especial respect.

Many urgent problems of ethnography require exchange of opinion of the ethnographers of different countries. Soviet ethnographers, like all Soviet scientists, are ardent supporters of consolidation in every possible way of scientific ties with their colleagues abroad.

Part Six

Reference Data

Reference Data

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DISSERTATIONS IN ANTHROPOLOGY SUBMITTED TO EDUCATIONAL INSTITUTIONS OF THE WORLD IN PARTIAL FULFILLMENT OF REQUIREMENTS FOR THE PH.D. DEGREE OR EQUIVALENT 701

MEDALS, AWARDS, AND MEMORIAL LECTURE SERIES IN ANTHROPOLOGY . . 753

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Introductory

THREE TOPICS only are considered in Part Six. The greatest portion of the section consists of a list of dissertations in anthropology submitted to the colleges and universities for the Ph.D. degree or equivalent. "Medals" comprises information concerning lecture series, medals, prizes, and other honors given by societies and other organizations for meritorious achievement in anthropology or closely related fields. "Professional Associations" provides current data on the international organizations of anthropological interest, as well as the national and regional professional associations of the United States of America, which meet at different places at different times.

The list of dissertations was compiled by addressing a request for such information to the chairmen or heads of departments of all educational institutions, as noted in the *International Directory of Anthropological Institutions,* 1953, which award an advanced degree in anthropology. The request was for data on all dissertations ever submitted for all advanced degrees. Here published are only those for the highest awards. The requirements for the Master's degree (M.A., M.Sc.) or equivalent vary so widely among institutions that it was decided to limit our published list only to the theses prepared for the Doctoral degree (Ph.D., D.Sc.) or equivalent. For several reasons, our list, though it includes sixty-one institutions and is the most extensive ever assembled on anthropological subjects, remains incomplete. Readers will note, among other institutions not included, the lack of any report from either Italy or Japan. The known gaps in information will be filled in future issues, together with an annual report on the new dissertations accepted each year at all institutions. The suggestion of data overlooked in this survey would be much appreciated. Dissertations are listed alphabetically by institution, then chronologically by year of award of degree. Those institutions whose dissertations in anthropology are reported in the pages that follow are listed on the next page.

The purpose of the "Reference Data" part of the Yearbook is to provide an array of lists, charts, diagrams, tables, and general data of cumulative and repetitive factual items needed by anthropologists. In the nature of almanac or handbook materials, these items will be corrected, supplemented, or brought up to date in succeeding volumes.

Any number of suggestions have been made of subjects to be added to the content of this section. For example, any or all of the following might be included:

Necrology
Bibliography of Bibliographies
Dictionaries and Encyclopedias
Abstracts and Digests
Collected Works
Education and Teaching Aids
Popular Works
Classifications and Nomenclature
Abbreviations, Signs, and Symbols
Examinations (Professional Qualifications)

Laboratories
Museums and Private Collections
Exhibitions and Fairs
Expeditions and Fieldwork

The Editor's Preface contains the request for suggestions from readers with regard to the content of future Yearbooks. Comments and criticism pertaining to reference data are doubly welcome, for such data should have no other criteria than that they be useful and presented in readily available form.

EDUCATIONAL INSTITUTIONS OF THE WORLD REPORTING ON DISSERTATIONS IN ANTHROPOLOGY SUBMITTED IN PARTIAL FULFILLMENT OF REQUIREMENTS FOR THE PH.D. DEGREE OR EQUIVALENT

Aarhus Universitet
Åbo Akademi
Ankara Üniversitesi
Australian National University
The Catholic University of America
Christian-Albrechts-Universität Kiel
Columbia University
Cornell University
Duke University
Eberhard-Karls-Universität Tübingen
Escuela Nacional de Antropología e Historia
Georg August-Universität zu Göttingen
Göteborgs Högskola
The Hartford Seminary Foundation
Harvard University
Johann Wolfgang Goethe Universität; Frankfurt am Main
Johannes Gutenberg Universität Mainz
Kungliga Universitetet I Lund
Kungliga Universitetet I Uppsala
Ludwig-Maximilians-Universität München
Northwestern University
Rheinische Friedrich-Wilhelms-Universität Bonn
Rijksuniversiteit-Leiden
Rijksuniversiteit-Utrecht
State University of Iowa
Stockholms Högskola
Sveučilište u Zagrebu
Turun Yliopisto
Universidad de Barcelona
Universidad de Madrid
Universidade de Coimbra
Universidade do Porto
Universität Basel
Universität Hamburg
Universität Köln
Universität Wien
Université de l'État de Liège
Université de Fribourg
Université Laval
Université de Paris à la Sorbonne
University of Arizona
University of Birmingham
University of California
University of California at Los Angeles
University of Cambridge
The University of Chicago
University of London
University of Lucknow
University of Michigan
University of Minnesota
University of New Mexico
The University of North Carolina
University of Oxford
University of Pennsylvania
University of Southern California
University of Toronto
University of Washington
The University of Wisconsin
Washington University
Westfälische-Landes-Universität Münster
Yale University

Dissertations in Anthropology

Submitted to Educational Institutions of the World in Partial Fulfillment of Requirements for the Ph.D. Degree or Equivalent

DISSERTATIONS are listed alphabetically by institution, then chronologically by year of award of degree. Those institutions whose dissertations in anthropology are reported in the pages that follow are listed on the facing page. The symbol "*" denotes those which are available for inter-library loan; an "M" indicates those which are available in microfilm; where known, publication information is given.[1]

AARHUS UNIVERSITET
University of Aarhus
Aarhus, Denmark

1952 MACKEPRANG, MOGENS BELLMANN. *De Nordiske Guldbrakteater (The Gold Bracteates of Scandinavia).* Published (with summary in English) as Vol. II of the major works series issued by Jysk Arkacologisk Selskab.

ÅBO AKADEMI
Åbo Academy
The Swedish University of Åbo
Turku (Åbo), Finland

All dissertations are printed and sent on exchange to other libraries and institutions. For information inquire of the Åbo Akademis Bibliotek, Åbo, Finland.

1931 NYBERG, PAUL. *Sibbo sockens historia. I. Untill början av 1700-talet.*

1932 GRANQVIST, HILMA. *Marriage conditions in a Palestinian village.* Published in *Societas scientiarum Fennica. Commentationes humanarum litterarum,* III, 8.

WALLÉN, HOLGER. *Språkgränsen och minoriteterna i Finlands svenskbygder omkr. 1600–1865.*

1934 CEDERLÖF, JOHANNES. *Det finländska prästerskapets ekonomiska ställning intill sjuttonde seklet.* Published in *Skrifter utgivna av Svenska litteratursällskapet i Finland,* CCXXXIX.

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[1] The following is reprinted from the *Bulletin, American Anthropological Association,* Vol. II, No. 3, October 1954, p. 13:

THE PROGRAM OF THE ASSOCIATION OF RESEARCH LIBRARIES FOR PUBLISHING DOCTORAL DISSERTATIONS

The Association of Research Libraries, an organization of representatives of fifty of the largest research libraries in the United States, approved in January, 1952, a program for making promptly and inexpensively available all doctoral dissertations currently accepted by colleges and universities in this country. Forty-three institutions are now publishing all or part of their dissertations in cooperation with this plan.

Librarians, constantly faced with the slow but steady demand for dissertations through inter-library loan channels, are generally agreed on the great need for better distribution of this useful material. The members of the ARL believe that the dissertation publishing plan that they have drawn up will secure such distribution, and hope that all institutions granting doctorate degrees will join the plan.

The plan has a three-fold objective: (1) To publish as cheaply as possible all doctoral dissertations as soon as they are accepted, (2) to maintain a permanent central repository for such dissertations, from which copies could be inexpensively procured at any time, and (3) to provide a uniform listing, indexing, and abstracting of these dissertations as soon as possible upon their acceptance.

To achieve these general objectives, the members of the ARL have endorsed publication of dissertations in microfilm, and have formulated a plan that makes use of the services established by University Microfilms, Ann Arbor, Michigan. Any institution granting doctorate degrees may participate in it by writing directly to University Microfilms. Each participating university makes its own decision as to whether the university or the student pay the fee. Various levels of participation are possible, including full participation at twenty dollars per dissertation, and three types of limited participation, ranging from fifteen to two dollars per dissertation.

ÅBO AKADEMI—Cont'd

1935 WIKMAN, KARL ROBERT VILLEHAD. *Die Einleitung der Ehe. Eine vergleichend ethno-soziologische Untersuchung über die Vorstufe der Ehe in den Sitten des schwedischen Volkstums.* Published in *Acta Academiae Aboensis. Humaniora,* XI, 1.

1938 HÖGNÄS, HUGO. *Sytning och arvslösen i den folkliga sedvänjan uti Pedersöre- och Nykarlebybygden 1810–1914.* Published in *Arkiv för Svenska Österbotten,* Utg. av Svensk-österbottniska samfundet, Bd. III.

1941 TEGENGREN, HELMER. *Bebyggelse och näringsliv i Kronoby älvdal 1608–1865.* Published in *Skriftserie utgiven av Handelshögskolan vid Åbo Akademi,* A:1.

1947 PIPPING, KNUT. *Kompaniet som samhälle. Iakttagelser i ett finskt frontförband 1941–1944.* Published in *Acta Academiae Aboensis. Humaniora,* XVI, 1.

1954 STEJSKAL, MAXIMILIAN. *Folklig idrott. En etno-sociologisk undersökning av den finlandssvenska allmogens manliga friluftslekar, särskilt under sommarhalvåret, deras miljö och tradition i belysning av idrottens allmänna historiska förändringar och sociala betydelse.* Published in *Skrifter utgivna av Svenska litteratursällskapet i Finland,* 344.

ANKARA ÜNİVERSİTESİ

University of Ankara

Ankara, Turkey

Dissertations published are available through the Library of the Faculty of Language.

1942 ATASAYAN, MUINE. *Türk Saçları Üzerinde ilk Antropolojik Araştırma* (A First Anthropological Study on the Hair of Turks, with a Separate Album of Hair Specimens, Forms, etc.).* Summarised in *Dil ve Tarih, Coğrafya Fakültesi Dergisi,* C. II, s.i, 1946.

AYGEN (ERDENTUĞ), NERMIN. *Türklerin Kan Grupları ve Kan Gruplarının Antropolojik Karakterlerle İlgisi Üzerine Bir Araştırma* (A Research on the Blood Groups of Turks and the Correlation of These Groups with Anthropological Characters).* Published (with a summary in English) in *Dil ve Tarih, Coğrafya Fakültesi Dergisi,* C. II, s.1, 1943.

1944 APAY, SAIM. *Türk Suçlularında Antropo-Sosyal Araştırma* (Anthropo-Social Study on the Turkish Convicts).* Summarised in Turkish and in English in *Dil ve Tarih, Coğrafya Fakültesi Dergisi,* C. IV, s.1, 1948.

1947 KÖKTEN, KILIÇ. *Anadolu Prehisroryasında Kars Bölgesinen Yeri* (The Region of Kars in the Prehistory of Anatolia).

1948 ISIKLAR, İBRAHIM. *Türk Çocuklarının Büluğ Yaşı Üzerinde Araştırmalar* (An investigation on the Age at Puberty in Turkish Children).* Summarized in Turkish and English in *Dil ve Tarih, Coğrafya Fakültesi Dergisi,* C. VII, s.4, 1949.

1954 BOSTANCI, ENVER. *Türk Okul Çocuklarında Beden Gelişimi Üzerinde bir Antropolojik Araştırma* (A Research on the Growth of Turkish Schoolchildren).

KÜÇÜKAYDIN, ORHAN. *Acıpayam ve Çevresinde Mesken ve Mesken Ile Ilgili Etnografik Araştırmalar* (Ethnographical Study on the Acıpayam Houses).

AUSTRALIAN NATIONAL UNIVERSITY

Canberra, Australian Capital Territory

Dissertations may be consulted at the Australian National University Library, but are not available for inter-library loan.

1953 BURRIDGE, KENELM OSWALD LANCELOT. *Social Control in Tangu.* Extract published in *Oceania,* Vol. XXIV, No. 4, 1954.

1954 WORSLEY, PETER MAURICE. *The Changing Social Structure of the Wanindiljaugwa.*

THE CATHOLIC UNIVERSITY OF AMERICA

Washington, D.C.

All dissertations are available for inter-library loan through the Library, The Catholic University of America. All but one have been published in the Catholic University of America Anthropological Series.

1930 KOPPERT, VINCENT A. *Contributions to Clayoquot Ethnology.** Published in No. 1.

1938 FLANNERY, REGINA. *An Analysis of Coastal Algonquian Culture.** Published in No. 7.

WARD, EDWARD. *The Yoruba Husband-Wife Code.** Published in No. 6.

1942 SULLIVAN, ROBERT J., S.J. *The Ten'a Food Quest.** Published in No. 11.

1947 COLEMAN, SISTER BERNARD. *Decorative Designs of the Ojibwa of Northern Minnesota.** Published in No. 12.

1948 DESMOND, GERALD R., O.S.B. *Gambling among the Yakima.** Published in No. 14.

VAN DER EERDEN, SISTER M. LUCIA. *Maternity Care in a Spanish-American Community of New Mexico.** Published in No. 13.

