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A HISTORY OF AMERICAN ANTHROPOLOGY

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AMERICAN ANTHROPOLOGY

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PROF. CLARK WISSLER

To

Prof. CLARK WISSLER, PH.D., LL.D.

This Book

is most respectfully Dedicated

as

A GURU-DAKSHINA (study-end offering to the Master)

and

A Token of the Appreciation of YOUNG INDIA

of

THE LEAD OF AMERICA IN SYNTHETIC INTERPRETATION OF MAN AND CULTURE.

PREFACE

The following pages originally presented and approved as a thesis for the degree of Doctor of Philosophy in Yale University in Ethnic Psychology, during the session, 1929-1930, are now appearing as a book form. The idea of writing a history of American Anthropology was first suggested to me by Prof. Clark Wissler with whom I worked at Yale; and he has laid me under a deep debt of gratitude not only by his valuable suggestions and thorough revision of the entire work in its manuscript form, but also acting as a Hindu ideal Guru (Guide and Preceptor) in teaching Western methods of research and keeping an ever wakeful interest in his pupil's future welfare.

In a monograph like this, which deals with so vast a subject as the history of American Anthropology, there is a great possibility of omission of even some of the important facts. Even somewhere I have been implicit where it would have been better to be explicit. And, for the offences of commission and omission, if any, I would crave the indulgence of the readers.

I now take the opportunity of extending my cordial thanks to my friends at Yale, specially Prof. and Mrs. G. C. Mccurdy, Drs. Forrest Clements, Scudder Mekeel and Helen H. Roberts for valuable suggestions, to Miss H. A. Jones for verbal corrections, to my friends at New Haven the late Mr. H. Davidson, Mr. James Whitford (Jr.) as also to Mrs. S. C. Tenney and Mrs. Henry P. Sage whose encouragement and affection alone enabled me to complete my work. My thanks are also due to Mr. J. K. Gan, for his valuable assistanse and Mr. A. C. Ghatak, Superintendent of the Calcutta University Press and his staff, for their kind co-operation and seeing the work through.

ASUTOSH BUILDING,
16th September, 1933. P. M.

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AMERICAN ANTHROPOLOGY

INTRODUCTION

The Study of Anthropology as a trait in Modern Culture Growth

Anthropology, as Professor Wissler points out, is the science of man, but it is a trait of European civilization and its point of view is that of the European observing the rest of mankind. So the growth of the science is intimately bound up with the growth of the knowledge and the outlook of Europe. Though we are aware of the beginnings of a scientific age with Euclid, Eratosthenes and Archimedes of Alexandria, where the scholars lived together in a Museum (a sort of University where they were paid salaries), it is not till the middle of the fifteenth century that we arrive at the close of the mediaeval epoch and the re-birth of the spirit of scholarship. It was the Humanists who devoted their lives to the study of culture *humanitas* (or as it was then but the study of the literatures of Greece and Rome), that revived the interest in man so beautifully expressed by Terence, the inspiring model of the early Elizabethan drama—*Homo sum nihil humani a me alienum puto* : I am a man ; nothing human do I consider foreign to me. Somehow there are periods, as it were, in the life of human activities *en masse* when the attention shifts from the subjective to the objective and, curiously enough at this time, we find poets in another part of the world quite disconnected singing, " Listen, oh brother man, to this truth from the poet Chandidas, Man is the highest truth, there is nothing higher than he,"

The fall of Constantinople is generally reckoned by the historians as the starting of the Renaissance, but the greatest factor that contributed to that expansion of outlook and mentality which is so characteristic of any creative epoch, is the discovery of America in 1492. The phases of human activities are generally divisible into periods of expansion, stagnation, and contraction or decay. It is the superfluity of energy in a group that is first manifest in the restlessness that leads man to seek fair fields and pastures new. The psychological causes resulting in these more dynamic activities of human groups, far transcending previous creative phases, are some of the problems pursued by students of culture. True it is that the great Egyptologist Flinders Petrie, in his *Revolutions of Civilizations* tried to figure out a comparative chronological cycle of 1,500 years between the peak periods of the culture of any land, and the causes of such sudden bursts of activity he could only guess at as due to the arrival and assimilation of a new race. Spengler tried to arrive at a similar result by the comparative study of historical cultures in his book (marred by its general pessimistic title and main thesis about the war) "*Decline of the West*," where he reduces the expansive period of a culture to a definite phase in a given zone, but fails to take note that the end of one culture is the beginning of a newer, higher, broader and deeper culture. It may be that ultimately the life of a culture will be pretty well determinable as the life of a living zygote, if culture is the product of the union biologically of favourable physical types and psycho-sociologically of stimulating idea-systems. But this point of view would leave out the fundamental facts of evolution for the culture of mankind as a whole, and ignore the fact that the culture of to-day has many things surpassing even the wildest dreams of earlier puissant peoples. Again, another recent anthropologist finds that the achievements of present civilization differ from those of the past in being more spectacular. It is only by realising that a new era dawned in the fifteenth century, which is far bigger in geographical objectivity than the culture of Greece or Rome at its highest, and the conse-

quent growth in the conceptional potentials of thought space, that we can somewhat understand the significance of 1493. If India only had been discovered and the New World were still unknown there could not have been the stimulus of possession of this vast new territory and the images of world maps in every human brain. It is worthy of note that in India herself, there were seers like Kabir, Nanak, and others, who were claiming discoveries in the spiritual region unknown heretofore and heralding, like fifteenth century Europe, a greater age of truth in the science and discovery of the nineteenth century.

It is only after the lapse of four centuries that the potentialities with which the Nina, Pinta and Santa Maria were fraught are beginning to unfold. Columbus had to die a broken-hearted man, as his chief, immediate effect upon Europe was being counted in terms of gold. It is true Leonardo da Vinci was then at the height of his career and discovering the scientific value of fossils; Christianity itself was trying to find new channels and to get out of the trammels of papal authority, but the Wycliffites and Hussites had been hushed into silence, and though a new voice was just emerging in the throat of a nine-year-old Luther, there was still a long wait before the struggle for freedom of conscience could fill a *Mayflower* with bold seekers for truth. As yet the forces of reaction were triumphant in southwest Europe and Machiavelli was upholding the ideal of a Borgia in *The Prince*, while the seeds of the new Democracy and the future American Republic were being wafted across the Atlantic. On the other hand, a century and a half earlier the work and writings of the Franciscan Friar Roger Bacon, pleading for experimental scientific work, imagining swift-sailing ships and aeroplanes, urging the study of Arabic for scientific source, were bearing fruit in increasing the number of individual investigators and adventurers in quest of objective reality. The Arabs had passed on much of the mathematical and medical knowledge of mediaeval Gupta India, and of the philosophies of the glorious Hellenic Age, and now the whole of Europe was in a ferment of scientific thought preparing

for a Copernicus, Tycho Brahe, Galileo and Newton in almost scientific Apostolic succession. Geography and the human sciences came into a new heritage through the discovery of new lands. The new synthetic outlook upon life laid the germ-seeds for the science of man. " By discovering a new world, Christopher Columbus compelled European statesmen and philosophers to think of mankind in terms of a whole."* If humanity has been continually advancing and if the present civilization is the culmination of long-operating forces, and reveals the dawn of a world-wide culture union in which all are to participate, 1492 is most important as having seen the laying down of the first stones in the foundation.

Now anthropology is the scientific survey of man by the interested party, man himself. This may fairly be taken as symptomatic of human groups being self-conscious culturally or physically. Thus, as the Hindu thinkers talk of " srishti "—creation, " sthiti "—stagnation and isolation, and " laya "—dissolution and decay, following each other in a cycle, we observe in the history of almost every culture a period of expansion following a period of isolation, characterised by accelerated dynamic group life. Thus Europe, breaking its isolation by the discovery of the New World, by circumnavigating the world and establishing contact with ancient seats of culture, became more self-conscious and self-confident. While the Middle Ages might have seen some maturation of the spiritual seed of Christianity in a fertile soil, it was the possession of an undreamed-of extent of territory that started modern Europe. While we can estimate the population of England as only about two and a quarter million in 1340, it had leaped to about six and a half million in 1600, and to more than seven and a half million in another century.† This alone can throw light on some of the unknown forces that come to operate on a nation at the time of her greatest growth, the time of a sort of cultural mutation.

* *Human History*, 1929, Preface.

† The History of Population and Settlement in Eurasia, by A. P. Usher, in *The Geographical Review*, Jan., 1930.

It is possible that the leaven of religion was one of the greatest factors in this period. Even in early pre-Buddhist India we find the ancient sages in one such period of national activity crying out, "*Srinvantu visve Amritasya putrah*" "Hear ye all in the world oh ye children of immortality." The sense of a high mission, which is but the vague expression of the rapidly expanding soul of a people, a dynamic phase, cause peoples to burst their bonds. It is found later on rationalized by vested interests in such cants as Papal inheritance, Nordic superiority or the Hellenization of the earth, or the White Man's burden. But the unmistakable hiss of a new cultural compound in the making, is always heard.

When Boniface and other Christian missionaries were working on the Slav frontier humane Buddhist missionaries were carrying their Hindu-Buddhist religious culture to the furthest limits of the Japanese-Ainu frontier. It might seem at first that the objective pagan outlook of the Renaissance would result in the withering of missionary activities. But the Renaissance came to England in the chrysalis of the Reformation, burst into the beauties of Elizabethan literature and the intensities of a Puritan passion which could load the *Mayflower* with carriers of the torch of a new culture to come. An individual, as well as a group, first exhausts the well-tried behaviour patterns, and so we see the Roman Catholic Church astir, missionaries requisitioned and dragooned to convert the newfound heathen and bring them to the papal heritage. It was not merely the belief in the Kingdom of God on the earth (as the sincere Christian naturally expected when he thought of the whole world becoming Christian), but of a veritable earthly appendage to Popedom that colored the serious thinking of the time. This is nowhere so clearly brought out as in the memorable document of the Requisition drawn up in 1509 by Dr. Palacio Rubios, at the command of King Ferdinand—a precious document for all students of group motivation for all time. "...The Lord our God created the heaven and earth and one man and one woman. Of all

these nations God our Lord gave charge to one man called St. Peter that he should be lord and superior to all the men in the world and that he should be head of the whole human race.....And he commanded him to place his seat in Rome.... This man was Pope...One of these pontiffs who succeeded to St. Peter as Lord of the world in dignity made donation of these isles and terrafirma to the aforesaid (Ferdinand and Juana) and to their successors....wherefore we ask and require of you that you take the time that shall be necessary to understand and deliberate upon it and that you acknowledge the Church as the ruler and superior of the whole world and the high priest called the Pope and in his name the King and Queen Donna Juana." We all know how the political growth of a Protestant Europe challenged this fantastic document as shown in their attempts ' to singe the Spanish King's beard,' but the obvious anthropological implications of such an authoritative declaration, like the Nordic nightmare of the days before the last war long weighed heavily on the conscience of the ethnological speculators of the New World. In the words of Prof. Wissler, " the Church solved to its own satisfaction an anthropological problem which was theological at its start....When we come to the maritime outburst of Western Europe, the discovery of Africa, India and the Americas, once again the world was brought to face the question, and this time it was a theological problem that came to the fore. Were these different orders of men all children of Adam and God? "*

Besides this interest in the spiritual salvation of the new found stray sheep, from one of the lost tribes of Israel, as the armchair anthropologists of the early period were at great pains to prove, another lure came upon the scenes. The new world not only offered land for the starting of democratic models, so long read and admired in the Greek Classics, but the American Indian was directly responsible for sponsoring that fiction of the noble savage, which was the dynamite that burst

* *Recent Developments in the Social Sciences.* 1927.

the old regime in France. As early as 1580, Montaigne opened up the subject. His Essays (*Les Essais*, livre I, Chapter XXX on Cannibals are based upon direct observation of American Indian life. He had once met some Idoquois ambassadors and talked with them through an old frontiersman of New France. "They are savage or wild, just as we call the fruits produced by nature in due course of time wild." His rhapsodies were taken up by La Hontan and subsequently were embellished by Voltaire and Rosseau. To Voltaire's encyclopaedic information the American Indian was another illustration for the theory of the degradations of civilisation and the nobleness of savagery. "The Huron, the Algonquin, the Illinois, the Kaffir and the Hottentot know how to make everything they need; and this our boors cannot do. The peoples of Africa and America are free, but our savages are without even the idea of freedom. . ."*

Thus we find a great many different motivations at work. But again, it was a new phase of human activity—an effort to break loose from the old shackles and forge ahead. According to Wallace there is a double layer of mental and physical universes and it is the physical universe coming in contact with a finer sphere that starts a new phase in evolution. The Hindu seer-thinker, Satyasrayee (1892-1928), in his Bengali book on *The Evolution of Universal Spiritual Life*, has tried to show how, after the evolution of man from lower organic forms by descent of energy from higher mental spheres, there has been an evolution of higher and higher mental type-men in the human age itself. He takes up the seers in India who were contemporaries of Columbus and Luther in Europe, namely, Chaitanya (1485-1527), Kabir (1440-1518), Nanak (1469-1538), as examples of the dawn of such a new mental epoch in human culture carried further in the nineteenth century in the mental discoveries of such seer-thinkers as Ramkrishna, Sivadayal, Saligram,

* *Essai sur les Moeurs* as quoted by R. Allier in *The Mind of the Savage*, p. 7.

Brahmasankar, and Sarkar Sahib, whose inner discoveries have surpassed those of the previous ages, as the scientific discoveries of the nineteenth century have wrested far newer secrets from the material world. This parallelism in the thought of the fifteenth century is of profound importance as being the seed-time of thought movements which sprouted forth in the nineteenth and twentieth centuries, ushering in a new era, objectively in the Europe and subjectively in the East, resulting in the creation or mutation of some new species of culture according to respective culture-patterns. In this sense the movements of which Columbus and Luther were the products were so deep and profound that the results of their activities have not yet been fully worked out; their importance will be felt more and more in the light of later developments. "The coming age in American literature is an age of spiritual pioneering, of contempt for material success, of sublimation of failure, of a new idealism based on the acceptance, not on the denial, of limitations. The energies of the American people, long extraverted to the conquest of the continent, are now intraverted to the perfecting of human relationships."* So the objective expansion of European thought and the subjective discoveries in new Hindu systems more than four centuries ago might have laid the seeds of the true foundation of God's own country—the day of perfection of Sons of Man by complete inner self-mastery and through control of forces outside—on earth as in Heaven—who knows?

This is a study of anthropology only as a culture-trait in the regional limits of America. It has been conditioned like psychology by the history of America, colored by the kind of supporting institutions which brought it into existence. In the case of American anthropology the institutional limitations of its museum birth and growth, nucleating round the objective study of the American Indian, has left its mark on its growth. On the other hand American thought was influenced by Europe.

* L. L. Hazard, *The Frontier in American Literature*,

Comparing diverse disconnected areas like India and Eur-America, it was found that the periods of inception, growth and maturation in time were coincident in spiritual thought schools in the former and in objective science in the latter according to the respective culture patterns of each. Specific ideas, like the coming of the American Indian *viâ* the Behring Strait supposed to be found by the Jesup expedition in 1897, have been traced to DuPonceau's Notes in 1820, using identical philological arguments, and still earlier, to Adair in his American Indian (1775) and the theological conjectures of the early Spanish fathers which often included it as an alternative. So each branch like philology, archaeology and physical anthropology as well as ethnology has been found to have some adumbration in the Proto-Anthropological period of New Spain and Early French and English explorations, differentiation and growth in the period of American history from 1783 to the Civil war, maturation from the period of the Civil war to the beginning of the 20th century and synthesis in the past two and a half decades, preparing the way for a greater synthesis of the subjective East and objective West and for a broader and deeper world-culture.

CHAPTER I.

Proto-Anthropological Period—Contributions of New Spain.

Out of the background of a humanistic classics-loving Italy, an Arab-oppressed, Arab-emerging Spain, a middle Europe with gunpowder, printing press and alchemy borrowed from the East, to batter down the strongholds of Feudalism, and a North-western Europe wavering between the old and new, comes a new birth, in a new environment far off, by Shakespeare's "still-vexed Bermoothes."

The frontier in America in the new factor.

One very important new factor in this development was the ever-present, ever-receding frontier of Western culture in the New World. The significance has been admirably stated by Frederick Johnson Turner in *The Frontier in American History* (1920). "Since the days when the fleet of Columbus sailed into the waters of the New World, America has been another name for opportunity, and the people of the United States have taken their tone from the incessant expansion which has not only been opened but has ever been forced upon them. He would be a rash prophet who should assert that the expansive character of American life has now entirely ceased.....To the frontier the American intellect owes its striking characteristics. That coarseness and strength, combined with acuteness and inquisitiveness; that practical, inventive turn of mind, quick to find expedients; that masterful grasp of material things, lacking in the artistic, but powerful to effect great ends; that restless, nervous energy; that dominant individualism, working for good and for evil; and withal that buoyancy and exuberance which comes with freedom—these are the traits of the frontier, or traits called out elsewhere because of the existence of the frontier." *

* *Op. cit.*, p. 37.

The objective training from the receding frontier.

Here indeed do we read of the birth of all that science and industry has wrought in present America, the dominant thought in its writings and achievement since John Elliot, Roger Williams, Jefferson, Lewis and Clark, through Cooper and Irving down to the days of the expeditions of Powell and Cushing, to the North Pacific Arctic and Antarctic expeditions of the present day. It was an objective need that evoked the expanding group-spirit and even when the immediate objective need was no more, new mental frontiers were sought out and created in Naga-ed-Dar or Ur, Balearic Isles or Mongolia. Thus, the content of geography, geology and anthropology was developed around concrete objectives co-ordinate with ever-receding barriers.

Catholic conservation in New Spain.

A far different tale has to be told of another impetus, one which did not fix its eyes on the frontier, but cast longing, lingering looks behind; one in which every step forward was for the consolidation of the ancient Church and not the achievement of something new. The Spanish cultural expansion in the New World may be compared to the sudden, dominant emergence of the titanic reptiles of the Mesozoic age, rapidly developed, the more rapidly to decay. While the springs of this later evolution were lying hidden in the insignificant mammals who, none the less, were preparing for the newer mutations, contemporaneous titanic monarchs of the earth were fast using up all energy.

New Spain's problem was different—organised government as against savage unconquered warriors in the North.

The cause for this lay in that Spain had conquered well-organized states, simply replacing the machinery at the top by its own. The American Indians, under its control, was a subject people and except for occasional protests from kindhearted Catholic Fathers, Spain's only concern was to keep the system going with the least disturbance. On the other hand, France and the New England colonists were faced with the problem of subduing large masses of unknown people scatter-

ed over unknown tracts. Exploration and conquest were thus early forced upon them by natural conditions. They had to seek alliances and meet the aboriginal inhabitants on an equal footing, and as such their interest in the natives grew with time rather than abated. For a time France was well ahead in this respect, but her idealistic aims and early exploration bore no permanent fruits, conditioned as they were by an imperialism of the old regime. The history of English colonial power and its ultimate triumph over Indian is well known yet it was the stubborn resistance of the Indian and the long association on the frontier that ultimately gave him a place in art and literature—under his ideal of the world's children—thanks mainly to the inimitable pen of masters like Irving and Cooper and the brush of Catlin, Stuart, Trumbull and Cole.

New Spain's early Western culture.

Yet the Spanish activities, bound up with the old legacies of the past "holding all the Americas, save Brazil, by award of the Pope, vicar of Christ on earth" resulted in much that was good. In Dr. Priestley's masterly work, *The Coming of the White Man* (1929), we are given an insight into the Spanish contribution to the culture of the new-found continents. As early as 1535-6 printing had begun, but unfortunately not two decades passed before attempts were started to censor learned books and prevent them from finding their way into the peaceful domain of what they were attempting to make an ultra-Catholic country, where "immigration was restricted from the beginning not only to Castilians, but to Castilians whose parents, as well as themselves, were Catholics." This is in curious contrast to the Pilgrim Fathers, hastening to colonize in the north, betaking to the inclemencies of an unknown region, among fierce strangers, to preserve the freedom of their conscience and be let alone in their new-found interpretations. The Spaniards sought the new land for the continuation of the old regime, for better control of criticisms which were already becoming too strong in the Old World. Yet the learning of the old Catholic Fathers, their sacrifices and civilizing effects,

the beneficent fruits of the Counter-Reformation, were found everywhere in the New Spanish domain. The food-plants and animals brought to the New World by Spain in a sense more than compensated for the heavy drain of gold which was fast emptying the treasuries of the seats of aboriginal cultures in South and Central America. We all know how the foundation of the Society of the Jesuits by St. Ignatius of Loyola in 1538 raised the standard of Catholic education in Europe and elicited the praise of even Francis Bacon—"As for the pedagogic part consult the schools of the Jesuits, for nothing better has been put into practice." They not only carried Christianity to China and India but were the chief missionaries in North America. The University of Mexico was founded in 1551. From a study of the start which this portion of America had in the 16th century, anybody would have been justified in proclaiming for Latin America the pre-eminence of culture in the world. "Enthusiasm for education characterized the earliest establishment of the Spanish colonies in America. Wherever the priests went a school was soon established for the instruction of the natives, or a college for its clericals who were already at work, as well as for those who were soon to take holy orders. From the colleges sprang the Universities which, in all the Spanish dominions, were founded at a very early date for the pursuit of the 'general studies,' which were at that time taught in the great peninsular universities of Alcala and Salamanca. Half a century before Jamestown was founded by the English, the University of Mexico was conferring degrees upon graduates in law and theology. Before the 17th century closed no less than seven universities had been erected in Spanish America, and their graduates were accepted on an equality with those of the Spanish institutions of like grade."*

Literary productions in New Spain.

The nature of productive scholarship during the period, is indicated by the thirty-six books listed by Francisco Fernandez del Castillo. All of these

* Bolton and Marshall, *The Colonization of North America*, 1492-1783 (1920), p. 76, from Priestley.

were books on devotion, grammars or calendars, save one, the *Suma y Recopilacion de Cirurgia* (1578, expanded in 1595) by Alonjo Lopez de Hinojoso. Eighty works of other types are mentioned, the first music book with American imprint, *Graduale Dominicale*, being one of them. Other notable books of the period were *Tratado brevae de Medecina* (1579, amplified in 1592), by Fray Augustin de Farfan, the *True History of Bernal Diaz*, the *Historia ae los Indios de Nueva Espana*, by Father Toribio Benavente, the *Historia Ecclesiasticale Indiana*, by Father Juan Mendicta, the *Monarchia Indiana*, by Father Torquemada. Thus were initiated the source-books of anthropology for Spanish America, containing a good deal of useful information and first-hand knowledge and, what is more, records of early contact colored by a good many fantastic theories which overshadowed the theoretical problems in anthropology in the New World for a long time, as we will see later on.

Speculations on the influence of the environment.

In *Parte de los Problems y Secretos Maravillosos de las Indios* (Mexico, 1591, reprinted, 1913), we have a crude attempt to correlate physical types and psychological temperament with the environmental conditions in the New World, showing "how people born in the Indies were generally of sanguine disposition, the hot sun and the humid climate and the light and delicate humors caused the people to lack perseverence." Thus the speculations as to the origin of man from a common cradle-land in Asia, and the influence of the environment in creating a New World physical type, can not only be traced to the apprehensions of a Burke, that the colonists were being changed in language and behaviour in the New World, but back through Adair and Du Pratz to the heavy and learned discussions of the Spanish Roman Catholic Fathers.

Early Linguistic lead. Sahagun's archaeology.

Similarly, many direct, as well as indirect leads, may be traced back to these days. American ethnology, finding itself confronted by strange tongues, and taking form in the days of the philological discoveries of Schlegel, Hum-

boldt, Sir William Jones, took from the very beginning a linguistic turn. It was in 1571 that the first Mexican vocabularies were published. Sahagun, famous missionary and Aztec Archaeologist (b. 1500, d. 1590), has come down to us as a contributor of the first rank. He studied in the convent of Salamanca, and instructed in the college of Santa Cruz, in Flatelolco, near the city of Mexico. Later he began to compile, in the Aztec language, a compendium of all things relating to native history and custom. This work took several years and was expanded into a history and description of Aztec people and civilization in twelve manuscript volumes, together with a grammar (Aztec) and a dictionary of the language.

Coronado's exploration.

Similarly we may take note of the brilliant Garsolassas, of Landa, and lastly of Coronado, who started on his famous expedition for Quivira in New Mexico in 1541, exploring Arizona and New Mexico up to the Colorado river. "The reports of the expedition," according to Bandelier, "being of the greatest importance for the geography and, more particularly, the ethnography of the southwestern part of North America."

Humboldt's estimate.

Nor were the contributions of these scholars to science without appreciation in Europe. Well-known is Alexander Von Humboldt's opinion as expressed in Cosmos,* "The ground-work of what we term physical geography, independently of mathematical considerations, is contained in Jesuit Joseph Acosta's work, *Historia natural y moral de los Indias*, and in the work of Gonzal Hernandez de Oviedo in the *Historia general y natural*, which appeared hardly twenty years after the death of Columbus. At no other period since the origin of society has the sphere of ideas been so suddenly and wonderfully enlarged in reference to the external world and geographical relations."

Spanish views on American origins.

These famous Spanish authors had quite pronounced opinions on the origin of the American Indian which did not fail to have pronounced influence on writers of the 17th and 18th

* London, 1864, Vol. II, p. 635.

centuries. Oviedo asserted that the Antilles were the famous Hesperides sung by early Spanish poets and Spain had again come to rightful ownership of what once was the domain of their King Hesperus, thousands of years ago; also that St. James and St. Paul had preached the gospel there and Gomara thought that the Americans came from Canaanites driven out of the promised land by Joshua. Gregoria Garcia, the famous Spanish Dominican published, in 1607, in Spanish, a treatise on "*The Origin of the Indians of the New World*," giving all the view-points of European scholars, adding valuable traditions of the Peruvians, Mexicans and islanders of Haiti and holding that several different nations had contributed to the peopling of the New World. Father Joseph de Acosta, a Spanish Jesuit, in the Spanish book already mentioned, boldly refutes the traditions relating to the Atlantis of Plato, and also denounces the theories relating to the descent from the Hebrews, on the ground that the American Indians possessed no writing, no love of silver, no circumcision and no love of the commandments like the Jews. and thinks the peopling of America was rather recent, either by the north of Asia or Europe, or regions lying to the southward of the Straits of Magellan. John de Solorzano Pereya, a Spanish lawyer, published in 1622, *De Jure Indiarum*, reviewing all the learned opinions on the origin of the Americans. In this connection we should also like to mention the work of the famous Dutch scholar, Hugo Grotius, who published in 1642 his "*De Origine Gentium Americanarum*" and was the first to start the theory that the whole of North America, with the exception of Yucatan, had been peopled by Norwegians who passed thither by way of Iceland, Greenland, Estotliland and Narumbega. Finally Clavigero in his celebrated "*History of Mexico*" (first printed in 1780), was quite critical and in advance of his times, holding the opinion, based upon his own philological researches, that the Americans did not derive their origin from any people existing in the ancient world.

CHAPTER II.

Proto-Anthropological Period—The English and French Travellers and Explorers—1620-1783.

The Travellers.

This great period was one of scientific exploration and "saw the rise of modern geography as an exact science and the development of the ancillary sciences, geology, botany, zoology and anthropology."*

Rise of business corporations.

A great factor in making the story of the frontier in North America essentially different from that of Latin America was the initiation of the business corporation. England, Holland, France, and even Russia and Sweden, in contrast to Spain and Portugal, delegated empire-building to the "Company" of limited liability, of whose fore-runner we have some hints in ancient Babylon, and which was known even as early as 1346 in Genoa, in the Mahona of Justinian. It was in 1554 that the Muscovy or Russia Company was launched by the English. Raleigh's bequeathal of his rights in the Americas to a joint-stock company in 1587 apparently was a stage in this transition. The Dutch East India Company was organized in 1602, by 1652 it had colonized the Cape of Good Hope and by 1669 was ruling over Java and Ceylon. In 1607 the Dutch West India Company was given a monopoly of trade in America. After the destruction of the Roanoke Company in North Carolina in 1587, its privileges passed to a private company, and after their lapse in 1606, James I divided North America between the Virginia Company, which was given the land north of the Delaware, and the Plymouth Company, which received the land south of it.

The Swedish South Company was organized in 1626, and the New France Company in 1629. Macleod has well pointed

* *Cambridge History of American Literature*, Vol. I, Book II, Chap. I, p. 186.

out that this precedence was a curious amalgam of "commercialism and feudalism," but which laid the foundations of all the activities in North America, as for example, the proprietary trust companies, who by purchase had acquired "the right to make all laws, to admit or expel inhabitants, to imprison, execute, make war, tax, etc., and hold title in fee from the crown to all land."* It was the trader rather than the missionary and the Catholic who on the frontiers of North America was building up a new culture, a culture in which economic organization was to be the driving force.†

Hudson's Bay Company.

It was in 1609 that Henry Hudson, in the employ of the Dutch East India Company, had explored the Hudson river to find the north-west passage. By 1670 the Royal Charter to "The Governor and Company of Adventurers of England trading into Hudson's Bay" had brought into existence the celebrated Hudson Bay Company, "the oldest united company in the world." By 1685 they had trading houses at Albany River, Hayes Island, Rupert's River, Port Nelson, Moose River and New Severn. In the spring the Crees, the Chippewayans and Eskimos brought their furs in canoes and traded with the ships which arrived when the waters were free from ice. The success and activities of the Hudson Bay Company stirred up French rivalry, and it is the rival companies and their prospecting travellers who give us long and interesting narratives as well as records of the state of the American Indian and his first reactions to Western contact. Notable among these explorers were Samuel Hearne of the Hudson Bay Company, and Sir Alexander Mackenzie of the North-western Company.

Laudonniere's History—the first French outlook.

Turning now to the activities of the French we note that barring the few desultory attempts of sailors from Dieppe visiting the coasts of North and South America, and Norman and Breton fishermen fishing off Newfoundland, as early as 1500, the first

* *The American Frontier*, p. 142.

† W. E. Stevens, *The North-West Fur Trade*, 1763-1800, p. 13.

true expedition was sent out by Francis I in 1524 under Verrazans. The French outlook in the New World at this period may be gleaned from Réné Laudonniere's *History of the First Attempt of the French to colonize the newly discovered country of Florida*. He describes the events of 1562, 1564 and 1567, and in the introduction speaks of America as divided into three parts, New France, New Spain, and Peru; "New France is almost as great as all our Europe. Howbeit, the most known and inhabited part thereof is Florida." He goes on to offer some observations on the American Indians. "The men are of an olive color, of great stature, fair, without any deformity .....They are great dissemblers and traitors, valiant of their persons and fight very well.....They have no knowledge of God, nor of any religion, saving of that which they see, as the sun and the moon.....They sow their maize twice a year, to wit, in March and in June, and all in one and the same soil .....They dig their mound with an instrument of wood..... When the land is to be sowed the king commandeth one of his men to assemble his subjects every day to labour.....At the time when maize is gathered it is all carried into a common house, where it is distributed to every man according to his quality."*

The influence of the Travellers' accounts.

The above quotations would show how these contemporary narratives, so important for historical purposes, are often made so general in statement, *i.e.*, without reference to the particular tribe concerned, that they lose much of their scientific interest. It must, however, be mentioned, that the travels of the voyagers of this period were widely read and had a great influence upon the literary and philosophical thought of Europe. Villegagnon's *Voyage to Brazil* had, as we know, directly influenced Montaigne, who mentions the work, and started the conception of the Noble Savage. But even in Laudonniere the record of personal

* See pp. 170-174, *Historical Collections of Louisiana and Florida*, including translations of original manuscripts relating to their discovery and settlement, by B. F. French, 1869.

contact with particular tribal chiefs, whom he mentions as kings, gives occasion for many ethnographic observations of scientific value, especially the adaptations in behavior on the part of the proud natives to the newcomers.

Iberville's Narrative.

In the next period, we find these statements clearer and the details more often than not of the greatest scientific value. Thus, M. P. Le Moyne D'Iberville's *Narrative of the Voyage made by order of the King of France in 1698 to take possession of Louisiana*, has as great ethnographic as well as historical value. Iberville is known as the founder of Louisiana, but he came on the scene as one trying to check the advances of the Hudson Bay Company. He was a lieutenant under De Troyes who captured that company's forts in Hudson Bay. He had attacked Pemaquice Fort unsuccessfully in 1692, but captured Fort Nelson in 1694. He tried to weld the Indians about Hudson Bay into an alliance by treaties and trade and to use them as allies against the spread of English settlement. His short, succinct account of this voyage gives us the location of several Indian tribes and refers to his intention of visiting the Natchez, or Telois, at the mouth of the Mississippi.

Annals of Louisiana.

These contributions were continued in many journals and reports of French explorers, a type of which is the "*Annals of Louisiana*, from the establishment of the first colony under M. D'Iberville to the departure of the author to France in 1722, including an Account of the Manners, Customs and Religion of the Numerous Tribes of that Country," by M. Perricaut. This contains many valuable observations for the years 1698 to 1722, or important observations about the Natchez, describing how the dress of women is manufactured from wild hemp, wild flax, and the inner bark of the mulberry tree, which are placed in water, soaked for eight days, dried in the sun, then beaten so as to be reduced to flax, washed in lye-water and spun and woven into cloth (p. 89, *op. cit.*). The descriptions of the funeral ceremony of the "Great Female Sun" (p. 93, *op. cit.*), the temple of the village of

the great sun—about 30 ft. high and 48 ft. in circumference—, the social distinctions in the nobility (pp. 94-95), and of a cannibal rite (p. 121), all contain first-hand observations of a native culture not yet shrivelled under foreign contact. The closing paragraph, showing how " God in His wisdom had designed Louisiana for the French, to show forth the power of the holy Catholic religion and to establish a French empire in America," clearly indicates that the Frenchman in America was the brother of the Spaniard, with the imperialistic motive less concealed.

Du Pratz's History.

The literary activities of the French in this period have been well summarized and shown to profitable advantage by Du Pratz in his *History of Louisiana*, first published in French in 1758 and later on, in 1763, translated and published in English, " containing a description of the countries that lie on both sides of the River Mississippi, with an account of the settlements, inhabitants, soil, climate and products." He has many discussions on the academic question of Indian origins, which shows how most of the later views entertained by American scholars were already taking shape in those early days. Thus he speaks of the tradition of a Natchez priest having lived yonder under the sun (pointing with his finger nearly south-west), " by which I understood that he meant Mexico " (p. 110, Vol. II). Then again, after quoting a passage from Diodous Siculus, he goes on to observe, " The Natchez may thus justly be supposed to be descended from some Phoenicians or Carthaginians who had been wrecked on the shores of South America " (p. 110). Again he states, " I have therefore good grounds to believe that the Mexicans came originally from China or Japan " (p. 119), thus anticipating Perry, so to speak, by two hundred years. Another passage would have rejoiced Prof. Elliot Smith. " Some years ago the skeletons of two large elephants and two small ones were discovered in a marsh near Ohio ; and as they were not much consumed, it is supposed that the elephants came from Asia many years before." The next sentence almost

strikes on the Behring Strait origin theory of the modern Americanists. "If we also consider the form of government and the manner of living among the northern nations of America, there will appear a great resemblance between them and the Tartars in the north-eastern part of Asia." Du Pratz is replete with valuable scientific data, and remarks that the American Indians were more populous before, but had been killed in war or by Spanish persecutions, and records the strength of the Chotka army at 25,000. He enumerates several tribes east and west of the Mississippi and he describes the Natchez, amongst whom he dwelt, the different occupations for the two sexes, their language, government, religion, ceremonies and feasts, marriages, distinction of rank, temples, tombs and burials, arts, manufacture, attire, diversions, and the art of war. He had the keen eye of an ethnographical observer and could even distinguish two strata of a language, one of an honorific type and the other meant for the common herd. Du Pratz combines in himself the characteristics of a historian, ethnographer and traveller, with considerable insight and great accomplishment, though he prefers to stick to personal narratives rather than launch into academic discussions.