1954 BRODSKY, CARROLL M. *A Study of Norms for Body Form-behavior Relationship.**

CHRISTIAN-ALBRECHTS-UNIVERSITÄT KIEL

Christian Albrechts University of Kiel

Neue Universität
Olshausenstrass 40/60
Kiel, Germany

All dissertations are deposited at the Universitätsbibliothek Kiel.

1953 WALTER, HUBERT. *Untersuchungen über die Erblichkeit der überdurchschnittlichen bzw. unterdurchschnittlichen Körperhöhe von Klein- und Schulkindern.*

WEBER, HANSJÜRGEN. *Über den Wert der Irisfarbe und- struktur für den erbbiologischen Vaterschafts-nachweis.*

COLUMBIA UNIVERSITY

New York 27, New York

All dissertations are deposited in the Library of the University and all are available for interlibrary loan. Manner and place of publication are indicated in each individual case.

1901 KROEBER, ALFRED L. *Decorative Symbolism of the Arapaho.** Published in *American Anthropologist,* Vol. 3, n.s., 1901.

1904 JONES, WILLIAM. *Some Principles of Algonquian Word Formation.** Published in *American Anthropologist,* Vol. 6, n.s., No. 3, 1904.

1907 LEWIS, ALBERT B. *Tribes of the Columbia Valley and the Coast of Washington and Oregon.** Published in *Memoirs of the American Anthropological Association,* Vol. 1, 1907.

1908 LOWIE, ROBERT H. *The Test-Theme in North American Mythology.** Published in *Journal of American Folklore,* Vol. 21, No. 81, April–Sept., 1908.

1910 GOLDENWEISER, ALEXANDER A. *Totemism; An Analytical Study.** Published in *Journal of American Folklore,* Vol. 23, No. 88, 1910.

1911 RADIN, PAUL. *The Ritual and Significance of the Winnebago Medicine Dance.** Published in *Journal of American Folklore,* Vol. 24, No. 92, April–June, 1911.

1914 BENEDICT, LAURA E. W. *A Study of Bagobo Ceremonial, Magic and Myth.** Published in *Annals of The New York Academy of Sciences,* Vol. 25, 1916.

WATERMAN, THOMAS T. *The Explanatory Element in the Folk-Tales of the North American Indians.** Published in *Journal of American Folklore,* Vol. 27, No. 103, Jan.–Mar., 1914.

1915 COLE, FAY-COOPER. *A Study of Tinguian Folk-Lore.** Published in *Field Museum of Natural History, Anthropological Series,* Vol. 14, No. 1, Chicago, 1915.

HAEBERLIN, HERMAN K. *The Idea of Fertilization in the Culture of the Pueblo Indians.** Published in *Memoir of the American Anthropological Association,* Vol. III, No. 1, 1916.

1918 BECKWITH, MARTHA W. *The Hawaiian Romance of Laieikawai with Introduction and Translation.** Published in *33rd Annual Report of the Bureau of American Ethnology,* Washington, 1918.

1920 SPIER, LESLIE. *The Sun Dance of the Plains Indians, its Development and Diffusion.** Published in *Anthropological Papers of the American Museum of Natural History,* Vol. 16, Pt. 7, New York, 1921.

1922 GAMIO, MANUEL. *Traduction of the Introduction, Synthesis and Conclusions of the Work: The Population of the Valley of Teotihuacan.**

SULLIVAN, LOUIS R. *The Frequency and Distribution of Some Anatomical Variations in American Crania.** Published in *Anthropological Papers of the American Museum of Natural History,* Vol. 23, Pt. 5, 1922.

1923 BENEDICT, RUTH F. *Concept of the Guardian Spirit in North America.** Published in *Memoir 29, American Anthropological Association,* 1923.

1926 HERSKOVITS, MELVILLE J. *The Cattle Complex in East Africa.** Published in

COLUMBIA UNIVERSITY—Cont'd

American Anthropologist, Vol. 28, n.s., 1926.

REICHARD, GLADYS A. *Wiyot Grammar and Texts.** Published in *University of California Publications in American Archeology and Ethnology,* Vol. 22, No. 1, Berkeley, 1925.

1928 CARTER, ISABEL G. *Reduction of Variability in an Inbred Population.** Published in *American Journal of Physical Anthropology,* Vol. 11, No. 3, April–June, 1928.

GUNTHER, ERNA. *A Further Analysis of the First Salmon Ceremony.** Published in *University of Washington Publications in Anthropology,* Vol. 2, No. 5, Seattle, 1928.

MEAD, MARGARET. *An Inquiry into the Question of Cultural Stability in Polynesia.**

SCHMIDT, ERICH F. *Time-Relations of Prehistoric Pottery Types in Southern Arizona.** Published in *Anthropological Papers of the American Museum of Natural History,* Vol. 30, Pt. 5, 1928.

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Chicago 37, Illinois

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Los Angeles 7, California

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1933 TANQUIST, M. R. E. *The Ancient Jemez Pueblo of Unshagi, New Mexico.**

1935 FISHER, REGINALD G. *The Relation of North American Prehistory to Postglacial Climatic Fluctuations.**

LOPATIN, IVAN A. *The Cult of the Dead among Natives of the Amur Basin.**

1937 ROGERS, S. L. *Comparison between Aboriginal Archery in Western North America and Eastern Asia.**

1938 MASON, GREGORY. *Culture of the Taironas.**

RUSSELL, VINCENT L. *The Serpent as the Prime Symbol of Immortality, Has Its Origin in the Semitic-Sumerian Culture.**

1940 ANDERSON, A. J. C. *Eclipse Rituals and Procedures of North American Indians in Relation to Their Ceremonial Patterns, from the Point of View of Social Psychology.**

1941 BALDWIN, G. C. *The Archaeology of the Upper Salt River Valley, Arizona: Its Sequence and Interrelationships.**

1942 BEATTY, W. C., JR. *The Army of the Incas, a Study in Comparative Military Ethnology.**

WATKINS, FRANCES EMMA. *The Crafts and Industries of the American Indian Women of California and the Southwest.**

1945 LUHRS, D. L. *An Anthropological Study of the Sources of Maladjustment among Eastern Pueblo Adolescents.**

UNIVERSITY OF TORONTO

Toronto 5, Canada

Dissertations are deposited in the University of Toronto Library.

1936 BAILEY, ALFRED G. *The Conflicts of European and Eastern Algonkian Cultures, 1504–1700.**

1937 BRYCE, L. WINIFRED. *The Changing Family in India.**

1942 MENZIES, JAMES M. *Shang Ko—A Study of th Characteristic Weapon of the Bronze Age in China in the Period 1311–1039 B.C.**

1945 SAUERBREI, CLAUDE. *The Settlement of Israel in Canaan in the Light of some Contemporary Anthropological Studies.**

UNIVERSITY OF WASHINGTON

Seattle 5, Washington

All dissertations are unpublished and only those noted are available for loan through the University of Washington Library, where they are deposited.

1951 SUTTLES, WAYNE PRESCOT. *Economic Life of the Coast Salish of Haro and Rosario Straits.**

1953 DAUGHERTY, RICHARD. *Early Man in the Columbia Mountain Province.*

LANE, BARBARA SAVADKIN. *A Comparative and Analytic Study of Some Aspects of Northwest Coast Religion.*

LANE, ROBERT BROCKSTEDT. *Cultural Relations of the Chilcotin Indians of West Central British Columbia.*

1954 SCRUTON, DAVID LAGROVE. *Sex Differential in Memory Retention of Aboriginal Patterns.*

THE UNIVERSITY OF WISCONSIN

Madison 6, Wisconsin

All dissertations are deposited in the Library of the University of Wisconsin and are available for inter-library loan.

1899 JENKS, ALBERT ERNEST. *The Wild Rice Gatherers of the Upper Lakes: A Study in American Primitive Economics.** Published in the *Nineteenth Annual Report of the Bureau of American Ethnology,* Part II, pp. 1013–1137, 1900.

1931 HANSEN, ASAEL T. *The Role of the Auxiliary Organizations in the Mormon System of Social Control.**

1932 BELL, EARL H. *A Socio-Anthropological Study of a Small Middle West Community.** Published as "The Development of a Magic Formula," *The Scientific Monthly,* Feb. 1931, Vol. XXXII, pp. 162–164; "Changing Family Situations in a Small Community," *The Scientific Monthly,* Nov. 1932, Vol. XXXV, pp. 462–465; "Social Stratification in a Small Community," *The Scientific Monthly,* Feb. 1934, Vol. XXXVIII, pp. 157–164.

1940 RITZENTHALER, ROBERT E. *The Cultural History of the Wisconsin Oneidas.** Published as "The Oneida Indians of Wisconsin," *Bulletin of the Public Museum of the City of Milwaukee,* Vol. 19, No. 1, pp. 1–52, 1950.

1942 WILCOX, LLOYD. *Group Structures and Personality Types Among the Sioux Indians of North Dakota.**

1944 REYNOLDS, EARLE. *The Pelvic Girdle in Early Infancy: A Serial Roentgenometric Study of 95 Children through Twelve Months.** Published as "The Bony Pelvic Girdle in Early Infancy: A Roentgenometric Study," *American Journal of Physical Anthropology,* Vol. 3, n.s., No. 4, December, pp. 321–354, 1945.

1947 USEEM, RUTH MARIE HILL. *The Aftermath of Defeat: A Study of Acculturation among the Rosebud Sioux of South Dakota.**

1955 JAMES, BERNARD J. *The Analysis of an American Indian Village: Chippewa.**

WASHINGTON UNIVERSITY

St. Louis, Missouri

Dissertations are available for inter-library loan through the George Warren Brown Library, St. Louis. Microfilm copies are available through University Microfilms, Ann Arbor, Michigan.

1953 SAMORA, JULIAN. *Minority Leadership in a Bi-cultural Community.** M.

1954 BOGGS, STEPHEN TAYLOR. *Ojibwa Acculturation and Personality Formation.** M.

WESTFÄLISCHE-LANDES-UNIVERSITÄT MÜNSTER

Westphalian State University of Münster

Hufferstrasse 27

Münster, Germany

1952 POPPENDIEK, HELMUT. *Über den Krankheitswert des Pelger-Gens beim Menschen.*

1953 DREIPELCHER, HORST. *Die Häufigkeit und geographische Verbreitung der Lippen-Kiefer-Gaumenspalte, des Schiefhalses und der Little'schen Krankheit in Westfalen.*

HOGE, GEORG. *Die Stellung der katholischen Kirche zu den Blutsverwandtenehen unter besonderer Berücksichtigung der erbbiologischen und medizinischen Gesichtspunkte.*

KINDERMANN, REINHARD. *Die Häufigkeit und die geographische Verbreitung der angeborenen Hüftgelenksverrenkung und des angeborenen Klumpfusses in Westfalen von 1900–1950.*

KUHNEN, BERNHARD. *Beobachtungen an sieben Zwillingspaaren mit Hirntumoren.* Published in *Acta Geneticae Medicae et Gemellologiae,* Vol. II, H. 3.

MÜLLER, MARIA. *Die Häufigkeit der Blutsverwandtschaftsehen der katholischen Bevölkerung der Gesamtdiözese Münster von 1944–1951 und des oldenburgischen Teiles der Diözese von 1899–1951.*

SCHILDWÄCHTER, DIETMAR. *Die Bedeutung von Erbe und Umwelt bei der Entstehung orthopädischer Leiden.*

1954 QUAST, WALTHER. *Lebens- und Krankheitsgeschichten von 38 Zwillingspaaren und 2 Fällen von Drillingen.*

RUSCHE, HEINRICH. *Nachuntersuchungen an 64 Schwachsinnigen und 19 Epileptikern, die auf Grund des "Gesetzes zur Verhütung erbkranken Nachwuchses" in den Jahren 1934–1944 unfruchtbar gemacht worden waren.*

SCHWERMANN, MARIANNE. *Beobachtungen an Zwillingspaaren mit Multipler Sklerose.*

WAGNER, MARGRIT. *Über Rutilismus.*

YALE UNIVERSITY

New Haven, Connecticut

All dissertations from Yale University are available for inter-library loan through the Yale University Library with the permission of the author.

1932 MEKEEL, HAVILAND SCUDDER. *The Modern American Indian Community in the Light of Its Past.**

NEWMAN, STANLEY STEWART. *A Grammatical Sketch of Yokuts.** Incorporated into "The Yawelmani Dialect of Yokuts," *Viking Fund Publications in Anthropology, No. 6,* 1946, pp. 222–248.

1933 DYK, WALTER. *A Grammar of Wishram.**

1934 HILL, WILLARD WILLIAMS. *The Agricultural and Hunting Methods of the Navaho Indians.** Published in Yale University Publications in Anthropology, No. 18, 1938.

1935 RAINEY, FROELICH GLADSTONE. *Archaeological Findings in Puerto Rico.** Published as *Puerto Rican Archaeology, Scientific Survey of Puerto Rico and the Virgin Islands,* Vol. XVIII, Part 1, 1940.

1936 MANDELBAUM, DAVID GOODMAN. *Adjustment of the Plains Cree to a Changing Environment.** Published as *The Plains Cree,* Anthropological Papers of the American Museum of Natural History, Vol. XXXVII, pp. 155–316, 1940.

PARK, WILLARD ZERBE. *Paviotso Shamanism: A Study in Cultural Relationships.** Published as *Shamanism in Western North America,* Northwestern University Studies in the Social Sciences, Vol. II, pp. 1–166, 1938.