Jesuitical activities —The Relations.

One is tempted to dwell at greater length than necessary for our immediate purposes upon how the American Indian was supplying to the French the idea of the "noble savage," destined in time to poison the old monarchical and feudal system. Meanwhile the enterprising, noble, heroic and chivalrous mediaeval exploits of the French missionaries in the New Continent were slowly but steadily crowding the adventurous merchant out of the picture and casting the lot of New France with, and moulding it after, the pattern of New Spain. Thus, in France, by the beginning of the 16th century, the conversion of the Indians of the New World came to be regarded as a duty of the first order. So came the first Jesuit missionaries and the reformed branch of the Franciscan order, the Recollects, who started colonies at Quebec and the

Huron country. Fathers Peter Baird and Edward Norse first learned the Micmac language, then a Huron dictionary was published by the Recollect Sagara. The Micmac grammar was completed by Abbe Anthony S. Maillard before his death in 1768. By 1737 the *Montaignais Mission* had been published by Peter Michael Lauve. By 1656 missionaries had visited each of the Five Nations. "Later, as Canada fell to England and Louisiana to Spain, the work of the Jesuit missionaries in French North America ended. Their record is a chapter of American history full of personal devotedness, energy, courage and perseverance; none can withhold the homage of respect to men like Jogues, Brebeuf, Garnier, Buteux, Gravier, Allonez and Marquette,"* "*The Relations*," 1632-1672, are extremely valuable records of their activities. Charlevoix says of them, "They were at the time extremely relished in France.....There is no other source to which we can apply for instruction as to the progress of religion among the savages, or for a knowledge of these people, all of whose languages the Jesuits spoke." D. G. Brinton found these extremely useful in studying the mythologies of the American Indians, and speaks of "*Relations de la Nouvelle France*" (Quebec reprint, 1858) as an authority of inestimable value and Horatio Hale's Studies on the Iroquois and on Indian Migrations were based upon the information they gave.

Probably a full account of the French in the New World is nowhere to be better found than in Charlevoix. His "*Journal of a Voyage to North America*, undertaken by order of the French king, containing the Geographical description and Natural History of the country, particularly *Canada*, together with an Account of the customs, characters, Religion, Manners and Tradition of the original inhabitants, in a series of Letters to the Duchess of Lesdiguieres, translated from the French of P. de Charlevoix," was published in two

* *Narrative and Critical History of America*, Vol. IV, Part II, p. 289.

volumes in London in 1761. The preliminary discourse on the origin of Americans, gives a critical summary of views of Spanish scholars and Lescarbot, John De Laet, Hugo Grotius and George De Harun. He himself advocated a philological enquiry. "It would only be necessary to make a collection of their grammars and vocabularies and to collate them with the dead and living language of the Old World that pass for originals. . . . If those characteristic marks are found in the American languages, we cannot reasonably doubt of their being truly original; and consequently, that the people who speak them have passed over into that hemisphere, a short time after the first dispersion of mankind." The description of the Iroquois village and the different nations inhabiting Canada, *e.g.*, Esquimaux, the tribes round the Hudson Bay known to the French as Savanois, the Sioux, and the statement that "the Algonquin and Huron languages share betwixt them almost all the Indian nations of Canada, with whom they have any commerce" (p. 283) show how well-informed he was. In Letter XII there is a good discussion of the characteristics of Algonquin and Huron languages. The book is full of valuable ethnographic details about the Indians on the Riviere des Sables, fire-dances on the Niagara, games near Fort Pont Chartrain, the customs of Indians near Lake Michigan, the characteristics of the Illinois, and villages of the Natchez country. What is remarkable in Charlevoix is that he is always critical and points out the good and evil qualities in the American Indian character. What we most admire in the Indians is not always to be attributed to pure virtue; that their natural disposition and their vanity, have a great share in it, and that their brightest qualities are obscured by great vices. (Letter XXI, Vol. II, p. 87.)

Peter Kalm (1716-1779).

Probably the most renowned traveller of this period, made much of in his day, was the Swede Peter Kalm (1716-1779). In 1770 the English translation of his work, which already appeared in several European editions, was published by Reinhold Foster,

in Washington. Kalm was Professor of Economy in the University of Abo, in Swedish Finland, an associate of Linnaeus, and the fact that his expenses were paid partly by the Universities of Sweden and partly by the King shows in what esteem he was held by his countrymen. In 1748, 1749 and 1750 he made a scientific tour of observation throughout North America. In 1772 was published his "*Travels into North America*, containing its Natural History and a circumstantial account of its plantations and agriculture in general, with the civil, ecclesiastical and commercial state of the country, the manners of its inhabitants and several curious and important remarks about various subjects." He was naturally interested in the origin of the American Indian. He remarks thus: "It is not certain whether any other nation possessed America before the present Indian inhabitants came into it, or whether any other nations visited this part of the globe before Columbus discovered it. . . . In vain does one seek for well-built towns and houses, artificial fortifications, high towers and pillars and such like among them, which the old world can shew from the ancient times" (p. 121, Vol. III). He goes on to observe, "In later times there have, however, been found a few marks of antiquity, from which it may be conjectured that North America was formerly inhabited by a nation more versed in science and more civilized than that which the Europeans found on their arrival here; and that a great military expedition was undertaken to this continent from those known parts of the world" (p. 123, Vol. III). We thus find already, in Peter Kalm, one opinion that was later on to sway theorists on the mound builders, like Caleb Atwater. It is remarkable how the cultural difference between the old world and the new in the cattle, cereals, wheel and plough was so clearly caught sight of by Peter Kalm. "It is to be observed that the nations which now inhabit North America could not cultivate land in this manner, because they never made use of horses, oxen, ploughs, or any other instruments of husbandry, nor had they ever seen a plough before the Europeans came to them" (p. 124, Vol.

III). Foster's note (on p. 125), in his English edition, and not Peter Kalm's, as Haven says, is interesting as showing the ideas of American Indian origins prevalent even at such an early date. "There are pillars supposed to contain Tartarian characters, according to Jesuits who saw this stone in Canada —this is confirmed by Marco Polo's description of Kublai Khan—whose first abortive expedition furnished North America with civilized inhabitants. There is a great similarity between Mexican idols and those which are usual among Tartars. . . The savage Indians of North America have, it seems, another origin, and are probably descended from the Yukaghiri and the Tchukchi, inhabitants of the most easterly and northerly part of Asia where, according to the accounts of the Russians, there is but a small traject to America. The Esquimaux seem to be of the same nation with the inhabitants of Greenland, the Samoyeds and Lapponians. South America, and especially Peru, is probably peopled from the great unknown fourth continent." Surely science moves but slowly, creeping on from point to point. We have here almost a full anticipation of the North American Indian emanating from Mongoloid Asia *viâ* Behring Straits, Elliot Smith's Pacific intrusions on Mexico, and Rivet's Antarctic Migrations to boot.

Apart from theories, Kalm's book is a mine of zoological and geographical observations, containing sample Algonkin word-list, descriptions of the making of sewn boats from the bark of hiccory (II, 298-300), the making of waterbottles from gourd-calabashes (I, 348), minute physical observations on the Esquimaux "as entirely different from the Indians of North America and not copper-coloured like the latter," and pointing out how they culturally differ as being hunters of seal, wearing seal-skin dress and using seal-skin boats, bows and arrows, javelins, etc. (III, 238-239), and the so-called similarity of their language with that of the Greenlanders. The descriptions of stone hatchets tied to a split stick, the method of felling trees (II, 38), their tools, knives, tobacco pipes, making of fire, pots of clay or bone (II, 36-41),

of the Mickmacks, Hurons, Anies, Iroquois, and tribes near Quebec, are full of ethnographic interest.

John Bartram (1699-1777).

In 1751 John Bartram, called by Linnaeus " the most accomplished natural botanist of the World," published his " Observations on the Inhabitants, Climate, Soil, Rivers, Productions, Animals and other matters worthy of notice in his Travels from Pennsylvania to Onondago, Oswego, and the Lake Ontario in Canada," annexed to which was " A Curious Account of the Cataracts at Niagara by Mr. Peter Kalm." In the preface is rightly pointed out how, among other curious parts, are " his thoughts on the origin of the Aborigines of America.". . . . " This question has long been agitated with great warmth. . . . but whether it might probably be peopled consistent with the Mosaick history,"—and we later find this view so prominent in the work of Adair. The sympathetic attitude of John Bartram and his gibes at Catholicism, ushers on the scene the new type of critical North European freethinking. Thus, speaking of an aboriginal rite he observes, " This seems to be a kind of offering, perhaps of first fruits, to the Almighty Power, to crave future success in the approaching hunting season and was celebrated with as much decency and more silence than many superstitious ceremonies: the bigotry of the Popish missionaries tempt them to compass sea and land to teach their weak Proselytes what they call the Christian religion." His attitude towards the question of peopling America is sceptical, " Perhaps it may be equally hard to disprove or prove that they were originally placed here by the same creator who made the world, as soon as it became habitable, for it is reasonable to suppose that the Almighty Power provided for the peopling of this as well as other sides of the globe, by a suitable stock of the human species " (p. 75) —a theory later championed by Lord Kames. John Bartram also talks of the possibility of peopling from Japan, or the drift-boats of Carthaginians, like others of this period, but it is strange that he speaks of the possibility of Norwegians coming to the New World, whereas Peter Kalm, the Scandi-

navian, was strangely silent about it. He says, " There are many relations of voyages hither from the north of Europe. That the Norwegians, the possessors of Iceland for many ages past, had colonies in Greenland is a fact too well attested to admit of doubt ; from Greenland the short passage across Davis Strait brings us into the continents of America " (p. 75).

William Bartram (1739-1823).

More reputed as a literary and scientific work was William Bartram's *Travels*, praised by Coleridge and possibly read by Wordsworth, which " translated into German by Zimmermann likewise ushered in the study of the geographical distribution of plants and animals, as well as of mankind."* Only a small portion (Part IV) of the book deals with observations on the American Indian, though interspersed throughout the whole are many personal incidents of contact. His attitude was profoundly sympathetic. " Their countenance and actions exhibit an air of magnanimity, superiority and independence " (p. 483). He describes in living detail the Cherokees, Muskogulges, Siminoles, Chicasaws, Chactaws and confederate tribes of the Creeks—peoples who were later fortunate in getting Adair as their historian. Bartram's delightful style and philosophical observations no doubt made him the favourite. We can find in him many passages which would be treasured by the champion of the Noble Savage, and were directly responsible for the political philosophy of the period, as " Do we want wisdom and virtue? Let our youth then repair to the venerable councils of Muscogulges " (p. 493). Talking on government and civil society he speaks of the ideal society as it was objectively found among them, " everyone's conscience being a sufficient conviction instantly presents to view, and produces a society of peace and love, which, in effect, better maintains human happiness than the most complicated system of modern politics, or sumptuary laws, enforced by coercive means, for here the people are all on an equality as to the

* *Cambridge History of Literature*, Vol. I, Book II, Chapter I, p. 186.

profession and enjoyments of the common necessities and conveniences of life, for luxuries and superfluities they have none " (p. 494). No wonder with such an idea of the prevailing state of aboriginal life, young France had been attracted and sent *coureurs du bois*, rangers of the woods, since the days of Jean Nicolet of the Three Rivers, and Etienne Brule, trying to establish wild fraternities; and Coleridges and Shelleys were thinking of starting Pantisocratic societies in the new-found, romantic environments beyond the pressure of any convention. Before taking leave of Bartram's fascinating passages we would like to point out that his chapters on the " dress, feasts and diversions," (Chapter III) " concerning property, agriculture, arts and manufactures," (Chapter IV) " of their marriage and funeral ceremonies," (Chapter V) " of their language, rhetorical and agreeable to the ears " and on " manners," are so full of fine details that one regrets they are short. He concludes with an observation on " pyramidal mounts " leading to artificial lakes or ponds and tetragonal terraces, chank yards and obelisks, saying, " I deem it necessary to observe that none of the American Monuments that I have seen discover the least signs of the arts, sciences, or architectures of the Europeans, or other inhabitants of the old world, yet evidently betray every sign or mark of the most distant antiquity,"—an opinion more and more insisted upon by later Americanists in the light of a greater mass of confirmatory data.

North-West Company's travellers.

We come now to the period of the fur trade. In contrast to the Hudson Bay Company, the North-West Company admitted into partnership those who had given most efficient service, and so we find many distinguished names on their rolls, among which are McTavish, McGillivroy, McKenzie, Frobisher, and Henry and Thompson, associated with them. " Every year a great concourse of partners, traders and voyagers was held at Fort William. . . . They travelled with all the pomp and fanfare of an eastern potentate or feudal lord, gorgeously attired and equipped."

Alexander Henry (1739-1824).

Alexander Henry (1739-1824) was a fur trader born in New York. He began his career as a soldier. He went to Mackinac in 1760 for the fur trade, was captured by and spent a year with the Ojibway, then resumed the fur trade. He visited all the northern plains tribes and published a book in 1809 as, "Travels and Adventures in Canada and the Indian Territories between the years 1760 and 1776, in two parts." In the preface he points out that the book consists of three items of which the third was "a view of society and manners among a part of the Indians of North America." We gather from him remarks about "the favour of the Indians shown to the French; their antipathy to the English; and the sense of the rights of the property amongst the Algonquins" (p. 23). He is full of lively observations about the taking of trout (p. 56), describes the "men of the woods," an inoffensive race with rude-fashioned lodges and living chiefly on hare (p. 60). His personal observations of maple sugar-making with white birch-bark vessels and vats of moose-skin (p. 69), as well as the scalping of the dead, with the drinking of the blood from the hollow of their hands (p. 81), are gruesome with realistic details. He passed a night in a cave where bones of ancestors were kept (p. 113). He mentions many traditions about Nanjibou (Great Hare) (pp. 212-14). In the description of the Cree Indians we find Henry linguistically sufficiently acute to recognize that language as a dialect of the Algonquin and to point out its affinities with Chippeway (p. 250). The social usage of loaning wives among the Crees (p. 246); the description of the religious ceremony of the Ossinipolles, giving minute details such as, "the Indians universally fix upon a particular object as sacred to themselves, as the giver of their prosperity and their preserver from evil, *e.g.*, hair;" the statement of religious notions, belief in the creator and governor of the world as the spirits, gods or manitos, which they denominate Wakons; the point-

* Clarence A. Vaudiveer, *The Fur Trade*, Cleveland, 1929, p. 121.

ing out of the similarity between the Ossinipoilles and the Cristiniaux (p. 299); the description of a circular grave about five feet deep and the dead buried in a sitting posture—the post is painted before a grave and a badge added called in Algonquin "Totem," which is in the nature of an armorial bearing (p. 305)—show Henry to be a shrewd ethnographic observer.

Samuel Hearne (1745-1792).

With Samuel Hearne (1745-1792) we enter historically into a phase marking the fall of New France through "the establishment of a religious tyranny in Canada and of monopolies granted to the favoured few," and the rapid growth of "Individuality, enterprise and initiative" under the English system.* Hearne "has the honor of being the first white man to reach the Arctic by overland route."† He entered into the service of the Hudson's Bay Company, was sent to the Fort of Prince of Wales, and then was sent out to explore the territory west of Hudson Bay by Governor Norton. He finds a place here, being the author of "A Journey from Prince of Wales Fort, in Hudson's Bay to the Northern Ocean in the years 1769, 1770, 1771 and 1772." He had not the forceful character possessed by Alexander Mackenzie, nor was he as accurate and scientific as Thompson, who met him at Churchill in 1784. "His book is chiefly valuable, not so much because of its geographical information, but because it is an accurate, sympathetic and patiently truthful record of life among the Chippewayan Indians at that time. Their habits, customs and general mode of life, however disagreeable or repulsive, are recorded in detail, and the book will consequently always remain a classic in American Ethnology."‡ Though Chapter IX is exclusively devoted to "a short description of the Northern Indians" we can gather many interesting details

* C. A. Vandiveer, *The Fur-trade and Early Western Exploration*, 1929, pp. 110-111.

† *Ibid*, p. 115.

‡ J. B. Tyrrell, Introduction to *Hearne's Journey*, Toronto, 1911, pp. 17-18.

replete with personal touch throughout his book. The description of the murder of the Esquimaux by the Chippewayans is gruesome, yet romantic as a detective tale (pp. 148-50); the custom of impounding deer (p. 120); the segregation of the women at childbirth and uncleanness for a month or five weeks (p. 131); the conjurer swallowing the bayonet and doing other tricks (p. 229), are fascinatingly interesting. The characterization of the Northern Indian is not like that of an idealist like Bartram, but a trader who had suffered annoyances at times, yet appreciated a faithful follower like Matonabee. The Northern Indians are, according to his description, "strong, robust, but not corpulent. Their dispositions are in general morose, and covetous, and they seem to be entirely unacquainted even with the name of gratitude" (pp. 298-299).

David Thompson (1770-1857).

David Thompson (1770-1857) was perhaps the greatest geographical explorer of the north-west at this period. His manuscript, is was said, was sought by Irving, and his maps are still consulted by the Canadian government. Thompson first entered into the employ of the Hudson's Bay Company. In prosecution of the fur trade he "travelled more than 50,000 miles in canoes, on horseback, and on foot through an unmapped country. Besides being an excellent traveller he was an exceedingly accurate and methodical surveyor. His notebooks include extensive meteorological data and partial vocabularies of many of the Indian tribes among whom he dwelt." In the "*Narrative of His Explorations in Western America*" (1784-1812), we find several chapters devoted to the Nahathaways, Mandans, Plains Indians, Peageans and Ilthykoyape tribes. Describing the Stone Indians, or Assiniboins, he recognizes them as a tribe of the Sioux and also points out the diversity of the languages of the Plains Indians (p. 326). Describing the character of the Peageans, he remarks, "they appear to be brain-steady and deliberate, but on becoming acquainted with them there is no want of individual character, and almost every character in civilized society can be traced among them, from the gravity of a judge

to a merry jester, and from open-hearted generosity to avaricious miserliness," a sentiment almost echoed through the mouth of the Noble Indian in Irving's "Last of the Mohicans."

Sir Alexander Mackenzie (1755-1820).

Perhaps Sir Alexander Mackenzie (1755-1820) stands out as the greatest of all the north-western explorers. One of the partners of the North West Fur Company he set out on his first expedition to the west in 1789, with four canoes and a party of two persons, and explored the river bearing his name up to 69° North Latitude. In July 1792 he started on his memorable expedition westward and was the first white man to cross the Rocky Mountains and reach the Pacific Ocean. In 1801 he published, in London, his book "*Voyages from Montreal* on the River St. Lawrence, through the Continent of North America, to the Frozen and Pacific Oceans, in the years 1789 and 1793." It is rich in scientific observations and data relating to Indians and is the classic of the period. It contained a preliminary account of the fur trade of the country and had maps, and ends with an account of the Chippewayan Indians. He describes them as "sober, timorous and vagrant, with a selfish disposition which has sometimes created suspicions of their integrity" (p. cxix). He describes their snowshoes and the "considerable influence in the traffic with the Europeans that they had." His descriptions of a deserted house of the Esquimaux (p. 57); the Esquimaux coming in search of flint in some parts (p. 75); of his observations on how, in 1786, the "use of snares had already gone and that of bows was becoming scarce among the Beaver Indians" (p. 146); the position of women, who, "notwithstanding this state of abject slavery and submission, have a considerable influence on the opinion of the men in everything except their own domestic situation" (p. 147); and the minute description of the Indians at the Upper or Friendly Village, as to physical appearance, types of cradle, weapons and implements with tips of iron obtained from British, Spanish and American sources, "and the custom of burning the dead," with his

avoidance of the description of their religion " as his means of observation were very contracted " (p. 379), show him to be a critical, accurate, reliable observer of ethnographic data, with a keen insight and delightful style.

Crevecoeur (1735-1813).

Before coming to the first serious anthropologists of this period we would like to draw the attention of the reader to two books which fall more within the history of literature than science. They reflect all the setting of the educated popular mind in the colony at that time. The first was referred to by Jefferson for prospective colonists, " *Letters from an American Farmer* describing certain provincial situations, manners, and customs not generally known, and conveying some idea of the late and present interior circumstances of the British Colonies in North America," written for the information of a friend in England by J. Hector St. John (M. G. St. J. de Crevecoeur), a farmer in Pennsylvania (London, 1783). This is a description of What is an American ; " Europe has no such class of men, the early knowledge they acquire, the early bargains, give them a great degree of sagacity.....As Christians, religion curbs them not in their opinions; the general indulgence leaves every one to think for themselves in spiritual matters; the laws inspect our actions, our thoughts are left to God " (pp. 54-55). This, with his description of the distresses of a frontierman, and other chapters, have still an interest to us when studying the colonial background to our subject

Jonathan Carver (1722-1780).

Of more direct interest to anthropology is Carver's " *Three Years' Travels through the interior parts of North America in the years 1766, 1767 and 1768 for more than five thousand miles*, containing an Account of the Great Lakes, and all the Lakes, Islands and Rivers, Cataracts, Mountains, Minerals Soil and Vegetable Productions of the North-West Regions of that Vast Continent ; with a description of the birds, beasts, reptiles, insects and fishes peculiar to the country, together with a concise History of the Genius, Manners and Customs of the Indians inhabiting the Lands that lie adjacent to the

Heads and to the Westward of the great River Mississippi, etc." (Philadelphia, 1789). After discussing the various theories of the origin of Americans, by Spanish Fathers Gregorio and Joseph De Acosta, Flemish John de Laet, Portuguese Emanuel de Moraez, Dutch George De Horun, French Pierre De Charlevoix, and the great American Adair, he himself expresses his own views, which can very little be amended today. "To me it appears highly improbable that it should have been peopled from different quarters across the Oceans, as others have asserted.....Upon the whole, after the most critical enquiries and the maturest deliberations, I am of the opinion that America received its first inhabitants from the North-East by way of the great archipelago just mentioned, and from them alone (p. 108).....I am confirmed in these conjectures by accounts of Kamschatka, published a few years ago by the order of the Empress of Russia. The author says that the distance between Tchukotskoi-Noss, a promontory which lies at the eastern extremity of the country, is not more than two degrees and a half of a great circle. He further says that there is the greatest reason to suppose that Asia and America once joined at this place." Carver ends with a quotation of Dr. Robertson from the journals of Behring and Tschisikow, surprising in its modernism. "We may lay it down as a certain principle in this enquiry that America was not peopled by any nation of the ancient continent which had made considerable progress in civilization.....If ever the use of iron had been known to the savages of America, if ever they had employed a plough, a loom, or a forge, the utility of these inventions would have preserved them, and it is impossible they should have been abandoned or forgotten" (p. 112). The succeeding chapters on "their dress, persons, manners and qualifications, method of reckoning time, government, dances, hunting, manner of making war, manner of making peace, marriage ceremonies, religion, their diseases, treatment of the dead, language, etc.," and a vocabulary, show considerable critical judgment and personal observation. Of the languages he writes, "The principal languages of the natives of North America may be divided

into four classes, consisting of such as are made use of by the nations of the Iroquois towards the eastern portions, the Chippeways, or Algonquins, to the north-west, the Naudowesses to the west, and the Cherokees, Chickasaws, etc., to the south " (pp. 211-12)—a position taken by Duponceaux and Heckewelder, which later on developed into Major Powell's famous linguistic map.

B. S. Barton (1766-1815).

We pass on to the two authors who are genuine anthropologists. Benjamin Smith Barton, M.D., was a corresponding member of the Society of Antiquarians of Scotland, member of the American Philosophical Society, Fellow of the American Academy of Arts and Sciences of Boston, and corresponding member of the Massachusetts Historical Society, and held the post of Professor of Materia Medica, Natural History and Botany in the University of Pennsylvania. He was author of "*Fragments of the Natural History of Pennsylvania*" and "*Essay towards a Materia Medica.*" This shows that the learned societies and universities of the time were active also and interested in anthropology. His book on "*New Views of the Origin of the Tribes and Nations of America*" (Philadelphia, 1798), dedicated to Thomas Jefferson, is interesting reading. It seems to be an echo in America of the enthusiasm aroused by results of philological researches in Europe. It contains about 276 pages of learned discussion upon the origins of the American Indians and advocates the philological comparative method above all. The selection of words for the comparative vocabulary is very judicious, comprising those for God and Heaven; relationship terms like father, mother, son, daughter, brother, sister, husband, wife, virgin, boy, child, man; parts of the body like head, nose, ears, forehead, hair, mouth, tooth, tongue, beard, hand, belly, foot, skin, blood, heart; common feelings and occurrences such as love, life, death, cold; material phenomena as sun, moon, stars, rain, snow, ice, day, night, morning, evening, summer, winter, earth, water, fire, wood, leaf, mountain, hill, river; food like bread; and personal pronouns as "I" and "Thou." Thus his technique and his use of as large a vocabulary, with

as many tribes in the old and new world as possible, show him to be not far behind that of the modern French school of Rivet, and the same criticism would apply as of Dixon to the latter, in not using the same dialects and same tribes in all his analogies. His general assumption that all the American Indian languages belong to one family is obviously wrong, but his method and outlook are surprisingly modern. On page (c) he remarks, " There is good reason to believe that the continents of Asia and North America were once united, not merely at the Straits of Anian and Behring, but even as low as about latitude 52, and perhaps still further south. The chain of islands which modern navigators have found between the two continents are probably fragments of the land which was stretched from one continent to another. It is highly probable that the principal population of America was accomplished before this separation took place; and at the same time many of the animals of Asia may have passed into America, and many of those of America may have passed into Asia."

James Adair (d. 1775).

A great scholar of the period, and the first American anthropologist properly so-called was James Adair. He was a trader with the Indians and resident in the country for forty years (1735-1775). There is evidence of great intelligence and learning in his book of 464 pages. He cites comparative data from the West Indies and Mexico. He has all through conceived his problem clearly and the execution is praiseworthy, however much the general conclusion may be challenged. It was always quoted with respect and authority in its day and is still a valuable book of reference. It is entitled, " *The History of the American Indians*, particularly those nations adjoining the Mississippi, East and West Florida, Georgia, South and North Carolina and Virginia, containing an account of their origin, language, manners, religious and civil customs, form of government, punishments, conduct in war and domestic life, their habits, diet, agriculture, manufacture, diseases and method of care, and other particulars sufficient to render it a complete Indian system... ...with an Appendia and a Map." He begins with observa-

tions on the color, shape, temper and dress of the American Indian and speculates on the causes for the observed difference in skin-color. "The Indians are of a copper or red-clay color and they delight in everything which they imagine may promote or increase it" (p. 1). "Many incidents and observations led me to believe that the Indian color is not natural; but that the external difference between them and the whites proceeds entirely from their customs and method of living and not from any inherent spring of nature" (p. 2). His method is a comparison of particular traits of culture. "In tracing the origin of a people, where there are no records of any kind, either written or engraved, who rely solely on oral tradition for the support of their ancient usages, and have lost a great part of them--though the undertaking be difficult, yet where several particulars, and circumstances, strong and clear, correspond, they not only make room for conjecture, but cherish probability, and if still better can be offered, must be conclusive" (p. 10). Adair is, however, like Barton, labouring under the confusion that the American Indian is of one linguistic stock. "All the various nations of Indians seem to be of one descent; they call a buffalo, in their various dialects, by one and the same name *yanasa*." Then through 206 pages he elaborates his arguments in proof of the American Indians being descended from the Jews: (1) "As the Israelites were divided into tribes and had chiefs over them, so the Indians divide themselves" (p. 15). (2) In religious belief the American Indian's "notions of a deity correspond" with that of the Hebrews, and are "dissimilar to the heathen's" in "their aversion to images," paying no religious veneration to the dead, having no traces of idolatry among them, having similar religious cherubic emblems, agreeing with the Hebrews in worshipping the true God, Jehovah, and sing "Halela-yuh yo He Wah" (p. 30). (3) "Agreeable to the Theocracy or divine government of Israel, the Indians think the Deity to be the immediate head of their state" (p. 32). (4) The American Indians believe in the existence and ministration of angels (pp. 35-37) like the Hebrews. (5) The Indian language and dialects appear to have the very idioms and

genius of the Hebrew. " Contrary to the usage of all the ancient heathen world, the American Indians not only name God by several strong compounds expressive of his divine attributes, but likewise say *Yah* at the beginning of their religious dances, with a bowing posture of the body; then they sing Yo Yo, He He and repeat those sacred notes" (p. 47).

Their names for the deity, manner of adjuration, parity in vocabulary and idiom, similarity in nervous and emphatical style, in " long compounded words " and verb formations (pp. 71-72), are pointed out as arguments of near coincidence with the Hebrew philologically. (6) The American Indians count time after the manner of the Hebrews (p. 74). (7) " In conformity to, or after the manner of the Jews, the Indian Americans have their prophets, high-priests and others of a religious order." Their method of seeking seasonable rains and payment of tithes to their priests are similar. (8) " Their festivals, fasts and religious rites have also a great resemblance to those of the Hebrews " (p. 94). " The Hebrew customs are cited, and then the American Indian dancing, for offering fresh fruits, singing, Yo Yo, He He; All-yo, Alee-yo; Hewah, Hewah." " The American aborigines were never idolators, nor violated the second commandment in worshipping the incomprehensible, omnipresent, divine essence, after the manner described by Popish Historians of Peru and Mexico " (p. 113). (9) The Indians have a similar custom to the " Oolah Katite " of the Hebrews (p. 115) and resemblances to Jewish sin-offering and trespass-offering (p. 117). " The red Hebrews imagine their temples to have such a typical holiness, more than any other place " (p. 119). (10) " The Hebrews had ablutions and anointings, according to the Mosaic ritual, and all the Indian nations constantly observe similar customs from religious motives " (p. 120). (11) " The Indians have customs conservant to the Mosaic laws of cleanliness " (p. 123)---such as lunar retreats for women, pollution by touching their dead, and purification rites. (12) " Like the Jews, the Indians abstain from things unclean—they abstain from blood." Adair even brings forth ingenious reasons for their disuse of circumcision. (13) The

Indian marriages, divorces, and punishment of adultery still retain a strong likeness to the Jewish laws and customs (p. 138). (14) Many other of the Indian punishments resemble those of the Jews—their law of retaliation and method of correction of youth and children are similar. (15) The Cherokee had cities of refuge (one town called " Choate ") like the Israelites (pp. 158-159). (16) Before the Indians went to war they had many preparatory ceremonies of purification and fasting, like those recorded of the Israelites (p. 159). (17) They are also similar in their taste for all kinds of ornaments. (18) Their manner of curing their sick is very similar to that of the Jews (p. 172). (19) Their burial of the dead is likewise similar (p. 177). The Choktah method of embalming the dead is described (p. 183) as very like the Hebrew custom. (20) The women's time and manner of mourning for their husbands is similar (p. 186). (21) The surviving brother raises seed to the dead amongst the Cherokee (p. 190) as among the Hebrews. (22) Giving names to children and choosing such appellatives as suited best with their circumstances and times, as among the Hebrews, is observable among the Indians as well (p. 191). (23) The last argument in support is of the origin of Indian Americans, from their own tradition, from the accounts of our English writers, and from the testimonies which the Spanish writers have given concerning the primitive inhabitants of Peru and Mexico.

So we find that quite a large number of traits were used —though the analysis was faulty and the data were not perhaps at all confirmatory, the general scheme worked pretty well. He concludes thus with observations about the origins, " Ancient History is quite silent concerning America, which indicates that it has been since time immemorial rent asunder from the African continent, according to Plato's Timaeus. The north-east parts of Asia also were undiscovered until of late. Many geographers have stretched Asia and Africa so far as to join them together; and others have divided those two quarters of the globe at a great distance from each other. But the Russians, after several dangerous attempts, have clearly convinced the world that they are now divided and have a close

communication by a narrow strait, in which several islands are situated; through which there is an easy passage from the north-east of Asia to the north-west of America, by way of Kamaschatka, which probably joined to the north-west point of America. By this passage, supposing the main continents were separated, it was very practical for the inhabitants to go to this extensive new world; and afterwards to have proceeded in quest of suitable climates, according to the law of nature, that directs every creature to such climes as are most convenient and agreeable " (p. 219).

Besides this we have a very valuable account of the Katahba, Cherokee, Mushkogee, Choktah and Chikkasah nations in about 152 pages, followed by general observations on the North American Indians in another 86 pages, by which Adair has laid all future ethnographers of America under a deep debt of obligation by his veracity and minute observations, and estimate of the populations of the tribes at that time.

CHAPTER III.

Early Scholarship and General Interest in the Science of the American Indian—Collector and Connoisseur Ideals.—1783-1864.

The changes due to the American Revolution.

We have seen the first seeds for the study of man sown by the philosophical speculators and travelling explorers of the preceding periods. Political exigencies were soon to bring the Indian into prominence. During the American Revolution a strong frontier policy was found to be essential. Three commissioners were appointed, one to look after the Six Nations and tribes to the north, the second to take charge of the tribes between the north and the south, and the third to administer to the Cherokee and other Indians to the south of them. Alliance was sought with the Indians both by the British and Americans on equal terms. The Chickasaws and Choctaws sided with the British in 1777 against the United States, and the Cherokee in the previous war had to be brought to terms by Colonel Andrew Williamson. The depredations of the Iroquois and their sympathy with the British were causing anxiety among the Colonials until a strong contingent was sent to deal firmly with the situation. After the revolution this firm policy was continued so that for a long time the new American army was almost continually at war with the Indians.

The eventual victories by which the British came to control the sea shut out once for all French hopes in the New World. Napoleon's acquisition of Louisiana from Spain, and America's prompt purchase on his offer of this little-known tract, determined the future domination of the United States. Yet the significant point here is that a new kind of explorer was called into being by political exigencies, an officer of the State, with as much scientific outlook as possible. Many of the leading politicians of the time were scholars and scientists, like Jefferson and Benjamin Franklin, and they

led the rapid growth in quality and quantity of scientific investigations.

Jefferson's lead in ethnographic research.

Thomas Jefferson (1743-1826), besides being famous for his draft of the Declaration of Independence and as a President of the United States, was a great scholar. He was well educated in languages, mathematics and law. He undertook a mission to Europe during the revolution and studied and travelled there. His was one of the most receptive and original minds of the day. It was he who planned the Lewis and Clarke expedition, and his instructions show how profound was his interest in the Indian. The reports were to include, according to his directions, " their (American Indian) names and numbers; the extent and limits of their possessions; their relations with other tribes or nations; their language, traditions and monuments; their ordinary occupations in agriculture, fishing, hunting, war, arts and the implements for these; their food, clothing and domestic accommodations; the diseases prevalent among them and the remedies they use; moral and physical circumstances which distinguish them from known tribes; peculiarities in their laws, customs and dispositions; and articles of commerce they may need or furnish and to what extent; and considering the interest which every nation has in extending and strengthening the authority of reason and justice among the people around them, it will be useful to acquire morality, religion and information among them, as it may better enable those who endeavour to civilize and instruct them to adapt their measures to the existing notions and practices of those on whom they are to operate."*

Jefferson's views of American Origins.

Thus we find Jefferson having a clear, concise view of the problems involved and the anticipator of Powell as a governmental ethnographic director of research. His views on American origins have often been quoted and are

* P. IV of the draft by Thomas Jefferson quoted in Memoir of Meriwether Lewis by Jefferson in History of the Expedition under the command of Lewis and Clarke by E. Cones (1893), Vol. I, p. 27.

remarkable for their originality and sound logic. "Great question has arisen, from whence came those aboriginal inhabitants of America? Discoveries long ago made, were sufficient to show that a passage from Europe to America was always practicable, even to the imperfect navigation of ancient times. In going from Norway to Iceland, from Iceland to Greenland, from Greenland to Labrador, the first traject is the widest: and this having been practised from the earliest times of which we have any account of that part of the earth, it is not difficult to suppose that the subsequent trajects may have been sometimes passed. Again, the late discoveries of Captain Cook, coasting from Kamschatka to California, have proved that, if the two continents of Asia and America be separated at all, it is only by a narrow strait. So that from this side also, inhabitants may have passed into America; and the resemblance between the Indians of America and the Eastern inhabitants of Asia would induce us to conjecture that the former are the descendants of the latter, or the latter of the former: excepting indeed the Eskimaux, who, from the same circumstance of resemblance, and from identity of language, must be derived from the Greenlanders and these probably from some of the northern parts of the old continent. A knowledge of their several languages would be the most certain evidence of their derivation which could be produced. In fact, it is the best proof of the affinity of nations which can be referred to. How many ages have elapsed since the English, the Dutch, the Germans, the Swiss, the Norwegians, Danes and Swedes have separated from the common stock? Yet how many more must elapse before the proofs of their common origin, which exists in their several languages, will disappear? It is to be lamented then, very much to be lamented, that we have suffered so many of the Indian tribes already to be extint without our having previously collected and deposited in the records of literature the general rudiments at least of the languages they spoke. Were vocabularies formed of all the languages spoken in North and South America, preserving their appellations of the most common objects in nature, of those which must be

present to every nation, barbarians or civilized, with the inflections of their names and verbs, their principles of regimen and concord, and these deposited in all the public libraries, it would furnish opportunities to those skilled in the languages of the old world to compare them with these, now or at any future time, and hence to construct the best evidence of the derivation of this part of the human race. But imperfect as is our knowledge of the tongues spoken in America, it suffices to discover the following remarkable fact. Arranging them under the radical ones to which they may be palpably traced, and doing the same by those of the red men of Asia, there will be found probably twenty in America, for one in Asia, of those radical languages, so-called because, if they were ever the same, they have lost all resemblance to one another. A separation into dialects may be the work of a few ages only, but for two dialects to recede from one another till they have lost all vestiges of their common origin, must require an immense course of time; perhaps not less than many people give to the age of the earth. A greater number of those radical changes of language having taken place among the red men of America, proves them of greater antiquity than those of Asia."*

This has been quoted at some length to show how, by the time of the American Independence, the main research leads in the science of the Indian had been well set. To know the American Indian, to collect ethnographic and sociological data, and to try to solve the problems of origin on a linguistic basis, became the major interests of the scientists who were nucleating round the leading Philosophical Societies and Academies of the time. What we observe is the emergence of the scientific explorer from the earlier background of the trader explorer. The museums, as we shall see later, were just being formed, but the museum lead came properly after the Civil War, and the lead of the Universities still later.

* *Notes on the State of Virginia*, by Thomas Jefferson (London, 1787), pp. 162-65.

Scholarly Explorers of the West.

Even in the Colonial period a systematic exploration of the west was the dream of Carver, an Englishman, and later Michaux, a Frenchman, but the most distinctive exploration was by Meriwether Lewis and William Clarke under orders from Jefferson, and their Report is full of the minutest and most exact details about the number of tribes, or at least their fighting strength, as of the Sioux,* the technological methods, such as making beads, by the Mandans,† history of the various tribes visited,‡ and shows how well these explorers were carrying out the directions of Jefferson for ethnographic research.

Edwin James (1797-1861).

One of the typical scholars of this period was Edwin James (1797-1861), a geologist born in Weymouth and descended from a family of early settlers of Rhode Island. He graduated at Middlebury College in 1816, removed to Albany and studied Medicine with his brother Dr. Daniel James, botany with Prof. Torrey, and geology with Prof. Amos Eaton. He was appointed botanist and geologist to Major Long's expedition to the Rocky Mountains; he was surgeon and Indian agent for the United States Government at various frontier outposts (1826-40), and made a study of the Indian dialects. He translated the New Testament into the Ojibway language. In 1823 his "*Account of an Expedition from Pittsburgh to the Rocky Mountains* performed in the years 1819, 1820 by the order of J. C. Calhoun, Secretary of War, under the command of Major S. H. Long of the U. S. Top. Engineers" was published in London.§ Edwin James gives an accurate description and measurement of several mounds at St. Louis (Nos. 2-27) and says, "These graves evidently contain the relics of more modern people than those who erected the

* See History of the Expedition under the command of Lewis and Clarke, by Lewis, Clarke (4 vols., New York, 1893), Vol. I, pp. 95-101.

† *Op. cit.*, p. 245, Vol. I.

‡ *Op. cit.*, p. 163, Vol. I.

§ Reprinted in Thwaite's *Early Western Travels*, Vols. XIV-XVI (1905).

mounds."* He critically examines the case of the supposed ancient human footprints. "We have no hesitation in saying, that whatever these impressions may be, if they were produced,—as they appear to have been—by the agency of human feet, they belong to a period far more recent than that of the deposit of limestone on whose surface they are found."† There is a valuable description of the Konzas,‡ and a first-hand description of the dance of the Oto,§ and a full, detailed account of the Omahaw—their manners, customs, religious rites, their marriages, infancy, relationship of parents and children, old age, diseases, medical and surgical knowledge, drunkenness and other vices, ideas of God and a future state, superstitions and practice of the Magi, expiatory tortures, death, mourning for the dead, physical character, senses, manufactures and arts, domestic and warlike implements, war, negotiation for peace, self-esteem, mimicry, tribes and bands, fabulous legends, wit, migrations, language, and human sacrifices.‖ These descriptions show the completeness of the observations and minute details of personal research of Mr. Say, from whose notes they were collected. There is a further description of Cherokee Indians and the results of the introduction of civilization among them and¶ a valuable vocabulary of the Indian languages of Oto, Konza, Omahaw, Sioux (Yankton), Minnbau, Pawnee, and Cherokee.** There are also some interesting accounts of the Osage nation and their manner of taking wild horses.††

Thomas Nuttall (1786-1859).

Of a similar scholarly type was Thomas Nuttall (1786-1859), an ornithologist and botanist. He came to America in 1808 and spent many years exploring in the lower Mississippi region. He was for a time Professor at Harvard. He was

* *Op. cit.*, Vol. XIV, pp. 112-17.
† *Ibid*, p. 110.
‡ *Ibid*, pp. 188-98.
§ *Ibid*, p. 230.
‖ *Op. cit.*, Vol. IV, pp. 288-319, and Vol. XV, pp. 1-165.
¶ *Op. cit.*, Vol. XV, pp. 18-22.
** *Op. cit.*, Vol. XV, pp. 288-308.
†† *Op. cit.*, Vol. XVI, p. 272.

honorary member of the American Philosophical Society and of the Academy of Natural Sciences. In 1821 he published his book, "*A Journal of Travels into the Arkansas Territory during the year 1819 with occasional observations on the manner of the Aborigines*," illustrated by a map and other engravings. The philological outlook and the importance of the New World data are quite clear and strong in his mind. "The aboriginal languages of America, hitherto so neglected, and consigned to oblivion as useless relics of barbarism, are, nevertheless, perhaps destined to create a new era in the history of primitive language," (preface). His ethnographic observations are also quite deep. Speaking of the Cherokees he remarks, "In no part of America have we met with that kind of irrational adoration called idolatry. All the natives acknowledged the existence of a great, good and indivisible Spirit, the author of all created Beings. They have also a belief in the immortality of the soul" (p. 133). He describes the remarkable "city of refuge" thus: "An institution, I believe, unparalleled in the policy of the Northern Natives, except among the Cherokees and Creeks (and which has been quoted by Mr. Adair in order to prove an affinity with the Jews), was the existence of a town of refuge, inhabited by the Supreme Chief, in which no blood was suffered to be shed and into which those who had committed manslaughter and other crimes were suffered to enter on excusing themselves, or preferring contrition" (p. 134). In his Appendix, Section I, he really tries to describe the aboriginal population on the banks of the Mississippi, gives the detailed description of the expedition of Ferdinand De Soto in 1539, his relations with the Indians and his death in 1842. In Section II of the Appendix he offers valuable observations on the Natchez, their worship of the sun and claim of descent and origin from it, like the Hurons (p. 268), and their successive prayers in the morning. In Section III he gives some observations on the Chicsaws and Choctaws, "who speak a language considerably related, entertain a tradition in common with the Delawares, the Illinois and most of the natives of North America, of having once migrated from the

west and crossed the Mississippi to their present residence " (p. 283).

" Thus we find a number of early Trans-Mississippi explorations undertaken by ambitious and thoughtful explorers, often mainly for scientific collections of botanical and zoological specimens in a newly opening region. Thus the great expedition of Lewis and Clarke (1804-06) was, both in conception and plan, a scientific excursion. Bradbury and Brackenbridge voyaged up the Missouri (1811) in search of rare plants and animals; Nuttall sought the Arkansas (1819) on a similar errand; Long's expedition (1819-20) was entirely scientific both in organization and objects; while Townshend crossed the continent with Nathaniel Wyeth (1834) to secure a harvest of rare birds in the mountains and beyond."*

Maximilian (1782-1867).

One of the most interesting figures to whom this call of the wild, and the glamour of science, came in early life was that unusual scientist, Alexander Philip Maximilian (1782-1867), Prince of Wild-Neuwied, eighth child of the reigning Friedrich Karl. He had fought in the battle of Jena, been captured and later ransomed, won the distinction of the Iron Cross at Chalon and entered Paris with the victorious army in 1813. But his love for natural history was keen from his very childhood, and later he came under the influence of the famous Professor Johann Friedrich Blumenbach. Early in 1815 he conducted an investigating tour to Brazil and published three books about the journey and the natural history of Brazil, which were translated in French, Dutch and English, and gave him an honored place among scientists. In 1832 he arrived in North America for his second famous investigating tour, which lasted for two years. The results were published in his *Reise in das innere Nord-America in den Jahren* 1832 *bis* 1834 (Coblentz, 1839-41), with an atlas of engravings by Charles Bodmar, the young Swiss artist who

* R. G. Thwaite, *Early Western Travels*, 1748-1846 (Ohio, 1906), Vol. XXII, p. 9.

had accompanied him, of primitive landscapes, together with portraits of the aborigines. The book is extremely valuable as a contemporary record of many traits of character and culture among the various tribes he visited, and the famous engravings of these. The Appendix contains "Vocabularies of the Tribes of North-Western America with an account of the sign language; tradition of the origin of the Oto, Java and Missouri; extract from an Indian land contract; and treaty of peace between the American Fur Company and the Blackfeet;" along with other things—these being invaluable for a study of the culture-changes and culture-adaptations in these tracts under European contact. In the first section of the Appendix he takes up the attitude of all the scientists of the period in trying to solve the problem of the American Indian philologically. "All conjectures over the origin and relationship of these peoples must await the more trustworthy conclusions which it will be justifiable to draw from the relationship of their languages."* Further on he continues, "In an examination of the tribes of America, the multiplicity of their languages is very striking. These languages are often confined to quite small tribes; their origin is quite correctly explained by Mr. Gallatin. From the interesting work of this scholar it appears, however, that a certain similarity of character belongs to this multitude of tongues, a circumstance that testifies to their common origin as well as to the antiquity of the American population."†

George Catlin (1796-1872).

Bodmar's engravings which accompanied the volumes of Maximilian's travels, depicting such interesting ethnographic details as "bear-trap, Indian pipes, Omaha Indians, tents of the Sioux burial stages, Ponca Indians in buffalo robes, Mandans in Bull-dance costume, bows, arrows and quiver, club with a carved head, harpoons for dolphins, and others, show

* R. G. Thwaite, *Early Western Travels*, 1748-1846 (Ohio, 1906), Vol. XXIV, p. 201.

† R. G. Thwaite, *Early Western Travels*, 1748-1846 (Ohio, 1906), Vol. XXIV, p. 203.

the widespread interest in all the items of life concerning the American Indian. The greatest credit for enshrining the latter in art, however, belongs to George Catlin (1796-1872), lawyer and painter, who conceived the idea of a pictorial record of Indians. He was the father of American Indian art and spent eight years afield. His exhibits were shown in Europe and aroused considerable interest. His "*Indian gallery of portraits, landscapes, manners and customs, costumes, etc., etc., collected during seven years' travel among thirty-eight different tribes, speaking different languages,*" bearing certificates of authenticity from William Clarke and Henry Schoolcraft, is of great value. It included portraits of Osage, Sacs, Foxes, Pawnee, Konza, Comanche, Kiowa, Weecoo, Sioux, Puncah, Crows (Bel-ant-sa), Mandans, Blackfoot, Menom-o-nie, Shawnee, Gros-Ventres, Chippeway, Iroquois, Riccaree, Flatheads, Assiniboin, Shienne, Cherokee, Muskkogee, Winnebago, Iowa, Seneca, Oneida, Qua-paw, Ottawah, Peoria, Shoshone, Omahaw, Oto, Seminole, Kickapoo, Kaskaskia, Cree, Choctaw, Delaware and Pawnee of the Platte, besides illustrations of their various games, religious ceremonies and other customs. His book, "*Illustrations of the Manners, Customs and Conditions of the North American Indians*" (1848) is of the greatest value in studying the economic reality of the American Indian in the first flush of prosperity, with the opening up of trade by European contact. Nowhere else do we get such a complete picture of the American Indian life as a whole and in a full setting of the changing environment of his day. If Catlin had been one of the great masters, his service to the Indian would have been much greater than that of Irvine's pen. In fact, in pre-photographic days the artists gave the most reliable and accurate data on the life and activities of these fast disappearing phases of life and illustrations gathered from the field by first-hand observers. Catlin, by means of Indian painting was also diffusing knowledge, showing "six hundred paintings with twenty-thousand full length figures" in 1871 in New York. These pictures did much to stimulate interest in the American

Indian. Catlin had an immediate following in artists, like J. M. Stanley, who was advertising in Cincinnatti in 1846 a North American Indian portrait gallery with one hundred portraits of Seminole, Creeks, Cherokees, Osage and Stockbridges.

The Contributions of the painters.

These contributions of painters not only aroused interest in the noble, manly physique and warlike sports of the savage of the American backwoods, but were soon to create public interest in the preservation of aboriginal life and the recording traditions and other anthropological data. It is recorded that in Rajputana the most chivalrous Hindu dynasties, dating back at least to the fifth and sixth centuries A.D., still, at the time of their coronation, invite the chieftain of the surviving primitive hunting tribe, the Bhil, who comes and marks with unguent the forehead of the Rajput prince on his ascendance to the throne, thus symbolizing the recognition of his former greatness by his vanquisher. In North America also, the more the American Indian was conquered, the more he was crowded off the land, the greater and more insistent was the call of the American citizen for him to come and beautify the metropolises by stately shrines in museums and art and literature and having the beautiful custom of inviting Indian chiefs to ride in the inaugural procession of an incoming President to symbolise the coming in of the later conqueror. It is in this period that the romanticist, the theorist, the art worshipper, began to offer incense at the shrine of the American Indian.

In Colonial times the painters were visiting Englishmen. According to Lee,* "The period, approximately from 1725 to 1825, produced at least twenty painters of considerable output and high capabilities." In the previous century New York has been the centre of painting, with Evert and Gerret Duyckinck, Henri Coutourier and Ian Striyiker, though there was Tom Child in Boston. It was the custom of foreign painters to make professional tours to America, and we hear of

* *Early American Portrait Painters*, by Cuthbert Lee (New Haven, Yale University Press, 1929), p. 3.

the reputation of John Sneibert, a Scotchman, Gustavus Hesselus, a Swede, Jeremiah Theiis, a Swiss, James Sharples, an Englishman educated in France, and others. Charles Wilson Peale (1741-1827), a founder of the Pennsylvania Academy of Fine Arts, in 1805, and a conceiver of a museum as early as 1785, when some mastodon bones were discovered, and for some years the principal portrait painter of Philadelphia, is known to have painted some of the Indians who visited Philadelphia, two of them being Joseph Brant or Thayendanegea (1742-1807) and Red Jacket or Sagayetha (1751-1830), a Senecan chief. The American Indian has also been immortalized by Gilbert Stuart (1756-1843), and John Trumbull (1756-1843). Gilbert Stuart is famous throughout the world on account of his Athenaeum bust of George Washington. " Were his Washington portraits non-existent, Stuart would still be the greatest of the early American painters and the best portrait painter this country has produced, ranking with the great names of the British school of his time: Reynolds, Gainsborough, Lawrence, Romney and Raeburn."* " John Trumbull is chiefly known as the historical painter of the Revolutionary War. His miniature portraits in oil of the leading officers and statesmen of the period are his best work. His excellence from the standpoint of art is recognized by critics abroad as well as at home."† " His miniature oils include several of Indian chiefs, which are important as among the very limited number of early portraits of Indians."‡ Thus the American Indians who had been figuring in wood engravings of De Bry's voyages (1591), or Champlain's great work, gradually came to their own by the time American art through Copley and West matured into Stuarts and Trumbulls. Gradually the English influence declined and with the founding of the National Academy of Design, New York became the

* *Op. cit.*, p. 13.

† *Op. cit.*, p. 125.

‡ *Early American Portrait Painters*, by Cuthbert Lee (New Haven, Yale University Press, 1929), p. 146.

art center, with the growth of the Hudson River School through Thomas Doughby (1793-1856), Asher Brown Durand (1796-1886) and Thomas Cole, who came to New York in 1825 and, though dying early in 1848, was really the father of the school of landscape painting. But the great painters did not specialize in the American Indian. It was the ordinary illustrator type that did this. But as field observers they were invaluable and they used their art as we now use the camera. Thus it is that we have to come back to George Catlin and his bulky volumes of engravings, and writings. In his "*Souvenir of the North American Indians as they were in the middle of the 19th century, a numerous and noble race of Human Beings fast passing to extinction and leaving no monuments of their own behind them*" he writes in his own handwriting (Yale Library 26.001/1), "Having become fully convinced of the certain extinction of the North American Native Races, I resolved at an early period of my life, to make and preserve for future ages, as far as my individual labors and personal means would enable me to do, a pictorial history of those interesting people; and with this view have, with great fatigue and expense (and with the most complete success) visited forty-eight tribes, mostly speaking different languages. From amongst these tribes I have brought home a very extensive collection of portraits, and other paintings illustrating their modes of living and customs, the portraits of which collection are mostly contained in these volumes, reduced from the original paintings and copied by my own hand, even to the smallest ornaments and trinkets; and in justice to these abused peoples, be it as imperishable as these designs, that amongst two millions of them where I have travelled unprotected, they have uniformly treated me with hospitality and with kindness." (Signed, George Catlin, London, 1852.) His published work on "*Illustrations of the Manners, Customs and Condition of the North American Indians*: in a series of Letters and Notes written during eight years of travel and adventure among the wildest and most remarkable tribes now existing, with three hundred and sixty engravings from

author's original paintings, had already, in 1848, run through six editions. In Letter No. 1 he gives an estimate (much exaggerated) of the number of American Indians as formerly sixteen millions and now only two millions (Vol. I, p. 6). He points to the interest in the American Indian by his contemporaries. " The Indians (as I shall call them), the savages or red men of the forests and prairies of North America, are at this time a subject of great interest and some importance to the civilized world; rendered more particularly so in this age, from their relative position to, and their rapid declension from the civilized nations of the earth. A numerous nation of human beings, whose origin is beyond the reach of human investigation, whose early history is lost, whose term of existence is nearly expired, three-fourths of whose country has fallen into the possession of civilized man within the short space of two hundred and fifty years, twelve millions of whose bodies have fattened the soil in the meantime; who have fallen victims to whiskey, the smallpox and the bayonet; leaving at this time but a meagre proportion to live a short time longer, in the certain apprehension of soon sharing a similar fate " (p. 4, Vol. I). Thus Catlin's sympathies are mainly humanitarian, in keeping with the noble activities of Robert Owen and Jedediah Morse of his day. It is this sympathetic attitude and the appreciative descriptions that make his works live, though there is no want of keen ethnographical observation, or detached scientific interest. It is very interesting to read from Catlin the Psychological reaction of the American Indian in a concrete instance to the appearance of the first steamer at the mouth of Yellowstones, Upper Missouri. " Among the Mandans some called it the ' big thunder canoe,' for when in the distance below the village they " saw the lightning flash from its sides, and heard the thunder come from it;" others called it the " big medicine canoe with eyes;" it was *medicine* (mystery) because they could not understand it; and it must have eyes, for, said they, " it sees its own way and takes the deep water in the middle of the channel ",.....(p. 20, Vol. I). Hearing the twelve-pound cannon

discharged several times " some of them laid their faces to the ground, and cried to the Great Spirit; some shot their horses and dogs, and sacrificed them to appease the Great Spirit, whom they conceived was offended; some deserted their houses and ran to the top of the cliffs some miles distant" (p. 20, Vol. I). Among other data we note an account of the Missouri Indians and their buffalo hunt (pp. 23-25), described with engravings, Blackfoot medicine-men (pp. 39-41), the Crows (p. 42), the pipe-dance of the Assineboins (p. 58), who derive their name from their manner of boiling meat without pots, the Mandan and Minataree villages and customs are described with all the art of a fascinating story-teller and with his humane interest he points out how an Indian in Washington " is a speechless brute and a drunkard," though " they are a far more talkative and conversational race," how " we mutually suffer in each other's estimation from the unfortunate ignorance which distance has chained us in " and how " these people are in the habit of seeing no white men in their country but traders, and know of no other; deeming us all alike and receiving us all under the presumption that we all come to trade or barter; applying to us all indiscriminately the epithet of liars or traders " (pp. 85-86). The second volume gives interesting details of Ioways, Osages, Camanche villages, Kickapoos, Weas, Potowatomies, Kaskaskias, Peorias, Piaukeshaws, Delawares, Mohecannahs, Oneidas, Tuskaroras, Senecas, Iroquois, Flatheads, Nez Perces, Chinvoks, Chuhaylas, Shawnees, Cherokees, Creeks, Choctaws, Sioux, Chippeway, Winnebagoes, Menominies, Seminoles, invariably accompanied by engravings of the greatest ethnographic value in the pre-photographic days. But Catlin's descriptions and drawings of the dances and hunts, horse captures and games are, and will always remain, an invaluable source of information, remarkable for lucidity and fidelity, about the customs which had not yet shrivelled under European contact. Catlin is always safe to appeal to if we want to know the sympathetic gentleman's attitude to the solution of American Indian problems. " I might never have been made to see the necessity

of showing how these people *came here*, or that they *came here* at all; which might easily have been done, by way of Behring's Strait from the North of Asia.....I believe, with many others, that the North American Indians are a mixed people, that they have Jewish blood in their veins, though I would not assert as some have undertaken to prove, ' *that they are Jews* ' or that they are ' the ten lost tribes of Israel ' '' (pp. 230-31, Vol. II). He can distinguish between the diffusion of culture-traits and migration of race-affinity. '' That customs should be found similar, or many of them exactly the same, on the most opposite parts of the continent, is still less surprising; for these will travel more rapidly, being more easily taught at treaties and festivals between hostile bands, or disseminated by individuals travelling through neighbouring tribes, whilst languages and blood require more time for their admixture '' (Vol. II, p. 235).

So we find the great value of Catlin's work lies in the graphic representation of definite social and ethnographical facts at a definite date. It is worth while in this connection to search the voluminous pamphlet literature which was growing in size and capturing the public imagination at this time, like the *History of the Spirit Lake Massacre* (1857); *Captivity among the Sioux Indians of Miss Annie Coleson : her own narrative* (1875); or the earlier *Report of the Indians of Upper Canada by a Sub-Committee of the Aborigines Protection Society* (1839), or the still earlier *First Annual Report of the American Society for promoting the civilization and general improvement of the Indian Tribes in the United States* (New Haven, 1824). The last was sponsored by Rev. Jedediah Morse, who in 1820 was commissioned by the President to visit all Indian posts and to study the situation. These humanitarian activities enlisted the sympathy of celebrated English reformers like Robert Owen (1771-1858), who founded an intellectual community at New Harmony, Indiana, in 1824. His son, Robert Dale Owen (1801-1877), came to settle there and was one of the founders of the Smithsonian Institution, which created the scientific centre.

The litterateurs on the American Indian.

Perhaps the greatest credit for enshrining the American Indian in the heart of his new conquerors should go to two masters of fiction and literature, Fenimoore Cooper (1789-1851) and Washington Irving (1783-1859). Thanks to their efforts the American Indian became the recognized hero of fiction, tales of adventure and nobility. Cooper was born on the frontier and saw the American Indians daily. He went to Yale but was expelled for lack of interest. After serving in the navy he retired to his boyhood home and took to writing novels, but before discussing Cooper and Irving themselves we have to survey the vicissitudes of the American Indian at the hands of the litteratuers. For the early Puritans and Virginians and their attitude toward the inhabitants of the New World we may turn to John Smith and his *Description of New England* (1616), Robert Gushman and his *Reasons and Considerations touching the lawfulness of removing out of England into the parts of America*, John Winthrop and his *General Considerations for planting New England*, and John Cotton's *God's Promise to His Plantations*. "The orthodox thing is to begin with parallels from Hebrew history, the Puritans being confident that by grace of a non-apostolic succession, they were now Jehovah's chosen people. Fortified by Biblical precedents they proceeded with a perfunctory remark or two about the duty of converting the Indians, sometimes for the benefit of the over-scrupulous, setting forth elaborate distinctions between 'natural rights' and 'civil rights' and proving to their own satisfaction that the Indians had no real claim to the lands they occupied. Besides, they were the devil's children anyway, and was it not downright impious to acquiesce in the fiend's possession of that fair land?"* According to the charter of the colony of Massachusetts Bay: "To win and invite the natives of this country to the knowledge and obedience of the only true God and Saviour of Mankind and the Christian faith, is our royal

* Hazard, *The Frontier in American Literature* (1927), p. 5.

intention, and the adventurer's free profession is the principal end of this Plantation." The Indian, to the Puritan, was an enemy or ally, or a slave. The hackneyed lament of John Robinson, "Oh, how happy a thing had it been if you had converted some before you had killed any;" the unanimity of the Puritan chronicles in praising "the special interposition of Providence in reducing by disease the Indians in Massachusetts from thirty thousand to three hundred;" the Johnson antithesis, "God cast out the heathen to make room for his people," all show that to Puritan New England "the only good Indian is a dead Indian." The seventeenth century Puritan was entirely free from sentimentality about the "noble savage" or "the pleasure in the pathless woods." With the arrival of the Virginian cavaliers in the south the attitude changed. The Virginians, with chivalrous naiveté, accept the Indian civilization as one entitled to respect on an equal footing. It was the graceful tribute of John Smith to Pocahontas that first made her the rage of London society. Byrd respects the contemporary state of Indians and cherishes perfectabilian hopes of their further educability and states with characteristic eighteenth century egalitarianism, "All nations of men have the same natural dignity, very bright talents may be lodged under a very dark skin. The principal difference between one people and another proceeds only from the differing opportunities for improvement."* In Crockett's *Narrative of the Life of David Crockett of the State of Tennessee* we find the barbarities of Indian warfare reappearing with gruesome realism in the pages of one whose father and grandmother were murdered in their cabin by the Creeks.

Fenimoore Cooper (1789-1851).

Coming back to Cooper and his *Leatherstocking Tales*, which have not been unjustly called "the epic of the American Indian," we find they have survived Mark Twain's attack for "literary offences," Lowell's complaint of their "insipid

* Hazard, *The Frontier in American Literature* (1927), p. 59.

females," Bret Harte's gibes at their "deus ex machina scheme," and still endear themselves to young imaginations. The order of publication is as follows: "*The Pioneers*, 1823; *The Last of the Mohicans*, 1826; *The Prairie*, 1827; *The Pathfinder*, 1840; and *The Deerslayer*, 1840; but the chronological sequence in the hero's life is somewhat different and the order should be as follows: *The Deerslayer, The Last of the Mohicans, The Pathfinder, The Pioneers*, and *The Prairie*." Cooper's division of the Indian tribes into good and bad is more or less conventional, the former being the Delawares and the Mingoes, and the latter represented by the Pawnees and the Sioux. In the introduction to "*The Last of the Mohicans*"—Cooper's best book, perhaps—we read, "Few men exhibit greater diversity, or, if we may express it so, greater antithesis of character than the native warrior of America. In war he is daring, boastful, cunning, ruthless, self-denying and self-devoted, in peace just, generous, hospitable, revengeful, superstitious, modest, and commonly chaste." Thus Cooper has an eye to the good and bad sides of his character. In spite of his Uncas and Chingachgook, we find his Indians more often as villains and drunk. Cooper was a well-read man and incidentally touched with considerable restraint upon the question of the American Indian origin in the same introduction. "It is generally believed that the Aborigines of the American continent have an Asiatic origin. There are many physical as well as moral facts which corroborate this opinion and some few would seem to weigh against it." Through Major Heywood he brings out the typical cavalier and eighteenth century attitude, shorn of all fantastic idealism, towards the Red Indian character. "Let us not practise a deception upon ourselves by expecting any other exhibition of what we esteem virtue than according to the fashion of a savage. As bright examples of great qualities are but too uncommon among Christians, so are they singular and solitary with the Indians; though for the honor of our common nature neither are incapable of producing them" (p. 65, *The Last of the Mohicans*).

Washington Irving (1783-1859).

When we come to Washington Irving we are in the presence of one of the greatest masters. His place in literature is abiding, though the occasion that brought him forward was the need for combating a mud-throwing campaign in English journalism on the inanities of Colonial life. Irving's service has been to release the American mind of its inner conflict between love for its adopted land and longing for its past homeland, its inner subconscious admiration for English idealism and literary grandeur, and open professed rivalry in the field of commerce and materialism. It is not with Rip Van Winkle and the Legend of Sleepy Hollow,—the classics of the modern schoolboy—that we are concerned, but with his *Astoria* and the *Adventures of Captain Bonneville* which weave all the mediaeval glamour and romance of knight-errantry around the frontier hunter and trapper. "*Astoria*" deals with Mr. Astor's ill-fated settlement of that name, giving an account of the voyage and fate of the Tonquin, the overland expedition of Mr. Hunt, the return party of Mr. Stuart, and the betrayal (as it seemed to Irving) of Astoria into the hands of British rivals. In "*The Adventures of Captain Bonneville*" Irving takes up the story of the American fur trade, at the time of the failure at Astoria, gives a brief résumé of subsequent activities, such as the Ashley-Smith expeditions, and then, basing his material on Captain Bonneville's manuscripts, details the travels of that party from their departure from Fort Osage on the first of May, 1832 to their return in August, 1835. "The characterization of Indians is in type groups, and his comments on them are in the main decidedly more favourable than in the Leather-stocking Tales. The depredations of the 'bad' Indians are more often mischievous pranks than brutal barbarities. The massacre on the Tonquin, unlike the massacre in *The Last of the Mohicans,* is directly ascribable to the arrogance of the white man. On the other hand, wanton outrages of the whites against the Indians are set down without extenuation. Good Indians such as the Nez Perces are depicted (and this

on the authority of Captain Bonneville) as possessed of all the virtues with which Cooper endowed the Delawares. The dignity and eloquence of the Indians' speeches are illustrated in the defiance of the defeated Blackfoot chief."* "The true hero of the epic, as Irving sees it, is not the Indian, however, nor the trapper, but the promoter, the business man who stands in the background scheming, devising, directing; at whose bidding and for whose profit the Stuarts and Hunts and Bonnevilles go forth, before whose advancing mechanistic civilization the Blackfeet are doomed. . . . The Indians are on the whole merely picturesque and pathetic specimens of an inferior race."*

Modern literary revival of interest in the American Indian.

Before coming to Irving's work proper it is interesting to draw attention to the recent revival of interest in the life of this period, especially Mr. John G. Neihardt's "*The Splendid Wayfaring*" (1920), where the trappers, instead of being crude, primitive and of inferior intelligence, are idealized into heroes. In "*The Song of the Indian Wars*" (1925) Neihardt tries to paint the clash of the cultures where the tragic grandeur of Cooper's heroes disappears in a conscious impersonality. In another recent work of Henry John Moberly, a former factor of the Hudson Bay Company. "*When Fur was King*" (1929), we are given useful and interesting details, but the American Indian has been dismounted from his heroic steed and saddle to be made into very useful hunter, or a good shot in the service of the company. He records, "A horse was worth about twenty made-beaver; a good robe, two; ammunition valued at ten balls, or one quarter of a pound of gunpowder, for a made-beaver" (p. 35). He describes the red man thus, "With the Indian on the warpath primitive passions held sway. Woe betide the enemy who by any dark mischance fell within his power!. . . The Indian in his martial activity was utterly ruthless; the atrocities he committed and the indignities he inflicted upon

* *Op. cit.*, pp. 121-22, 124.

the persons of his foes, not infrequently while still alive and conscious, would not bear relating in any book " (p. 179).

Irving's *Astoria* and Adventures of Captain Barneville.