1937 BURROWS, EDWIN GRANT. *Cultural Differentiation in Western Polynesia.**

FENTON, WILLIAM NELSON. *The Seneca Eagle Dance.**

1938 HUDSON, ALFRED EMMONS. *The Development of Turco-Mongol Social Structure.** Published as *Kazak Social Structure,* Yale University Publications in Anthropology, No. 20.

LABARRE, WESTON. *The Peyote Cult.** Published in Yale University Publications in Anthropology, No. 19.

ROUSE, BENJAMIN IRVING, JR. *The Prehistory of the Ft. Liberté Region, Haiti.** Published as *Prehistory in Haiti: A Study in Method,* Yale University Publications in Anthropology, No. 21, 1939 and as *Culture of the Ft. Liberté Region,* Haiti, *Ibid.,* No. 24, 1941.

1939 HOCKETT, CHARLES FRANCIS. *A Descriptive Grammar of the Potawatomi Language.**

RAY, VERNE FREDERICK. *Cultural Relations in the Plateau of Northwestern America.** Published in Publications of the Frederick Webb Hodge Anniversary Publications Fund, Southwest Museum, Vol. III. Los Angeles.

VOEGELIN, ERMINIE WHEELER. *Shawnee Mortuary Customs.** Published as *Mortuary Customs of the Shawnee and Other Eastern Tribes,* Indiana Historical Society Prehistory Research Series, Vol. II, pp. 227–444, 1944. Indianapolis.

1940 SMITH, ANNE MILNE MILLSPAUGH. *An Analysis of Basin Mythology.**

1941 SISKIN, EDGAR ELIAS. *The Impact of the Peyote Cult on Shamanism among the Washo Indians.**

SMITH, ALLAN HATHORN. *Culture Diffusion in the Plateau Area.**

ZIGMOND, MAURICE LOUIS. *Ethnobotanical Studies among California and Great Basin Shoshoneans.**

1942 WHITING, BEATRICE BLYTH. *The Role of Sorcery in Social Control: A Study of the Harney Valley Paiute.** Published as *Paiute Sorcery,* Viking Fund Publications in Anthropology, No. 15, 1950.

1943 HORTON, DONALD. *Alcohol and Anxiety: A Cross-Cultural Study of the Func-*

YALE UNIVERSITY—Cont'd

*tions of Alcohol in Primitive Societies.** Published as "The Functions of Alcohol in Primitive Societies: A Cross-cultural Study," *Quarterly Journal of Studies on Alcohol,* Vol. IV, No. 2 (September), pp. 199–320.

1945 HOWARD, GEORGE DELVIGNE. *Prehistoric Ceramic Styles of Lowland South America: Their Distribution and History.** Published in Yale University Publications in Anthropology, No. 37, 1947.

1946 EMORY, KENNETH P. *Eastern Polynesia: Its Cultural Relationships.**

HOLMBERG, ALLAN R. *The Siriono: A Study of the Effect of Hunger Frustration on the Culture of a Semi-Nomadic Bolivian Indian Society.** Published as *Nomads of the Long Bow: The Siriono of Eastern Bolivia,* Smithsonian Institution, Institute of Social Anthropology, Publication No. 10, 1950.

HONIGMANN, JOHN J. *Kaska Ethos: A Study in Methodology.** Published as *Culture and Ethos of Kaska Society,* Yale University Publications in Anthropology, No. 40, 1949.

1947 ROBERTS, JOHN M., JR. *The Navaho Household: A Comparative Analysis of a Small Cultural Unit.** Published as *Three Navaho Households: A Comparative Study in Small Group Culture,* Papers of the Peabody Museum of American Archaeology and Ethnology, Harvard University, Vol. XL, No. 3, 1951.

UNDERWOOD, FRANCES WENRICH. *The "Vodun" Complex of the West Indies: A Study of Persistence.**

VOGET, FREDERICK WILLIAM. *The Diffusion of the Wind River Shoshone Sundance to the Crow Indians of Montana.** Published in part as "Individual Motivation in the Diffusion of the Wind River Shoshone Sundance to the Crow Indians," *American Anthropologist,* Vol. L, n.s., pp. 634–645, 1948.

1948 GOGGIN, JOHN MANN. *Culture and Geography in Florida Prehistory.** Published as *Space and Time Perspective in Northern St. Johns Archeology, Florida,* Yale University Publications in Anthropology, No. 47, 1952.

1949 ARMSTRONG, JOHN M., JR. *A Mexican Community: A Study of the Cultural Determinants of Migration.**

GOODENOUGH, WARD H. *A Grammar of Social Interaction.** Published as *Property, Kin, and Community on Truk,* Yale University Publications in Anthropology, No. 46, 1951.

LOUNSBURY, FLOYD G. *Comparative Iroquoian Morphology.** Published as *Oneida Verb Morphology,* Yale University Publications in Anthropology, No. 48, 1953.

ORLANSKY, HAROLD. *An Appraisal of an Anthropological Community Study.**

1950 HOWARD, ROBERT RANDOLPH. *The Archeology of Jamaica and Its Position in Relation to Circum-Caribbean Culture.**

SOMMER, FRANK HENRY, III. *Kwakiutl Iconography.**

1951 SILVERTHORNE, HENRY. *Individual Variation in Cultural Participation in Haiti.**

1952 ADAMS, RICHARD NEWBOLD. *Muquiyauyo (Study of a Peruvian Community).**

FRIED, JACOB. *Ideal Norms and Social Control in Tarahumara Society.**

GLADWIN, THOMAS FAVILL. *Personality and Development on Truk.** Published with Seymour B. Sarason as *Truk: Man in Paradise,* Viking Fund Publications in Anthropology, No. 20, 1953.

LEBAR, FRANK MICHAELS. *Trukese Material Culture.**

SCHAEDEL, RICHARD PAUL. *Central Andean Stone Sculpture.**

1953 COHEN, YEHUDI ARYEH. *Interpersonal Relations in a Jamaican Community.**

LANDMAN, RUTH HALLO. *Some Aspects of the Acculturation of Mexican Immigrants and Their Descendants to American Culture.**

1954 DARK, PHILIP JOHN CROSSKEY. *Methods of Ethnohistory with Reference to Mixtec Materials.**

MANGIN, WILLIAM PATRICK. *The Cultural Significance of the Fiesta Complex in an Indian Hacienda in Peru.**

VREELAND, HERBERT HAROLD, III. *Mongol Community and Kinship Structure.** Published in *Behavior Science Monographs,* Human Relations Area Files, 1954.

WILKIE, RAYMOND ABELL, JR. *The Economy and Social Structure of a Mexican Ejido Community.**

WILLIAMS, STEPHEN. *An Archeological Study of the Mississippian Culture in Southeast Missouri.**

Medals, Awards, and Memorial Lecture Series in Anthropology

THESE are the honors which the anthropological profession, through its societies, institutes, and associations, bestows upon its distinguished members. In every case, the recipients are selected for the honor on the basis of their work of distinction. Excluded from our list are the prizes, awards, essay contests, and fellowships of a competitive nature for which one must make application.

Alfred Vincent Kidder Award
Frazer Lectureship in Social Anthropology
Harold Coote Lake Research Medal
Henry Myers Lecture
Huxley Memorial Medal and Lecture
Lugard Memorial Lecture
Prix Broca
Prix Josephine Juglar
Prize John Koumaris
Rivers Memorial Medal
Sarat Chandra Roy Memorial Medal
Viking Fund Medals and Awards

ALFRED VINCENT KIDDER AWARD

Superintended by the
Executive Board of the
American Anthropological Association

Purpose: For eminence in the field of American archeology with emphasis on the American Southwest and Middle America so long as these fields are important in archeological research.

Current Data: A medal given every three years to a scholar selected by an especially appointed committee of the American Anthropological Association. The medal is presented at the annual meeting of the Association, and notices published in the *American Anthropologist* and in *American Antiquity*. No address or papers are associated. A statement on the award appeared in *American Antiquity*, Vol. 16, No. 3, p. 267, January, 1951.

History: Established 1 November 1950, in commemoration of the retirement on that date of A. V. Kidder as Chairman of the Division of Historical Research, Carnegie Institution of Washington. The donors were a large number of Dr. Kidder's friends headed by a Committee consisting of Robert Wauchope, *Chairman;* J. O. Brew; Gordon F. Ekholm; Emil W. Haury; Jesse L. Nusbaum; and H. E. D. Pollock. Contributions paid for the casting of 100 medals and the establishment of $100, in the capital funds of the Peabody Museum of Archaeology and Ethnology, Harvard University, where the medals are deposited, to produce an income for inscribing the recipients' names on the medals. The original Award Committee requested the Executive Board of The American Anthropological Association to superintend the selection of the recipient by appointing a committee for that purpose. There is no specific commitment for perpetuating this relationship between the Association and the award. The medal, designed and sculpted by Miss Tatiana Proskouriakoff, is of bronze, three inches in diameter. The obverse bears a carving taken from a carved slate mirror-back excavated by Dr. Kidder at Kaminal Juyu in Guatemala; the reverse is a conjectural detail of a Southwestern cliff dwelling.

Recipients:

1950 ALFRED M. TOZZER.
1953 EARL H. MORRIS.

FRAZER LECTURESHIP IN SOCIAL ANTHROPOLOGY

Of the Universities of
Oxford, Cambridge, Glasgow, and Liverpool;
Administered by the
Financial Board of the University of Cambridge

Purpose: To commemorate Sir James Frazer's great services to learning, by the delivery of an annual lecture on social anthropology.

Current Data: Lectures delivered annually and in rotation at the Universities of Oxford, Cambridge, Glasgow, and Liverpool, the appointment of the lecturer for a particular year being vested in the Vice-Chancellor or Principal of the respective university.

History: Established 1920 by a committee consisting of representatives of the four universities; capital of fund vested in the Financial Board of the University of Cambridge, who, as trustees, administer it. An Address, drawn up by Professor A. E. Housman and signed by 175 supporters was presented to Sir James Frazer in 1921. First lecture delivered in 1922. First eleven lectures published as *The Frazer Lectures, 1922–1932,* edited by Warren R. Dawson, F.R.S.E., London, Macmillan and Co., Ltd., 1932, xv, 304 pages.

Lecturers:

1922 (Oxford) E. SIDNEY HARTLAND, LL.D., F.S.A.: "The Evolution of Kinship. An African Study." Published by the Clarendon Press, Oxford, 1922.

1923 (Cambridge) REV. CANON JOHN ROSCOE, M.A., Honorary Canon of Norwich: "Immigrants and their Influence in the Lake Region of Central Africa." Published by the University Press, Cambridge, 1924.

1924 (Glasgow) W. J. PERRY, M.A., D.Sc., Reader in Cultural Anthropology in the University of London: "The Age of the Gods."

1925 (Liverpool) BRONISLAW MALINOWSKI, Ph.D., D.Sc., Reader in Social Anthropology in the University of London: "Myth in Primitive Psychology." Expanded and published (Psyche Miniatures Series) by Kegan Paul & Co., London, 1926.

1926 (Oxford) ALEXANDRE MORET, Litt.D., Membre de l'Institut de France, Professor au Collège de France, Paris: "La mise à mort du dieu en Égypte." Published by Geuthner, Paris, 1927.

1927 (Cambridge) R. R. MARETT, M.A., D.Sc., F.B.A., Reader in Social Anthropology in the University of Oxford, Rector of Exeter College, Oxford: "The Diffusion of Culture." Published by the University Press, Cambridge, 1927.

1928 (Glasgow) EDWARD A. WESTERMARCK, Ph.D., LL.D., Professor of Sociology in the University of London, and Professor of Philosophy in the Academy of Åbo, Finland: "The Study of Popular Sayings."

1929 (Liverpool) A. C. HADDON, M.A., Sc.D., F.R.S., formerly Reader in Ethnology in the University of Cambridge: "The Religion of a Primitive People." Published in *Annals of Archaeology and Anthropology,* Vol. 17, 1930.

1930 (Oxford) PAUL RIVET, Professor au Musée d'Histoire Naturelle, Paris: "Les Océaniens."

1931 (Cambridge) SIR ARTHUR EVANS, M.A., D.Litt., F.R.S.: "The Earlier Religion of Greece in the Light of Cretan Discoveries." Published by Macmillan & Co., London, 1931.

1932 (Glasgow) SIR ARTHUR KEITH, M.A., D.Sc., F.R.S., Conservator of the Museum and Hunterian Professor, Royal College of Surgeons of England: "The Aryan Theory as it Stands Today."

1933 (Liverpool) CHARLES GABRIEL SELIGMAN, M.A., M.D., F.R.S., Professor of Ethnology, University of London: "Egypt and Negro Africa. A Study in Divine Kingship." Published by Routledge, London, 1934.

1934 (Oxford) HERBERT JENNINGS ROSE, M.A., Professor of Greek, University of St. Andrews: "Concerning Parallels."

1935 (Cambridge) ALAN H. GARDINER, D.Litt., F.B.A.: "The Attitude of the Ancient Egyptians to Death and the Dead." Published by the University Press, Cambridge, 1935.

1936 (Glasgow) WARREN ROYAL DAWSON, F.R.S.E., F.S.A.: "The Magicians of Pharaoh."

1937 (Liverpool) HENRY BALFOUR, M.A., F.R.S., Curator of the Pitt Rivers Museum, Oxford: " 'Spinners' and 'Weavers' in Anthropological Research." Published by the Clarendon Press, Oxford, 1938.

1938 (Oxford) J. H. HUTTON, C.I.E., M.A.,

D.Sc., William Wyse Professor of Social Anthropology in the University of Cambridge: "A Primitive Philosophy of Life."

1939 (Cambridge) ALFRED REGINALD RADCLIFFE-BROWN, M.A., Professor of Social Anthropology in the University of Oxford and Fellow of All Souls College, Oxford: "Taboo." Published by the University Press, Cambridge, 1939.

1940 (Glasgow) WILLIAM REGINALD HALLIDAY, M.A., LL.D., Principal of King's College, London: "The Riddle of Apollo."

1941 (Liverpool) No lecture delivered.

1942 (Oxford) R. M. DAWKINS, M.A., Litt.D., formerly Bywater and Sotherby Professor of Byzantine and Modern Greek in the University of Oxford, and Hon. Fellow of Exeter College, Oxford: "Soul and Body in the Folklore of Modern Greece."

1943 (Cambridge) JOHN L. MYRES, M.A., formerly Wykeham Professor of Ancient History in the University of Oxford: "Mediterranean Culture. An Essay in Geographical History." Published by the University Press, Cambridge, 1944.

1944 (Glasgow) MORRIS GINSBERG, M.A., D.Litt., Martin White Professor of Sociology in the University of London: "Moral Progress." Published (Glasgow University Publication 62) by Jackson, Son & Co., Glasgow, 1944.

1945 (Liverpool) REV. E. W. SMITH, D.D.: "A Dynamic Science of Man applied to African Problems."

1946 (Oxford) H. J. FLEURE, M.A., D.Sc., F.R.S., formerly Professor of Geography in the University of Manchester: "Aspects of our British Heritage."

1947 (Cambridge) E. E. EVANS-PRITCHARD, M.A., Ph.D., Professor of Social Anthropology in the University of Oxford and Fellow of All Souls College, Oxford: "The Divine Kingship of the Shilluk of the Nilotic Sudan." Published by the University Press, Cambridge, 1948.

1948 (Glasgow) ALEXANDER MACBEATH, M.A., Professor of Logic and Metaphysics in the Queen's University, Belfast: "The Relationship of Primitive Morality and Religion."

1949 (Liverpool) V. GORDON CHILDE, D.Litt., D.Sc., F.B.A., Professor of Prehistoric European Archaeology in the University of London, and Director of the University of London Institute of Archaeology: "Magic, Craftsmanship and Science." Published by the University Press, Liverpool, 1949.

1950 (Oxford) HENRI FRANKFORT, M.A., Ph.D., F.S.A., Professor of the History of Pre-Classical Antiquity in the University of London, and Director of the Warburg Institute: "The Problem of Similarity in Ancient Near-Eastern Religions."

1951 (Cambridge) CHRISTOPH VON FÜRER-HAIMENDORF, Dr. Phil., Professor of Asiatic Anthropology in the University of London: "The After-Life in Indian Tribal Belief." Published in the *Journal of the Royal Anthropological Institute of Great Britain and Ireland,* Vol. 83, 1953.

1952 (Glasgow) H. M. GLUCKMAN, M.A., D.Phil., Professor of Social Anthropology in the University of Manchester: "Rituals of Rebellion in South-East Africa." Published by the University Press, Manchester, 1954.

1953 (Liverpool) E. FRANKLIN FRAZIER, A.M., Ph.D., Professor of Sociology, Howard University, Washington, D. C.: "The Evolution of Religion among the American Negroes."

1954 (Oxford) I. SCHAPERA, M.A., D.Sc., F.R.S.S.Af., Professor of Social Anthropology in the University of London: "The Sin of Cain." Published in the *Journal of the Royal Anthropological Institute of Great Britain and Ireland,* Vol. 85, 1955.

1955 (Cambridge) RAYMOND WILLIAM FIRTH, M.A., Ph.D., F.B.A., Professor of Anthropology in the University of London: "The Fate of the Soul. An Interpretation of some Primitive Concepts."

HAROLD COOTE LAKE RESEARCH MEDAL

of the

FOLK-LORE SOCIETY

c/o University College London

Gower Street

London, W.C. 1, England

Purpose: For research work of outstanding merit in folklore matters.

HAROLD COOTE LAKE RESEARCH MEDAL—Cont'd

Current Data: Awarded from time to time at the discretion of the Council of the Society and presented at a meeting of the Society, usually the Annual General Meeting.

History: Established 1939 by Mrs. H. A. Lake Barnett in memory of her brother, Harold Coote Lake, who from 1929 to 1939 was first Hon. Treasurer and then Hon. Secretary of the Society. Medal, designed and struck by the Royal Mint, is made of bronze and is 1.42 inches in diameter. It bears the name of the Society and a design of a sprig of mistletoe on one side and the name of the recipient on the other. Cost defrayed by donor and a further sum of £51 presented for investment, the interest to cover the then cost of a medal if presented annually.

Recipients:

1940 Mrs. Mary Macleod Banks, for research on Scottish Calendar Customs issued by the Society.

1941 Dr. L. E. Lones, for similar research on English Calendar Customs.

1952 Dr. W. L. Hildburgh, for long and valuable service to folklore, notably in the field of amulets throughout the world.

1955 Rev. Professor E. O. James, for work on myth and ritual in relation to religion.

HENRY MYERS LECTURE

of the

Royal Anthropological Institute of Great Britain and Ireland
21 Bedford Square
London, W.C. 1, England

Purpose: For lectures on the place of religious belief in human development.

Current Data: Presented biennially by lecturers appointed by invitation of the Council of the Institute. Lecturers chosen are announced in advance at the annual general meeting of the Institute; lectures given are published in the Institute's *Journal.*

History: Founded 1945, when Henry Myers, a Fellow of the Institute, gave a sum of money for a lecture on the subject. Upon his death in 1947, he bequeathed to the Institute £1000, to enable the Council to finance lectures on the subject as a permanent biennial institution.

Recipients:

1945 Professor A. R. Radcliffe-Brown, M.A.: "Religion and Society."

1948 Professor Raymond Firth, M.A., Ph.D.: "Religious Belief and Personal Adjustment."

1950 Rev. Professor E. O. James, D.Litt., Hon.D.D., Ph.D., F.S.A.: "Religion and Reality."

1952 Dr. Edwin W. Smith, D.D.: "African Symbolism."

1954 Professor E. E. Evans-Pritchard: "The Meaning of Sacrifice among the Nuer."

HUXLEY MEMORIAL MEDAL AND LECTURE

of the

Royal Anthropological Institute of Great Britain and Ireland
21 Bedford Square
London, W.C. 1, England

Purpose: For lectures in memory of Thomas Henry Huxley.

Current Data: Awarded annually, by ballot of the Council, to a scientist, British or foreign, distinguished in any field of anthropological research in the widest sense. Lecture normally delivered at a special meeting of the Institute in November, and followed by the presentation of the medal. Lectures published in the Institute's *Journal.*

History: This distinction instituted in 1900; the highest honor at the disposal of the Royal Anthropological Institute.

Recipients:

1900 Lord Avebury: "Huxley, the Man and his Work."

1901 Sir Francis Galton: "The Possible Improvement of the Human Breed under the existing Conditions of Law and Sentiment."

1902 Dr. D. J. Cunningham, M.D., D.C.L., F.R.S.: "Right-handedness and left-brainedness."

1903 Karl Pearson: "On the Inheritance of the Mental and Moral Character."

1904 Dr. J. Deniker, President de la Société d'Anthropologie de Paris: "Les six Races composant la Population Actuelle de l'Europe."

1905 John Beddoe, M.D., LL.D., F.R.S.: "Colour and Race."

1906 Professor W. M. Flinders Petrie, D.C.L., F.R.S.: "Migrations."

1907 Edward Burnett Tylor: no lecture.

1908 William Z. Ripley, Ph.D.: "The European Population of the United States."

1909 Professor Gustaf Retzius: "The So-

called North European Races of Mankind."

1910 W. Boyd Dawkins, M.A., Hon.D.Sc., F.R.S.: "The Arrival of Man in Britain in the Pleistocene Age."

1911 Felix von Luschan, M.D., Dr. Ph., University of Berlin: "The Early Inhabitants of Western Asia."

1912 William Gowland, Assoc. R.S.M., F.R.S., F.S.A.: "The Metals in Antiquity."

1913 Professor W. J. Sollas, M.A., Sc.D., LL.D., F.R.S.: "Paviland Cave: An Aurignacian Station in Wales."

1914 None.

1915 M. Emile Cartailhac: No lecture due to World War I.

1916 Sir James G. Frazer, D.C.L., LL.D., Litt.D.: "Ancient Stories of a Great Flood."

1917 None.

1918 None.

1919 None.

1920 A. C. Haddon, M.A., Sc.D., F.R.S.: "Migrations of Culture in British New Guinea."

1921 Henry Balfour, M.A., F.S.A., F.Z.S.: "The Archer's Bow in the Homeric Poems."

1922 Professor Marcellin Boule: "L'Oeuvre Anthropologique du Prince Albert Ier de Monaco et les récents progrès de la paléontologie humaine en France."

1923 Dr. E. S. Hartland: no lecture due to ill health.

1924 Professor R. Verneau: "La Race de Néanderthal et la Race de Grimaldi; leur Rôle dans l'Humanité."

1925 Sir Arthur Evans, D.Litt., F.R.S., Hon. V.P.S.A.: "The Early Nilotic, Libyan and Egyptian Relations with Minoan Crete."

1926 Sir Wm. Ridgeway: posthumously.

1927 Dr. Aleš Hrdlička: "The Neanderthal Phase of Man."

1928 Sir Arthur Keith, F.R.S.: "The Evolution of the Human Races."

1929 Erland Nordenskiöld: "The American Indian as an Inventor."

1930 Professor A. H. Sayce, LL.D.: "The Antiquity of Civilized Man."

1931 Dr. Georg Thilenius, Director of the Ethnological Museum of Hamburg and Professor of Ethnology in the University of Hamburg: "On Some Biological View-points in Ethnology."

1932 Professor C. G. Seligman, M.D., F.R.S.: "Anthropological Perspective and Psychological Theory."

1933 Professor J. L. Myres, O.B.E., F.B.A., D.Litt., D.Sc., M.A.: "The Cretan Labyrinth: A Retrospect for Aegean Research."

1934 Sir Aurel Stein, K.C.I.E., Ph.D., D.Litt., D.Sc., F.B.A.: "The Indo-Iranian Borderlands: Their Prehistory in the Light of Geography and of Recent Explorations."

1935 Sir Grafton Elliot Smith, M.A., M.D., Litt.D., D.Sc., Ch.M., F.R.C.P., F.R.S.: "The Place of Thomas Henry Huxley in Anthropology."

1936 Professor Edward Westermarck, Ph.D., LL.D.: "Methods in Social Anthropology."

1937 Professor H. J. Fleure, D.Sc., M.A., F.R.S.: "Racial Evolution and Archaeology."

1938 Professor Marcel Mauss: "Une Catégorie de L'Esprit Humain: La Notion de Personne, Celle de 'Moi.' "

1939 Dr. R. R. Marett, M.A., D.Sc., Hon. D.Litt.(Oxon.), Hon. LL.D. (St.A.), F.B.A.: "Charity and the Struggle for Existence."

1940 H. J. E. Peake, M.A., F.S.A.: "The Study of Prehistoric Times."

1941 Professor Henri Breuil: lecture postponed due to World War II, "The Discovery of the Antiquity of Man."

1942 Sir Leonard Woolley, M.A., D.Litt., LL.D.: "North Syria as a Cultural Link in the Ancient World."

1943 Professor F. C. Bartlett, C.B.E., F.R.S.: "Anthropology in Reconstruction."

1944 Professor V. Gordon Childe, D.Litt., D.Sc., F.B.A., F.S.A., F.R.A.I.: "Archaeological Ages as Technological Stages."

1945 Professor A. L. Kroeber, University of California: "The Ancient Oikoumene as an Historic Culture Aggregate."

1946 Miss G. Caton-Thompson, F.B.A., F.S.A., F.R.A.I.: "The Aterian Industry: Its Place and Significance in the Palaeolithic World."

1947 Dr. W. L. H. Duckworth, M.A., M.D., Sc.D.: "Some Complexities of Human Structure."

HUXLEY MEMORIAL MEDAL AND LECTURE—Cont'd

1948 PROFESSOR ROBERT H. LOWIE, Ph.D., University of California: "Some Aspects of Political Organization Among the American Aborigines."

1949 JAMES HORNELL: no lecture due to death.

1950 DR. JULIAN S. HUXLEY, M.A., D.Sc., F.R.S.: "New Bottles for New Wine: Ideology and Scientific Knowledge."

1951 PROFESSOR A. R. RADCLIFFE-BROWN, M.A.: "The Comparative Method in Social Anthropology."

1952 SIR PETER BUCK (TE RANGI HIROA), Bishop Museum, Hawaii: no lecture due to death.

PROFESSOR KAJ BIRKET-SMITH, University of Copenhagen and the National Museum, Denmark (at Cambridge): "The History of Ethnology in Denmark."