Irving, after returning from a seventeen-year tour in Europe, took a wide and extensive tour in America and brought out in 1835 " *A Tour on the Prairies.*" Here he describes the Osage Indians " stern and simple in garb and aspect," with " fine Roman countenances and broad, deep chests ; " gaily dressed Creeks " quite Oriental in appearance," along with hunters and trappers. But *Astoria* teems with details about early American enterprise ; the coureurs du bois, so accustomed to the Indian mode of living and the perfect freedom of the wilderness, that they lost all relish of civilization," the French merchant, a kind of commercial patriarch, the North-west Company, in its " powerful and prosperous days of feudal sway." Besides the description of the Hawaiians, many Indian tribes are contrasted as " hunting Indians of the prairies and piscatory Indians of the sea-coast," and incidentally we get a good picture of the first effect of European trade on such tribes as the Chinook. " Each village forms a petty sovereignty, governed by its own chief, who, however, possesses but little authority unless he is a man of wealth and substance, that is to say, possessed of canoes, slaves and wives " (Ch. 8). Nowhere else do we get such a graphic description of the fishing mart of those days, and the corrupting effects of " the habits of trade and avidity of gain in the aboriginal emporium (Ch. 10). The description of some of the half-civilized Indians " who retained some of the good and many of the evil qualities of their original stock " is particularly good. " They were firstrate hunters, and dexterous in the management of the canoe. They could undergo great privations and were admirable for the service of the rivers, lakes, and forests, provided they could be kept sober, and in proper subordination ; but once inflamed with liquor, to which they were madly addicted, all the dormant passions inherent in their nature were prone to break forth, and to hurry them into the most vindictive and

bloody acts of violence. Though they generally professed the Roman Catholic religion, yet it was mixed, occasionally, with some of their ancient superstitions, and they retained much of the Indian belief in charms and omens " (Ch. 12). Such personal, accurate, literary descriptions may be picked out by the hundred throughout the book. The burial of Blackbird, the Omaha chief (Ch. 16); the ruthless character of the Sioux Tetons, " A sort of pirates of the Missouri " (Ch. 17); the two Arickara chiefs (Ch. 20) and their negotiation to supply all with horses, " which they might steal if they had not enough: " the description of an Indian toilet, " an operation of some toil and trouble " (Ch. 21); the Cheyennes " whose only possession was horses, war, famine or pestilence, together or singly, having brought down their strength and thinned their numbers " (Ch. 23); the notorious horse-stealing Crows (Ch. 24); Shoshonie and Flathead anecdotes (Ch. 29); Snake Indian camps (Ch. 30); Sciatoga and Tus-che-pa camps (Ch. 37); and the full description of the natives in the neighbourhood of Astoria (Ch. 40)—these would grace any book written by the best ethnographer, but would, however, lack the incomparable charm of Irving's style, which makes all true description as entrancing as fiction. Similarly, in the *Adventures of Captain Bonneville*, the reader is made to live again the prairie life of those days, in contact with the wild tribes, and participate in the keen interest and rivalries of the fur-trading companies; travel through " a Crow paradise " and learn the cost of an Indian present; encamp with the Nez Percés; contact the Blackfeet Indians; witness the conversion of the Shoshonies and learn that two good horses were very good pay for one bad wife of the Shoshonie. The picture is astonishingly complete and it is hard to draw the line between fiction and true narrative of a journey in these descriptions. It is their very charm that has kept them from being reckoned as sources of ethnography. Without them no ethnographer can half understand the fast disappearing life of the frontier in those days, the rapidly changing Indian and the speedily transforming American,

both mutually suspicious of and respectful toward each other. The whole life is aglow with romance and scintillates with interest, and though the American Indian often becomes a pale, shadowy ideal, a figurative figment of the brain of the story-teller, he comes to entwine himself around our hearts, and we feel with him, resent his weaknesses, his shortcomings, and feel within our hearts that perhaps we have not done the right thing toward him.

Albert Gallatin (1761-1849).

We may well close this great period prior to the Civil War with a review of two of the greatest ethnological figures in the American field, Albert Gallatin (1761-1849) and Henry R. Schoolcraft (1793-1864). Gallatin, famous as a diplomatist and financier, was born in Geneva, Switzerland, on January 29, 1761, became an orphan at nine years of age, emigrated to America in 1780, and taught French at Boston and Harvard in 1782-83. From there he went to the Pennsylvania frontier and engaged in trade and state politics, was elected to the United States Senate in 1793, but rejected as an alien. He was made a Member of the House in 1795-1801 and was soon elected leader of the Republican party. In 1801-1813 he became eminent as Secretary of the Treasury. Later he was sent as minister to France and England. Retiring to New York in 1828 he became President of a National Bank. Gallatin was a founder of the University of the City of New York, in 1830-31. He introduced Swiss artisans in the manufacture of glass in Pennsylvania. A scholarly man, he was founder and first President of the American Ethnological Society, organized in 1842, and President of the New York Historical Society in 1842-43. In 1836 he published "*A Synopsis of the Indian Tribes of North America,*" and in 1845 "*Notes on the semi-civilized Nations of Mexico, Yucatan and Central America, with conjectures on the origin of the semi-civilization of North America,*" besides papers on currency and banking. Gallatin's prefatory letter shows his comprehensive viewpoint and cautious, scientific attitude. He tries to stress the philological standpoint and stands as a

connecting link between Du Ponceau and Major Powell. He sensed the difficulty in the application of the term "family," of which we find echoes in the writings of later eminent Philologists of America "The expression 'family' applied to Indian languages, has been taken in its most extensive sense, and as embracing all those which contained a number of similar primitive words, sufficient to show that they must at some remote epoch, have had a common origin" (Prefatory Letter, p. 4).* Like Jefferson he was a believer in the great antiquity of the American race, a legacy which he passed on to the baffled Putnam and the students of the Nebraska skull. "Whilst the unity of structure and of grammatical forms proves a common origin, it may be inferred from this combined with the great diversity and entire difference in the words of the several languages of America, that this continent had its first inhabitants at a very remote epoch, probably not much posterior to that of the dispersion of mankind" (*Ibid*, p. 6). It must be remembered here that Palaeoliths and Palaeolithic fossil skulls as criteria of antiquity had not yet clouded the serene inductions of the philologists; they all had it their own way.

How sound Gallatin's work was can be judged by the fact that though there have been considerable additions to his list of formulas by later data there has been very little supersession of his. We all know of Major Powell's linguistic map, but if had not Duponceaux's work and Gallatin's map had not preceded it, it would hardly have been possible. Further, Gallatin's grasp of the cultural content is remarkable. Thus of the Peruvians and Mexicans, he held that their astronomical knowledge was of local origin. He endeavored to show that the cereals of the Eastern Hemisphere (millet, rice, wheat, rye, barley, oats) were entirely unknown to the aboriginal Americans; and that maize, which was the great and

* *Transactions and Collections of the American Antiquarian Society*, Cambridge, 1836, Vol. II.

almost sole foundation of aboriginal agriculture, was exclusively of American origin, indigenous in Mexico and adjacent tropical regions, from whence it spread in different directions. Later research, with its acute distribution and culture-area-mapping method, has amply corroborated this position taken by Gallatin in days when Caleb Atwater and Bradford had not ceased to talk of connections overseas with China, Hindustan, and other civilized parts of the Old World. The environmental situation and the independent origins of civilization in favoured tracts are strongly advocated by him; "Those centers of American civilization were all found precisely in those places, where we might have expected to find them, if that civilization was of domestic origin. . . . In America, in the torrid zone, extensive and fruitful districts of elevated tableland and valley enjoy a climate as mild and favorable as the banks of the Euphrates and of the Tigris. It is accordingly in those favored spots, in the vicinity of Mexico, of Santa Fe de Bogota, of Quito and of Cuzco, that were found those agricultural and manufacturing nations, those extensive empires and populous cities with regular forms of worship and of government which excited the wonder and inflamed the cupidity of the European invaders" (*Ibid*, pp. 145-46). Though essentially a philologist, Gallatin has a rare sense of the general cultural differentiation of the New World. Linguistically, he follows in the wake of Heckewelder and Du Ponceaux, with four main divisions." (1) The northern nations like the Esquimaux, etc., (2) the Algonquin, Lenape and Iroquois Nations, (3) the southern Indians east of the Mississippi, and (4) the tribes between the Mississippi and the Pacific Ocean" (*Ibid*, p. 9). Thus his classifications are mainly geographical, though the philological differentiations are strong in his mind. Later he almost stumbles into the culture-area idea by trying to group them by food content. "All the Indians of North America, north of the civilized districts of the Mexican empire, may be arranged in two classes; those who cultivate the soil and those who derive their substance exclusively from the natural

products of the earth and the sea '' (*Ibid*, p. 149). He then goes on to describe the main foods of these regions, such as wild rice or oats among the Menomini, and also differentiates between the northern musk-ox and reindeer region and the southern buffalo and common deer tract. He also speaks of the salmon and seal food of the Esquimaux. Gallatin has also a surprising grasp of the limitation of population by the status of a culture. '' The population of nations which, for their sustenance, depend exclusively on natural products is necessarily limited by the quantity naturally produced. A nation of hunters, living exclusively on game, cannot increase the quantity which a given extent of territory can sustain '' (*Ibid*, p. 150). He has a correct notion of the nearer estimate of the true aboriginal population, which we have found so sentimentally inflated in authors like Catlin: '' The four millions of industrious inhabitants, who, within less than forty years have peopled our western states, and derived more than ample means of subsistence from the soil, offer the most striking contrast when compared with perhaps one hundred thousand Indians whose place they occupy '' (*Ibid*, p. 159). Thus we find that Haven's remarks about the work of Mr. Gallatin are more than justified: '' Mr. Gallatin's general conclusions were not dissimilar to those of Mr. Duponceau. Being less imaginative and less under the influence of excitement produced by the development of unexpected and extraordinary characteristics in the American languages, he employed a cooler and stricter logic in their examination. He had the advantage also of a wider scope, and a field of observation prepared to a considerable extent by previous labors. Hence, his view is more comprehensive, and his exposition of details more complete.''*

H. R. Schoolcraft (1793-1864).

Henry Rowe Schoolcraft was born in Albany county on March 28, 1793. His mind was, it seems, early imbued with a thirst for knowledge and he had an early bias for philoso-

* *Smithsonian Contributions*, Vol. VII, p. 61.

phy of language. He was trained as a mineralogist and geologist and in 1819 published a book on the mines and mineral resources of the Missouri county. In 1822 he was appointed Indian Agent for the Upper Mississippi country and later on gave all his time to the study of Indians. He made a complete lexicon of the Algonkin language and reduced its grammar to a philosophic system. His marriage into an aboriginal family was a great stimulus to his plans for the improvement of Indian languages. From 1828 to 1838 he was a member of the Territorial Legislature. By 1834 DuPonceau spoke very highly of him, and the prize for the best essay on Algonquin language was awarded to him. The American Philosophical, Geological and Antiquarian Societies were honoring him very soon. The Royal Geological Society of London, the Royal Society of Northern Antiquarians at Copenhagen, and the Ethnological Society of Paris elected him to foreign membership. In 1846 the College of Geneva conferred on him the degree of LL.D. Yet he was continually active at home. In 1825, 1826 and 1827 he attended the convocations of Indian tribes at remote points. In 1832 he was selected by the Indian and the War departments to conduct a second expedition into the region embracing the entire Upper Mississippi. In his day he was believed to be the only man in America who had seen the Mississippi from its source in Itasca Lake to its mouth in the Gulf of Mexico. In 1839 he published his collection of oral legends from Indian sources under the title *Algic Researches*. In 1845 the Legislature of New York authorized him to take a census and collect statistics of the Iroquois, which he published as, "*Notes on the Iroquois.*" In 1845 he published "*Onoeta, Characteristics of the Red Race.*" In 1846 he brought the subject of the American aborigines to the notice of Congress, and in 1847 an appropriation was made authorizing the Secretary of War to "collect and digest such statistics and materials as well may illustrate the history, present condition, and future prospects of the Indian tribes of the United States." Schoolcraft was selected to conduct the inquiry on behalf of the Indian Bureau. He

collected data by an elaborate series of interrogatories suggested by long experience and sympathy. The first part of his national work was published in 1850 and continued until 1857. He was a voluminous writer and left many works under many miscellaneous titles. He died in 1864. Truly his work has been called "national," and its development shows the growing, systematic, deep, scientific interest of an American scholar, replacing the sporadic curiosity of earlier times respecting the vital problems of the Red Indian. In other words, the conquered aborigines ceased to be objects of fear and became data for the abiding scientific and humane interests of the conqueror.

Schoolcraft's approach to the problem, while often carried on by the narrative method and the personal touch of previous writers and anticipating the later emphasis on field-work, has a new flavor. He is more interested in folk-lore and tradition, though always suspicious of their authenticity, and tries to probe the psychological attitude of the Red Indian and his adaptive reaction to changing conditions. He enters into the question of the decline of the Red races and finds the cause to be in the clash of cultures. "Two types of the human race, more fully and completely antagonistic in all respects, never came in contact on the globe. They were the alpha and omega of the ethnological chain. If, therefore, the Red race declined and the white increased, it was because civilization had more of the principles of endurance and progress than barbarism; because Christianity was superior to paganism; industry to idleness; agriculture to hunting; letters to hieroglyphics; truth to error. Here lie true secrets of the Red Men's decline."* He is alive to the defects of the conquering personnel that brought about the clash and hindered the adjustment. "The pernicious examples of white men who have conducted the Indian trade, their immoral habits, injustice and disregard of truth, and open licentiousness, have created the deepest prejudice in the minds of the Red Race

* H. R. Schoolcraft, *The American Indians* (Buffalo, 1857), p. 369.

against the whole European race. The Indian only thinks when he is forced to think, by circumstances. Fear, hunger, and self-preservation are the three prominent causes of his thoughts. Affection and reverence for the dead come next. Abstract thought is the characteristic of civilization. If teachers could induce the Indians to think on subjects not before known to them, or but imperfectly known, they would adopt one of the most efficacious means of civilizing them."* The modernness of outlook, the breadth of view and the wide diversity of interest of Schoolcraft in the American Indian is surprising. His personal reminiscences often anticipate the vivacity of an Irving. His collections of traditions are worthy to rank with the classic work of the Grimm brothers. His sketches of the " *Lives of Noted Red Men and Women*," such as Brant, Red Jacket, Uncas, Miontonimo, and others, anticipate the later recognition of the ethno-psychological value data upon the social cycle or personal history of a single individual in a definite culture-zone. His appreciation of Indian music, songs, poetry, and verse renderings of their poems, endow almost with lyric and epic dignity the culture of the vanquished races, though his main object is always to submit them as " *facts or materials*, on the mental condition of the tribes, and not as evidences of attainment in the arts of metre and melody, which will bear to be admitted or even criticised by the side of the refined poetry of civilized nations."† It is not his opinions, but his vast collection and sympathetic treatment that are unique in the history of primitive ethnography. Haven has indeed given ample and pertinent quotations bringing out the salient features of his archaeological and ethnological views. Schoolcraft is trying a variant of the old world method by collating archaeological data with oral traditions instead of literary records. " Thus we have traditionary gleams of a foreign origin of the race of North American Indians from separate stocks of nations, extending, at intervals from the Arctic Circle to the

* *Ibid*, p. 90.
† *Ibid*, p. 229.

valley of Mexico. Dim as these traditions are, they shed some light on the thick historical darkness which shrouds the period. They point decidedly to a foreign, to an oriental, if not Semitic origin" (Vol. I, p. 26). On the other hand, he fully recognizes, in contrast to Atwater, the native character and origin of the western earthworks. "The fullest consideration of the Indian history and character denote these earthworks to have been built by aboriginal hands. That these beginnings of an Appalachian Indian Empire were finally frustrated by the surrounding barbarous tribes, is denoted by the few traditions recorded" (Vol. IV, p. 148). It is remarkable how the emanation of higher culture elements, radiating from Central America as the culture center, was so early comprehended by him. "We may, on the most enlarged view which can be taken on the subject, recognize in the mounds, earthworks and mural monuments of the Mississippi valley, the results, and final extinguishment of that impulse toward civilization which was commenced by the Toltecs of Mexico. It cannot be inferred from our present survey of the languages, that large numbers of the Toltecs mingled in this exodus of tribes from the interior of Mexico into the northern hemisphere; but the movement which led to their downfall in the twelfth century, and gave the sovereignty to the Aztecs, appears, from the monumental indicia, to have impelled them northward and eastward, disturbing other tribes impinged in their progress toward Florida and the Mississippi valley, and across the Appalachian range into the Atlantic slopes. The traditions of the tribes, even of central New England, point to such a migration. They came from the south-west. Their traditions place in the south-western tropical regions the residence of the benevolent god, from whom they affirmed that they had derived the gift of *Zea maize*" (Vol. IV, pp. 147-48). In comparing different cultures he is cautious and critical, though he does not fail to point out the traces of foreign origin when he finds them. "Some shadowings of an Asiatic origin, it is thought, are to be seen in the existing customs and beliefs of the Indians. Such is the practice of scarifications of their arms

and legs to denote sorrow for their dead. The practice of scalping seems to be a Hebrew custom. The doctrine of the immortality of the soul is distinctly taught by most of the North American Indians. . . . One of the strongest and, at the same time, the most ancient points of Indian belief is the duality of God. This was the leading doctrine in the Zendavesta. . . . Equally general has been the notion on this continent, in all its latitudes, that the sun is the symbol of the beneficent Creator and upholder of their great cosmogonic frame, imparting light and warmth for the benefit of mankind. . . . There seems but little in their manners and customs to connect the American Indian with the Hindoo race, notwithstanding the resemblances in some of their physical traits. They did not burn their dead, even in the torrid zone. Widows never ascended the funeral pyre. Old men were not committed to the sacred waves of the Amazon, the Oronoco, or the Mississippi. There was no western Ganges. They did not swing on hooks of steel. They did not fall before the car of a western Juggernaut. There is no infanticide. There are no traits of caste. The extreme excess of polytheism of Buddhism was not practised, though each element had its attributed God. Yet, like the Hindoostanee, they worship the spirits of their ancestors. They both place cakes on their graves and sepulchers and pour out libations.'' Later he goes on to discuss evidence for Hebrew affinities. '' Whether the practice itself (of making the feast of the first animal killed) would have been deemed a coincidence with the solemn Hebrew rite of eating the paschal lamb, had we not a preconceived theory of the Hebraic origin of the tribes (promulgated first, I think, by Grotius), may be questioned. . . . The most striking custom of apparently Hebraic origin, is the periodical separation of females. . . . Some of the choruses of their religious dances are deemed by observers to excite the mysterious and awe-inspiring. But these choruses differ among the different stocks, and the sequence of syllables mentioned as being sacred by Adair is thought to be almost purely fanciful '' (Part III, pp. 59-62).

The general scheme of these monumental volumes of "*Ethnological Researches respecting the Red Man of America,*" is comprehensive and critical. The topics are: general history; manners and customs; antiquities of the United States; physical geography of the Indian country; tribal organization; history and government; intellectual capacity and character; topical history; physical type of the Indian race; language; state of Indian art; present condition and future prospects; daemonology, witchcraft and magic; medical knowledge; literature of the Indian languages; and population and statistics. The appreciation of pictographs and the strong archaeological and philological, as well as linguistic, physical and economic bases, make the volumes full of new viewpoints of enduring interest and scientific value. The sixth part gives us a comprehensive view of the "Post Columbian, or modern Indian history." It deals progressively with the contact of the European nations with the American Indian; the wars fought and the lowest point of depression reached by the Red Race in 1816; the organization of the Indian Bureau, and its transference from the War Department to the Department of the Interior; the passing in the Senate, on February 1, 1825, of the bill "for the preservation and civilization of the Indian tribes in the United States," and and on December 27th of the same year the instruction to devise a plan for allotting each tribe a sufficiency of land; the colonization plan; the removal and the reservation policy. Incidentally the psychological problems regarding the antagonism of barbarism and civilization, and the psychological causes of the decline of the Indian tribes, are dwelt upon mainly from the viewpoint of the difficulty of adjustment of the hunter tribes to the changed conditions of complex civilization. "It was not so much a struggle between colonies and tribes as between conditions of society. True to his instincts, the Indian desired to preserve his territories as hunting grounds, on which the entire race of animals might increase. . . . He did not wish for a religion whose teachings were diametrically opposite; and coveted not letters which he

did not understand or appreciate, and could not employ in the nomadic life he led. Industry to him was a weariness he could not endure, and which he was ever ready to confound with slavery " (Part VI, p. 508).

Thus everywhere we find this interpretative method strong in Schoolcraft. His " *History of the Indian Tribes* " is simply an elaboration and extension of his earlier methods, as in " *Notes on the Iroquois* " (1847), or still earlier, " *Oneóta, or Characteristics of the Red Race of America* " (1845), where we find him alive to all the aspects of the American Indian problems. This encyclopaedic, exhaustive method of treatment based upon field work has become more and more characteristic of subsequent American ethnologists work, and though a pioneer Schoolcraft is not a less eminent star in this galaxy. Yet Schoolcraft's work has not escaped the censure of the unfailing master critic Brinton who has brought out all that can be said against it : " The government work on the Indians (*History, Conditions, and Prospects of the Indian Tribes of the United States*) published at Washington 1851-59, was unfortunate in its editor. It is a movement of American extravagance and superficiality, Mr. Schoolcraft was a man of deficient education and narrow prejudices, pompous in style, and inaccurate in statements. The information from original observers it contains is often of real value, but the general views on aboriginal history and religion are shallow " (D. G. Brinton, *The Myths of the New World*, 1876, p. 41).

CHAPTER IV.

Physical Anthropology, Philology and Archaeology as growing schools of thought prior to the Civil War—Learned Society and Academic efforts.

Hitherto we have merely concerned ourselves with the proto-Anthropological and initial periods of studies. The American frontier was calling the fur-trader, the explorer, the warrior, the missionary, the visionary of the "Noble Savage" to lay the foundations of the science of the American Indian. Soon there followed in their wake the classifying natural historians, trying to deal with man in America as they had studied biological phenomena elsewhere. So Anthropology grew as a by-product in many laboratories and factories, and once in a while a merchant like Adair, or an ambitious scholar like Schoolcraft, prized it for its own sake.

But American thought has always been a part of general European culture, and the developments of scientific thought therein had always its echo in the American field of scholarship and academic tradition. Thus Americans would give serious academic attention to the classification of human races, tracing human origins through language and trying to get an insight into man's past by archaeological digging.

A. Physical Anthropology.

In a recent paper in the American Anthropologist (1914, Vol. 6, pp. 508-54) Prof. *Ales* Hrdlicka supplements the useful details of Haven about early Physical, or as the latter calls it, "Physiological" researches into the origin of man. "Toward the beginning of the nineteenth century the white man's contact with the Indian in North America was becoming extensive, and the need of knowing the race better, physically as well as culturally, was felt with growing intensity. . . . Besides President Jefferson's instructions, and

growing acquaintance with mounds in the Ohio valley, came potent influences from abroad. Works on the natural history, races and variation of man were published by Buffon, Linnaeus and Cuvier, and specially by Blumenbach (*De generis humani, etc.*, 1795), and Prichard (*Researches into the Physical History of Mankind*, 1813). In 1789 there was organized at Paris the *Musee d'Histoire naturelle*, which eventually in its scope also comprised man; in 1800 there came into existence in Paris the *Société des observateurs de l'homme*, pointing to a new sphere of investigations of great interest; and before many years had passed the early physiological phrenology began to call attention to the study of the skull."*

Boston—John C. Warren.

In 1814 the Boston Linnaean Society was started, which later gave place to the Boston Natural History Society. Professor John C. Warren, of Harvard, an eminent anatomist, read, in 1837, before the British Association for the Advancement of Science, a paper on crania found in western mounds and came to the conclusion, " 1. The race whose remains were discovered in the mounds were different from the existing North American Indians. 2. The ancient race of the mounds is identical with the ancient Peruvians."† He had already published, in 1822, an " *Account of the Crania of some of the Aborigines of the United States* "—the first publication in this field in this continent.

Samuel G. Morton.

It is, however, Dr. Samuel G. Morton who can be called the father of physical anthropology in the United States. Born in Philadelphia in 1799, he graduated as M.D. from the Medical College of the University of Pennsylvania, and subsequently from the University of Edinburgh. In 1839 he became Professor of Anatomy in Pennsylvania Medical College, and in that same year published his monumental work " *Crania Americana*," 26 years

* *American Anthropologist*, 1916, Vol. VI, pp. 510-11.
† *American Journal of Science*, XXXIV, p. 47.

before " *Crania Britannica* " by Davis, Barnard and Thornham J. came out in England (1865). This book, in its size and beauty of execution, at such an early date, excites our wonder and admiration. After an elaborate introduction, treating of the varieties of the human species, Morton gives a detailed study of various skulls from Aboriginal America. He begins with the ancient Peruvians and then goes on to the study of the Atures (on the Orinoco), the Puelches (of Patagonia), the Charruas and Botocudos (of Brazil), the Mexicans, the Natchez, Chetinaches, Creeks and Seminoles, Cherokees, Uchees, Algonquin-Lenape, Chippeways, Menominees, Miamis, Ottigamies, Potowatomies, Naumkeags, Delawares, Iroquois, Cayuga, Oneidas, Huron, Pawnee, Dacota, Osage, Blackfoot and Flathead tribes of Columbia River ; skulls from the tumuli or mounds, from ancient tombs in Mexico, and from caves in the valley of the Ohio ; Charibs, Araucanians and Esquimaux. The list itself shows how complete and rare his collection of American skulls was. About its merits Professor Hrdlicka justly observes, " This first and largest work of Morton makes manifest some of the defects of the early period in anthropology, and it includes a chapter on phrenology, though it is the physiological phrenology of Morton's time and has no trace of the charlatanism later associated with Morton's name ; but these defects are slight when contrasted with the large bulk of astonishingly good work and the number of sound conclusions. One wonders at the nearness with which the measurements employed by Morton correspond with later and even present-day measurements in that line, and at the soberness and clearsightedness of his deductions. As to the lithographic illustrations of the work, they have not been excelled in beauty and accuracy."* Naturally this work at once placed Morton in a position of authority at home and abroad, as Prichard's appreciation shows :—" The magnificent publication of Dr. Morton, which far exceeds in its comprehensiveness, and in the number and beauty of its

* *American Anthropologist*, N.S. 16, 1914, p. 514.

engravings, any European work that has yet appeared on national varieties of the skull."* Morton adopts generally the divisions of mankind as given by Blumenbach, using race for variety. His general conclusions, as stated by him, are:

"1. The American Race differs essentially from all others, not excepting the Mongolian; nor do the feeble analogies of language, and the more obvious ones in civil and religious institutions and the arts, denote anything beyond casual or colonial communication with the Asiatic nations; and even those analogies may perhaps be accounted for, as Humboldt has suggested by the mere coincidence arising from similar wants and impulses in nations inhabiting similar latitudes.

2. That the American nations, excepting the Polar tribes, are of one Race and one species, but of two great Families which resemble each other in physical, but differ in intellectual character.

3. That the cranial remains discovered in the Mounds from Peru to Wisconsin belong to the same race and probably to the Toltecan family."†

In the American family he talks of four branches: (1) the Appalachian, including all nations of North America excepting the Mexicans, together with the tribes north of the River of Amazons and East of the Andes; (2) the Brazilian, spread over a greater part of South America east of the Andes; (3) the Patagonian, including nations south of La Plata to the Strait of Magellan, distinguished for their tall stature, and (4) the Fuegians, who call themselves Yacaunacunnee."‡ Thus Morton's physical classification of South American nations is on sound, broad lines. Similarly he dismisses the term "copper-colored race," observing correctly that "the error has arisen from the habitual use among many tribes of red

* *Natural History of Mankind*, 4th Edition, II, p. 502.
† *Crania Americana*, p. 260.
‡ *Ibid*, p. 64

paint to a brown skin, which occasions a coppery hue."* Morton also distinguishes three main divisions by general cultural traits as " derived from the pursuits on which they depend for subsistence, *viz.*, hunting, fishing and agriculture."† Writing of their mentality he observes, " The intellectual faculties of the great family appear to be of a decidedly inferior cast when compared with those of the Caucasian or Mongolian races."‡ Morton wrote many miscellaneous papers, besides another voluminous work on Crania Egyptica, which laid the foundations of American eminence in Egyptological studies. In a small pamphlet on " *An Inquiry into the distinctive characteristics of the Aboriginal Race of America* " (Philadelphia, 1849), we find by his footnote that three schools were being definitely recognized in anthropology. "Ethnography may be divided into three branches, (1) Physical, or organic Ethnography; (2) Philological Ethnography; and (3) Historical Ethnography " (p. 3). The last is equivalent to our archaeological. It is remarkable also how modern is Morton in outlook in discussing connections from the philological standpoint: " The entire number of common words is said to be one hundred and four between the American languages and those of Asia and Australia; forty-three with those of Europe; and forty with those of Africa, making a total of one hundred and eighty-seven words. But taking into account the mere coincidence by which some of these analogies may be reasonably explained, I would enquire, in the language of an ingenious author, whether these facts are sufficient to prove a connection between four hundred dialects of America and the various languages of the old world? " (p. 17)—an answer almost in the line of Dixon refuting Rivet's arguments of oceanic connections by word analogies. Morton has, it seems, been unduly neglected, and he deserves to rank with the best anthropologists of any land. His general conclusions still stand, though his division into

* *Ibid*, p. 68.
† *Ibid*, p. 72.
‡ *Ibid*, p. 81

the American and Toltecan family has gone out of favor. "Once for all, I repeat my conviction, that the study of physical conformation alone excludes every branch of the Caucasian race from any obvious participation in the peopling of this continent. If the Egyptians, Hindoos, Phoenicians or Gauls have ever, by accident or design, planted colonies in America, these must have been sooner or later dispersed and lost in the waves of a vast indigenous population. . . . The American race is essentially separate and peculiar, whether we regard it in its physical, its moral, or its intellectual relations. To us there are no direct or obvious links between the people of the Old World and the New" (*Ibid*, p. 35).

Nott and Gliddon.

The effect of Morton was very great. Physical anthropology was once for all recognized as part of all first-rate investigations in America. Thus the archaeological work of Squier and Davis included studies of Crania. Hale and Gallatin's work, on the "*Indians of North America*" published in *Transactions of the American Ethnological Society* (1848), was associated with a paper by Morton on his craniological collection, while the bulky, comprehensive volumes of Schoolcraft not only included in the second volume a paper by Morton himself "on the physical characteristics of the Indian" but in subsequent volumes had always some chapters on physical data. Subsequent works, like that of Charles Pickering, "*The Races of Man*," 1848, Wm. N. F. Van Amringe, "*Natural History of Man*," New York, 1848, Charles Hamilton Smith, "*The Natural History of the Human Species*, Boston, 1851, show the growing popularity of the subject, culminating in the famous "*Types of Mankind*" by Nott and Gliddon, first published in 1854, and reaching its tenth edition by 1871. Another popular work in 1857, by Nott and Gliddon, was "*Indigenous Races of the Earth.*" About these Professor Hrdlicka's judgment is measured and sound. "It is to be regretted that these publications, and particularly the "*Types of Mankind*," were strongly attached to the biblical traditions, more than three hundred pages of the latter volume being

devoted to efforts at harmonizing the results of the rising science with the biblical Genesis. Another serious defect of the two works was a dearth of actual field or laboratory research. They bore on the whole the stamp of popular science rather than that of reports on scientific investigation."* Yet, the *Types of Mankind* is extremely valuable not on account of its intrinsic worth, but as a survey of anthropological knowledge and opinion, as based upon contemporary authorities, especially a memoir of Samuel G. Morton and two of his unedited papers. It is interesting to note a paper by Professor L. Agassiz, "*On the Geographical Distribution of Animals and the Races of Man*," which shows the trend of the scientific thought of the time. Agassiz exerted a great influence in America in his methods of personal observation, nature study, and classification. He had indirect influence on all the biological sciences that were springing to life then. Present-day Anthropology in America, characterized by its just emphasis on field work, received this lead on the one hand from the explorers initiating the collection of data (which we shall see became the recognized method for the collection of field specimens for Museums) under Putnam, has also must reckon its debt to Agassiz and the natural historians and rather indirectly to the gradual elaboration of the public education system in America. Biology received the prominent place it now holds on account of the work of Agassiz and his school, and anthropology, as always, comes in as an indispensable final appendage. This explains the popularity of Nott and Gliddon's work. Nott's work had to be divided into two parts, the first part dealing with geographical distribution of animals and the races of man, general remarks on the types of mankind, and specific types such as Caucasian, African, Negro, American, and valuable papers on geology and human paleontology, hybridity of animals and comparative anatomy of races. The second part dealt with Biblical ethnography and interpretation of the tenth chapter of Genesis. It is

* *American Anthropologist*, N.S. 16, 1914, p. 52.

remarkable how up-to-date and well-read the chapters on archaeology were, for they mention with figures Boucher de Perthes' "diluvial knives" (p. 366), and there was an attempt to prove "man absolutely fossilized exists in North America" from fragmentary finds, and "Dr. Dowler's sub-cypress Indian, who dwelt on the site of New Orleans 57,600 years ago" (pp. 350-52).

B. Philology.

Haven rightly distinguishes three epochs in the study of American languages by 1856, thus: "In the first the study of words was the principal object of attention for the purpose of detecting similarities of sound and sense with those of other nations. In the second, the radical connection between the native dialects of the whole continent excited the special interest of the enquirers. In the third, the modern linguistic system was adopted, and the philosophy of organization, the grammatical machinery by which ideas are combined, and quality relation, and action are indicated became the permanent subject of investigation."*

(*a*) Early Contributions.

The first contact with an unknown people and the missionary need of converting them brought forth an early crop of vocabularies and grammars. As early as 1571 Mexican-Spanish vocabularies were printed in Mexico. The divergence of the American Indian languages was soon patent as new tribes were met, and the duty of every traveller and explorer was to collect a vocabulary to append to his narratives.

Roger Williams.

Roger Williams (1604-1684) was one of the unique characters of the early Puritan days. He asserted in Salem independent authority for which he was banished in 1635 and founded a new settlement,

* *Smithsonian Contributions*, Vol. VIII, p. 55.

which he called Province. In 1644 he obtained a patent for Rhode Island, and one may see his statue to-day, at Providence, Rhode Island. In 1643 he published "*A key unto the Language of America, or An help to the Language of the Natives in that part of America called New England* Together with brief observations of the customes, manners and worships, etc. of the aforesaid natives in peace and warre, life and death. On all which are added spiritual observations, general and particular, by the Author of chief and special use (upon all occasions) to all the English Inhabiting those parts, yet pleasant and profitable to the view of all men." The title shows how Puritanical his preoccupations were and that the religious motivation was leading him to write this grammar. He had some interesting remarks, even at so early a date, about the origin of the American Indian. Thus he writes in his preface, "Wise and judicious men with whom I have discoursed maintain their original home to be Northward from Tartaria and at my taking ship at the Dutch plantation, it pleased the Dutch Governor (in some discourse with me about the natives) to draw their line from Iceland, because their name Sackmackan (the name for an Indian prince) is the name for a prince in Iceland.