1953 PROFESSOR M. GINSBERG: "On the Diversity of Morals."

1954 PROFESSOR RALPH LINTON, Ph.D., Yale University: no lecture due to death.

PROFESSOR HENRI V. VALLOIS, D.M., D.Sc.: "Neandertals and Praesapiens."

LUGARD MEMORIAL LECTURE

of the

INTERNATIONAL AFRICAN INSTITUTE

St. Dunstan's Chambers

10–11 Fetter Lane

Fleet Street

London, E.C. 4, England

Purpose: To commemorate the Rt. Hon. Lord Lugard, G.C.M.G., C.B., D.S.O., D.C.L., LL.D., first Chairman of the International African Institute, and to constitute an award for meritorious work in the field of African studies.

Current Data: Awarded every two years; honorarium of 20 guineas; recipient nominated in writing to the Chairman of the Institute by three members of the Executive Council and nomination voted upon at a meeting of the Executive Council. Lecture is given, in either English or French, at a meeting of the Executive Council and subsequently is published in *Africa*, the Institute's quarterly journal.

History: Lectureship constituted in 1948, the first award being made at the March 1949 meeting of the Institute's Executive Council. For four years the award was made annually, but now is made on alternate years only. Honorarium payable to the lecturer is paid out of the Institute's current income.

Recipients:

1950 MISS MARGERY PERHAM, Fellow of Nuffield College, Oxford. Lecture, given at Amsterdam, entitled: "Lord Lugard; a Preliminary Evaluation."

1951 M. ROBERT DELAVIGNETTE, formerly Chef du Cabinet, Ministère de la France d'Outre-Mer. Lecture, given in London, entitled: "Lord Lugard et la Politique Africaine."

1952 VICE-GOUVERNEUR A. MOELLER DE LADDERSOUS. Lecture, given in Brussels, entitled: "Le Message de Lord Lugard et l'Afrique d'Aujourd'hui."

1953 DR. EMORY ROSS, formerly Secretary to the Africa Committee of the Division of Foreign Missions of the International Council of the Churches of Christ in the United States of America. Lecture, given in Lisbon, entitled: "The Dual Mandate for Tomorrow."

PRIX BROCA

of the

SOCIÉTÉ D'ANTHROPOLOGIE DE PARIS

1 rue René Panhard

Paris 13, France

Purpose: For the best memoir on a question of human anatomy, comparative anatomy, or physiology, pertaining to anthropology.

Current Data: Prize of 1,500 francs awarded every two years; selected by the "Commission des Prix," named by the Council of the Society and reported in the *Bulletins et Memoires de la Société d'Anthropologie de Paris.*

History: Founded in 1881 by Madame Paul Broca.

Recipients:

1884 PROF. L. TESTUT, "Mémoire sur les anomalies musculaires chez l'Homme."

1886 J. DENIKER, "Recherches anatomiques et embryologiques sur les singes anthropoides."

1888 DR. R. COLLIGNON, "Etudes sur l'ethnographie générale de la Tunisie."

1890 ALPH. BERTILLON, "Etudes élementaires sur les lois mathématiques de l'Anthropométrie en général et plus spécialement du signalement métrique."

1892 DR. J. RAHON, "Recherches sur les ossements humains anciens et préhistoriques en vue de la reconstitution de la taille."

1894 Dr. A. Le Double, "Des malformations des muscles faciaux et viscèraux dans l'espèce humaine et de leurs homologues."

1896 Prof. E. Dubois, "Recherches sur le Pithecantropus de Trinil."

1898 Dr. Y. Delage, "La structure du protoplasma et les théories sur l'hérédité et les grands problèmes de la biologie générale."

Dr. R. Anthony, "Du sternum et de ses connexions avec le membre thoracique dans la série des mammifères."

1900 Dr. Paul-Boncour, "Etude des modifications squelettiques consécutives à l'hémiplégie: le fémur et ses modifications consécutives à l'hémisplégie spasmodique infantile."

1902 Dr. Godin, "Anthropométrie à l'âge de la puberté."

1904 Drs. Lannois et Roy, "Etudes biologiques sur les Géants." Paris, Masson, 1904.

1908 Dr. P. Rivet, "Recherches d'anthropologie générale ethnique et d'ethnographie."

1910 Dr. Legendre, "Recherches anthropologiques et ethnologiques sur les Lolos et les Chinois du Seu-Tchouen."

1919 Mm. Chantre and Bertholon, "Recherches anthropologiques dans la Berbérie Orientale." Lyon, 1913.

Dr. H. V. Vallois, "Etude anatomique de l'articulation du genou chez les Primates." Thése, Montpellier, 1914.

1920 Prof. N. Puccioni, "Recherches d'anthropologie physique sur les races africaines."

Dr. Rouma, "Ensemble des recherches sur la croissance."

Prof. Villemin, "Travaux anatomiques notamment l'anatomie comparée du duodénum chez l'Homme et les Singes."

1922, awarded 1924 F. Sarrasin (Bâle), "Anthropologie des Néo-Calédoniens et des Îles Loyalty."

E. Pittard (Pr. d'anthropologie à l'Université de Genève), "Les peuples des Balkans."

1924 Dr. A. Delattre, "Anatomie comparée et mécanique fonctionelle de l'axis des mammifères."

Prof. Chaine, pour ses travaux sur les muscles masticateurs.

1926 Dr. Botez (l'Université de Jassy, Roumanie), "Etudes morphologique et morphogénique du bras et de l'avant-bras chez les primates."

Dr. Arthaud, "Contribution à l'étude des formes du crâne dans l'hydrocéphalie." Thèse, Paris, 1925.

1928 M. Hinzde (Professeur à l'Université de Moscou), "Recherches sur la circulation cérébrale chez les hommes et chez les singes."

1930 Prof. Siffre, pour l'ensemble de ses recherches odontologiques principalement chez les Hommes Néolithiques.

1932 Dr. J. Botar (Assistant à la Université de Szeged, Hungary), "Recherches sur le système sympathique de l'Homme et des vertébrés."

1934 Mlle. Dr. M. Friant, "Recherches sur l'evolution dentaire des mammifères."

1938 Dr. L. Pales, pour l'ensemble de ses travaux d'anthropologie et d'ethnographie et notamment pour son livre: *Paléopathologie et pathologie comparative*. Paris, Masson, 1930.

1942 Prof. E. Patte, "Recherches d'anthropologie prehistorique, préhominiens, hommes préhistoriques d'Indochine, anciennes populations de la France."

1946 Dr. J. Beauvieuz, "Essai d'une systématisation anthropologique et comparative des variations de l'architecture cranio-faciale."

1949 Mme. Genet-Varcin, "Les Négritos de l'Île de Luçon, étude anthropologique. Thèse, doct. Sciences."

1951 Mme. Dr. J. Leschi, "Races Mélanodermes et Leucodermes, pigmentation et fonctionnement surrenalien."

PRIX JOSEPHINE JUGLAR

of the

Société d'Anthropologie de Paris
1 rue René Panhard
Paris 13, France

Purpose: For the best work on anthropology published in the French language during the previous five years.

Current Data: Prize of about 400 francs awarded every five years; selected by jury of seven members of whom five are Society members and two from outside the Society, the jury being chosen by the Council of the Society. Act of candidacy unnecessary.

History: Founded in 1912 by Madame Josephine Juglar. Income for prize derived from rents.

PRIX JOSEPHINE JUGLAR—Cont'd

Society did not come into possesion of legacy until 1922, the first prize being awarded in 1927.

Recipients:

1927 M. ANTHONY, "pour ses recherches sur le cerveau."

1933 PROF. H. V. VALLOIS, "pour ses recherches sur l'omoplate."

PRIZE JOHN KOUMARIS
of the
HELLENIC ANTHROPOLOGICAL SOCIETY
c/o Anthropological Museum
Athens National University
University Laboratories, Goudi
Athens, Greece

Purpose: To promote research and writing by Greeks on the Greek race, with preference on physical anthropology.

Current Data: Prize of one million drachmas (U.S.A. $66.00) awarded at indeterminate intervals upon decision of "Critical Commission," which is the Administrative Board of the Society presided over by the Dean of the Medical School of the University of Athens. The selected study, which may be written in any language, is announced and published in the *Practika* of the Society.

History: Established 1 June 1949, on the occasion of the twenty-fifth anniversary of the Hellenic Anthropological Society, by the General Secretary, Professor John Koumaris, to encourage anthropological research in Greece. Five million drachmas has been deposited in cash with the Society to be divided among five prizes. The prize will be stabilized forever.

Recipients:

1951 GEORGE APOSTOLAKIS (Professor of Anatomy, University of Athens), PETER PETRIDIS (Lecturer and Assistant of Anatomy), ORESTES LOURIDIS, M.D., for their paper: "Biometric Research upon the Visage and the Ear of Adult Greeks."

RIVERS MEMORIAL MEDAL
of the
ROYAL ANTHROPOLOGICAL INSTITUTE OF GREAT BRITAIN AND IRELAND
21 Bedford Square
London, W.C. 1, England

Purpose: For specially meritorious work in anthropology in the field.

Current Data: A medal awarded annually, not more than two being awarded in one year, by the Council of the Institute, with preference given to Fellows of the Institute and others who are British subjects. Recipient announced at annual general meeting of the Institute, and notice published in its *Journal.*

History: Founded 1923 by the Council of the Institute in memory of its late President, William Halse Rivers Rivers.

Recipients:

1924 DR. A. C. HADDON. For field-work in Torres Straits, New Guinea, Sarawak.

1925 PROFESSOR C. G. SELIGMAN, F.R.S., for anthropological research in New Guinea, Ceylon, and the Sudan.

1926 PROFESSOR EDWARD WESTERMARCK, for anthropological work in Morocco.
DR. A. P. MAUDSLAY, for archeological work in Central America.

1927 SIR W. BALDWIN SPENCER, F.R.S., for field-work in Central and Northern Australia.

1928 SIDNEY H. RAY, for research on linguistics in the Torres Straits.
EMIL TORDAY, for researches in the ethnology and ethnography of the Congo Basin.

1929 JOHN HENRY HUTTON, for field work in the Naga Hills, Assam.

1930 PROFESSOR BRONISLAW MALINOWSKI, for field-work in Melanesia.

1931 REV. E. W. SMITH, for valuable field-work in Northern Rhodesia.

1932 MELVILLE WILLIAM HILTON-SIMPSON, for field work in Algeria, Sahara, and Belgian Congo.

1933 MRS. BRENDA ZARA SELIGMAN, for anthropological work in the field in Ceylon and the Sudan.
DR. ROBERT SUTHERLAND RATTAY, C.B.E., D.Sc., for anthropological work in the field in the Gold Coast, West Africa.

1934 MISS GERTRUDE CATON-THOMPSON, for field-work in Egypt, the Libyan Desert, and Rhodesia.

1935 PROFESSOR A. M. HOCART, M.A., for field-work in Melanesia, Polynesia, and Ceylon.

1936 PROFESSOR PETER H. BUCK (TE RANGI HIROA), D.S.O., M.D., Director of the Bishop Museum, Honolulu, for anthropological work in New Zealand, Central, and Eastern Polynesia.

1937 Dr. Edward Evan Evans-Pritchard, for anthropological work in the Sudan and Kenya.

1938 Dorothy Ann Elizabeth Garrod, for field work in Gibraltar, S. Kurdistan, and Palestine.

1939 Professor Isaac Schapera, M.A., D.Sc., Ph.D., F.R.S.S.Af., of Capetown University, for field-work in the Bechuanaland Protectorate.

1940 Dr. Raymond W. Firth, M.A., Ph.D., for field-work in Tikopia.

1941 Dr. Diamond Jenness, for field-work in Arctic America.

1942 James Philip Mills, for field-work among the Nagas of Assam.

1943 Beatrice Mary Blackwood, for field-work in North America and Melanesia.

1944 James Hornell, for field-work in the coastal areas of India, Africa, and Indonesia, and in the Pacific Islands.

1945 J. Eric Thompson, for field-work in the Maya area, Central America.

Dr. Audrey I. Richards, for field-work among the Bemba of Northern Rhodesia.

1946 Ian H. Hogbin, for field-work in Ontong Java, Solomon Islands, and New Guinea.

1947 Dr. Meyer Fortes, for anthropological field-work in the Northern territories of the Gold Coast, in Ashanti, and in Nigeria.

1948 Dr. Verrier Elwin, for anthropological field-work in India.

1949 Dr. C. von Fürer-Haimendorf, for anthropological field-work in Hyderabad, Deccan and Assam.

1950 Dr. S. F. Nadel, for anthropological field-work in Northern Nigeria and the Anglo-Egyptian Sudan.

1951 Dr. R. F. Fortune, for field-work in Melanesia and North America.

1952 Dr. L. S. B. Leakey, for archaeological and anthropological field-work in East Africa.

Professor Monica Wilson, for socio-anthropological field-work in Southern Africa.

1953 Dr. Donald F. Thomson, for field-work in Arnhem Land.

SARAT CHANDRA ROY MEMORIAL MEDAL

of

The Asiatic Society
1, Park Street
Calcutta 16, India

Purpose: For the most outstanding book or monograph on any aspect of the Cultural Anthropology of India.

Current Data: A medal awarded every three years by the Council upon nomination by a Medal Advisory Board. The medal is presented at the Annual Meeting of the Society, and notices published in the Society's *Yearbook.*

Recipients:

1944 Dr. Verrier Elwin, D.Sc. (Oxon.), F.N.I., F.R.A.I., F.A.S.
1945 J. P. Mills, C.I.E., I.C.S., F.A.S.
1946 W. V. Grigson, I.C.S.
1949 Dr. U. R. Ehrenfels, Ph.D.
1952 Srijut Tarak Chandra Das, M.A.

VIKING FUND MEDALS AND AWARDS

of the

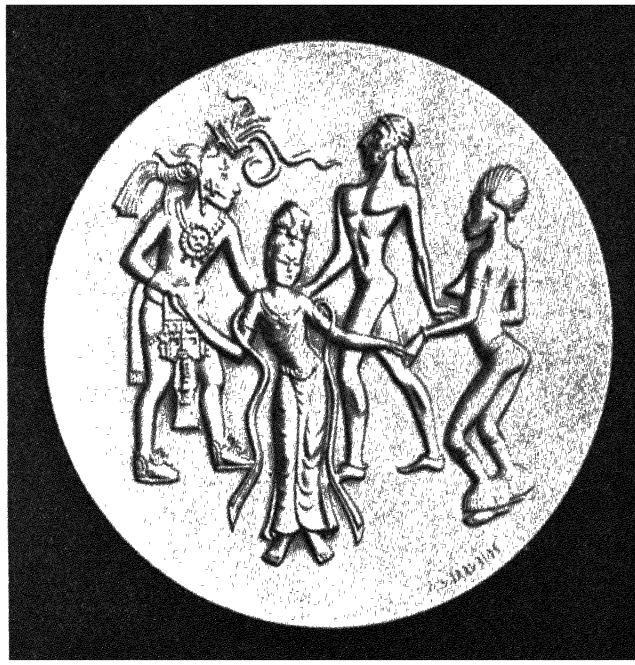
Wenner-Gren Foundation for Anthropological Research, Incorporated
14 East Seventy-first Street
New York 21, New York

Purpose: For distinguished research and publications in, and contributions to, general anthropology, archeology, and physical anthropology.

Current Data: Three medals and accompanying awards of $1000 each are made available annually by the Foundation, one to each of three professional societies: American Anthropological Association, for selection of medalist in general anthropology; The Society for American Archaeology, for selection of medalist in archeology; American Association of Physical Anthropologists, for selection of medalist in physical anthropology. A special committee of each organization annually selects the candidate to receive its medal and award, with announcements usually made at the annual meetings of the respective organizations; photographs and biographical statements of recipients usually appear in the journals of the respective organizations. Awards for the previous year are presented at the annual dinner of the Foundation, customarily at the Waldorf-Astoria Hotel in New York City on the first Friday of March.

VIKING FUND MEDALS AND AWARDS—Cont'd

History: Founded 1946 by the Board of Directors of the Foundation, then The Viking Fund, Inc. Medal designed by Miguel Covarrubias and sculpted by René Paul Chambellan. Face of bronze medal, plated with gold, is shown in accompanying picture. Reverse bears words "Viking Fund Medal for Anthropology," the recipients name and year of award. Expenses of medal, awards, and annual dinner are met by the Foundation from current income. Each of the three organizations has full freedom of choice in the selection of the recipients for the medal and award, without regard for the nationality or place of residence of the recipient, or whether the honor is in recognition of a specific accomplishment of that particular year or for the activities of a lifetime.



Recipients:

	General Anthropology	Archeology	Physical Anthropology
1946	Dr. Alfred Louis Kroeber *University of California*	Dr. Alfred Vincent Kidder *Harvard University*	Dr. Franz Weidenreich *American Museum of Natural History*
1947	Dr. Robert Harry Lowie *University of California*	Dr. John Otis Brew *Harvard University*	Dr. Earnest Albert Hooton *Harvard University*
1948	Dr. John Reed Swanton *Smithsonian Institution*	Alex Dony Krieger *University of Texas*	Dr. Adolph Hans Schultz *Johns Hopkins University*
1949	Dr. George Peter Murdock *Yale University*	Dr. Hallam Leonard Movius, Jr. *Harvard University*	Dr. Wm. King Gregory *American Museum of Natural History*
1950	Dr. Clyde Kay Kluckhohn *Harvard University*	Dr. Emil Walter Haury *University of Arizona*	Dr. Wilton Marion Krogman *University of Pennsylvania*
1951	Dr. Ralph Linton *Yale University*	Dr. Frank Harold Hanna Roberts, Jr. *Smithsonian Institution*	Dr. Carleton Stevens Coon *University of Pennsylvania*
1952	Dr. Julian H. Steward *University of Illinois*	Dr. Alfonso Caso *Instituto Indigenista, Mexico*	Dr. William L. Straus, Jr. *Johns Hopkins University*
1953	Dr. Melville J. Herskovits *Northwestern University*	Dr. Gordon R. Willey *Harvard University*	Dr. T. Dale Stewart *Smithsonian Institution*
1954	Dr. Robert Redfield *University of Chicago*	Dr. Wm. Duncan Strong *Columbia University*	Dr. William W. Howells *Harvard University*

Professional Associations

International Organizations of Anthropological Interest

THESE are the multi-national organizations which hold congresses, conferences, or meetings, at intervals of from one to four years and usually in different countries. This roster with its current data will be repeated each year. There should be additions to this list; the appropriate data will be most appreciated.

CONGRÈS INTERNATIONAL DES SCIENCES ANTHROPOLOGIQUES ET ETHNOLOGIQUES
CONGRÈS INTERNATIONAUX DES SCIENCES PRÉHISTORIQUES ET PROTOHISTORIQUES
CONGRÈS INTERNATIONAL DES AMERICANISTES
CONFERENCE INTERNATIONALE DES AFRICANISTES DE L'OUEST (CIAO)
THE FAR-EASTERN PREHISTORY ASSOCIATION
THE PACIFIC SCIENCE ASSOCIATION
INSTITUTO INDIGENISTA INTERAMERICANO

CONGRÈS INTERNATIONAL DES SCIENCES ANTHROPOLOGIQUES ET ETHNOLOGIQUES

International Congress of Anthropological and Ethnological Sciences

c/o Division of Anthropology and Psychology
National Research Council
2101 Constitution Avenue
Washington 25, D. C.

Principal Officers: *President,* Froelich Rainey; *Secretaries General,* William N. Fenton and Alfred Kidder, II, elected by Permanent Council at the IVth Congress held in Vienna, Austria, September 1952. Terms of office expire with election of officers at close of Vth Congress. *Organizing Committee for IVth Congress* (also the Committee on International Relations in Anthropology of the Division of Anthropology and Psychology of the National Research Council): *Chairman,* Froelich Rainey; Erwin H. Ackerknecht; *Chairman sub-committee on foreign delegations,* Henry B. Collins, Jr.; *Editor,* Loren C. Eiseley; A. I. Hallowell; *Chairman sub-committee on program,* M. J. Herskovits; *Chairman sub-committee on local arrangements,* Alfred Kidder, II; *Chairman sub-committee on finance,* Clyde Kluckhohn; Alfred Métraux; *Chairman of sub-committee on sponsoring committee,* William Duncan Strong.

Meetings: Vth Congress in the United States of America at the University Museum, University of Pennsylvania, Philadelphia, Pennsylvania, September 1–9, 1956.

Current Status: Anticipated members at Vth Congress approximately one thousand; dues $10.00. Unsolicited papers from membership limited to one each. Permanent Council instructed Organizing Committee to arrange program around a number of themes, which will require solicited contributions as well as volunteered papers.

CONGRÈS INTERNATIONAUX DES SCIENCES PRÉHISTORIQUES ET PROTOHISTORIQUES

International Congress of Prehistoric and Protohistoric Sciences

c/o Secretary, Professor Dr. S. J. De Laet
"Les Sablettes"
Avenue Christian Soenens 2
St. Denis–Westren (Ghent)
Belgium

Principal Officers: Executive Committee (1954–1958), composed of *Chairman,* Prof. Dr. G. Bersu, Deutsches Archaeologisches Institut, Frankfurt; *Members,* Prof. Dr. H. Arbman, Lund; Prof. A. C. Blanc, Rome; Prof. Dr. J. Bøe, Bergen; Prof. C. F. C. Hawkes, Oxford; Dr. M. E. Marien, Brussels; Prof. L. Pericot, Barcelona; Prof. R. Vaufrey, Paris; Prof. Dr. E. Vogt, Zürich; and *Secretary,* Prof. Dr. S. J. De Laet, Ghent. *Permanent Council,* of 120 members representing 52 countries.

Meetings: Executive Committee in Oxford, 1955; Permanent Council in 1956; Congress in Germany, 1958.

Current Status: About 500 members. Proceedings of 1954 Congress in Madrid in press.

CONGRÈS INTERNATIONAL DES AMERICANISTES

International Congress of Americanists
National Museum, c/o Ethnographical Department
Copenhagen, Denmark

Principal Officers: Organizing Committee composed of *Honorary President,* Professor William Thalbitzer; *President,* Dr. Kaj Birket-Smith; *Treasurer,* Mr. Kjeld Rørdam; Professor L. L. Hammerich, Professor Erik Holtved, Dr. Helge Larsen, Dr. Ernst Mengin, Mr. Jens Yde.

Meetings: XXXIInd Congress in Copenhagen, Denmark, in August 1956.

CONFERENCE INTERNATIONALE DES AFRICANISTES DE L'OUEST (CIAO)

International Conference of West Africanists
c/o Secretariat of the Permanent Committee, Professor Theodore Monod
Institut Francais d'Afrique Noire (IFAN)
B.P. 206, Dakar, Sénégal, A.O.F.

Principal Officers: Members of the *Permanent International Committee:* GREAT BRITAIN, Prof. C. Daryll Forde, Director of International African Institute, London, and Professor J. E. Webb, University College, Ibadan, Nigeria; SPAIN, Prof. F. Hernandez-Pacheco, Museo Nacional de Ciencias Naturales, Madrid, and Prof. S. Alcobé Noguer, Universidad, Barcelona; FRANCE, Prof. G. Mangenot, Directeur de l'I.D.E.R.T., Adiopodoumé, Côte d'Ivoire, and Prof. Th. Monod, Directeur de l'IFAN, Dakar, A.O.F.; PORTUGAL, Prof. A. A. Mendes-Corrêa, Director, Escola Superior Colonial, Lisbon, and Prof. Orlando Ribeiro, Centro de Estudos Geograficos, Lisbon.

Meetings: Sao Tomé, December, 1955.

Current Status: Sections of (1) geography and geology, (2) botany, (3) zoology, (4) human sciences.

THE FAR-EASTERN PREHISTORY ASSOCIATION

c/o Office of the Secretary
Canterbury Museum
Christchurch, New Zealand

Principal Officers: Chairman, Bernard P. Groslier; *Secretary,* Roger Duff; *Honorary Chairman,* Prof. H. Otley Beyer, Manila. *Council:* JAPAN: Prof. Ichiro Yahata, Archaeological Institute of Japan, Tokyo; CHINA: Prof. Li Chi, Academica Sinica and Taiwan University, Taipei; HONG KONG: Prof. Francis S. Drake, University of Hong Kong; INDOCHINA: Bernard P. Groslier, École Française d'Extrême-Orient, Saigon; THAILAND: H. R. H. Prince Dhani Nivat, The Siam Society, Bangkok; MALAYA: Prof. C. A. Gibson-Hill, Raffles Museum, Singapore; INDONESIA: Prof. H. R. van Heekeren, Dinas Purbakala, Jakarta; PHILIPPINES: E. Arsenio Manuel, Museum of Archaeology, Manila; AUSTRALIA and MELANESIA: Prof. F. D. Mc Carthy, The Australian Museum, Sydney; NEW ZEALAND and POLYNESIA: Dr. Roger Duff, Canterbury Museum, Christchurch; MICRONESIA, HAWAII, and U.S.A.: Dr. Alexander Spoehr, Bishop Museum, Hawaii. New Council and officers elected at next Congress.

Meetings: Fifth Far-Eastern Prehistory Congress in Bangkok, Thailand, early in 1958, at time of Pacific Science Congress.

Current Status: Formally organized at closing session of Fourth Far-Eastern Prehistory Congress in Manila, 1953, as a permanent liaison organization among scientists engaged in prehistory and archeology of the Far East and the Pacific Area, and to organize The Far-Eastern Prehistory Congresses (Hanoi, 1932; Manila, 1935; Singapore, 1936; Manila, 1953). Council will help and promote international and cooperative projects.

Special Activities: Council intends publication of twice-yearly *Bulletin,* with information from various countries secured by each local branch; bibliography of prehistory and archeology of Pacific area being compiled by each member-country representatives for completion and publication for next Congress.

THE PACIFIC SCIENCE ASSOCIATION

c/o Bernice P. Bishop Museum
Honolulu 17, Hawaii

Principal Officers: President, of The Association and of The Eighth Pacific Science Congress, Dr. Vidal A. Tan; *President-elect* of The Association and President of The Ninth Pacific Science Congress, Air Vice-Marshal Muni Mahasantana Vejyant Rangsrisht (to take office when invitations are issued for the Ninth Congress and to remain in office until invitations are issued for the Tenth Congress; *Secretary-General* (Ninth Congress), Charng Ratanarat; *The Pacific Science Council Secretariat: Secretary,* Brenda Bishop.