"First, others (and myself) have conceived some of their words to hold affinities with the Hebrew; secondly, they constantly anoint their heads as Jews did; thirdly, they give dowries for their wives as the Jews did; and, fourthly, they constantly separate their women (as amongst Jews—during the menstrual period)."* He points out some affinities with the Greek language and mentions the great tradition of the American Indian for the south-west. His work, based on the Narroganset dialect, shows great attention paid to the pronunciation and proper placing of the marks. The thirty chapters of his vocabulary are interspersed with valuable observations about the manners and customs of the New England tribes that he met. He deals with 'salutation, eating and entertain-

* *Collections of the Rhode Island Historical Society*, Vol. I, reprint edition of 1827, p. 20.

ment, sleepe, numbers, relations of consanguinity, house, family, parts of body, discourse and news, time of the day, seasons of the year, travel, heavenly lights, weather, winds, fowle, earth and fruits thereof, beasts and cattell, sea, fish and fishing, nakedness and clothing, religion, soule, etc., government, marriages, coyne, trading, debts and trusting, hunting, sports and gaming, warre, painting, sicknesse, death and burial,' though the treatment is brief and sketchy the information gathered under such a comprehensive list at such an early date deserves perusal and reference.

John Elliot.

John Elliot, the famous translator of the Indian Bible, published in 1666 "*The Indian Grammar Begun or An Essay to bring the Indian Language into Rules for the help of such as desire to learn the same for the furtherance of the Gospel among them.*" The book is a careful production, observing pronunciation marks and bringing out several characteristics. "I found out these new ways of grammar which no other Learned Language (so far as I know) useth." Elliot speaks also of "the delight in compounding of words" of this language, with declensions not as male or female, as in other learned languages and European nations, but animate and inanimate, having for the verb "substantive word terminations added to noun, adnoun, or an adverb." Pickering refers to the wonderful work of Elliot "the Apostle," his entire translation of the Old and New Testaments, and his Grammar as "the most remarkable."

Sebastian Rasles.

Father Sebastian Rasles or Rale (1657-1724), a French Catholic missionary of the order of the Jesuits, took up his residence at the village of Narantsonack, about two hundred miles east of Boston, on the river Kennebec, near its confluence with the Sandy river, and left a copious manuscript dictionary of the Abnaki Language in North America. It bore the words "1691. *Il y a un an que je suis parmi les sauvages, je commence a mettre en ordre en forme de dictionare les mots que j'apprens* (It is now a year that I have been among the savages; and I begin

to set down in order, in the form of a dictionary the words I learn).'' In one of his letters he writes, '' I took up my residence in a village of the Abnaki nation, situated in a forest which is only three leagues from Quebec. This village was inhabited by two hundred savages, who were almost all Christians. . . . It was among these people, who pass for the least rude of all our savages, that I went through my apprenticeship as a missionary. . . . I had a long progress to make in order to master the turn and genius of their language, which are altogether different from the turn and genius of our European languages. . . . (With the help of the most intelligent savages) in a short time I made a Dictionary and also a catechism containing the principle and mysteries of religion.'' This Dictionary, printed later in about two hundred quarto pages, did for the northern part what had been done by the works of Zeisberger and Heckewelder for the southern part, and by Elliot and Cotton for the middle, and formed one of the bases of early linguistic studies.

Josiah Cotton.

Josiah Cotton (1680-1756) was a respectable inhabitant of Plymouth, a graduate of Harvard, and the son of Rev. John Cotton who was skilled in the Indian languages and had helped in Elliot's Indian Bible. The Manuscript reprinted by Pickering entitled '' *Vocabulary of the Massachusetts (or Natick) Indian Language*,'' followed the plan of Roger Williams and gave special attention to the pronunciation and consisted of sixty leaves of small quarto size in manuscript. It had an appendix from the Indian Primer on The Ten Commandments and part of a sermon in English and Indian. The purpose of all these works was the same—'' for the help of such as desired to learn and for the furtherance of the Gospel among the Indians ''—nevertheless the value of these early works cannot be minimized as records of a language which had not yet been changed very much by European contact.

Soon, however, interest in American languages was aroused in Europe. In 1708, Adrian Reland, a celebrated oriental scholar, wrote on American languages, using the

materials available from Brazil, Peru, Chile, Pocoman, Carib, Mexico, Virginia, Algonkin and the Huron. He found no relationship between the languages of the Old World and the New. "If any relation is to be found between the tongues of the hemispheres, he thinks it must be looked for among the languages of Asia. He inserts an Icelandic vocabulary, by which, he says, 'they who imagine there is any affinity between the languages of the North and those of America may be undeceived.'"*

Maupertuis, a celebrated mathematician, in his "*Reflections on the Origin of Language,*" in 1750, advocated the study of barbarous languages on the chance that "new plans of ideas" might be discovered.

Jefferson's influence on the study of language was very great. He gathered a store of manuscript materials which were destroyed by fire in 1801. His conception of comparative philology was astonishingly clear for his time. He wrote, "Were vocabularies formed of all the languages spoken in North and South America, with the inflections of their nouns and verbs, their principles of regimen and concord, it would furnish opportunities to those skilled in the languages of the Old World to compare them with these, and hence to construct the best evidence of the derivation of this part of the human race."†

Jonathan Edwards was the first to set a scientific motive.

Jonathan Edwards.

He was born on the 26th of May, 1745, of a distinguished father. He was a student in Nassau Hall, at Princeton, New Jersey, in 1761, licensed to preach the Gospel of Christ in 1766, ordained at New Haven in 1769, and left there in 1795, becoming President of Union College, Schenectady in 1799. He knew Hebrew, as well as the Indian dialects, and was the author of several works, such as, *Universal Salvation, Liberty and Necessity,* and in 1788, "*Observations on the Language of the Muhhekaneew Indians.*

* *Smithsonian Contributions*, Vol. VIII, p. 56.
† *Ibid*, p. 56.

in which the extent of that language in North America is shown; its genius is grammatically traced, some of its peculiarities and some instances of the Analogy between that and the Hebrew pointed out. Communicated to the Connecticut Society of Arts and Sciences and published at the request of the Society by Jonathan Edwards, D.D., 23rd October, 1787." It is very short but full of keen insight, and gives a comparative list of twenty-six words in Mohegan and six word list of Mohegan and Chippawa is given, showing these to be related. His selection of the words is critical and includes animals, *e.g.*, bear and beaver, parts of the body, *e.g.*, eye, ear, etc., terms of relationship, and personal pronouns. He shows similarly that the Mohegan and Mohawk languages are dissimilar, by giving a comparative list of numerals in two languages and their different Pater Noster. His short grammatical treatise is accurate and scientific He has short observations on the absence of gender, no variation in cases except one; different words for relations; absence of proper adjectives; expressing of qualities by verbs; declensions of particles through the persons and numbers; affixing of pronouns in appellatives; affixing and suffixing of pronouns in verbs; absence of verb substantives, etc., in the Mohegan language. He remarks about the fullness of the language. "It has been said that savages have no parts of speech besides the substantive and the verb. This is not true concerning the Mohecans, nor concerning any other tribe of Indians of whose language I have any knowledge." He has a clear idea of the difference in vocabulary and calls attention to "hand" being translated by "Krisk" (thy hand) and "Mrisk" (my hand). Moods and personal affixes are also so distinguished. Thus it is a very neat little work and there is nothing against it except its brevity.

(*b*) Development of Philology as a Science.

At this time a great stimulus to philological studies came from Europe. Bunsen, in his *Philosophy of Universal*

History (I, 50) drew attention to the great importance of Schlegel's work. "In 1808 a book appeared, small in extent, and on the whole a mere sketch, but possessing all those properties which constitute an epoch-making work. I mean Schlegel's "*Essay on the Language and Philosophy of Hindoos.*" Schlegel pleads for structure as the basis of classification. Soon followed the publications of the Adelungs, Vater, and William Von Humboldt on American tongues. Before this Catherine II of Russia had, with the help of comparative vocabularies, discovered the affinities of the Indo-European group. This great continental activity in philology did not fail to produce its effect on America and we find the two great scholars of this period, Duponceau and Pickering, openly professing their admiration for, and acknowledging as masters, the German school.

P. S. DuPonceau (1760-1844).

Peter S. DuPonceau, LL.D. (1760-1844) was a Frenchman who had served in the Revolution. In 1783 he became Under-Secretary of State for Foreign Affairs. He had practised law in Philadelphia with distinction and contributed many legal works. He specialized in Philology. He became President of the Philosophical Society of America, succeeding Jefferson. DuPonceau's studies were thorough and systematic. About the origin of the American Indian and passage by the Behring Strait, he is one of the first to comprehend this fully on a scientific basis and state it clearly. In his *Notes* (Boston, 1827), p. 5, he writes, "It has been, moreover, ascertained that one nation at least on the eastern continent of Asia, the sedentary Tchukschi, speak an American language; a dialect of that which begins in Greenland, crosses the American continent (on both coasts of which it is found among the people called the Esquimaux), is spoken at Norton Sound and the mouth of the Anadir, and from thence Northward along the coast to the peninsula called *Tschukschkoi Noss*, or the promontory of the Tschutschki. The grammatical forms of the languages of the Koriaks, Lamats, Kamchadals, and other nations of the Eastern coast of Asia, are not yet known

to us; and while we are taking pains to investigate the languages of our own country, it is much to be wished that the learned men of the Russian empire would collect and communicate information respecting those of their Kamchadal, Samoyed and Siberian tribes; so that a full comparison might be established between them and our Indians." In his *Memoires* he quotes from Mithridates (III, 462), that the sedentary Tschukchis speak a dialect of Karalit, or the language of the Esquimaux, " *et de cette circonstance ainsi que leurs moeurs et de leurs habitudes il y a lieu de supposer qu'ils sont de race Americaine, et une colonie de continent.*" He further finds no evidence of Malayan here, as McCulloh thought. DuPonceau was an authority in those days. His " *Memoire sur le systeme grammaticale des Langues de quelques Nations indiennes de L'Amerique du Nord,*" which was awarded the Volney prize, is full of psychological and analytical treatment of language. He was a master of the Algonquin Languages and his treatment of " that numerous family of languages, the most widespread of all the languages in the Northern part of America, which have about thirty dialects and several already extinct " (p. 96) is complete. DuPonceau's *Memoire* first of all offers some preliminary observations (Ch. 1), discusses the formation of languages (Ch. 2), then deals with the American languages in general (Ch. 3), and goes on to an elaborate discussion of the different American languages, such as that of Greenland, of the Cherokees, and of Chili (Ch. 4), with a full discussion of the Algonquin languages (Ch. 5), their phonology (Ch. 6), their etymology (Ch. 7), their ideology (Ch. 8), the comparative outlook of the different dialects (Ch. 9), function of the words of the Algonquin languages (Ch. 10), the article (Ch. 11), the genders and number (Ch. 12), the substantive (Ch. 13), the pronoun (Ch. 14), the adjective (Ch. 15), the verb in general (Ch. 16), the forms of the verb (Ch. 17), the moods and the tenses (Ch. 18), the infinitive and the participles (Ch. 19), and the adverbs, prepositions, conjunctions and interjection (Ch. 20). It has further an Appendix (A) giving the comparative voca-

bulary of the Algonquin and Iroquois languages, and an Appendix (B) giving a comparative indexed vocabulary of the languages of the Algonquin family. There is also a valuable report on the general character of the American languages submitted to the committee of history and literature of the American Philosophical Society. Thus we find that DuPonceau was not only well versed in the general principles of philology, which his continental academic training in science and languages gave him, but he knew his Algonquin thoroughly and knew also its main distinctions with Iroquois. If Morton is reckoned the father of American physical anthropology, DuPonceau, with Pickering, is surely the father of American Indian Philology.

John Pickering (1777-1846).

John Pickering (1777-1846), born in Massachusetts, was the son of a distinguished statesman. He graduated from Harvard Law school and became Secretary to the Legation in Portugal and England, later returning to Boston to practise law. He was a successful city solicitor and a member of the lower legislature and a State Senator. He became celebrated for his philological studies and was held to be acquainted with twenty-seven languages. His works are "*On the Adoption of a Uniform Orthography for Languages of North America*" (1820), "*Remarks on the Indian Languages of North America*" (1836), "*Memoir on the Language and Inhabitants of Lord North's Island*" (1845), and also "*A vocabulary or collection of words and phrases which have been supposed to be peculiar to the United States of America*" (1816). He was President of the American Academy of Sciences, first President of the American Oriental Society, and was recognized as one of the founders of American Comparative Philology, collaborating with Vater's continental work on the section devoted to American languages at the request of Humboldt. His orthographic system was taken up by the Board of Foreign Missions. In his note to Elliot's grammar he writes, "We now, accordingly, find that the numerous dialects of North America (on the

East side of the Mississippi) may probably be reduced to three, or at most four, classes or families: (1) the Karalit, or the language of Greenland and the Eskimaux, (2) the Delaware, (3) the Iroquois, to which should be added, as Mr. Heckewelder is inclined to think, (4) the Floridian class, comprehending the body of languages spoken on the whole southern frontier of the United States."

(c) Provision for Language Studies in America.

The American Philosophical Society.

Meanwhile societies had sprung up and attempts at systematization began. In 1816 the American Philosophical Society set up a committee to gather new data and classify the languages of the Indians. The library of the Society began to accumulate manuscript materials.

Great contributions to the linguistic studies of these days were now made by the Moravian missionaries. The "United Brethren" who sought to go back to the simple life and organization of primitive Christianity, were driven from Bohemia and Moravia and, under Count Zuizendorf, formed the nucleus of a foreign mission. They came to Pennsylvania about 1740. They were in intimate contact with the Indian tribes, among whom they worked for a life-time. "What Mayhew and Elliot have been to the aborigines of New England, the Moravians were to the Delawares and the Iroquois."*

Most notable among the missionaries was David Zeisberger (1721-1808), a missionary to the American Indians for sixty years of his life. He joined Ogelthorpe in Georgia in 1738, went to Pennsylvania in 1740, and began his mission work in 1743 in Ohio. He was a great influence among the Indians, was made a Sachem by the Iroquois and adopted by the Munsey. He wrote several works in Delaware and English and left an unpublished dictionary of German and

* *Smithsonian Contributions*, Vol. VIII, p. 45.

Onondaga languages in seven volumes. The dictionary contained in parallel columns English, French, German, Iroquois, Onondaga, Algonquin and Delaware. It was a monumental work and Zeisberger's thorough knowledge of the languages and his life of sacrifice were an object lesson for all the missionaries of his day.

J. G. E. Heckewelder (1743-1823).

John Gottlieb Ernestus Heckewelder (1743-1823) was a worthy follower of Zeisberger and was always looked upon by DuPonceau and Gallatin as an authority. He came to Pennsylvania in 1754, joined the mission work in 1762, and finally, in 1771, began work as an evangelist, assisting Zeisberger and laboring in the Ohio country. He returned in 1786 from missionary labors and in 1792 became associated with Putnam in treating for peace with the Indians of Wabash. Next year he was employed on another treaty with Indians of the Miami of the Lake. In 1810 he returned to Bethlehem. In 1818 he published his "*Account of the History, Manners and Customs of the Indian Nations who once inhabited Pennsylvania and the neighbouring states.*" Heckewelder began to use historical traditions of the native tribes in order to elucidate their history, which was subsequently done so systematically by Schoolcraft. Thus he deals with the tradition of the Lenni-Lenape, that they resided many hundred years ago in a very distant country in the western part of the American continent, and its bearing or the origin of the tribal divisions of the Delawares (p. 51); he goes on to collate critically the accounts of the Lenape, Mohicanni and Mohawks, and finds out that the degradation of the Lenape into "women" occurred after the European advent. We read from him the amusing account of the first contact of the Lenni-Lenape with the Dutch, how they suspended the iron axes and hoes received the year before around their necks. Heckewelder is very sympathetic and records many cases of suffering among the Lenape, Mohicans, etc., at the hands of the Europeans (pp. 76-81), and subsequently the Nantichoke tribe of the Delawares, Shawanees and the Mohicans (90-93).

He describes the Mengue, or Iroquois, as looked upon by the Lenape as a nation of several confederated tribes who called themselves United Brethren or *Aquanoscioni* and got their different names Mingoes, Maquas, and Iroquois from the Americans, Dutch and French respectively. The general character of the Indian is considered by him to be high. He tells how they worshipped the all-powerful, wise, and benevolent Manitto; how they had a non-quarrelsome disposition (p. 103); and dwells on their ingenuity in satirical observations, general wit, consideration for old age, and strong, innate sense of justice,—though they were also revengeful and cruel to their enemies—an estimate time and again confirmed by Catlin, Cooper and Irving, though often challenged. Heckewelder's contemporary anecdotes—of the Indian councils in 1785; of the methods of education of the Indian as first being impressed by everything as obtained from God; of his distinction between good and evil, taught and brought up by example; of his learning the arts of hunting, trapping, and making war by listening to the aged when conversing together on these subjects, each in turn relating how he acted —are pictures based upon considerable insight from intimate and familiar acquaintance, and are of rare value to ethnography. His division of languages into four main groups of Karalit, Iroquois, Lenape and Floridian, east of the Mississippi, substantially accepted by Pickering and DuPonceau, elaborated by Gallatin, and subsequently worked out by Powell, shows what a great and accurate linguist he was. However, he includes among the Floridian not only the languages later established as Mushkogean, such as Creek, Chickesaw and Choctaw, but also brings in Pascagula, which was a Siouxan dialect, and Cherokee, an Iroquoian tongue. This showed that the languages of the South had not yet been thoroughly studied, though the Eskimo, Algonquin and Iroquois distinction and distribution in the North were pretty well understood. Heckewelder's work is full of other details, such as the hieroglyphic writings on bark—another point subsequently developed by Schoolcraft; the natural and simple

eloquence of the Indians; their metaphorical expressions, such as Sun-fish and Blackfish for names; their display and skill in political manœuvres; their marriages, good treatment and fondness for their wives; their pride; respect for the aged; food and clothing; dress and ornaments; dances; songs and sacrifices; scalping; remedies, doctors or jugglers; mythology; funerals, and psychological traits in contrast with whites. In short, Heckewelder was rearing the scaffolding by which the philological structures of Pickering, DuPonceau and Gallatin on the one hand, and the ethnographic monuments of Schoolcraft on the other were later built up. The earlier Hebraic prepossessions of an Adair no longer minimize the values of a sound scholarship, and yet a too rigid objective does not chill the warm heart of sympathy, the foundation of all human observation. However much Heckewelder be a thorn in the side of the decrier of the Indian,—like the scholar Cap, who would paint him as an out-and-out villain—he will rest secure in an honored niche in the monument to the science of the American Indian.

Horatio Hale (1817-1896).

Born on May 3, 1817 at Newport, New Hampshire, Hale studied at Harvard, and collected a vocabulary of an Algonquian dialect which was printed in 1834. He was a linguist and ethnographer to "United States Exploring Expedition." In 1846 he published a volume which is very valuable in its materials for Polynesian and American Ethnography. He studied closely the occurrence of 'child-languages and made the discovery that Tutelo of Virginia belonged to Sioux stock. He was vice-president of the American Association for the Advancement of Science and in 1886 chairman of its Anthropological Section. He was a practitioner in law and settled in Clinton Canada where he died on December 28, 1896. "In all his writings he was singularly fair and courteous to his contemporaries. He loved science for its own sake" (Brinton, *American Anthropologist*, Jan., 1897, pp. 26-27). In his paper on Hawaiatha and the Iroquois confederation, a lawgiver of the Stone Age (1881) he shows how Schoolcraft

was responsible for part of the confusion of the Hawaiatha legend in identifying him with Manabozho and thus a grave Iroquois lawyer of the 15th century could become in Longfellow's poem, an Ojibway demigod. He also stands by the Morgan position that the Iroquois with all their complex political system were a people of the Stone Age. It is interesting to find him, in his various papers, anticipating some of the fundamental notions of the later school. " The doctrine of evolution whose importance I would in no way depreciate, has in reference to the intellectual powers of the human race been strangely misapplied, to such an extent as to lead to serious errors.....When ' speaking man ' appeared as a new species on the world's stage, the size and power of his brain was fixed, once for all."* Besides his various writings on "the origin of languages and the antiquity of speaking man (Cambridge, 1886), " The Oxegon Trade Language or Chinook jargon (London, 1890), his " Iroquois Book of Rites " (Philadelphia, 1883) published in Brinton's Library of Aboriginal American Literature shows him to be a thorough linguist. His views on ' the Aryan Race in Europe and America ' only show him attempting to create a philological probability of the contact of Europe with the New World prior to the days of Columbus or of the Vikings. Horatio Hale thus represents the carrying on of the set of freelance scholars in philology, though he himself was more in line with the Aryan philologues than Du Ponceau and Gallatin.

C. Archaeology.

Probably the most important and fruitful of all branches in anthropology that early made for itself an unchallenged position is archaeology. The discovery of Mexican ruins had early drawn the attention of the Spanish fathers, and this knowledge filtered into Colonial thought when it had considerable influence upon the armchair studies of the day, such as that of MacCulloh, or Bradford, as we shall see.

* *The Development of Language*, Address before Canadian Institute, Toronto, 1888, pp. 38-39.

Early work on Ohio Mounds.

On the other hand the Atlantic coast had few earthworks or conspicuous antiquities. In the South such remains were always associated with the existing tribes, so they gave rise to no new problems. It was when the frontiers reached Ohio that a new set of facts challenged the attention of observers and archaeology began. As usual, it is the missionary, the casual visitor, or the political explorer that first brings these things to notice.

Rev. David Jones (1736-1820), well-known for his missionary efforts on behalf of the Shawanee and Delaware, chaplain in the Indian wars north-west of the Ohio, and an honorary Master of Arts of Brown University, first mentioned remains near Chilico in 1772. In his "*Journal of Two Visits made to some nations of Indians of the west side of the River Ohio in the years* 1772 *and* 1773" he writes, "North of this town (Chillicaathe) are to be seen the remains of an old fortification, the area of which may be fifteen acres. It lies near foursquare and appears to have had gates at each corner, and in the middle likewise. From the west middle gate, went a circular entrenchment including about ten acres, which seems designed to defend on all quarters. This circle included a spring. Mr. Irwine told me that another exactly in this form is to be seen on the River Siota, the banks of which remain so high as to intercept the sight of men on horseback. "'Tis evident to all travellers that this country has been inhabited formerly by a martial race of mankind enjoying the use of iron, for such entrenchments as appear in various places, could not have been made otherwise."* Thus they were thought to be fortifications and ascribed to a superior race.

Many random contributions to the subject may be culled from the journals of the period, which contain descriptions of such sites. In the Royal American Magazine (January, 1775) there is a rough plan and description of the earthworks of

* Pp. 56-57, Sabin's Reprints No. II (New York, 1865).

Circleville, Ohio. An account of the pioneer settlements in Kentucky, by John Filson, in 1784, contains a brief notice of two " ancient fortifications." In a letter from General Samuel H. Parsons (October 2, 1786) the mound at Grave Creek is described. This was published in the Columbian Magazine, May, 1787. In 1791 Dr. Benjamin Smith Barton read a paper before the American Philosophical Society embodying personal observations of earthworks at Muskingum, Grave Creek, Paint Creek, on the Scioto, and Great and Little Miami (see Vol. III, Transactions of American Philosophical Society). By 1787 a curious opinion had come to be formulated that the works might have been constructed by Ferdinand De Soto as a protection against savages. Fantastic descriptions began to be prevalent, and in the American Magazine, May, 1792, an anonymous author refers to ruins in Illinois and Wabash countries, and, a hundred miles further west, to pyramids from seventy to eighty feet high. So " before 1800 the existence of tumuli and mounds in great numbers and imposing magnitude throughout the valley of the Mississippi and from the Gulf of Mexico to the Lakes was well known to the public."*

It is refreshing, however, to turn to the careful observations of Bishop Madison of Virginia, who thoughtfully examined the earthworks and came to the conclusion that they were not fortifications.

Thaddeus Mason Harris, A.M., a member of the Massachusetts Historical Society, seems to have been an equally careful observer. His " *Journal of a Tour into the Northwest of the Alleghany Mountains made in the spring of the year* 1803 " contained an engraving of " a bird's-eye view of the ancient works on the Muskigum," as well as some accurate measurements and descriptions (see pp. 149-176). The " largest square fort " called " The Town " he describes as " encompassed by a wall of earth from six to ten feet high and from twenty-five to thirty-six feet in breadth at the base "

* Smithsonian Publications, Vol. VIII, p. 30.

(p. 149). He even tried some excavations in "graves." "An opening being made at the summit of the great conic mound, there were found the bones of an adult in a horizontal position, with a flat stone. Beneath the skeleton were thin stones placed vertically at small and different distances" (p. 152). He considered these as "places of defense erected by Asiatic emigrants" (p. 159). "The situation, construction, form and general contents of these Asiatic tumuli, and the American mounds, are so similar that there can be no hesitation in ascribing them to the same people" (p. 175). He further thinks them to be derived from Toltecan migrations "till they were finally driven to Mexico."

Caleb Atwater (1778-1867).

The first true archaeologist was, however, Caleb Atwater (1778-1867). Born in Circleville, Ohio, he graduated at Williams College in 1804 and became a successful legal practitioner. He moved back to Ohio in 1811, where for some years he was a member of the State Legislature and postmaster of Circleville. He was also Indian Commissioner under Jackson. He was financed by Isaiah Thomas, printer and publisher of Worcester, Mass., first President of the American Antiquarian Society, and was commissioned to investigate the ruins. The results of his investigations were published in Volume I of the Antiquarian Society. He described, with accurate chain survey and plans, the ancient works near Newark, those in Perry county, at Marietta, at Circleville, on the main branch of Paint Creek, at Portsmouth, and on the Little Miami River, all in Ohio. His method was quite up-to-date and his work was considered a classic in his time. He used distribution data in his interpretations. "Our ancient works continue all the way into Mexico, increasing indeed in size, number and grandeur, but preserving the same forms, and appear to have been put to the same uses. The form of our works is round, square, semi-circular, octagonal, etc., agreeing in all these respects with works in Mexico. The first works built by the Mexicans were mostly of earth and not much superior to the common

ones in Mississippi."* He proceeds to state how "a careful survey of the above-mentioned works would probably show that they were all connected and formed but parts of a whole. . . . Thus it will be seen that these remains which were so few and small along the northern lakes, are more and more numerous as we travel in a southwestern direction until we reach the Mississippi, where they are lofty and magnificent. Works similar to the Teocalli of Mexico are not found north of the mound at Circleville, on the Scioto, or at least I have seen none of them. . . . An observing eye can easily mark in these works the progress of their authors, from the lakes to the valley of the Mississippi; thence to the Gulph of Mexico, and round it, through Texas, into New Mexico and South America; their increased numbers, as they proceeded are evident; while the articles found in and near these works show also the progressive improvement of the arts among those who erected them."†

His excavations and thorough scientific treatment of the finds lead him to a correct estimate of their possible threefold functions, "Though they were used as places of sepulture and of worship, yet were they not, sometimes in the last resort used also as places of defence?"‡ He mentions indeed a fourth class, as places of diversion, "intended for the celebration of solemn games instituted in honor of the dead."§ He also uses physical criteria. "The skeletons found in our mounds never belonged to a people like our Indians. The latter are a tall, rather slender, strait-limbed people; the former were short and thick. They were rarely over five feet high, and few indeed were six. Their foreheads were low, cheek bones rather high; their faces were very short and broad; their eyes were very large; and they had broad chins. I have examined more than fifty skulls found in tumuli, several of which I

* Archaeologia Americana (Transactions of the American Antiquarian Society, Vol. I, 1820).

† *Ibid*, pp. 187-190.

‡ *Ibid*, p. 190.

§ *Ibid*, p. 191.

have before me."* He could clearly distinguish the higher culture of the mound-builders when contrasted with that of the existing native races in the place. "The Ancestors of our North American Indians were mere hunters, while the authors of our tumuli were shepherds and husbandmen."† He also proves antiquity by the growth of generations of forests over these remains, and the changes in the levels and courses of streams on whose banks they are situated—an argument we find elaborated in President William Henry Harrison's "*Discourse on the Aborigines of the Valley of the Ohio*" (Cincinnati, 1838). "The process by which nature restores the forest to its original state, after being once cleared, is extremely slow. . . . The sites of the ancient works on the Ohio present precisely the same appearance as the circumjacent forest. . . . Of what immense age, then, must be those works, covered, as has been supposed, with the second growth after the ancient forest state had been regained" (pp. 30-31). This is still accepted by scholars like Cyrus Thomas as proving the antiquity of the mounds prior to European occupation, though none are considered anterior to the Christian era. The arguments that the builders were of a superior and extinct race, or that they were Mexicans, long troubled the archaeologists and divorced archaeology from ethnology. It is with the later investigations, chiefly of the Bureau of American Ethnology, that connections of the mound-builders were suggested with tribes like the Yuchi, Creeks, Chicasaw, Natchez, and Quapaw of Arkansas, who were still building mounds in 1540-41.

Thus, whatever Atwater's views and conclusions, his methods were fundamentally sound, consisting of field work, objective treatment of data; he stood for empirical work, for which Gallatin made a strong plea when he was eighty-seven years old. "From whatever place the people of America came, the first important question is the *time* of their arrival."

* *Ibid*, p. 210.
† *Ibid*, p. 212.

Barring Atwater's prepossessions on Hindu connections, dwelt on at length by Bradford and McCulloch, especially on the basis of the Triune idol or vessel found in the mounds, his general views about American origins still hold good. In his "*Tour to Prairie du Chien or the Indians of the Northwest*" (Columbus, 1850) he remarks, "If Asia was the original birthplace and home of man, and there is nothing which proves very decisively to the contrary, then the ancestors of our Indians emigrated from Asia in the very earliest ages of the world, before they had learned any one art which has since added to the comforts and conveniences of human life. It must have been, too, before men had domesticated the ox, the horse, the hog, the sheep, the goat, or any beast of the field, or fowl of the earth, or of the air; before any of the grasses, by culture, had been changed into grains, such as our wheat, rye, oats, millet, or barley" (p. 92).

The effects of Atwater's work were to stimulate other contributions, like DeWitt Clinton's *Note on New York*, or Lapham's *Survey of Wisconsin*, in 1836, subsidized by the American Antiquarian Society.

Squier and David—Ancient Monuments.

But the great interest in and scientific importance of archaeological work was fully brought out in the *Smithsonian Contributions to Knowledge*, the first volume of which appeared in 1848, and contained a paper on the "*Ancient Monuments of the Mississippi Valley comprising the results of extensive original surveys and explorations*," by E. G. Squier, A.M., and E. H. Davis, M.D., which showed a resolution to ignore all opinions and conclusions and proceed *de novo*. The field technique was well conceived. Davis appeared to be the field man and naturalist and Squier the historian and engineer. The publication set a high standard and was the type for a long time. It dealt with facts and minute details, and little space was given to ultimate origins. Mounds are classified on a functional basis, as for defence, sacred purposes, sacrifice, temples, sepulture, etc., though the main treatment is from the point of view of structural type and geographical distribu-

tion, an equal emphasis is laid on the artifacts and the physical character of the crania. " We must seek, therefore, in the contents, as well as in the form and position of these works, for the secret of their origin and purpose."* In physical measurements Morton is closely followed. The concluding observations were that the mound-builders were homogeneous in nature; that their distribution was against the migration theory; and that their origins lay perhaps in Mexico. " That the mound-builder culture was essentially homogeneous, in customs, habits, religion and government, seems very well sustained by the great uniformity which the ancient remains display."† Again, " We find side by side in the same mounds, native copper from Lake Superior, mica from the Alleghanies, shells from the Gulf, and obsidian (perhaps porphyry) from Mexico. This fact seems seriously to conflict with the hypothesis of a migration, either northward or southward."‡ About the connections, it is stated with reserve, " we may venture to suggest that the facts thus far collected point to a connection more or less intimate between the race of the mounds and the semi-civilized nations which formerly had their seats among the Sierras of Mexico, upon the plains of Central America, and Peru."§ Quite justly it was hailed by Morton as " by far the most important contribution to the Archaeology of the United States " and lauded by the Committee of the American Ethnological Society for " its scientific arrangement, simplicity and directness of statement and legitimate deduction from facts."

It must here be remembered that Schoolcraft had already contributed a great deal to the subject of archaeology, being the first to emphasize the value of pictographs dealt with so accurately by Squier and Davis. By a study of stratification Grave Creek Mound was shown to have been of slow growth, and the tree-ring method proposed 1100 to 1200 as the peak

* Smithsonian Contributions, Vol. I, p. 119.
† *Ibid*, p. 301.
‡ *Ibid*, p. 306.
§ *Ibid*, p. 301.

of mound culture. Heckewelder had been the first to reveal legends of mound building among the Delawares, though he was strongly contested by Atwater's followers, and Cass denounced him as ignorant and dishonest, yet Heckewelder had strong support and we get from him a direct challenge to the extinct race theory.

An idea of the activity of this date in scholastic treatment and speculative thought on American Indian remains, can be formed by turning to the two great synthetic students of the period, McCulloh and Bradford.

J. H. McCulloh's Researches.

In 1829 there appeared the "*Researches, philosophical and antiquarian concerning the Aboriginal History of America,*" by J. H. McCulloh, Jr., M.D. Haven is justified in speaking of it highly. "No more perfect monument of industry and patient research connected with this subject has been published."* Its method of treatment is as complete as could be possible, dealing with the physical features, languages, ethnographic details, archaeological remains, and social institutions of the peoples of North and South America. It has a chapter "on the manner in which men and animals reached America." His general position still largely holds good. "In comparing the barbarous nations of America with those of the western continent, we perceive no points of resemblance between them, in their moral institutions, or their habits, that are not apparently found in the necessities of human life. In their languages nothing but the feeblest analogies to each other are to be observed. In personal appearance, they are perhaps identically the same, thus testifying that though they are the same race of men, yet they have been separated from each other from the earliest period of time" (p. 462). Quite ingenious is his theory of a Trans-Pacific continent by which the migrations occurred, and the learned quotations from scientists and the authority of the Bible, used in the attempt to prove its existence. His views

* Smithsonian Contributions, Vol. VIII, p. 48.

on the mounds are remarkably modern, since he ascribes them to the American Indians and finds them overestimated in magnitude and complexity, and further records several traditions especially from the Delawares from Heckewelder about mound building. He states, " I am decidedly of the opinion that they are erected by Indian tribes of North America. The more eminent monuments were most probably raised by nations kindred with the Natchez, Taensas, Maubiliens, etc., if not the ancestors of these very people, whose traditions indeed seem to point out some ancient establishments in the western country. The Natchez said their empire once extended to the Ohio river, which is to a certain degree confirmed by the traditions of the Lenni-Lenape, or Delaware Indians " (p. 519). As to physical characteristics, he finds the American Indian to be of white, brown and black types, and his challenge of the theory of " copper-colour " was substantially accepted by Morton.