Meetings: Eighth Pacific Science Congress in Philippines, 1953. The Ninth Congress is to

be held in Bangkok, Thailand in January, 1958, under auspices of The Science Society of Thailand.

Current Status: Information Bulletin issued six times per year. Consultative arrangements with UNESCO and WMO. Seventeen Standing Committees, which study the more important problems of common interest and report on their work to the succeeding Congress, include Committee on Anthropology and Social Sciences in the Pacific Area, *Co-Chairmen:* G. P. Murdock, Yale University, New Haven, Conn., and H. E. Maude, South Pacific Commission, Sydney, Australia.

INSTITUTO INDIGENISTA INTERAMERICANO

Inter-American Indian Institute
Calle Niños Héroes 139
México 7, D.F., México

Principal Officers: Governing Board (permanent), formed by representatives of each of sixteen national governments; *President* (two years, elected) for 1954–1956, representative of Ecuador; *Vice-President* (two years, elected) for 1954–1956, representative of Colombia. *Executive Committee* of five members for five years: *President*, for 1954–1956, representative of Venezuela. *Director* (six year term, elected), Dr. Manuel Gamio; *Secretary* (appointed), Dr. Juan Comas.

Meetings: III Congreso held at La Paz, Bolivia, 1954; IV Congreso in Brazil, 1958.

Special Activities: Two seminars or regional round-tables on common problems in improving aboriginal populations: on Central America, 1955, and Andean South America, possibly 1956; expansion of Interamerican Exposition of Indigenist Arts and Crafts; continuance of compilations of indigenist legislation of member countries; continuance of bibliographies of works concerning indigenist problems; establishment of Commission of Sociological Studies on matters of land tenancy and ownership.

National and Regional Professional Associations of the United States of America

THESE are the organizations whose officers and addresses change frequently, usually annually, and whose meetings are held at different places at different times. This roster with its current data will be repeated each year. There should be additions to this list and an identical list compiled of similar-type organizations in other countries; the appropriate data will be most appreciated.

American Anthropological Association
American Association for the Advancement of Science
Section H (Anthropology), American Association for the Advancement of Science
American Association of Physical Anthropologists
The American Association of Anatomists
The American Association of Physical Anthropologists
The American Ethnological Society, Inc.
The American Folklore Society, Inc.
The American Institute of Human Paleontology
Archaeological Institute of America
Central States Anthropological Society
Eastern States Archaeological Federation
Great Basin Archeological Conference
Linguistic Society of America
Modern Language Association of America
Division of Anthropology and Psychology, National Research Council
Northwest Anthropological Conference
Pecos Conference of Southwestern Anthropologists
The Society for American Archaeology
The Society for Applied Anthropology, Inc.
Southeastern Archeological Conference
Western States Branch, American Anthropological Association

AMERICAN ANTHROPOLOGICAL ASSOCIATION

c/o *Executive Secretary,* William S. Godfrey, Jr.
Logan Museum, Beloit College
Beloit, Wisconsin

Principal Officers: President (1955), George P. Murdock; *President-Elect* (for 1956), Emil W. Haury; *Secretary-Treasurer* and *Executive Secretary to The Executive Board,* William S. Godfrey, Jr.; *Assistant Treasurer,* Andrew H. Whiteford. *Executive Board* (staggered three-year terms): (1953–1955) Harry Hoijer, Lauriston Sharp; (1954–1956) A. Irving Hallowell, Jesse D. Jennings; (1955–1957) Fay-Cooper Cole, Alexander Spoehr. *Editorial Board: Editor,* Sol Tax (University of Chicago), David A. Baerreis, James N. Spuhler; *Book Review Editor,* Richard K. Beardsley (University of Michigan); *Assistant Editor,* Malcolm Collier.

Meetings: November 1955 at Boston, Massachusetts; December 1956 at Los Angeles, California; 1957 at Chicago, Illinois.

Current Status: Total members, 3,128. Annual dues, to individuals, $8.50; to institutions, $9.00. Publications: *American Anthropologist,* now six times annually; *Bulletin,* four times annually; *Memoirs,* usually two or more annually.

AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE

1515 Massachusetts Avenue, N.W.
Washington 5, D. C.

Principal Officers: President (1955), George W. Beadle; *Past President and Chairman of Board of Directors* (1955), Warren Weaver; *President-Elect* (for 1956), Paul B. Sears; *Treasurer,* Paul A. Scherer; *Administrative Secretary* and *Acting Editor,* Dael Wolfle; *Board of Directors* consists of above officers plus Wallace R. Brode, John R. Dunning, Mark H. Ingraham, Paul E. Klopsteg, Chauncey D. Leake, Margaret Mead, Thomas Park, Laurence H. Snyder. Treasurer and Administrative

Secretary appointed, all others elected at annual meeting.

Meetings: Annually during last week of December; for 1955 at Atlanta, Georgia; 1956 at New York City; 1957 at Indianapolis, Indiana; 1958 at Washington, D. C.

Current Status: 49,000 members, divided by categories as follows: 750 Life and Emeritus, 11,750 Fellows, 36,500 members. Dues are $6.50 a year. Publications: *Science,* weekly; *The Scientific Monthly,* monthly; technical symposia, irregular; General Program-Directory, annual. Affiliated are 256 scientific and professional associations.

Special Activities: 1955 international symposium and conference on anthropological, biological, hydrological, and other aspects of arid land research and utilization. Beginning July 1, 1955, *Science* redesigned with larger page size and three-column format.

Section H (Anthropology)

American Association for the Advancement of Science

c/o Department of Anatomy
Wayne University College of Medicine
1401 Rivard Avenue
Detroit 7, Michigan

Principal Officers: Vice-President and *Chairman of Section* (1955), W. Montague Cobb; *Secretary,* Gabriel Lasker; *Committeemen-at-large* (4 year terms, one elected each year by the committee), Hallam L. Movius, Jr. (1952–1955), James B. Watson (1953–1956), Loren C. Eiseley (1954–1957), Robert W. Ehrich (1955–1958). Section Committee and Council includes representatives of five national societies.

Meetings: Annually during last week of December as constituent part of meetings of AAAS (see above), but no sessions scheduled for Atlanta meeting, 1955.

Current Status: 182 Fellows plus 302 members.

Special Activities: Annual meetings usually include symposia. "Non-Human Primates and Human Evolution" was published by Wayne University Press, Detroit, 1955.

THE AMERICAN ASSOCIATION OF ANATOMISTS

c/o *Secretary-Treasurer*
2109 Adelbert Road
Cleveland 6, Ohio

Principal Officers: President, Samuel R. Detwiler; *First Vice-President,* Walter E. Sullivan; *Second Vice-President,* Leon S. Stone; *Program Secretary,* Oliver P. Jones; *Secretary-Treasurer,* Normand L. Hoerr. President and vice-presidents elected for two-year terms. Secretary-treasurer and program secretary elected for four-year terms.

Meetings: Annually, usually of three days, during first half of April; for 1956 on April 4–6 at Marquette University, Milwaukee, Wisconsin.

Current Status: 1,045 members. Dues $5 for United States members, $4 for Canadian members, $2 for foreign members. *The American Journal of Anatomy* and *The Anatomical Record* published by the Wistar Press; the latter includes abstracts of papers presented at the annual meeting and the Proceedings of the Association.

Special Activities: The Association, through its Committee on Anatomical Nomenclature, is assisting the International Commission on Anatomical Nomenclature sponsored by UNESCO. The Association cooperates with the Wistar Institute of Anatomy in reviewing motion picture films on anatomical subjects and publishing a list of these films in *The Anatomical Record.* Copies of the films deposited are loaned by The Wistar Institute.

AMERICAN ASSOCIATION OF PHYSICAL ANTHROPOLOGISTS

c/o *Secretary-Treasurer,* J. Lawrence Angel
The Daniel Baugh Institute of Anatomy
The Jefferson Medical College of Philadelphia
307 South Eleventh Street
Philadelphia 7, Pennsylvania

Principal Officers: President (two-year term, 1955–1957), Mildred Trotter; *Vice-President* (two-year term, 1955–1957), W. Montague Cobb; *Secretary-Treasurer,* J. Lawrence Angel; *Executive Committee* (three-year terms): T. Dale Stewart, James N. Spuhler, W. W. Howells; *Managing Editor, American Journal of Physical Anthropology,* S. L. Washburn, The University of Chicago; *Book Review Editor,* Fred P. Thieme, University of Michigan.

Meetings: Annual meeting, generally late March or early April; for 1956 on April 6–8 at Chicago.

Current Status: 370 members.

Special Activities: Luncheon and Symposium planned for annual meeting, in December 1955, of American Anthropological Association.

THE AMERICAN ETHNOLOGICAL SOCIETY, INC.

c/o Hunter College
695 Park Avenue
New York 21, New York

Principal Officers: President, Verne F. Ray; *Vice-President,* Joseph Bram; *Secretary-Treasurer,* Alice G. James; *Editor,* Esther S. Goldfrank. Above officers elected annually in January; above persons held office in 1954, re-elected for 1955. *Councillors,* staggered three-year terms, Dorothy L. Keur (1953–1956), Willard Rhodes (1954–1957), Ward Goodenough (1955–1958).

Meetings: January annual business meeting including election of officers at New York Academy of Sciences; full-day Spring meeting; November joint meeting with Section of Anthropology of The New York Academy of Sciences; luncheon meeting during December annual meeting of American Anthropological Association.

Current Status: Members: Life, 12; Regular, 349; student (3 year maximum), 75.

Special Activities: Bonus publications sent to Regular and Life Members during 1953 and 1954 by arrangement with the Human Relations Area Files, Inc. Newly affiliated with the American Association for the Advancement of Science.

THE AMERICAN FOLKLORE SOCIETY, INC.

Bennett Hall, University of Pennsylvania
Philadelphia 4, Pennsylvania

Principal Officers: President, Herbert Halpert; *First Vice-President,* William N. Fenton; *Second Vice-President,* J. Mason Brewer; *Secretary-Treasurer,* MacEdward Leach; *Editor,* Thomas A. Sebeok; *Review Editor,* Richard Dorson. Elective, one-year term.

Meetings: Winter meeting, 1955, December 29–30, at Washington, D. C.

Current Status: Membership, 1,035; dues, annually, $5.00 for individuals, $6.50 for institutions.

THE AMERICAN INSTITUTE OF HUMAN PALEONTOLOGY

c/o Division of Physical Anthropology
United States National Museum
Washington 25, D. C.

Principal Officers: President, T. Dale Stewart.

Meetings: Informal, at call of President; probably in Fall of 1955.

Special Activities: Planning program of activities looking toward 1956 meeting in Philadelphia of International Congress of Anthropological and Ethnological Sciences.

ARCHAEOLOGICAL INSTITUTE OF AMERICA

608, University Library
University of Cincinnati
Cincinnati, Ohio

Principal Officers: President, Henry T. Rowell; *Vice-President,* Carl W. Blegen; *General Secretary,* Cedric Boulter; *Editor-in-Chief, American Journal of Archaeology,* Richard Stillwell, Princeton, New Jersey; *Editor, Archaeology,* Gladys Davidson Weinberg.

Meetings: Fifty-seventh annual general meeting at Chicago in December, 1955.

Current Status: 2,432 members (September 1954).

CENTRAL STATES ANTHROPOLOGICAL SOCIETY

c/o *Secretary,* John W. Bennett
Department of Sociology and Anthropology
The Ohio State University
Columbus 10, Ohio

Principal Officers: (1955–1956) *President,* Thomas Sebeok; *First Vice-President,* David Baerreis; *Second Vice-President,* David F. Aberle; *Secretary,* John W. Bennett; *Treasurer,* Erika Bourguignon; *Executive Committee* includes the above officers, plus E. Adamson Hoebel, Frank Essene, Robert G. Spier. *Program Chairman:* Dr. David B. Stout. All elected annually for one-year terms. Customary for vice-presidents to be nominated upward toward presidency.

Meetings: Annually; for 1956 at State University of Iowa, Iowa City, Iowa, on April 12–14; for 1957 at University of Wisconsin, Madison, Wisconsin.

Current Status: 175 members through affiliation with American Anthropological Association; a small proportion have paid $1.00 dues to treasurer.

Special Activities: Selects annually one or more papers given by graduate students at its annual meeting and arranges for their publication in anthropological journals.

EASTERN STATES ARCHEOLOGICAL FEDERATION

New Jersey State Museum
Trenton 7, New Jersey

Principal Officers: President, C. A. Weslager; *Recording Secretary,* Dorothy Cross; *Corre-*

sponding Secretary, Kathryn B. Greywacz; *Treasurer,* James L. Swauger. Elective for 2-year terms, 1954–1956. *Staff Directors* (appointed for 2-year terms, 1954–1956): Editor, John Witthoft; Research, Irving Rouse; Membership, William J. Mayer-Oakes; Public Education, Arthur G. Volkman; Exhibits, Alfred K. Guthe.

Meetings: 1955 at New Haven, Connecticut, on November 12–13; 1956 at Trenton, New Jersey.

Current Status: Federation composed of sixteen archeological societies: fifteen state societies in the United States and one in the province of Ontario, Canada. Those added since 1952 are: The Society for the Preservation of Early Georgia History; Archeological Society of Maryland; Massachusetts Archaeological Society; and Ontario Archaeological Society.

Special Activities: Supplement to *An Anthropological Bibliography of the Eastern Seaboard;* compilation of a series of *Ceramic Abstracts* for the Federation's region.