A. W. Bradford's American Antiquities.

A similar armchair production was that of Alexander W. Bradford—" *American Antiquities and Researches into the Origin and History of the Red Race* " (1843). In the first part he deals with antiquities in the United States, Mexico, and South America, and in the second part compares the ancient monuments, physical appearance, language, astronomy and religion of the Old and the New World. He rejects the theory of an old Pacific continent and thinks highly of the possibility of maritime migrations. His method of cultural comparisons in the oceanic American and Asiatic area is quite laudable and shows considerable research. His general conclusions are, " That the first seats of civilization were in Central America, whence population was diffused through both continents; that the Mexicans and Peruvians resemble the cultivated nations of Oriental Asia; and that the barbarous tribes are the broken, scattered and degraded remnants of a society originally more enlightened and cultivated " (pp. 430-31). The method of comparison of cultures has hardly been superseded even by the Perry school, and the idea of a

continuous geographical area of distribution is not missing. Thus we read, "The Cohans and other Brazilian tribes, the Araucanians and Peruvians, all wore the Poncho, which is identical with the Polynesian Tiputa, or cloak; that the South American and Polynesian girdles are similar; that the Pacific and Indian islanders were skilled in the art of fortification and constructed earthen or stone fortresses; that the same blind and superstitious adoration was paid to the person of their monarchs by both people; a species of vapor bath is used in some of the oceanic islands; they betray a fondness for dances, and these are often of a religious character; that professed story-tellers and dramatic entertainments afforded the principal amusement; that some of the tribes were skilled in the working of the metals, and that one of the systems of enumeration presents a resemblance to the Mexican in reckoning by tens, twenties, forties, four hundreds and eight hundreds. The art of irrigation and of cutting the slopes of the mountains into terraces for the purpose of cultivation; the sacred enclosure, or cities of refuge; the art of making paper; the traces of picture or symbolical writing; the arabesques and meanders which are cut on the war clubs, and even tattooed upon the bodies of the natives of the South Sea Islands; the earthen and stone tumuli; and the pyramidal edifices—all approximate these people to the American Aborigines" (pp. 414-15).

Finally, the group of armchair students have to yield the palm to S. F. Haven, whose "*Archaeology of the United States*" in Smithsonian Contributions (Vol. 8, 1853) has not only preserved from oblivion all these scholars who were reckoned so great in their day, but also critically analyzed their data. His own conclusions were cautious and scientific. He found out that there were not enough data to settle the comparative geological antiquity of the Old and the New Worlds. He rejected the known data of fossilization as inconclusive. He admitted man and mammoth being contemporary, but regarded this as of no consequence. He admitted the possibility of drift vessels favored by winds and currents

coming to the New World, but thought it had not resulted in colonization or cultural influence. Haven pointed out that affinities which had no united reference to any particular nation were of little value. He was disposed to find a protracted term of isolation in the number and variety of the American languages. The variety of physical type and culture was also an argument for age. Time and isolation were necessary for this. The mounds were linked with the Indians. The old Asiatic affinity and trans-Siberian connections were accepted.

Thus we may summarise this section and review of early anthropology in America by stating that we find many of the arguments thoroughly modern. The culminating method is also highly objective and the level of mind displayed is very high. For example, Gallatin's argument for the independent origin of Indian agriculture based on flora is completely modern. In short we find that the patterns of ideas and methods have been well laid out and discussion since then has been travelling pretty nearly in the same cycle.

We have seen the beginnings of anthropology in Spanish contact; we have followed the increase of interest in the American Indian by the traveller, explorer, geographer, and philosophical speculator. We have seen the Indian enshrined in the national heart by painters and masters of fiction. Side by side we have noticed the rise of great scholars like Adair the merchant, Heckewelder the missionary, and Gallatin the politician. The growth in importance of the subject itself had attracted lawyer scholars like Duponceau and Atwater. The national importance of the subject had been recognized through Schoolcraft's monumental work, and scholars like McCulloh and Bradford were making the American Indian their life study. Archaeology asserted its claim as one of the great, dignified sciences in Smithsonian Institution publications. The general leads and methods had thus been well nigh set prior to the Civil War. What was to follow was only the quickening into life, the organization of research and a greater application of field-methods. Considering the

state of anthropological sciences in Europe prior to the middle of the nineteenth century, America can well be proud of her achievements in quantity as well as quality. True it had to wait some time yet to add a few fundamental concepts to anthropological studies, but its lead in regional surveys and detailed study had already been well assured.

CHAPTER V.

Lewis H. Morgan: "The Tylor of American Anthropology."

Before coming to Morgan himself a retrospect is needed. There is a sudden acceleration in speed in development after the Civil War, due to economic changes and rapid advance in the applied sciences in America. We have seen how, prior to the Civil War, new leads had already developed in linguistics, physical anthropology and archaeology. Yet, it is rather astonishing that so much had been accomplished, while the anthropological outlook was so restricted, little being known about the south-west and the Rocky Mountain area. On the other hand, the mound area had already been explored; the locations of the tribes east of the Rockies were known and their main language relationships had been guessed, though satisfactory culture data had as yet not been recorded. Museums had been started but their real organization and work on a large scale came after 1880. Broca's laboratory in Paris itself was opened in 1867, and Tylor became the first instructor in anthropology at Oxford in 1883 and the first Professor of Anthropology in the British Isles in 1898. A professorship in Columbia University was not created until 1899.

So, in America prior to the beginning of the twentieth century, when the academic studies begin and a new era of synthetic survey in fundamental notions comes into vogue, the anthropological lead of the few preceding centuries is followed; though slowly but definitely changed by the growth of museums and the rise of the Washington, Boston and Philadelphia schools. Two tendencies were discernible: first the recognition of the greater importance and fundamental need for empirical study, and second, the increase of armchair

speculators on American ethnology. Though scholars like Schoolcraft and Gallatin had recognized both, the necessity for discipline in field work as a *sine qua non* and attempting to solve inductively such fundamental problems as may arise out of it which may be reckoned as the great contribution of America to anthropology and the cause of its present lead in the science, was first completely conceived and thoroughly worked out by the great luminary, Lewis H. Morgan.

It is rather unfortunate that the greatness of Morgan is so seldom realized. This may be due to his complicated technique, not generally understood and usually avoided by the general worker. He has also suffered at the hands of his own followers, who found his hypothesis a little too ambitious considering the limited data available. Yet Morgan's general position and his discovery of a method of sociological study through terms of relationship still stands as a unique contribution. In contrast to Morgan, Tylor had the good fortune to be in an academic position that challenged a hearing and created a following; yet his contribution of the conception of "animism" to the study of primitive religion is scarcely superior. From the standpoint of practical research value, the Morgan technique in terms of relationship, as elaborated by Rivers and further refined by Kroeber, Swanton and Lowie in America, was through the study of social organization of greater empirical worth. It seems that Mendel, though a contemporary of Darwin, had to wait until Darwinism had been worked out to come into his own; so Morgan, though the senior contemporary of Tylor, had to wait for his true following until Tylor had brought recognition for anthropological work in general.

Lewis Henry Morgan, lawyer, statesman and ethnologist, was born in Aurora, N. Y., November 21, 1818, of distinguished New England ancestry. He graduated from Union College in 1840 and received the degree of LL.D. from that institution in 1875. After being called to the bar in Rochester in 1844, he joined a secret society called "The

Gordian Knot" for the study and welfare of the American Indian. He came in close contact with Ely S. Parker, a remarkable Seneca Indian, developed a deep interest in the design, and changed the name of the society, "The Grand Order of the Iroquois," which was given an Indian name, "We-yo-ha-yo-de-za-de Na-bo-de-no sau nee"—"They who live in the home of the dwellers of the Long house." This society successfully resisted, through Morgan, the efforts of a company to purchase lands in the Indian reservations. Morgan was at once hailed as the friend of the Indian, and on June 1, 1847, he was adopted into the Hawk clan of the Senecas. During 1844 to 1846 he published "*Letters on the Iroquois*," addressed to Gallatin. In 1856 he published "*The Laws of Descent of the Iroquois*," which shows his early mastery of Iroquois social organization, and its culture as well. He had already, in 1849, been employed by New York State University to make an ethnological collection and submitted a report which, according to Holmes, "is indispensable to an understanding of the various Iroquois artifacts at that period." These notes appeared in the "League of the Iroquois" in 1851, which, according to Putnam, "at once attracted general attention and secured for its author a well-earned position." Powell refers to it as "the first scientific account of an Indian ever given to the world," and it was justly estimated by Lloyd as entitling Morgan to the name of "Father of American Anthropology." All through the book we note the empirical treatment of detail and the use of comparative methods in dealing with the fundamental social problems involved; this is what makes his works so valuable to the study of politics, law, or sociology. Thus anthropology in his hand is not a mere sketch of minute ethnographic details. His way of handling data and explaining their significance in society as a whole often reminds us of Sir Henry Maine's treating of Ancient Law by basic comparisons between Hindu and Roman systems. In fact, the empirical study of primitive law, and primitive economics, importance of which is being recognized more and more

today, could also be said to have begun with Morgan. Morgan was not only a lawyer but a biologist. He starts almost as a psychological environmentalist in the study of social institutions and ends with the position of an evolutionist. It is for the latter that he has had to bear the brunt of criticism. His mastery of details and intuitive sensing of synthetic systems behind them, statically as well as in dynamic growth, has seldom been surpassed. It is interesting to follow the growth of Morgan's mind, his following up of one clue after another leading into wider fields and his final attempt at the formulation of a great hypothesis. In his early work * we find just a hint about the system of relationship, and his interest at that time is to reduce it to the parlance of current law: "The Iroquois mode of computing degrees of consanguinity was unlike that of the civil or canon law; but was yet a clear and definite system. No distinction was made between the lineal and collateral lines, either in the ascending or the descending series. . . . It was the leading object of the Iroquois law of descent, to merge the collateral in the lineal line, as sufficiently appears in the above outline." Morgan has already the feeling of something intangible existing besides social institutions, which he, however, does not define as "culture." "It is still problematical whether the vast power they would have accumulated and the intellect which would have been developed by their diversified affairs, would not together have been sufficiently potent to draw the people from the hunter into the agricultural state. The hunter state is the zero of human society and, while the red man was bound by its spell, there was no hope of its elevation."† "At the periods of their separate discovery, the Aztecs on the South, and the Iroquois on the North, were the only Indian races upon the continent, whose institutions promised, at maturity, to ripen into civilization,"†—so a stratigraphic and dynamic concept of civilization, of which

* League of the Ho-de-no-san-nee or Iroquois (Edition of 1901), Vol. I, p. 81.
† *Ibid*, Vol. I, p. 135.
‡ *Ibid*, Vol. I, p. 136.

the socio-psychological environment was a prepotent factor, had already been shaping itself in his mind. Similarly in his treatment of religion, while he considers it fundamentally important as " the spirit of the League " it is noticeable how much in advance of Tylor or Levy Bruhl's generalizations he was. He has given full credit to the psychological factor and the trait of leadership in religion, as revived at the present day by Lowie, in his *Primitive Religion*. To Morgan beliefs are " a natural outcome of the religious tendencies of the mind of man, who, when left to the guidance of his own inward persuasions, searches after the Author of his being, and seeks to comprehend the purposes of his existence and final destiny." * His statement of the facts of the actual starting of a New Religion of the Iroquois through Ga-ne-o-di-yo, or " Handsome Lake," a Seneca sachem and an estimate of his personal capacities, show his appreciation of the religion of the Iroquois as perhaps superior to that of any student of primitive peoples. " The fruits of their religious sentiments, among themselves, were peace, brotherly kindness, charity, hospitality, integrity, truth and friendship; and towards the Great Spirit reverence, thankfulness and faith. More wise than the Greeks and Romans in this great particular, they concentrated all divinity into one Supreme Being; more confiding in the people than the priestly class of Egypt, their religious teachers brought down the knowledge of the " Unutterable One " to the minds of all."† His conception of technology as being in harmony with social status, and his accurate descriptions of natural culture-traits are worthy of a Mason and anticipate the interpretative school of functional technology. " The fabrics of a people unlock their social history. . . . Although the fabrics of the Iroquois are indicative of a low state of the useful arts, the artificial contrivances by which they were surrounded are yet the indices of their social condition."

* *Ibid*, Vol. I, p. 141.
† *Ibid*, Vol I, p. 215.

Coming back to the growth of Morgan's own favourite scheme, which has brought him so much fame, we find him taking the second step in his anthropological development when he becomes conscious of the factor of distribution. For a long time he hardly knew any other primitive culture than that of the Iroquois, which he studied against the background of the classical. In 1858 came his first great insight, fortuitously, when railroad business took him to Michigan and a study of the Ojibway. He found to his great surprise that the Iroquois system (of nomenclature) was substantially identical with that of the tribes of the west. This led him to his first great generalization; for the power of generalization was one of the most distinguished traits of his mind. "Now it occurred to him that this Iroquois and Dakota system of relationships might be common to all the aborigines of both North and South America. . . . When he had attained to this stage in his enquiries (after ten years' study) a second and wider generalization occurred, namely, that possibly the system might be found among the Turanian tribes of the old continents. . . . With another vast series of investigations . . . . he found overwhelming evidence that the system had once prevailed in all the Arabic and Semitic peoples, including the Hebrews, in all Sanscritic or Aryan branches, the Brahmans, Persians, Greeks, Romans, Gothic, Celtic and Slavonic nations—in a word throughout the human race, over three-fourths of which his investigations extended . . . These results were published by the Smithsonian Institution in 1871, in a large quarto volume, as "*Systems of Consanguinity and Affinity of the Human Family.*"

This is a monumental work and still offers a basis of work even though it leads to different arrangements and the formulations of different hypotheses. It is rather unfortunate that this work itself has not given rise to schools of thought respecting ideas and terms of relationship. Morgan divides the subject into two main parts. "All the forms of consanguinity exhibited in the tables resolve themselves into two, the descriptive and the classificatory. Of these the former is

the most simple in its structure, and for this reason should be first considered. It embraces the Aryan, Semitic and Uralian families, which are identical in their radical characteristics. The classificatory system has one principal form, the Indo-American, and two subordinate forms, the Malayan and the Eskimo. Of these the Malayan is the most simple, and probably the underlying form." (Preface, p. 7.) In the first part, the classes treated are Arabic, Hebraic and Aramaic, of the Semitic group; Celtic, Iranic, Indic, Teutonic, Romaic, Hellenic and Slavonic of the Aryan group, and Turki and Ugric of the Uralian group. Thus it is evident that the treatment is rather by philological than tribal groups, though it is surprising how much Morgan tried to recover the forms by direct field study. "It is impossible to recover the system of consanguinity and affinity of any people from the lexicon. . . . It can only be obtained in its completeness, by a direct resort to the people." (*Ibid*, p. 17.) The second part, dealing with the American Indian, is more complete. It deals with no less than eighty "nations or languages" and eight subdivisions of the Dakota, four of the Ojibway, three of the Eskimo, and shows Morgan's recognition of the importance of the geographical area of distribution. A large number of these tribes were visited by him personally. The systems of the Asiatic family, under the heading of Turanian and Malayan, includes three Dravidian, four Gauran dialects, Chinese and Japanese, four Burmese languages, two Micronesian, four Polynesian (and Melanesian) and one African (Kafir) language. Thus the data collected are vast yet important. Gaps are noticeable in the series, yet the treatment, for instance, of the Gauran group, which Morgan probably rightly surmises as an Aryan system superlaying an essentially Dravidian form, shows how fruitful the Morgan method is in analyzing culture data. His diagrams of consanguinity and his method of collecting data *

* Circular in reference to the Degrees of Relationship among Different Nations (Smithsonian Contributions: Miscellaneous Collection, 1860).

still endure in substantially their original form (only slightly modified by Rivers). His admiring friend compares his last generalization for its vastness and grandeur and fruitfulness in results to the Newtonian Law of Gravitation. We further learn from this friend of Morgan that "as yet he had not the least conception of any process of thought in which it could have originated, or of anything which could have caused it so universally to prevail." Thus, what apparently seems to be the greatest defect in Morgan—that of conceiving in the Victorian way the highest possible level of culture, then working backward to its nether pole and filling in the intermediate stages by absurd data assumed to be as connecting links—is belied by his own natural process of growth. His method was essentially empirical, but his was a vast mind which did not rest satisfied with the mere piling up of facts *qua* facts, but also sought the one grand harmony within. If anthropology is ever to achieve its own deserved place in the scheme of knowledge it is not by putting together disjoined scraps of things pertaining to man in one basket, as Tylor advocated, but by exhausting all data and trying to find out the inner principles of the unity in the Microcosm within, corresponding to the Macrocosm without and behind the diversity, and this Morgan attempted to do. The solution might be inadequate, but the conception and procedure should be recognized as a legitimate one in anthropology. The anti-evolutionists in reacting against Morgan too violently did a great disservice to anthropology, and one is glad to find the Morgan spirit moving behind a Wissler interrogating the piling up of facts around the American Indian to see what it has to yield on the general fundamental problems of human culture.

If anybody needs to be disillusioned as to the true method of Morgan, which was farthest removed from that of an armchair speculator, he need but turn to his earlier works. Even his casual performance while trout-fishing in Michigan is sufficient to give us the keynote to his procedure. It was his acquaintance with Henry and Agassiz in 1856 that had brought him early encouragement and he never ceased to be

an Agassiz student of nature. Thus, in 1868, we have from him "*The American Beaver and his Work*," a publication of which Dr. Jeffries Wyman truly remarked, "that it came the nearest to perfection of any work of its kind he had ever read." Yet it was not mere detached scientific interest in a well-convoluted ever-active brain that could have made Morgan so great. His warm heart, keen human interest, and his classical style were the great factors in his wide influence. He objected to his friends, the beavers, being called "brutes;" he would prefer calling them "mutes," and he was attracted to them, as he remarked in his preface, "as the results of the persevering labors of the beaver were suggestive of human industry." We come to have an insight into his thoroughness as we read of his having two hundred skulls of beavers sent to him by a relative.* From Morgan we get an idea of how much more valuable to science it is when, for instance, an astronomer with his mightiest telescopes has also a St. Francis heart welling out in love to his brother the sun, or his sister the moon!

Morgan now proceeded to his third important step in generalization, "discovering like Newton," as his friend said, "thousands of new facts and rendering intelligible thousands of facts previously known" and placing his final results in "*Ancient Society*," "a work which placed him in the front rank of science in archaeology, ethnology, sociology, anthropology and political philosophy." Truly has Putnam remarked that Morgan's earlier works will ever stand as monuments of industry and give to him enduring fame, but he will be widely known by his most popular volume, "*Ancient Society*," published in 1871. Another calls it "a comprehensive and philosophical work—the result of twenty years' pursuit of a unique and engrossing enquiry. This book has exerted a well-nigh unparalleled influence on the conceptions of historians, sociologists, and students of kindred branches of knowledge, while, through the champion-

* Michigan History Magazine, Vol. XIII, p. 400.

ship of such men as Bebel and Engels, it has likewise become a popular classic in Socialistic circles." (International Encyclopaedia.)

The book was divided into four parts: (1) Growth of Intelligence through inventions and discoveries; (2) Growth of the Idea of Government; (3) Growth of the Idea of the Family; and (4) Growth of the Idea of Property. Its division stratigraphically of modes of life into Savagery, with three substages; Barbarism, with three subperiods; and Civilization, has become classic, and however much its unilinear scheme of evolution has been challenged and its attempts at correlation between social status and cultural levels been questioned, in the light of later data, it has once for all recognized the importance of material culture as a criterion in understanding any system. Living in the days of the first flush and enthusiasm of the evolutionary doctrine and its successful application in the fields of geology and sociology, Morgan could not but be pre-occupied with a stratigraphic and chronological series, and it is not surprising that his earlier tendencies of study by the methods of distribution were overshadowed so that he narrowly missed the sense of the geographical continuum, so keenly and acutely realized in later American synthetic studies. The idea of growth and biological evolution which Morgan had engrafted once for all in anthropology, if a little overdone, was an error on the right side, standing in contrast to a Nott and Gliddon, the best seller because it gave large consideration to Biblical ethnology; and even a Bradford talking of Noah's deluge. This may explain how later a geographical lead from Germany quickly appealed to the people, perhaps as an escape from anti-Hebraic evolutionism, which had been anathema maranatha in the pulpits throughout the length and breadth of the land. In such setting note that Holmes thus speaks of Morgan; "He formulated for the first time a logical order for the history of social organization and as his labors progressed he reached the solution of many related problems of anthropology. His grandest contribution to the science of mankind is not the elucidation of

any one branch of the subject of his researches, but the opening up of a vast new field of research of which the world had no previous knowledge, and the application of the remarkable insight into human affairs thus gained to the classification and logical arrangement of the whole subject-matter of anthropology." * Then again, it has been truly pointed out that his book " had great influence upon the development of anthropological theory throughout the world, possibly more in Europe than in America," and that " Morgan shares with Tylor the honour of having done more than any other to lay the foundations of cultural anthropology."†

Morgan was a leader in organizing the Anthropological Section of the American Association for the Advancement of Science, and started Bandelier on his great archaeological career. Here also he did a great service. In the pre-Civil War period a distinction, as we have seen, was constantly being drawn between the higher cultures of Middle America and the savages. Morgan defended their unity. In " *The Seven Cities of Cibola* " (1869) he advanced strong arguments showing that the ancient Pueblo structures of New Mexico and Arizona, as well as those of Mexico, were merely communal dwellings of exceptionally advanced peoples. In his article on " *Montezuma's Dinner* " he rationalized the Spanish account and almost dealt the final blow at the Prescott School.

He was a vigorous writer. For example he started Australian sociological researches by an Introductory Note to the Kamiliroi and Kurnai terms recorded by Fison and Howitt (1880), bringing out their Tamilian characteristics. Even shortly before his death he brought out a volume on " *Houses and House Life of the American Aborigines* " (1881)—in Powell's Series of Contributions to North American Ethnology, Volume IV—proving American Indian architecture to

* National Academy of Sciences, Biographical Memoirs, Vol. VI, p. 236.
† Encyclopaedia of Social Sciences, p. 337.

be in harmony with the practice of hospitality and of communism in living.

Thus, like a colossus he strode in every field of anthropology, influencing his generation with his burning enthusiasm and agreeable disposition. His Relationship system has been appreciated rightly by Rivers as follows: "I do not know of any discovery in the whole range of science which can be more certainly put to the credit of one man than the classificatory system." * Professor Wissler has clearly elucidated its main points † and especially its present status through McLennan and Tylor to its revival by Rivers and Lowie and application by Spencer and Gillen to Australian Tribes, and pointed out how "on the whole the American group was anti-Morgan," and how though "it is obvious that the method pursued by Morgan is inadequate, no one has suggested a new method of empirical approach" by which "the objective study of tribal systems might reveal the forms of marriage previously followed by man." The psychology of linguistic growth is yet but imperfectly understood and if ever any psychological fossils of social states be recoverable from studies of the distribution, dispersion, mutation and convergence of different stocks of the languages of the whole of a mankind, evolving from a single species, the Morgan method might yet be an invaluable clue. It is curious to observe that the assumption of an initial promiscuity in which Morgan's position seems to have been shaken the most, is found by a recent author, Gerrit S. Miller Jr., to be perhaps more consistent with the facts than any other hypothesis.‡

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* "Kinship and Social Organization" (1914), pp. 6-7.

† "Introduction to Social Anthropology" (1929), Chapter IX.

‡ In Journal of Mammalogy, Vol. 9, No. 4, 1928, pp. 278-293, Gerrit S. Miller writing on "Some Elements of Sexual Behaviour in Primates and their possible influence on the beginnings of Human Social Development" makes clear the facts 'that adequately conducted studies of non-human primates reveal the presence of loosely organized, sexually promiscuous horde life as a type of association frequently occurring among these animals' and suggests that it seems reasonable to believe that a stage of simian horde life with its attendant sexual promiscuity lies somewhere in the ancestry of the human social systems which exist to-day.

CHAPTER VI.

Powell, the Research Leader; Putnam, the Museum Builder; and Brinton, the Academician, and their Schools at Washington, Boston and Philadelphia. Museum Methods.

The Establishment of Research Centers.

Research itself is a highly specialized culture product and radiates from centers which become gradually institutionalized. In any given line it has a long preparatory history characterized by disjointed individual efforts, which tend to integrate and nucleate at favourable and highly specialized centers in a community thought-life. Its growth is assured at a place and time where and when the succession of discrete protopraxic responses begin to adjust themselves in a dynamic continuum, so as to give freer play to epicritic responses in higher levels of integration in a social organism, as it were. Until the institutions are formed, a mechanism does not evolve to insure a regular channel for mental activities in a said framework where the sustenance problem has been solved. In India, higher thought was provided for in yore by a social class-institution, its protection being secured by the second class, and its monetary support by the third class. In China, the position and administrative support of the Literati insured the brain-work of the community. But in democratic communities where caste-stratification has not formed, or is not desirable, the higher thinking functions of a social unit become justly a national concern. In America we have, as in business so in research, a higher type of organism that has led to so much efficiency along with greater quantitative output. The older system of spasmodic state or court patronage of eminent societies or eminent men, were culture-beds for dissociate organisms only. But in the United States we find in the gradual building up of the nation as an organic unit, one central nervous system,

as it were, through the National Academy and its National Research Council and the other units nucleating around Washington, such as the Smithsonian Institution, the United States National Museum, Medical Museum, Bureau of American Ethnology, Department of Indian Affairs, Anthropological Society of Washington, the Carnegie Institution, and the Washington Branch of the Archaeological Institute of America.

Leadership of Powell and Putnam.

From the end of the Civil War to the beginning of the twentieth century we find all the higher culture-traits in Europe transmuted to the United States, steadily and speedily bringing about her emergence as a world power and preparing her for world leadership. Stimulated by European scholarly interest in the American anthropological field, nurtured by the European type of scholar, as Duponceau and Gallatin, native-born scholars as Morton and Schoolcraft, a new birth and a new lead was realized in the dominant synthetic genius of Morgan. The need was intuitively felt for fostering nurseries for the maturation of this new life. So the leadership of a Powell and Putnam came in at the right time to sponsor and take care of the hundred blended notes soon to echo throughout the continent.

Before 1860 anthropological institutions in Washington were almost non-existent. There, the Smithsonian Institution had encouraged some research in anthropology, the Department of Indian Affairs began to take shape and to stimulate ethnographical and linguistic research, but it is entirely to Powell that we owe the creation and development of the Washington School and its galaxy of brilliant scholars, all masters in their special fields,—such as McGee, Thomas, Gatschet, Holmes, Fewkes, Mooney, Mason, Fletcher, Matthews, Hodge, and Hough. Powell recognized the three main lines of approach, namely, linguistic, cultural and archaeological. He echoed and applied in various fields Morgan's culture scheme of evolution from savagery through barbarism into civilization. He not only set up a geological survey, but made anthropological research in America a

profession in a Government Bureau. He it was who set a standard for anthropological publications that is unique.

Though the museums and academies had already a long start it was solely to the credit of Putnam that the museums were built up as centers of anthropological thought, and it is to him that we owe indirectly the rise of the University, side by side with the museum as a factor in anthropological research. Charles Elliot rightly said that " he was to anthropology what Asa Gray was to botany." Not only the reorganization of the Peabody Museum, the American Museum of Natural History, the Anthropological Section of the World's Fair, the inception of the Field Museum, and even the furthest University of California were due to him, but all of them were sustained by his zeal and early fostering care. He it was who got Dr. Franz Boas for the Chicago Fair and then started him on his brilliant career at Columbia University. As early as 1886 he was made Peabody Professor of American Archaeology and Ethnology, and though honored as Professor Emeritus at Harvard and California his main interest was in museum building. It was he who emphasized the importance of field-work as a means of replenishing museums. It was Putnam and Powell who definitely started the building up of anthropology as a museum subject, attached to field-work, but in a sense, divorced from college discipline. His greatness and capacity for leadership may be very well judged by his being the maker of men like Boas, Bowditch, Carr, Dixon, Dorsey, Fewkes, Fletcher, Gordon, McCurdy, Mead, Mills, Moorehead, Pepper, Russell, Smith, Saville, Swanton, Tozzer and Willoughby.

John Wesley Powell: 1834-1902.

A " scientific frontiersman," as Powell has been aptly called, whose life shows " how a man of exceptional power rises suddenly in an otherwise undistinguished lineage, and how he surmounts the limiting associations of early years, less through the opportunity provided by others than through opportunities opened by his own individual enterprise for the

satisfaction of inborn interests."* It was on March 24, 1834 that Powell was born at Mount Morris, New York, of English immigrants, the fourth of nine children. His father was a Methodist preacher who moved to the Middle West, finally settling in Illinois. He was educated in rural schools, attended Illinois College for a short time and then went to Oberlin for two years. He began teaching in schools in 1852 and became an enthusiastic student of natural history. He travelled alone over Wisconsin, Illinois, Iowa and Missouri, collecting plants, shells, minerals, and fossils, and soon came in contact with various colleges in Illinois. The son of an anti-abolitionist, the call of the Civil War soon found him enlisting as a private, later winning the rank of a Major, by which he was ever afterwards known—though he was made Lieutenant-Colonel later on. He lost his left arm at the battle of Shiloh, in 1862. This military training stood him in good stead as an organizer and administrator. Yet a parson's peaceful heritage and cultural outlook which has given England so many geniuses—according to Galton—and the vocation of a nature student under adverse circumstances, were never lost on him. We find him again turning to teaching, becoming a Professor of Geology in Illinois Wesleyan College, giving up a more lucrative job in an office. But specimen collecting was his hobby and he moved on to the curatorship of the Museum of Illinois, and lecturer in Normal University. Originality and love of exploration was bred in his bones and in 1867 he took a class of sixteen to the Rocky Mountain region of Colorado, inaugurating a summer school system in geology. He remained in the west to continue explorations and later, with the financial assistance of educational institutions in Illinois and congressional authority to use supplies from military posts, organized geographical and geological expeditions. He wintered west of the Rocky Mountains in the White River valley and used the opportunity to study the Indians in the vicinity. Thus, though without an early training in ethnology, his warm heart and keen

* National Academy Biographical Memoirs, Vol. VIII, pp. 11-12.

inquiring spirit led him to the success which he was to attain to such a high degree later. Then he made his famous exploration of the Grand Canyon of Colorado which made him a national hero. Starting with four boats, at Green River Station, Wyoming, he reached the mouth of the Virgin River August 30, 1869, after three months of desperate battling with the torrents. He planned a second expedition more successfully, which led to the development of the United States geographical and geological survey of the Rocky Mountains, of which he was made director. Then began his work under the Smithsonian Institution, of which, due to the advice of Professor Henry, the gathering of ethnological data was an important part. Many surveys in western United States were being conducted by Hayden, Clarence King and Lieutenant Wheeler simultaneously, and there crept in much rivalry as to the scope of each. It was through Powell's urging that the three surveys were merged into the United States Geological Survey, under the Department of the Interior (1879). Working on 670 Indian vocabularies in the Smithsonian Institution he brought out, in 1877, his first "*Introduction to the Study of Indian Languages.*"

In 1879, by an act of congress, the Bureau of Ethnology was organized, with Powell as Director, an office which he held with great distinction for twenty-three years. The annual appropriations ran from $20,000 to $50,000. "The object of the Bureau was the prosecution of research by direct employment of scholars and specialists in the Bureau itself, and by the promotion of research through collaborators elsewhere throughout the country. As far as the general progress of ethnology was concerned, Powell's great service here, as in geology, lay in organizing a corps of experts; in providing opportunity for their steady work under good conditions; in directing their work wisely; and in securing assurance of fitting publication for their results.....Twenty-three large volumes of *Annual Reports of the Bureau,* issued under Powell's direction, mark an epoch in American ethnology."*

* *Ibid,* p. 63.

When Clarence King resigned from the Geological Survey in 1881, Powell was made Director, holding office till 1894. During his administration the work of the survey greatly expanded. His topographical survey map and irrigation survey works are phenomenal. His tackling of the problem of irrigation in arid districts at so early a period, his foreseeing the proper way of development in arid districts, now conducted on an enormous scale by the Reclamation Service, a direct outgrowth of the Geological Survey, well entitles him to the claim of being one of the great national benefactors. "The United States Geological Survey, under Powell's leadership, came to be not only the largest scientific organization of its kind, but the largest scientific organization of any kind in the world."

In 1878 he became a founder of the Archaeological Institute of America, and in 1879 he organized the Anthropological Society of Washington. In 1889 he was elected President of the American Association for the Advancement of Sciences.

In later years Powell paid less and less attention to the administration of the Bureau of Ethnology, which was run largely by W. J. McGee, and gave most of his time to personal studies "which passed gradually from anthropology into the fields of psychology and general philosophy."

Powell's genius lay in the organization and stimulation of the research by others in the fields of geology, physical and economic geography, anthropology and philosophy. His creation of the gigantic geological survey, with divisions by subject and not area; and of the ethnological survey, raising the status of ethnology and taking it out of the amateur class, have made America unique in those branches, not only by its excellent quantitative output, but by the creation of a field for a large number of eminent leaders of thought, who otherwise might have drifted to other studies.

Powell's Contributions.

His direct publications and contributions to ethnology are not numerous. In 1880, his "*Introduction to the Study of the Indian Languages*" showed his grasp of the subject and recognized the importance of the field technique. Also the

considerable influence that Morgan had on him is shown in his use of the schedule on kinship terms. So, when, in 1891, the Seventh Report of the Bureau of Ethnology came out, we find Powell contributing one of the most synthetic studies and fundamental contributions to the science of linguistics that has ever appeared. Powell's study is in fact a carrying on of the earlier contributions of Heckewelder, Gallatin and Duponceau, but his procedure set once for all the type of American linguistic studies. We can discern a kinship in style and thought between the later treatment of Boas and the earlier work of Powell, especially in the psychological interpretation of grammatical categories and the technique of finding linguistic stocks and families. It is true he emphasized the lexic rather than the grammatic, but in his paper on the "*Evolution of Language*"* his emphasis is placed more on grammatical processes, such as combination by juxtaposition, compounding, agglutination or inflection, vocalic mutation, intonation and placement. He further points out that in settling the criteria of rank in languages, "the grade of organization, *i.e.*, the degree to which the grammatic processes and methods are specialized," are of as much importance as the "somatological content." Powell's linguistic map stands as his greatest contribution. "The work was so well done that very few changes have been made and as it was, in the main, based upon mere vocabularies, its excellence stands as a worthy memorial to Powell and his able associates."† True the designation of stocks has been somewhat arbitrary, and important modifications in particular groups have been suggested by Boas, Swanton and Kroeber, Dixon and Sapir, and will perhaps lead to the elimination of some stocks in Powell's list of fifty-eight, but it must always be the point of departure for investigation.

Powell wrote articles on the Hopi, Wyandot, and notes on the Ute and Shoshonean myths. He projected a series on the evolution of thought and activity in philosophy, linguis-

* Transactions of the Anthropological Society of Washington, 1880, pp. 34-53.

† C. Wissler, The American Indian, 1922, p. 305.

tics, aesthetics, society and industry. Gradually he turned his attention from anthropology to psychology and in 1899 brought out a book on "*Truth and Error*," followed by a series of essays in the American Anthropologist on "*Good and Evil*."

This is not the place to enter into a discussion of the validity of Powell's philosophical theories, but no judgment of Powell's work would be complete without taking into account his silent but positive influence through the Bureau of Ethnology reports under his regime. G. K. Gilbert has placed on record the fact that "Phenomenally fertile in ideas, Powell was absolutely free in their communication, with the result that many of his suggestions—a number of which can never be known—were unconsciously appropriated by his associates and incorporated in their published results."

Evolution supplies the keynote of Powell's studies, whether dealing with language or mythology, music, or "pentalogic series of human activities." He starts with the Morgan position of the states of Savagery, Barbarism and Civilization and fills up the canvas with color from every department of life. In his emphasis on adaptation he anticipates some dominant schools of sociological thought in university centers. "In anthropic combination the units are men, and men at this stage are no longer passive objects, but active subjects, and instead of man being passively adapted to the environment, he adapts the environment to himself through his activities. This is the essential characteristic of anthropic evolution. Adaptation becomes active instead of passive."* Powell's theories of evolution show how deep was his grasp and how keen he was to differentiate between the three evolutions in the physical, biotic and anthropic kingdoms. His recognition that in the anthropic kingdom "all the changes in the other kingdoms appear together with changes in the composition of activities;" his attempt at classifications in Sociology or Science of Institutions as one of the five co-ordinate sciences, esthetology, technology, sociology,

* The Three Methods of Evolution (Bull. Philosophical Society of Washington, VI, 1883, XLVIII-L).

philology and sophiology, which he called demonomy, shows his characteristic philosophical attitude. It is remarkable how much Powell was preparing the way for freeing American anthropology from the shackles of ultra-evolutionism : " The laws of biotic evolution do not apply to mankind. There are men in the world so overwhelmed with the grandeur and truth of biotic evolution that they actually believe that man is but a two-legged beast whose progress in the world is governed by the same laws as the progress of the serpent or the wolf; and so science is put to shame.....That which makes man more than beast is culture. Culture is human evolution —not the development of man as an animal, but the evolution of the human attributes of man. Culture is the product of human endeavor." * So the importance of Powell can be easily judged as bridging the gulf between Morgan and Boas. Transplant into the Morgan-Powell field a Ritter-Ratzel seed and it gives us a Boas crop and a Wissler synthesis.

The Boston School —Jeffries Wyman, 1814-1874.

Before the rise of the Washington School, Boston had already begun to rival the earlier glory of Philadelphia as a reputed center of culture and learning. Agassiz and Wyman, by their united effort, had put Harvard's scientific material and instruction on the highest level. Jeffries Wyman was born at Chelmsford, near Lowell, August 11, 1814. After graduating, in 1833, he entered the Harvard medical school and in 1837 received the degree of M.D. In 1839 he became the curator of the newly founded Lowell Institute and delivered his first course of public lectures there in 1841. In 1843 he became professor of anatomy at Hampden-Sydney medical college, Richmond, Va. In 1847 he was chosen to the Hersey Professorship of Anatomy at Cambridge, and published a notable account of the gorilla. He gradually became famous by his study of the fore-and-hind symmetry in limbs. In 1852, health having failed him, he explored shell-mounds in Florida and then travelled in South America.

* Proceedings, American Association for the Advancement of Science, XXXVIII, 1889, pp. 4, 5.

On the 8th of October, 1866, George Peabody gave one hundred and fifty thousand dollars " in trust for the foundation and maintenance of a museum and professorship of American archaeology and ethnology with Harvard University." Wyman was head of the Museum, which began with fifty specimens, half given by himself, but grew rapidly under his direction. His method and precision, measurement of skulls, arrangement of specimens, and his lectures on Anatomy and Anthropology, soon established the popularity of anthropology as a museum-regulated, academic subject and won for him a wide reputation. He was a believer in evolution and it is to him that we owe that characteristic lead in American Museums " not to aim at a multiplicity of specimens, but to select typical and representative forms and parts."

F. W. Putnam—1839-1915.

A descendant of John Putnam, who immigrated to Salem from England in 1640, Frederick Ward Putnam was born in Salem, Mass. on the 16th of April, 1839. He graduated B.Sc. from Harvard in 1862—fourth generation to graduate from this University. He was interested in natural history from early boyhood, and at the age of seventeen published a list of birds of Essex county. Entering Lawrence Scientific School, as a special student under Louis Agassiz, he was soon made assistant in charge of fishes at the Harvard Museum, working in this position until 1864. His contemporary students were Alphaeus Hyath, Edward S. Morse, and Alphaeus S. Packard, with whom he founded the American Naturalist in 1867. He became Curator of Ichthyology in the Boston Society of Natural History in 1859, and was at this post until 1868. The influence of Agassiz was strong over him throughout his life. From 1864-1878 he worked in ornithology and ichthyology. From 1867-1869 he was superintendent of the Museum of the East India Marine Society. He succeeded Jeffries Wyman as Curator to the Peabody Museum of Archaeology and Ethnology. We would not be very far wrong in saying that the university centers which now lead in anthropological thought and teaching owe

their initiation to Putnam. Harvard, New York, Chicago and California—everywhere the hand of this zealous organizer is evident. Harvard itself owes its early start to the fortunate leadership of a Wyman, but more to a Putnam for well-organized studies and a famous museum, and to the credit of Harvard be it said that it never allowed itself to be dissociated from the grand old museum-builder. He was made Honorary Curator in 1909 and Professor Emeritus from 1913 until his death in 1915. It is remarkable how the lure of anthropology proved too strong for Powell the geologist, Brinton the physician, and Putnam the ichthyologist. It was in 1857, when attending an American Association for the Advancement of Science meeting at Toronto, that Putnam's interest was first aroused in anthropology. He defined anthropology "as the study of man and his work." Though engaged in 1874 in the Kentucky Geological Survey, and serving from 1876 to 1878 as assistant in ichthyology in the Harvard Museum of Comparative Zoology, he was writing, along with many papers on fish and birds, notes on ethnological and archaeological subjects. He contributed a paper "*On Indian Graves on Winter Island*" in 1865 to the Boston Society of Natural History. In 1870 he wrote on "*The Indian Mound at St. Louis*," and about that time became interested in the Mammoth Cave. In 1871 he was reading papers on "*Indian relics from Beverley*" and "*Ancient Fortification on the Wabash.*" The next year he published a short "*Note on the Inhabitants of the Mammoth Cave.*" By 1873 we find his archaeological interests gradually overshadowing his observations on tadpoles and insects. "*Indian Shellheaps of Massachusetts*," "*Ancient Indian Carvings in Ipswich*," "*The Great Antiquity of Man*," "*Ancient Fortifications on the Wabash*," "*Ancient Relics of America, their crania, migrations and greatest development in Mexico and Peru*" from his pen, fill the pages of the Bulletin, Essex Institute (Vol. IV) in 1873. His interest in archaeology became greater and deeper as shown in observation made while serving as assistant to U. S. Engineers in a survey west of the 100th meridian, 1876-1879, thus

familiarising himself with Southern California, Arizona and New Mexico. Later he made extensive explorations among the mounds and burial places of Tennessee. "A large earth mound, twenty feet in height by about one hundred and fifty in diameter, was carefully opened. A large burial mound containing between two and three hundred graves was completely explored."* In a Report of fifty-six pages he describes from the objects found "the high attainment of this ancient people in ceramic art, and shows the development reached in native art by people who worked in copper, carved in stone and shell, moulded in clay, wove fabrics of several kinds, cultivated maize, lived in walled or fortified towns, buried their dead in extended posture—generally in stone graves, and erected the large mounds of the Cumberland valley, from which they are now known as the Mound-Builders."† Further we find many important papers, like those of Bandelier, forming part of the Reports issued by Putnam, others treating of explorations in Nicaragua by Dr. Flint, and in Mexico by Dr. Palmer. The adequate history of the explorations and activities of the museum under Putnam would require a volume by itself. In 1877 Putnam writes on "*Esquimaux Skulls*" and in 1879 we find important technological papers, *e.g.*, on "*Perforated Stones*," "*Implements and Weapons made of Bone and Wood*," "*Textiles, Fabrics and Basket-work*," "*Iron Implements obtained by Contact with Europeans*" contributed by him in the "*Report upon the U. S. Geographical Surveys West of the One-Hundredth Meridian.*" His paper on "*Marriot Mound No. 1 and its Contents*," in 1884, shows his accurate field technique as well as his profound interest in the Ohio mounds. In 1886, on the occasion of his election to be the Peabody Professor of American Archaeology at Harvard, we find the trustees placing on record "their increased confidence in their nominee.....(confirmed by competent opinions) in recognition of his eminence as archaeologist and of his talents for

* Peabody Museum, Harvard, Reports, Vol. II, p. 203.
† *Ibid*, p. 360.

organizaion and research. The secretary of the Smithsonian Institution in particular declares that he has adopted from Mr. Putnam the ideas and plans upon which our Museum is arranged and that he proposes to reorganize the vast national collections at Washington accordingly." * In 1891 Putnam could truly write "to review the past of the Peabody Museum would be to review the whole subject of American Archaeology and Ethnology for a quarter of a century, so closely indentified is this museum with many phases of its development. It has, moreover, taken its full share in the work of introducing scientific methods of arrangement," † and we know how much of it was due to the breadth of vision and accuracy of detail in Putnam himself. In 1889 Putnam was an organizer of the American Folk-Lore society and remained active in it until his death. In 1892 he was appointed chief of the Anthropological Section at the World's Fair, Chicago. His achievements here resulted in a great impetus to the study of anthropology and the organisation of Museums—it saw the beginnings of scientific collecting and the Field Museum was a direct outcome of this. In 1892 Putnam was made an honorary Phi Beta Kappa at Harvard, and in 1894 he was made D.Sc. at Pennsylvania. From 1894-1903 he was curator of Anthropology in the American Museum of Natural History, New York. In 1894 he writes that he was called upon " to reorganize the department (of Anthropology) on a broad basis, to plan for its future development and for exploration, and to direct its work. Since the first of June I have held both positions (devoting one week each month to New York).....thus bringing into perfect harmony two important centers of anthropological research." ‡ We find also in this year a course of ten lectures given in the Museum inaugurating the educational aspects, and a regular graduate course on " Anthropology " begun at Harvard, including Physical Anthropology, Comparative Archaeology, and Ethnology, and the designation of the course was changed

* Reports, Vol. III, p. 520.

† Reports of the Peabody Museum, Vol. IV, No. 4, p. 2.

‡ Peabody Museum Report, 1893-94, p. 8.

from American Archaeology and Ethnology to Anthropology. Thus, as Powell was the organizer of centralized research under national patronage, Putnam not only built up museums but made them grow into educational institutions. So it is a museum subject that anthropology grew to be under Putnam, who believed in work with specimens rather than books or lectures. In almost every museum where anthropology had a place could be found a Putnam trained student. As Prof. Kroeber wrote in his obituary notice: "It is no exaggeration to say that at least half of the anthropologists of the country today owe not only counsel but their first professional recognition to the influence of Professor Putnam."* In 1902 Putnam organized the American Anthropological Association, and in 1903-04 the department of Anthropology of the University of California, serving as Professor of Anthropology and Director of the Anthropological Museum. In 1909-15 he was made Professor Emeritus.

In connection with the work of the above institutions Putnam conducted, or directed, archaeological work in thirty-seven states, Central America, Mexico, South America, Canada and Europe.

He had a strong belief that men lived in glacial times in America and this led him to continue investigations at Trenton for thirty years. He was permanent secretary of the American Association for the Advancement of Science from 1873-1893 and the present organization is due to his breadth of vision. He had great ability as an organizer and fired others with zeal for anthropology, inspiring them with the importance of the subject. He exercised his initiative in securing the preservation of antiquities, especially in the south-west, as national monuments. It was through his efforts that the serpent mound was turned over to the Ohio Society. He shared in the organization of the Archaeological Institute of America and helped archaeology to find a foothold in the continent. He took a prominent part in the establishment of the *American Naturalist*. He has left us no

* American Anthropologist, N. S., Vol. 17, 1915, p. 718.

big volumes, yet in the bibliography appended to the Putnam Anniversary volume (1904) we find no less than four hundred and four items listed as his publications, besides his editorial labors. Most of his work is buried in Reports of the Museums, Societies and University departments that he built up. His chief efforts were directed to the development of a new science and a new field of research. The greatest monument to Putnam are his centers, for though the Powell center at Washington has somewhat waned since the death of Powell's associates, the Putnam centers have continued in their growth and now hold the torch of Anthropology for all lands.

Daniel G. Brinton —1837-1899 and the Philadelphia School.

We are already aware of the vigorous intellectual lead in Philadelphia before the more opulent or politically influential centers came into existence. After 1860, though the glorious tradition of others was carried on, it became less and less conspicuous. A strong group developed, however, with interest in Oriental and Egyptian problems, as Morris Jatow, Semitic scholar, and Mrs. Cornelius Stevenson, Egyptologue.

Brinton was the dominant figure in American problems; his interests were wide, though he specialized in the languages of Central America. He was a native of Pennsylvania, born at Thornbury, in Chester county, May 13, 1837. The days of his boyhood were spent near a village-site or a former encampment of Delaware Indians, where Indian pottery and flint arrowheads turned by the ploughshare first attracted his notice. He entered Yale in 1854 and graduated in 1858, with a first prize in English composition. The next two years he studied medicine at Jefferson, completing the study at Paris and Heidelberg the following year. He returned to practice medicine in West Chester. In 1862 he entered the army and saw much active service till 1865, when he was brevetted Lieutenant-Colonel of Volunteers, " for meritorious services," and honorably discharged. He married in 1865 and removed to Philadelphia, where he became editor of " *The Medical and Surgical Reporter* " till 1887. In 1884

he was made professor of Ethnology and Archaeology in the Academy of Natural Sciences in Philadelphia, and in 1886 Professor of Linguistics and Archaeology in the University of Pennsylvania. For forty years he was an incessant writer on ethnological subjects, which brought him honor and fame at home and abroad. In 1885 he was awarded the medal of the Societe Americaine de France for valuable work on American ethnology. In 1886 he was vice-president of the American Association for the Advancement of Science. Twenty-six learned American Societies were officially represented at his memorial meeting, at which Putnam spoke and Powell was represented, showing the great esteem in which he was held by the best of his countrymen.

Regarding his ethnological work, Dr. W. J. McGee's remarks are quite appropriate. After mentioning the fact that the discovery of the New World created new interests, he tells how when " the semi-romances grew into sober reality American students began to make various contributions to the budding science of ethnology, among which the classic work of Samuel G. Morton stood well toward the fore, if not in the lead," and how there arose the science of men, which " may be called the New Ethnology, and which may be fairly deemed America's contribution to the sisterhood of sciences." He goes on to speak of the three pioneers, of whom Brinton was one. " The leading pioneer in the New Ethnology was Albert Gallatin.....who founded inductive philology as a branch of the Science of Men; his mantle passed down to the shoulders of Horatio Hale, who did noble service in shaping the science to the needs of critical students. The second pioneer in the New Ethnology caught inspiration from Gallatin, yet blazed a new path in the wilderness of aboriginal relationships; this was Lewis H. Morgan, who.....founded inductive Sociology as a second branch of the Science of Men. The third pioneer in the New Ethnology, whose career overlapped that of Morgan, pushed into the very depths of the most closely entangled aboriginal relationships, and essayed, albeit cautiously and haltingly as befitted the difficulty of the subject, to discuss and classify the Red People in terms of

their own myths and beliefs; and thereby he laid the foundation for an inductive mythology (now called Sophiology) as the definite branch of the Science of Men. This third pioneer was Daniel Garrison Brinton." Dr. McGee further points out that " while Brinton's name stands among those of the pioneers, he was much more—he was an actual settler and an active producer as well a wilderness-breaker." As to his methods, McGee rightly brings out that " his position as a spokesman for a science was curiously like that of the elder Dana in geology, in that both were in chief measure reworkers of raw material produced by others, rather than original producers." Lastly, his unique position as a critic is very well brought out thus : " In one respect Brinton held a unique position among his fellow-ethnologists—he was the leading ethnologic critic of the country, if not the world..... It is not too much to say that a considerable portion of American ethnologic utterances during the last decade were really addressed to an audience of one, and that one the fearless critic of Philadelphia."*

It is Brinton's treatment of mythology that is his outstanding contribution to the Science of Man. Side by side with comparative philology, trying to understand man's expression of ideas, bloomed in luxuriance the science of mythology, studying inductively the contents of man's mind about the world other than himself. The studies of the Grimm brothers in Europe revealed to that country similarities and identities in the folk-lore and sacred mythologies of Indo-European peoples. This did not satisfy the restless, inquiring, pioneering spirit of Max Muller, who tried to push beyond into " the basic ideas and thoughts; the stuff of which mythologies are made," in his " *Oxford Essays*," in 1856. In 1859 Kuhn exemplified the same methods and principles of interpretation in his " *Origin of Fire and the Drink of the Gods*," elevating comparative mythology to the level of a world-movement.† Brinton, " the outstanding leader in

* See Brinton Memorial Meeting Report, Philadelphia 1900, pp. 37-41.
† Wissler, " Introduction to Social Anthropology," Chap. IX.

America," in a Bibliographical note referred to his predecessors in these studies on the American continent.* The first significant work in this field was by Dr. S. F. Jarvis, "*A Discourse on the Religion of the Indian Tribes of North America,*" New York, 1821—a philosophical survey of American religions, confined to the tribes of New Mexico, but marred by crude notions of the state of primitive civilization. Next followed E. G. Squier's "*The Serpent Symbol in America,*" New York 1851,—"now discredited." School craft's "*Indian Tribes*" (1851-9), with its valuable information, was pronounced to be shallow. J. G. Muller's "*Geschichte der Amerikanischen Ur-Religionen*" Basle, 1855, fantastically divided the religion of the red race into nature-worship, centering around the Sun in the South, and a fear of spirits with fetichism in the North—an imaginary antithesis drawn from an uncritical study of sources. A more comprehensive, sound and critical work was Dr. Theodore Waitz's "*Anthropologie der Naturvolker,*"—unfortunately defective and full of hasty generalizations on religion. Condemnable was also the work of the antiquary Abbe E. Charles Brasseur (de Bourbourg) in his interpretation of American myths as history or geology, though the priceless sources he unearthed from Spain and Central America were extremely useful, especially the Sacred National Book of Quiches of Guatemala.

In 1867 Brinton first essayed a short comparison of the Myths of Manibozo and Ioskeha, the analogous figures in Algonquin and Iroquois mythology respectively. In his "*Myths of the New World—A Treatise on the Symbolism and Mythology of the Red Race of America,*" Brinton "aims by a comparison and analysis of numerous native American religions to set forth the general principles of mythology, symbolism and rite which are common to all, and prove an identity of type among them." The work starts with general considerations of the isolation of the Red race, with their principal linguistic sub-divisions; the race as a unit, with glimpses

* The Myths of the New World, 1876, pp. 40-43.

of an extensive intercourse in distant ages between the great families, a prevalent unity of mental type and perhaps a still visible oneness of descent. (p. 39). It then deals with the idea of God, with a "*sensus numinis*"—a feeling that invisible, powerful agencies were at work around him which, as they willed, could help or hurt him—and among the American Indians appearing as a word comprehending all manifestations of the unseen world, yet conveying no sense of personal unity, in Algonquin *manito* and *oki;* in Iroquois *oki* and *otkon*; in Hidatsa *hopa;* in Dakota *woken*; in Aztec *teotl;* in Quichua *huaca;* and in Maya *ku,* all expressing in its most general form the idea of the supernatural (Chap. II). Then it describes the sacred number four—derived from the cardinal points and identified with the Four Winds (Chap. III). The symbols of the Bird and the Serpent, as standing for the Clouds and Winds, and the Lightning and Waters respectively, are treated in a masterly way (Chap. IV). The synthesis of the worship of fire, water, and the winds in the Thunder-Storm and water-ritualism is clearly and lucidly described and explained (Chap. V). The American culture-myths and their central heroes, Mannibozo or Michabo of the Algonquin, Ioskeha of the Iroquois, Viracocha of the Peruvians, and Quetzalcoatl of the Toltecs are finely analyzed and their affinities established (Chap. VI). Next the myths of creation, the deluge and epochs of nature and last day are treated comparatively and interpreted philosophically and psychologically (Chap. VII). The myths of man as earth-born, and the universality of the belief in a soul, a future state, and a resurrection of the dead, are shown from American Indian examples (Chaps. VIII and IX). Two chapters (X and XI) on native priesthood and the influence of the religions on moral and social life of the race, close this important book, which will always remain the best introduction to the mythology of the New World. While Brinton's insight into the psychology and social life of primitive peoples is always profound when viewed as a correlate of material culture, and while the geographic sense is implicit in all his studies, he may be said to be the adumbrator of the historical method in primitive

mythology. At least the conception of culture-heroes appearing as tribal heroes under different names, and the attempt to build up continental types from regional varieties of hero-cycles is definitely to be ascribed to Brinton. Later, due to the collection of more authentic data, the content and range, the style and structure, and the relative stability in form of various myths were better comprehended; but the universal elements in mythology and its place in tribal life were never better understood by anyone than by Max Muller and Brinton. In his "*American Hero Myths—A Study in the Native Religions of the Western Continent*" (Philadelphia, 1882), he further clears up the idea of the "culture-hero" or legendary civilizer and tribal deity, generally represented as of fair complexion, from a study of Quetzalcoatl, Viracocha, Michabo, Itzamna, etc.

Though Brinton was too cautious a critic to form generalizations, and though he has left numerous papers on particular archaeological and philological problems, he was always seeking general principles inductively derived from ethnological sources. In 1876 he wrote, "*The Religious Sentiment; its source and aim.*" This is a book of 284 pages, with chapters treating on the emotional and the rational elements of the religious sentiment, prayer, myths, cults, and the momenta of religious thought. This general examination of the origin of religions was later elaborated by him in his "*Religion of Primitive Peoples*"—the second American Lecture on the History of Religions. Laying down the three methods, historic, comparative and psychologic, he himself shows his sympathies to be with the last. He analyzes the basic beliefs and rituals and tried to arrive at some universal postulate of religion, such as "conscious volition being the source of Force, communion between the human and the divine minds, universality of inspiration. He goes on to an analysis of primitive religious expression in the word to the gods as various forms of prayer; the word from the gods as law and prophecy; and the word *concerning* the gods as myths. He concludes with a treatment of the line of development in primitive religions in seven aspects, such as, primitive social

bond; family, and the position of women; growth of jurisprudence; development of ethics; advance in positive knowledge; fostering of the arts, and the independent life of the individual. The general setting of the study and its method of presentation had made this an important ethnological contribution to theology.

Brinton's last work on "*The Basis of Social Relations—a study in ethnic psychology*" published in 1902, again endeavors to break new ground. Opening with a discussion on the Unity of the human mind, he takes up the consideration of the individual and the group and tries to examine the so-called ethnic mind, "a super-organism," or "physio-psychic organism," and finds that "the analogy of the group to an organism is purely fictitious; the historic causes of the decay of nations are not the same and not allied to those which bring about mortality in the individual" (p. 40). He would weigh all ethnic traits "by the contributions they make to the cultural history of mankind" (p. 45). His examination of physiological variation in the ethnic mind, and his suggestions that the rate of progression in the culture of savagery, half-culture, and full-culture stages are by arithmetical (addition), geometrical (multiplication) and saltatory (permutation) progressions and agreement with Isles that "the newest factor of culture multiplies all the factors which went before it," are extremely interesting. Similarly his study of pathological valuations of the ethnic mind lead him to formulate interesting ethnic psychopathic conditions in the intellectual life, consisting of conditions of deficiency (imbecility and criminality), and of perversion (delusions and dominant ideas), as well as in the emotional states, consisting of conditions of hyperesthenia or active motor-states (*e.g.*, hysteria, exultation and destructive impulses), and conditions of asthenia or passive sensory states (*e.g.*, melancholia or depression, neurasthenia or exhaustion). The natural history of the ethnic mind is then studied from the point of view of the somatic environment, showing the diversity of cognate causes as the influence of the social and geographical environments. The book is in a sense incom-

plete, but shows how comprehensive and deep was his conception of the subject. His small pamphlet on "*Anthropology as a Science and as a Branch of University Education*" describing "the study of man, pursued under the guidance of accurate observation and experimental research, embracing all his nature and all the manifestations of his activity, in the past as well as in the present, the whole co-ordinated in accordance with the inductive methods of the natural sciences —this study must in the future unfailingly come to be regarded as the crown and completion of all others—and this is Anthropology," shows his master-mind. Brinton's and Morgan's work have not yet been completed, and further, Brinton is the sign that the great synthetic period is at hand. What with Powell's state-help, with Putnam's public appreciation in museum-building, anthropology needed a Brinton's academic vision to complete the full triangle. Brinton's programme of anthropology includes a short history of the Societies and Schools for the Study of Anthropology, along with Professor MacCurdy's papers on the "*Teaching of Anthropology in the United States*," and "*Extent of Instruction in Europe and the United States*," it gives a complete picture of the academic status of the subject by the close of the 19th century. In France the lead came through learned Societies—the first Anthropological Society in Paris being founded by Broca in May, 1859, who also opened the first school in 1876 with a corps of five professors. A second school was organized in connection with the Museum of Natural History at the Jardin des Plantes. Instruction was begun at Oxford under Professor Tylor, December 31, 1898. There was some teaching at Cambridge, under Dr. Haddon, and at Edinburgh under Sir William Turner. In Germany the instructions at Munich, Berlin, Marbourg and Budapest were carried on by Ranke, Bastian, Von den Steinen and Von Torok. By 1902 thirty-one universities and colleges were offering anthropology. It was found to be an adjunct of sociology in nine, of philosophy in five, of psychology in three, of geology and zoology in five, and of medicine in one—only in five it stood alone, and in three it was unclassified.

This was really due to the interest aroused by the work of the Scientists connected with the National Museum, the Smithsonian Institution, the Army Medical Museum, and especially the Bureau of Ethnology at Washington, which, as Brinton justly remarked, " had enriched the literature of Anthropology with a series of publications not exceeded in value by those of any government." Brinton's work on " *Races and Peoples* " in Lectures on the Science of Ethnography (1890), is a good index of the state of knowledge concerning the science at that period, particularly in its chapters on physical and psychical ethnography and description of races. The classification of course is questionable, but the last chapter on problems of acclimatation, amalgamation, and civilization again anticipates the later absorbing interests of the great synthetic schools of thought in America.

Associates of Powell.

The work of Powell's associates is voluminous, embracing all branches of American archaeology and ethnology. The thoroughness of their treatment, their intensive field-work and museum training, have made these works substantial books of reference. The philological outlook of Powell and his concept of regional surveys was a trait common to all these investigators and their exhaustive studies prepared the way for synthetic studies later.

W. J. McGee (1858-1912) was a self-educated man of humble origin intuitively interested in geology. In 1883 he was associated with the United States Geological Survey. In 1893 he took charge of the Bureau of Ethnology under Powell and continued in that post until 1903. He was anthropologist at the St. Louis exposition, and later returned to geological work. Besides many geological publications, he was author of " *The Sioux Indians*," " *Primitive Trepping in Peru*," " *The Seri Indians*." In the " *History of North America* " he contributed a volume in collaboration with Cyrus Thomas, on " *Prehistoric North America*." Finding the " theory of glacial man in North America yet in dispute " the authors proceeded upon the theory that man's appearance on the continent was in the post-glacial era, though some puzzling questions arose in attempting to follow out this

theory.* There is corroboration of the long assumed connection with the old world, *viâ* Behring Straits. "Very recent investigations are furnishing some additional evidence of the long advocated theory of some relationship of the North American tribes, especially those of the north-western sections, with people of north-eastern Asia."† Admitting and even emphasizing the influence of the physical environment, they state, "No one, as far as we are aware, has followed Brinton in his idea of a 'particular area of characterization.'" They agree with Brinton, in the general sense that "American culture, wherever examined, presents a family likeness," but modify the statement by saying, "Not only can the leading types in art, architecture, forms, ornaments, etc., be readily distinguished in most cases from those of other parts of the world, but the boundary lines between *type districts* are not often sheer breaks, but usually gradual shadings from one to another."‡ About the mound-builders, the findings are at last definite. "The recent and more careful study relating to the pre-historic age in North America has disposed forever of the theory of a preceding highly civilized race, by whom the mounds of the Mississippi valley and the stone structures of Mexico and Central America were built."§ There is significant approving mention—though noting inequality in the grouping—of Farrand's book "*The Basis of American History,*" classifying the culture of North America "according to type, grade and geographical distinction in the following districts or culture groups: (1) the Eskimo; (2) the tribes of the North Pacific coast; (3) tribes of the Mackenzie River Basin and the high plateaus; (4) tribes of the Columbia River and California; (5) tribes of the plains; (6) tribes of the eastern woodlands; (7) tribes of the south-west and Mexico."‖ They further point out that "in culture the tribes of the

* "Prehistoric North America," p. 468.
† *Ibid*, p. 469.
‡ *Ibid*, p. 470.
§ *Ibid*, p. 474.
‖ *Ibid*, p. 476.

Pueblo region surpassed those of the Atlantic section only in architecture, agriculture and textile fabrics.....that culture reached its highest grade in North America in the elevated treeless or semi-treeless plateaus of the semi-tropical and tropical regions of Mexico and Central America.....that the advanced culture of Mexican and Central American tribes was indigenous.....and that the Pacific section was peopled before, and possibly several centuries in advance, of the Atlantic section."

Cyrus Thomas (1825-1910) was a lawyer and a minister. In 1858, he founded the Illinois Natural History Society; in 1869 was entomologist to the Hayden survey; in 1873 Professor in Illinois Normal University; in 1877 became State Entomologist and was in the U. S. Entomological Commission; and in 1882 was appointed to the Bureau of Ethnology, of which he was the archaeologist. He made an exhaustive survey of the mound question and dealt the final blow to the separate race theory. His study of Maya writing placed him in the front rank of Central American Archaeologists. In "*The Circular, Square and Octagonal Earthworks of Ohio*" (Washington, 1889), he enunciated his views thus: "There is nothing in them, nor connected with them, contradictory to the theory of their Indian origin, except it be the single fact that a few of them approach very nearly to true geometrical figures. That it was a custom among the Indians north and south to build circular inclosures and forts is fully attested by history; it is also known that some of the Indian forts in the northern section were polygonal, especially those built by the Iroquois tribes. There is, therefore, nothing in the form or arrangement that is inconsistent with Indian ideas and usages. On the other hand, there is nothing in their form or construction consistent with the idea that their composition is due to European influence" (p. 32). His study of these problems is to be found in his "*Report on Mound Explorations*" (Twelfth Annual Report of the Bureau of Ethnology), "*Catalogue of Prehistoric Works East of the Rocky Mountains*," "*Problem of the Ohio Mounds*," etc. His Maya

studies have been embodied in his "*Study of the Manuscript Troano*," "*Notes on Certain Maya and Mexican Manuscripts*," etc. He has left us a small handbook in his "*Introduction to the Study of North American Archaeology*" (Cincinnati, 1898). The noteworthy feature of this work is his classification into divisions, such as, Arctic, Atlantic and Pacific, which was later on elaborated by Holmes in his archaeological characterization areas. His insistence on philology and archaeology as mutual aids has also contributed to the healthy growth of the science of the American Indian: "Although the monuments and relics must be our chief reliance in studying customs, arts and activities of pre-historic peoples, language must form the chief basis here, as has been found true in the old world (p. 368). In his interesting work on "*The Indians of North America in Historic Times*" (1903) Thomas gives a very interesting résumé of Indian relations with and changes brought about by European contact. His appreciation of the contribution of the Indian to the civilization of the New World is very apposite and useful. "That the Indian has been an important factor in American history will be conceded, but the extent to which he has aided the Europeans in settling the continent, notwithstanding his seemingly obstructive methods, does not appear to have been fully appreciated.....That the Indians accelerated discovery and aided the spread of European population over the continent becomes apparent from a few negative considerations. Let us suppose the continent to have been uninhabited, wholly without human occupants at the time of the first arrival of the whites. What would have been the progress of discovery and settlement? How long would the Spaniards have been in discovering the Pacific Ocean, and when would they have learned of the gold of Peru? With no Tenochtitlan, no Aztec empire to conquer, how long would Spain have been planting colonies and discovering mines in Mexico and Central America?.....One of the most important steps in the preparation for the coming of Europeans was the discovery and cultivation of maize.....The Indians also aided in the

process of settlement by bringing other economic plants into use, by bringing to light the precious metals found in the continent and by discovery of many of the mine localities..... But the part played by the Indians in American history..... even affected the history of Europe. The Indians had much to do in deciding the contest between England and France for supremacy in North America.....the Iroquois determined the present boundary between the United States and Canada..... The history of both North and South America since Europeans began to settle their coasts has to a very large extent been colored by the history of the aboriginal element" (pp. 430-432). This shows a keen appreciation and a scientific appraisement of the Indian contribution to the culture of North America and to the racial composition of South America.

With Professor O. T. Mason (1838-1908) and W. H. Holmes (1846-) we enter into the discussion of the greatest systematic technologist and the greatest archaeologist prior to the twentieth century. Mason was educated in Washington, D. C. and was a teacher in the University. In 1884, he became Curator of Ethnology in the United States National Museum. He was the founder of the Anthropological Society of Washington. Many papers, which are outstanding works of reference in their line, owing to the completeness of their survey and minuteness of detail, are credited to him. The two best-known of his popular works are, "*Woman's Share in Primitive Culture*" and "*Origins of Invention*," but his greatest work was "*Indian Basketry*." Holmes belonged to Ohio, specialized in geography and geology, and was a teacher in Colorado. In 1871 he was assistant in the United States Geographical Survey. In 1894, he joined the Bureau of Ethnology. From 1894-1897, he was at the Chicago Exposition and Curator of the Field Museum. He was Professor of Geology in the University of Chicago and Curator of the National Museum in 1897. He became Chief of the Bureau of Ethnology in 1902. It is to the credit of both

Mason and Holmes that they emphasized the importance of museum methods, leaving a permanent impress on American Anthropology. Both used geographical arrangement, but it seems that the Oxford idea of culture-evolution as enunciated by Tylor and developed by Lane-Fox had some hold on their minds. As Mason sought to portray the historical development of material traits, such as the knife, mocassins, pottery, etc., Holmes tried to apply the same methods to archaeological finds, such as ancient pottery, or prehistoric stone implements in certain areas in the New World. In his article on "*Throwing Sticks*" Mason tried " to show how methods and problems of natural history are applicable to the products and apparatus of human industry."* In " *Primitive Travel and Transportation* " (United States National Museum, Washington, 1896) Mason's general prepossession is a psychological classification of better and higher modes of mechanical supports, often in an evolutionary series. Yet, when studying man's handiwork, the material and the technological process are more of interest to him. Though his exhaustive comparative studies lead him to detect similarities in types, he never speaks of geographical zones or types. " From whatever cause, the fact remains that there is no break between the foot-covering of the Chukchi and that of their eastern neighbours in Asia, and North-western America " (p. 335)—he leaves the problem there, the cultural implications do not interest him. An exhaustive enumeration of all the different types available, from whatsoever zone (*e.g.*, the carrying chair of Korea or Brazil), would be studied side by side. In studying foot-gear he distinguishes carefully the structure and materials, the elaboration, or evolution, or phylogeny, the environmental influences, and even ethnic peculiarities, but does not speak of diffusion or geographical distribution. In his masterpiece on " *Aboriginal American Basketry* " he has the advantage of geographical restriction to the New World which, according to Ratzel, " rightly understood, has to supply the key to the

* Proceedings of the U. S. National Museum, 1893, p. 219.

greatest problems of Anthropology; the reason for its decisive importance being found in its isolated position." Mason stops as it were on the threshold of important conceptions. Though the abundance of data has not kept him hidebound within *à-priori* psychological leads, the prepossession of an evolutionary classification from simple to complex processes, and the museum objective of finding typological series often makes him stop short of dealing with fundamental culture-problems. His distinctions of "woven and coiled" basketry; his accurate survey of the technique of basket-making and ornamentation; and his masterly comprehension of the functional needs of basketry, will always remain the models of technological work. The linguistic family-zones of Powell, indeed, lead him to distinguish "ethnic varieties of basketry," and though he suggests type-zones, like Fraser-Columbia or California-Oregon, are regions not coterminous with linguistic boundaries, yet he leaves it there.