GREAT BASIN ARCHEOLOGICAL CONFERENCE

c/o *Chairman,* Miss Ruth D. Simpson
Southwest Museum
Highland Park
Los Angeles 42, California

Principal Officers: Chairman (1954–1955), Miss Ruth D. Simpson; *Secretary* (1954–1955), Clement Meighan. Elected annually.

Meetings: Southwest Museum, Los Angeles, in late August 1955.

Current Status: Informal organization, without dues, publication, or affiliations, composed of persons—professional and amateur—interested in exchange of information about problems and progress in archeological research in the West.

Special Activities: Attempt at degree of agreement on a realistic charting of chrono-cultural relationships now known or suspected in the West.

LINGUISTIC SOCIETY OF AMERICA

c/o *Secretary-Treasurer,* Archibald A. Hill
1719 Massachusetts Avenue, N.W.
Washington 6, D. C.

Principal Officers: President, Zellig Harris, University of Pennsylvania; *Vice-President,* Yakov Malkiel, University of California; *Secretary-Treasurer,* Archibald A. Hill, Georgetown University; *Editor, Language,* Bernard Bloch, Yale University.

Meetings: Summer meeting, August 1955, in connection with Linguistic Institute held at Georgetown University, Institute of Languages and Linguistics; annual meeting at Chicago in last week of December.

Current Status: 1,041 members. Regular dues $8.00 a year; students $4.00 a year.

Special Activities: Sponsorship of series of Linguistic Institutes, which are academically recognized graduate and undergraduate summer schools of applied and theoretical linguistics. During 1955 there are three Institutes, at Chicago, Michigan, and Georgetown Universities. The latter will be the site of the Collitz Chair of Comparative Indo-European Philology, and the site of the summer meeting.

MODERN LANGUAGE ASSOCIATION OF AMERICA

6 Washington Square North
New York 3, New York

Principal Officers: President (1955), Louise Pound, University of Nebraska; *First Vice President* (1955) Lawrence M. Price, University of California; *Second Vice President* (1955), Norman L. Torrey, Columbia University; *Executive Secretary* (1947–1956), William Riley Parker, New York University; *Treasurer* (1952–1955), John H. Fisher, New York University. *Executive Council:* (1952–1955), C. Grant Loomis, University of California; Justin M. O'Brien, Columbia University; A. S. P. Woodhouse, University of Toronto; (1953–1956), Morris Bishop, Cornell University; Clifford P. Lyons, University of North Carolina; Perry Miller, Harvard University; (1954–1957), J. Milton French, Rutgers University; Henri Peyre, Yale University; Willard Thorp, Princeton University.

Meetings: Annually, usually in December; 27–29 December 1955 at Chicago, Illinois; 1956 at Washington, D. C.; 9–11 September 1957 at Madison, Wisconsin; 1958 at New York City.

Current Status: About 8,000 regular members, plus 35 honorary members.

Special Activities: "Foreign Language Program," a special study through Rockefeller Foundation grant, of role modern foreign languages *should* play in American life. MLA a clearinghouse of information about all aspects of foreign language study in America.

DIVISION OF ANTHROPOLOGY AND PSYCHOLOGY
NATIONAL RESEARCH COUNCIL

2101 Constitution Avenue
Washington 25, D. C.

Principal Officers: Chairman, Harry F. Harlow; *Chairman-Designate,* Clyde Kluckhohn; *Executive Secretary,* Glen Finch. All officers appointed by President of the National Academy of Sciences.

Meetings: Annually, in May, at Academy-Council Building, Washington, D. C.

Current Status: In addition to officers, Division has eleven anthropological members and eleven psychological members with staggered three-year terms. Of these, nine members each are nominated by the two scientific associations affiliated with the Division—American Anthropological Association and American Psychological Association—and Division membership nominates two anthropologists and two psychologists as members-at-large to serve staggered three-year terms. Members are appointed by President of the National Academy of Sciences as members of the Division and therefore members of the National Research Council.

Special Activities: Committees, appointed or reappointed annually for the year July 1–June 30, presently operating under Division are: Africa, Asia, Archaeological Terminology, Child Development, Disaster Studies, Fellowships, International Relations in Psychology (with a Subcommittee on a Directory of Foreign Psychologists), Latin America, Physical Anthropology. In addition, a Division representative serves on the independent Committee for the Recovery of Archaeological Remains and the Division is responsible administratively for The Armed Forces-NRC Committee on Hearing and Bio-Acoustics.

NORTHWEST ANTHROPOLOGICAL CONFERENCE

c/o *Chairman,* Dr. Luther S. Cressman
Department of Anthropology
University of Oregon
Eugene, Oregon

Principal Officers: (1955–56) *Chairman,* Dr. Luther S. Cressman. Chairman elected annually at annual meeting; secretary appointed by Chairman.

Meetings: Annually, in Spring, customarily during first weekend of May. For 1956 probably at Portland, Oregon.

Current Status: Informal organization, no membership or dues, principally of faculty and students of colleges and universities in northwestern United States with a professional interest in anthropology, with other interested persons welcome to attend and participate. Various departments of anthropology take turns sponsoring Conference. Graduate students urged to gain experience by presenting papers. Attendance varies from 80 to nearly 200. Proceedings, including abstracts of papers presented, are edited by Chairman, then mimeographed and distributed to those in attendance and other interested individuals and institutions.

PECOS CONFERENCE OF SOUTHWESTERN ANTHROPOLOGISTS

c/o Laboratory of Anthropology
The Museum of New Mexico
Santa Fe, New Mexico

Principal Officers: (1955) *Interim Chairman,* Stanley A. Stubbs; *Committee members,* Charlie Steen, Joe Ben Wheat. Interim Committee of three appointed by out-going Interim Chairman to plan and organize following year's meeting; Chairman usually from city or institution acting as host.

Meetings: Annually, in latter half of August. For 1955 on August 15–17 at Santa Fe, New Mexico.

Current Status: Informal organization, no dues or publication; conference attendance approximately 125.

THE SOCIETY FOR AMERICAN ARCHAEOLOGY

c/o *Secretary,* Albert C. Spaulding
University Museums Building
Ann Arbor, Michigan

Principal Officers: President (1955–56), Wm. Duncan Strong, Columbia University; *First Vice-President* (1955–56), H. M. Wormington; *Second Vice-President* (1955–56), Alex D. Krieger; *Secretary* (1955–1959), Albert C. Spaulding; *Treasurer* (1955–1959), William J. Mayer-Oakes; *Editor, American Antiquity,* Richard B. Woodbury, Columbia University; *Chairman, Program Committee,* John M. Corbett, National Park Service, Washington, D. C.; *Chairman, Local Arrangements Committee,* John L. Champe, Lincoln, Nebraska.

Meetings: Annually, usually in early May; for 1956 at Lincoln, Nebraska.

THE SOCIETY FOR APPLIED ANTHROPOLOGY, INC.

150 East 35th Street
New York 16, New York

Principal Officers: President (one-year term, 1955–1956), Charles R. Walker, Yale University; *Vice-President* (one-year term, 1955–1956), Nicholas Demerath, University of North Carolina; *Secretary* (four-year term, 1955–1959), Margaret Mead, American Museum of Natural History; *Treasurer* (three-year term), David B. Hertz, Columbia University; *Editor, Human Organization,* Eliot D. Chapple, The E. D. Chapple Co., Inc.; *Other Members of Executive Committee:* Solon T. Kimball, Gordon Macgregor, Sol Tax; *Regional Vice-President* (one-year terms, 1955–1956): East, Douglas G. Haring, Syracuse University; Midwest, John W. Bennett, The Ohio State University; West, John Adair; *Director* of The Clearinghouse for Research in Human Organization, Wilton S. Dillon.

Meetings: Annually, usually in Spring.

Current Status: Members 1,953, including 327 Active, 967 Subscribing, and 299 Student. Affiliations with American Association for the Advancement of Science and with World Federation for Mental Health.

SOUTHEASTERN ARCHAEOLOGICAL CONFERENCE

c/o School of Geology
Louisiana State University
Baton Rouge, Louisiana

Principal Officers: Permanent Secretary-Editor, William G. Haag; *Chairman of Annual Meeting,* Joseph Caldwell, Ocmulgee National Monument, Macon, Georgia.

Meetings: On November 11–12, 1955, at Ocmulgee National Monument, Macon, Georgia.

Current Status: Membership, about 75; virtually all professional or amateur archeologists, but no restrictions on membership. Meetings are "working conferences," consisting of about 25 members intensively considering one current problem in Southeastern archeology. Mimeographed *Newsletter,* now in Volume 3, with 13 numbers issued since 1939.

Special Activities: Currently considering Southern Death Cult; at November 1955 meeting will consider the Woodland cultural horizons in the Southeast.

WESTERN STATES BRANCH AMERICAN ANTHROPOLOGICAL ASSOCIATION

c/o *Secretary-Treasurer,* Carling Malouf
Montana State University
Missoula, Montana

Principal Officers: President, Harry Hawthorn, University of British Columbia; *Vice-President,* George Brainerd, U.C.L.A.; *Secretary-Treasurer,* Carling Malouf, Montana State University; *Editor, Western States Bulletin,* Carling Malouf. Elective, one-year terms.

Meetings: Held annually in various of the eleven Western states, primarily for presentation of professional papers, including student participation.

Current Status: About 160 members from eleven Western states, British Columbia, Canada, Mexico, Hawaii, and Alaska.

Special Activities: Planning a small publication of formal papers on subjects of special interest to members in region.

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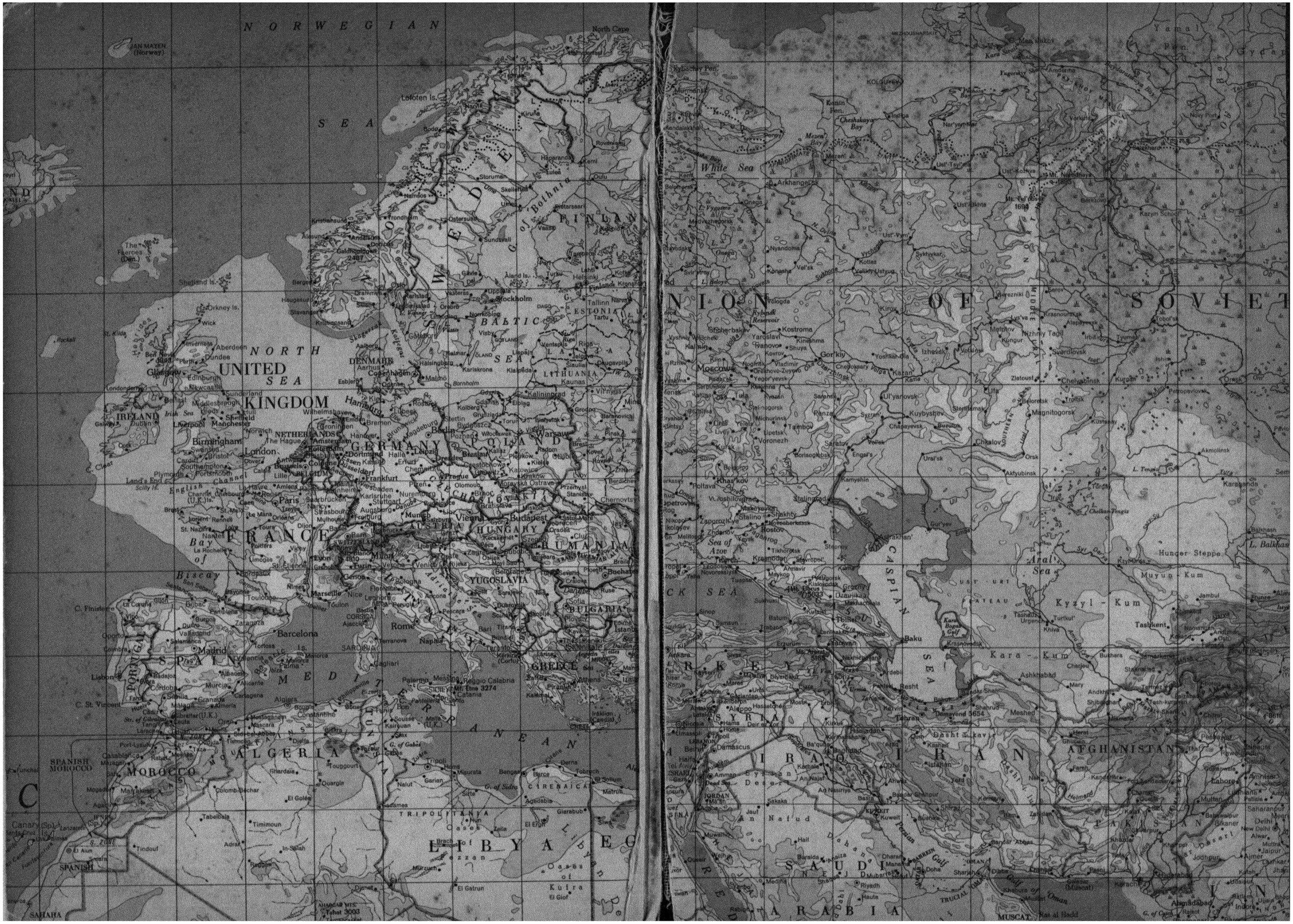
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