In the works of William Henry Holmes we recognize the identical technological sense of classification by material and process of manufacture. Dealing with archaeological rather than ethnological material, the functional aspects become subordinate and the ideas of chronology and distribution dominant. In the "*Pottery of the Ancient Pueblos*" or "*Ancient Pottery of the Mississippi Valley*" (1882-1883), he deals with zonal potteries, but his comparisons are limited to the superiority or inferiority of style and make in other regions. In his "*Origin and Development of Form and Ornament in Ceramic Art*" (1882-1883) he exhaustively deals with the origin of form by adventition, imitation, and invention, but leaves out diffusion. Similarly the sources of decorative motifs are studied as psychologically derived from suggestions of features of natural or artificial objects, or from accidents attending construction. There is no treatment by distribution or design-areas. In "*Stone Implements of the Potomac-Chesapeake Tidewater Province*" (Annual Report of the Bureau of Ethnology, 1893-1894) we find the same thorough geological and technological treatment. Nowhere else except from Holmes, or perhaps Nelson, do we get exactly

the forms of stone implements in a related genetic series, illustrating progressive stages in the shaping of Neolithic implements. Holmes was a master-mind and in his "*Handbook of Aboriginal Antiquities,*" *Part I*—"*The Lithic Industries*" (Washington, 1919) we get, as it were, the connecting link between the old technological school and the new culture-area school. The sections on "*Stone-shaping Arts*" are as much a permanent contribution to the science of technology in general as Mason's insight into basketry. His "archæological areas," which he terms "culture-characterization areas," first appeared in the American Anthropologist, Vol. 16 (1919), followed by Professor Wissler's study of the "*Material Cultures of the North American Indians*" and show him to be far in advance of Mason's "ethnic varieties of types," yet prove how far archaeology itself could go if the fundamental and basic concepts of culture were not prominent. In this connection Professor Wissler's paper in the Holmes Anniversary Volume (1916) on "*Correlations between Archaeological and Culture Areas in the American Continent,*" (pp. 489-90) brings out fully how close the correlations are when the maps are superimposed on each other. The three steps of "linguistic," "archaeological" and "cultural" distribution maps are positively distinct. The emphasis laid on the geographical and economic environment, and the concept of the culture-center in relation to the whole area of the New World is fundamentally the contribution of the last, which has enabled us to enter into the whole question of origins and distribution afresh. In the bibliography * we find 184 papers brought out by Holmes since 1875.

J. Walter Fewkes (1850-1930), a student of Agassiz, who graduated with a Ph.D. from Harvard, was a student in Leipzig, and worked in 1881-1889 in the Zoological Museum at Harvard. He is the contributor of many brilliant papers, especially relating to Katcinas, and when in charge of the Hemenway expedition edited the Journal of Ethnology and

* Bibliography of William Henry Holmes, compiled by Ella Leary in Holmes Anniversary Volume (1916), pp. 491-499.

Archaeology (1890-1894). He became Head of the Bureau of Ethnology in 1918. In the study of ceremonials Fewkes leads. "*A Few Summer Ceremonials at Zuni Pueblo*" (1891), "*A Few Summer Ceremonials at the Tusayan Pueblos*" (1892), and "*The Snake Ceremonials at Walpi*" (1894) are perhaps the best and most complete descriptions of primitive ceremonials that we have, reminding us of Spencer and Gillen's work in Australia. The ceremonials are described from day to day with great vividness, accuracy and detail. There is some evidence that Fewkes was swayed by Frazer's "*Golden Bough*," which is quoted (p. 120) in the interpretation. He concludes, "The Snake Dance is an elaborate prayer for rain, in which the reptiles are gathered from the fields, intrusted with the prayers of the people, and then given their liberty to bear these petitions to the divinities who can bring the blessing of copious rains to the parched and arid farms of the Hopi" (p. 124). To perceive the limitation to this we have only to refer to the later studies of the Sun-Dance, by a group of scholars in the American Museum of Natural History, and Leslie Spier's concluding correlations, to understand the value of the new concepts that later came in with the synthetic school, whose geographical studies enable us to recover the dynamic aspects of primitive life, and to realize just how far the older school could go without these new methods.*

James R. Mooney (1861-1921) came from Richmond, Indiana, and was originally a newspaper man. He met Powell in Washington and was appointed ethnologist in 1880. He was a Gaelic scholar. In 1893 he was sent to the Pine Ridge Sioux by Powell. His studies of Cherokee, Chevenne and Kiowa, and especially of the Ghost Dance Religion, are classic. In his paper on "*The Aboriginal Population of America North of Mexico*" (1928) a critical appraisement is made, and instead of the enthusiastic over-estimations of Catlin, or the under-estimates of Gallatin, we get a fair average for the size of the biological group, which is so essential in population studies.

* See also obituary notice—American Anthropologist, N. S., Vol. 33, pp. 92-97.

CHAPTER VII.

Noted Expeditions.

We have seen how political, economic and geological expeditions gave birth to American Anthropology. In later years direct anthropological expeditions contributed a great deal to its maturity and richness. In fact, expeditions of a shorter or longer duration, whether summer field-work by individuals, or a sustained, intensive study by a group of scholars in a particular region for a number of years, have become a recognized pattern of anthropological studies in the New World.

Hemenway South-western Expedition (1887-1899).

In the fifth and last volume of the American Journal of Archæology and Ethnology, Benjamin Ives Gilman and Katherine A. Stone have written a short account of this famous expedition, which was later the inspiration of others of the same type, which have done so much for the study of Pueblo life. In 1882, Frank Hamilton Cushing, of the Bureau of Ethnology, visited Boston with several Zuni Indians and Mrs. Hemenway was "impressed with the need of securing accurate information about the tribes of the South-western United States before it should be too late." In 1886 Cushing again visited the East with three Zuni chiefs, at Mrs. Hemenway's invitation. He was commissioned to form an expedition and suggested the title of *Hemenway South-western Archæological Expedition*. He became the Director and had as his associates F. W. Hodge, Dr. J. L. Wortman of the Army Medical Museum, Dr. Hermann F. C. Ten Kate and Dr. Adolf F. Bandelier. In 1887 investigations were begun on the Rio Salado, near Phœnix, Arizona, and the collections of pottery and other finds are now mainly in the Peabody Museum. In 1888 work was begun with the Zuni and the expedition received from the Berlin Congress of Americanists two advisers. Until 1891

the history of the Pueblo tribes was entrusted to Dr. Bandelier. In 1889, J. W. Fewkes took charge of the expedition. The same year he was commissioned to visit the Passa Moquoddy tribes of Indians in Maine, taking with him a phonograph for recording folk-lore and music. In 1890-1891, John S. Owens was associated with the expedition. Owens was the first holder of the Fellowship instituted by Mrs. Hemenway in American Archæology and Ethnology and filled this position until 1893. In 1891 the expedition moved from Zuni to Hopi and all the collections were transferred to the Peabody Museum. In 1892-1893 Fewkes was commissioned to take a representative collection from Hopi to the Exposicion Historico-Americana at Madrid, held on the 400th anniversary of the discovery of America. A collection of pottery from Rio Salada had been exhibited at the Seventh Americanist Congress. In 1893 Gilman was commissioned to make miscellaneous phonograph records for the Chicago Exposition. The field-work of the expedition ended in 1894, with the death of Mrs. Hemenway. At the Congress International des Americanistes, compte-rendu de la septieme session, Berlin, 1888 (pp. 151-194), Cushing contributed a masterly paper on this expedition, in his own characteristic classic style, entitled, "*Preliminary Notes on the Origin, Working Hypothesis and Primary Researches of the Hemenway South-western Archæological Expedition.*" He starts with the search for an idea as a dominant trait of a culture, "the history of any special culture, as such, may be said to begin with the general conception or acquisition of a conformity to some special idea.....In his search for the Idea—which in this sense is the living soul of a dead culture—the ethnologist will often be guided by, for example, surviving customs among analogous peoples; by the distribution of structural remains, sacerdotal or utilitarian, of his dead people; by indications of some peculiar rites of sepulture once practiced by them, or by symbolism in their art. Ascertaining thus by the study of the traces of, say any Institution, what was the dominant idea (or culture-soul) which fostered its growth, he will then be enabled—even though he discover but scant evidence of other Institutions—neverthe-

less to reconstrue or reconstruct them all, or nearly all, merely by virtue of his *à priori* understanding of this dominating or all fashioning idea" (p. 152). Cushing goes on to describe how he adopted the costumes and habits of life of the people, acquired their language, and discovered not only their totemic sociologic subdivisions, but also sacerdotal or medicinal Esoteric Societies. He began to study their rituals and ceremonies and found them all in search of the "middle of the world" (p. 157). After organizing the expedition, he conducted excavations of what he calls "temples, house burials and pyral mounds," collecting a large number of specimens, seventeen to twenty thousand being found at Los Muertos alone. Cushing's plan was to excavate carefully the seven cities of Cibola "for joining the most ancient with the historic, to investigate the various sedentary cultures of western America, and both North and South America as different periods, phases or branches of one culture, the *Aridian*, as he had generalized it, and the Zuni as he specialized or typified it" (p. 194).

F. H. Cushing (1857-1900).

Frank Hamilton Cushing was born July 22, 1857, in north-eastern Pennsylvania. At nine years of age an Indian arrow-point attracted his attention and he became a collector. "Even before he knew the living Indian, he grew into sympathy with Indian art, Indian methods, and Indian motives;" he attained great skill in reproducing chipped stone arrow-points, and his skill extended gradually to pottery-making, basketry, weaving, skin-dressing, and all other native arts. In 1874, at the age of seventeen, he wrote an account of the "*Antiquities of Orleans County, N.Y.*" published in the Smithsonian report for that year. In 1876 he had charge of a portion of the National Museum Collection at the Centennial Exposition in Philadelphia. In 1879 Major Powell employed him in the Bureau of American Ethnology. He was to collect artifacts from Pueblos, but became so interested that he stayed with the Zuni for five years and was adopted into the Macaw clan. He was initiated into the tribal fraternities and made second chief of the tribe, the Head Priest of the

Bow. In 1887 he left the Zuni, bringing some of them East with him to Boston. This stimulated interest and resulted in the Hemenway Expedition, as we have seen. From 1886-1888 he was in charge of the expedition and then returned to work under the Bureau of Ethnology, taking up work in Florida under trying conditions. He died April 10, 1900. Powell showed his appreciation of him in the following: "Cushing was a man of genius.....Cushing stood out not only as a man of intellect, but pre-eminently as a master of those manual concepts to which he gave name as well as meaning—indeed he might fittingly be styled a manual genius .....By reason of his peculiar insight into primitive devices and motives Cushing was a teacher of his collaborators, even of those whose years were more than his own. His mind responded readily to the impact of new sights, new thoughts, new knowledge; hence he was fertile in hypothesis, fruitful in suggestion, an avant-courier in research, and a leader in interpretation. All his associates profited by his originality and learned much from him. The debt of American ethnology to Cushing is large." Cushing has left very few writings, but they are of the best. His works are "*Outlines of Zuni Creation Myths*," "*Zuni Folk-Tales*" and "*Zuni Breadstuff*." Powell, in his foreword to "Zuni Folk-Tales" writes thus truly, "under the scriptorial wand of Cushing the folk-tales of the Zunis are destined to become a part of the living literature of the world, for he is a poet, although he does not write in verse. Cushing can think as myth-makers think, he can speak as prophets speak, he can expound as priests expound, and his tales have the verisimilitude of ancient lore; but his sympathy with the mythology of tribal men does not veil the realities of the Science from his mind."

Adolph F. Bandelier (1850-1914).

One of the accomplished scholars of the period who studied archæology along with written records about the areas in which he labored (*e.g.*, the South-west, Mexico and Peru), of which Spanish records and aboriginal traditions were so full, and who always accepted written or oral tradition most critically was Bandelier. He was born in Switzerland, at Berne, on August 6, 1850. He had

no regular schooling after he was eight years old. He was brought to this country, to Highland, Illinois. He at first turned to business, but was rather unsuccessful. Gradually becoming interested in ethnology and archæology, he was greatly influenced by Morgan. In 1877 he travelled in Mexico and Central America, studying archæology, ethnology and history. These travels soon bore fruit in his papers "*On the Art of War and the Mode of Warfare of the Ancient Mexicans*" (Report, Peabody Museum, 1877, pp. 94-160) of which Putnam wrote, "This paper is the result of very careful study of the old Spanish and Mexican authors, and materially changes the views heretofore generally held in regard to the stage of development reached by the nation which so bravely held out against its Spanish conquerors. This paper is endorsed by Lewis H. Morgan" (*Ibid*, p. 12). He refers to "the distinguished American Ethnologist Lewis H. Morgan" and his papers on "Montezuma's Dinner, etc.," as having "made a bold stroke for the establishment of American Ethnology on a new basis" (*Ibid*, p. 114). After stating that the occupation of the Mexicans was not agriculture, but warfare, he gives an accurate, critical analysis of their armaments, strength, defensive and offensive armours, and military organization. He points out that there was no nobility of any kind in Mexico and describes the council of chiefs "tlatocan" in which the ultimate power of government was vested, and whose functions were equally legislative and judiciary, and proved that the Mexicans were not subject to the despotic rule of a monarch, but organized after the principles of a free military democracy. Equally learned and thorough was Bandelier's paper "*On the Distribution and Tenure of Lands and the Customs with Respect to Inheritance among the Ancient Mexicans*" (*Ibid*, 1878, Vol. II, pp. 384-448). Here he proved conclusively "that the principle and institution of feudality did not exist in aboriginal Mexico; that the notion of abstract ownership of the soil either by nation, or state, or by the head of its government, or by individuals, was unknown to the ancient Mexicans, and that definite possessory right was vested in the kinships composing the tribe" (*Ibid*,

p. 448). In his third paper " *On the Social Organization and Mode of Government of the Ancient Mexicans* " (*Ibid*, II, pp. 557-699), his main thesis is " that the social organization and mode of government of the ancient Mexicans was a military democracy, originally based upon communism in living " (p. 699). He acknowledges the debts to Lewis H. Morgan, who " in his previous two papers as well as in the present discussion, furnished to the writer his points of departure and lines of investigation; besides, the distinguished American Ethnologist has watched with more than friendly solicitude the progress of these essays " (p. 557). He acknowledges also the " liberal assistance " received from F. W. Putnam, Col. Fred. Hecker of Summerfield, Illinois, Dr. G. Bruhl of Cincinnati, Ohio, and officers of the Mercantile Library at St. Louis, Missouri, though he does not clearly mention whence came his financial support. In 1880 he was appointed by the Archæological Institute of America to work in Mexico. He visited Pecos Ruin, Cochiti, San Juan, etc. In 1881, he was sent by the Archæological Institute to Mexico to join Desire Charnay in the researches of the Lorillard Expedition—Charnay had meanwhile returned to France. The results were published by the Archæological Institute. From 1882-1886 he worked in New Mexico, Arizona, and northern Mexico—apparently supported by the Archæological Institute —part of the publications being provided for by Mrs. Mary Hemenway. In 1883 he met Cushing. In 1886 he joined the Hemenway South-western Archæological Expedition under the leadership of Cushing—acting as historiographer and studying Spanish archives. In 1889, when the Hemenway Expedition ended, his copies of documents were deposited with the Peabody Museum. At this time he brought out his " *Final Report of Investigations among the Indians of the South-western United States carried on mainly in the years from* 1880-1885 " * After a historical introduction he reconstructs the ethnographic conditions of the south-west in

* Archæological Institute Papers, American Series III, Part I, 1890, Part II, 1892.

the sixteenth century, showing " the region sparsely inhabited as a whole, its population separated into two divisions —land-tilling Indians with a tendency to permanence of abode, and wandering tribes.....Even the difference between the arts of the savage and those of the Pueblo is slight..... The religious system, the general character of creeds and beliefs, appear analogous, if not uniform. So were the systems of government and the social institutions. It was language that separated the various groups and kept them apart." * Thus we find the labours of a Bandelier definitely establishing the culture-zone of the south-western area as apart from a linguistic area. The present condition of the tribes is recorded with a full description of the changes wrought in their customs, art, industry, and religious condition through European contact. In the second part, after fourteen chapters devoted to archæological description, he concludes by telling about the " vestiges of a sedentary aboriginal life " scattered over a large proportion of the area of the South-west " appearing nearly uniform in every section " (p. 577). He finds " Cliff houses and cave dwellings to be expedients resorted to out of necessity and favored by natural features, and not to be considered as separate types " (p. 581). He finds " the drift of shiftings of tribes from North to South " (p. 590). Another product of Bandelier at this period was his novel " *The Delight Makers* " written in the midst of Pueblo surroundings in 1885, with " a conviction that however scientific works may tell the truth about the Indian, they exercise always a limited influence upon the general public " and so he hoped to make the " truth about the Pueblo Indians more accessible and more acceptable to the public in general." But the Pueblos still await the pen of a Cooper or an Irving to make them live in the heart of the public and Bandelier's great work is to preserve an analytical, accurate, critical estimate of these disappearing cultures as source-books for future novelists. Bandelier's " *Outline of the Documentary History of the Zuni*

* Final Report, Part I, p. 186.

Tribe "* is another thorough document and gives us valuable cross-sections of the history of the tribe in 1538-1539, 1539-1600 and the seventeenth century. From 1892-1894 Bandelier's work lay in Peru. The collections were given to the American Museum of Natural History and the work was done under the patronage of Henry Villard. The work was continued in Bolivia. In 1903 he returned to the United States and became officially connected with the American Museum. In 1904 he lectured at Columbia on Spanish American Literature. In 1906 he resigned from the American Museum and joined the Hispanic Society. From 1906-1909 cataracts made him almost totally blind. In 1911 he published his "*Islands of Titicaca and Koatl.*" In 1911 he was appointed Research Associate in the Carnegie Institute in order to complete his studies of Spanish documentary history of the Pueblo Indians. He died in March, 1914. Bandelier will always live as the greatest source of Archæology and Spanish documentary history of the South-west, and as one of the greatest ethnologists in regional studies.

Jesup North Pacific Expedition.

At the 13th Session of the International Congress of Americanists held at New York, 1902, Vice-President Putnam spoke of the project and introduced in very eulogistic terms the worthy President of the American Museum, Mr. Morris K. Jesup, "to whom the whole Museum is indebted and the Department of Anthropology especially so.....Mr. Jesup became interested in this department and in the great question of the distribution of man over the continent. Where did man come from? How did man get on the American continent? Did he come from Asia here, or did he spread from America into Asia? The wheel, you know, is going round and round. A little while ago Mr. Culin would not, for the life of him have admitted that there was the slightest contact between Asia and America; and now the wheel has gone round

* Journal of American Ethnology and Archæology, Vol. III, 1892.

a little farther, and we are getting the contact, and it has carried everything from America over to Asia. Several years ago Dr. Boas and I brought the matter to the attention of Mr. Jesup. We had tried for some time to find out if there was any indication of contact between Asia and America in former times. Mr. Jesup became very much interested in that question and finally he agreed to give a certain sum every year for us to carry on that investigation. That investigation has led to very interesting results" (p. 93). Thus the expedition, conceived and launched by Putnam, was organized by Dr. Boas early in 1897. The field of investigation in America was limited to the peculiar culture of the north-west coast, extending over an area from northern Alaska to the Columbia River, and in Asia to the limits of southern Siberia. "The fundamental questions which the expedition had to solve were: (1) The period of occupancy of various parts of the coast and changes in the physical characteristics and culture of the inhabitants. (2) The geographical distribution of the types of men along the coasts and their relationship to those of neighboring areas. (3) The investigation of the languages and cultures of the coast tribes with particular reference to the question of the dissemination of culture." The work in America was carried on by American ethnologists: Franz Boas worked among the Thomson Indians, Chilcotin, Tsinishian, Bella Coola, Rivers Inlet, and British Columbia in 1897 and 1900; Livingstone Farrand among the Thomson Indians, Chilcotin, and Bella Bella; Fillip Jacobsen among the Nootka; C. F. Newcombe in Queen Charlotte Islands; Harlan I. Smith on archaeology of Thompson River and Delta of Fraser River; James Teit among Thomson Indians; Ronald B. Dixon on the west coast of Washington and Lilloet, B. C.; Dr. Berthold Laufer was engaged on the Amur River; from the Academy of Sciences in St. Petersburg the services of W. Jochelson, who worked among the Koryak, and Lamut in 1900, and Yukaghir and Yakut in 1902, were obtained, and of W. Bogoras, who worked among the Koryak, Eskimo and Chukchee in 1900 and 1901. The field-work was completed

by 1902. The principal results of the expedition were as follows :

(*a*) Morphologically the languages of N. E. Asia were not found related to the Ural-Altaic group of languages. The Chukchee, Koryak and Kamchadel, and to a less extent the Yukaghir, in their fundamental traits were found to resemble the typical American languages.

(*b*) Archaeological material in British Columbia did not differ in any way from the culture of the Indians inhabiting that region in that day.

(*c*) Archaeological conditions on the coast region, especially the deep shell mounds (according to Mr. Smith), indicated a mode of life similar to that of the then present fishing Indians there. The style in art was very nearly the same, though there has been an exuberance of form in later times. The art of stone, once practised extensively, seems to have been absent in the coast later. There was a considerable change of population in this region by invasion of tribes from the interior.

(*d*) Extended migrations seem to have taken place in northern British Columbia and in adjoining parts of Alaska. The Haida and Tlingit, with languages akin to the Athapascan, have been deeply influenced by Tsimshian with a different type of language. But all three have a strictly maternal organization and in artistic productions, mode of living and manufactures are very much alike, though the Tsimshian traditions show that their affiliations with the coast tribes have been recent. " The distribution of customs and folklore along the coast are such that there is everywhere great similarity. The whole number of cultural traits of the interior that have been introduced along this line to the coast are so great as to lead to the assumption that the Tsimshian are new arrivals."

(*e*) As to the probable relationship between the tribes of Siberia and America, it was found that among the Chukchee, related in culture to the Eskimo, with the exception of possessing the reindeer, there are not only a great number of Eskimo stories but also raven myths, analogous to those of the Indians

on the north Pacific coast. Among the Koryak and Kamchadale, Eskimo elements became fewer in number, while raven myths similar to those of southern Alaska and Siberia became greater, showing a close affiliation and intimate relationship between the Indian tribes of the Pacific coast and peoples of eastern Siberia, though also a break between the eastern Siberian tribes and the Eskimo was established.

"Thus the fact was established that the Chukchee, Koryak, Kamchadale and Yukaghir must be classed with the American race rather than with the Asiatic race. The rôle of the Alaskan Eskimo in communicating Asiatic culture to America and *vice versa*, has yet to be determined. But the main fact of the existence of a close relation between the aborigines of Siberia and of America seems to be well established."*

Thus the same arguments that were being adduced by DuPonceau at last received confirmation and firmly established the trans-Siberian origin of the American Indian.

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* See Franz Boas, "The Jesup North Pacific Expedition," 13th International Congress of Americanists at New York, 1902, pp. 91-100 (1905).

CHAPTER VIII.

New Methods and Research Concepts in the Twentieth Century....The Great Synthetic Schools.

A Retrospect.

We have proceeded step by step from the humble beginnings in the Spanish theological speculations on the finding of the New World, through French Utopian conceptions of the noble savage, and English objective exploration. We have seen the collector and ethnographer busy at work in the United States, setting up philological, archaeological and physical methods of approach, along with the growth of anthropology as a museum subject. One of the consequences of museum objective was " to emphasize the problems of material culture and art, to study racial anatomy, but to disregard living aboriginal cultures."* Though Lewis H. Morgan " the greatest American social philosopher " came to influence all, including the great museum peoples at Washington, Philadelphia and Harvard, who were developing teaching and academic interests, " he lived a little too early to gather under his lead the later linguists, curators, etc.....and in his day the academic circle was scarcely conscious of social problems as they are now recognized.....so first and last museum interests have dominated, directing attention to prehistoric archaeology and racial anatomy, but later turning to more objective culture and linguistic problems of the living Indians."†

The Geographical point of View —Franz Boas (1858-).

The great period of maturation and synthesis, as it has been rightly called in the Encylopaedia of Social Sciences, came in after 1900. Its inception may be traced to Franz Boas, transplanting the environmentalism of Carl Ritter and the anthropogeography of Ratzel in the area where

* C. Wissler, " Recent Developments in Anthropology " (Recent Developments in the Social Sciences, 1927, pp. 52-53).

† *Op. cit.*, pp. 55-56.

intensive field-work technique and objective technological methods had been well established, mainly by the work of Powell and his associates, especially Mason and Holmes. Boas was born in Westphalia and studied at Heidelberg, Bonn and Kiel. In 1883-1884 he made a scientific journey through Baffin's Land. He was also trained in museum methods, being first assistant in the Royal Ethnographical Museum in Berlin from 1885-1886. He met Putnam in the American Association meeting at Buffalo in 1886. He was made associate editor of " Science " from 1886-1888. From 1888-1892 he was instructor in anthropology in Clark University. Putnam writes, " In 1891 when I was appointed chief of the Department of Ethnology of the World's Columbian Exposition, Dr. Boas, at my urgent request, was appointed chief assistant of the Department.....At the close of the Exposition, in 1893, Dr. Boas took charge of the collections made by our department as curator of the Department of Anthropology of the Field Columbian Museum in Chicago..... In 1896, two years after I took charge of the Department of Anthropology of the American Museum of Natural History, I was again able to secure Dr. Boas' co-operation in the development of this department, giving to him the sections of ethnology and somatology." Since 1899 he has been Professor of Anthropology in Columbia University. In his preface to " *Primitive Art,*" Boas speaks of his indebtedness to Ratzel. " But historical data are not available and when prehistoric research does not reveal sequences of cultural changes, the only available method of study is the geographical one, the study of distribution. This has been emphasized in the last third of the past century by Friedrich Ratzel. It has probably been most rigidly developed in the United States. I illustrated this method in 1891 by a distribution of folk tales in North America and it has become more and more the analytical study of cultural forms." *

To understand the geographical point of view we have to go back to Carl Ritter (1779-1859) and Friedrich Ratzel

* Primitive Art, Oslo, 1927, p. 5.

(1844-1904) in Germany. "Environmental determinism is said 'to be clearly postulated in Aristotle' and is the dominant note in rationalistic eighteenth century in Montesquieu's "*Spirit of Laws*," Herder's philosophy and Buckle's "*History of Civilization*." Ritter's position is thus described by Ratzel that an important part of geographic science lies in the recognition of the expressions of area on the intellectually ascending development and unfolding of individuals and people even of the whole human race. Ratzel in his anthropogeography described the effects of environment on man independent of his will, and the effects on the willed activity of man."* but "behind the work of Ratzel is a distinct point of view; he set his face against the idea that there is an inner functional development of man by which culture can be explained; he believed that the whole of culture is forced upon man from the outside, claiming that in migrations, and in the borrowing of culture by one tribe from another, can be found the full explanation of any tribal culture."†

Boas enunciates his scheme thus, "Two principles should guide all investigations into the manifestations of life among primitive people: the one the fundamental sameness of mental processes in all races and in all cultural forms of the present day; the other, the consideration of every cultural phenomenon as the result of historical happenings.....Each culture can be understood only as an historical growth determined by the social and geographical environment in which each people is placed and by the way in which it develops the cultural material that comes into its possession from the outside, or through its own creativeness. For the purpose of an historical analysis we treat each particular problem first of all as a unit, and we attempt to unravel the threads that may be traced in the development of its present form. For this reason we may not start our inquiries and interpretations, as though the fundamental thesis of a single unilineal develop-

* C. A. Sauer, "Recent Developments in Cultural Geography" (Recent Developments in Social Sciences, 1927, pp. 165-166).

† C. Wissler, "Introduction to Social Anthropology," 1929, p. 304.

ment of cultural traits the world over, of a development that follows everywhere the same lines, had been definitely proven."*

Thus this might be characterized as principle of method rather than of interpretation. "In effect, Boas took the following position: Let us make no postulate of evolutionism or diffusionism, or of environmentalism, but let us use any one of these concepts wherever it best fits the facts. Let us begin with definite geographical areas within which a type of culture predominates, such as that of the Kwakiutl. Let us intimately investigate the totality of cultural factors within it, seeking the historical processes of which they are resultant, seeking also the psychological unity on which they no less depend. The different factors will be variously exhibited, variously related, from tribe to tribe and this will lead to a comparative study of cultural aspects, of the mode of assimilation of common features and of the significance of differences. We thus discover the conditions and limits of the culture area, and give concreteness to the idea of a culture-pattern in each case, which incorporates and modifies to its own likeness the accretions, introductions and novelties, accepted or arising from within. The culture-area will then be seen in its geographical setting and in its relation to other areas."† It seemed at first that the geographical method would lead to extreme environmentalism and result in a series of mere regional monographs. But the influence of Tylor and Morgan was so deep and widespread that from the beginning generalized inductions, though limited to a particular area became a part and parcel of this method. Thus in 1888 we find F. Boas writing about "*The Development of the Culture of North-West America*" (Science, Vol. XII, pp. 194-196) and in 1891 discussing the "*Dissemination of Tales among the Natives of North America*" (Journal of American Folk-Lore, Vol. IV, pp. 13-20), both of which may be taken as typical of the early methods of this school. A general area is selected for intensive local study, then by a

* F. Boas, "Primitive Art," Oslo, 1927, pp. 1 and 4.

† R. M. McIver, "Encyclopaedia of Social Sciences" (1930), p. 824.

comparative study of distribution, historical clues are sought as to their origin and growth. " Is it possible to trace the unwritten history of this culture? All these questions are of interest to the historian as well as to the ethnologist who tries to solve the question of ethnologic development.....The north-west coast of America is inhabited by tribes belonging to a great number of linguistic stocks.....The best basis for ethnological comparisons are collections of specimens and collections of myths. The latter are the best clues to the religious ideas of a people, and reveal many remarkable customs which would escape the notice of the casual observer..... The legends of these tribes are of a comparatively uniform character all over the north-west coast of America.....As regards the elements common to all their traditions, their gradual distribution may be traced in studying, for instance, the legend of the ' Visit to Heaven,' which is known all over North-West America.....I have attempted to elucidate a few points regarding the history of North-West American culture. Those facts seem to be the most convincing which prove that various tribes belonging to the same linguistic stock have not the same social organization and customs." (Science, Vol. XII, pp. 194-196). So in his study of Tales, he applies the method by inquiring into distribution of component elements. He formulates his position thus : " I believe we may safely assume that wherever a story which consists of the same combination of several elements is found in two regions we must conclude that its occurrence in both is due to diffusion. The more complex the story is which the countries under consideration have in common, the more this conclusion will be justified.....The 'elements' (of the tale of dog children ancestors) may have arisen independently in various places, but the sameness of their combination proves most conclusively that the whole combination, that is the story, has been carried from Arctic America to Vancouver Islands..... Whenever we find a tale spread over a continuous area, we must assume that it spread over this territory from a single center. If, besides this, we should know that it does not occur outside the limits of this territory, our conclusion will

be considerably strengthened.....Our comparison proves many creation myths to be of complex growth.....Therefore they cannot be explained as symbolizing or anthropomorphizing natural phenomena; neither can we assume that the etymologies of the names of the heroes or deities give a clue to their actual meaning, because there never was such a meaning. We understand that for an explanation of myths we need, first of all, a careful study of their component parts, and of their mode of dissemination, which must be followed by a study of the psychology of dissemination and amalgamation." (Journal of American Folklore, Vol. IV, pp. 13-20.) In the brief discussion on the "*History of Anthropology*" (Science, N. S., Vol. XX, pp. 512-524) Boas speaks of the folklorists being divided into "two camps of the adherents of the psychological theory and those of the historical theory.....To the one party the occurrence of these forms of folklore seems to be due in part to psychic necessity, in part to the survival of earlier customs and beliefs. To the other party it seems to owe its origin to the spread of ideas over the whole continent .....However, this controversy both in folklore and anthropology may be settled, it is clear that it must lead to detailed historical investigations by means of which definite problems may be solved and that it will furthermore lead to psychological researches into the conditions of transmission, adaptation and invention." (*Op. cit.*, p. 520.) About the methods, Boas speaks of "The beginnings of anthropology laid from three distinct points of view, the historical, classificatory and the geographical" (p. 515). He goes on to point out the distinct "biological, linguistic and ethnologic-archaeological methods," and that the problems relating to the effect of geographical and social environment and those relating to heredity are primarily of a biological character... Nevertheless we must always demand that the anthropologist who carries on field research must be familiar with the principles of these three methods, since all of them are needed for the investigation of his problems." (*Op. cit.*, p. 523.) But fundamentally Boas shows his leanings towards Ratzel, though he would not like to be called an environmentalist.

" Environment has an important effect upon the customs and beliefs of man, but only in so far as it helps to determine the special forms of customs and beliefs. These are, however, based primarily on cultural conditions, which in themselves are due to historical causes."*

The Geographical Method.

We would now turn to the later fruitful researches of the geographical method with which Prof. Boas is apparently in disagreement,† at least in some points. There are two main concepts in the geographical school, that of migration from one region to another and regions of distribution. The American school has emphasized the idea of continuity in distribution to deduce affinities and relationship, whereas the German school " took the movements of peoples and the sequence of their expansions over large and small areas as the key to the order of cultures and tribes."‡ This naturally led to the school of Graebner and Pater Schmidt and had reached its reductio ad absurdum in the hands of the Elliot-Smith Perry School in England. On the other hand, the distribution concept may also be traced to Gerland's Atlas der Volkerkunde (1892), which mapped the distribution of anatomical as well as social traits. We have seen Gallatin and Powell mapping out the languages of America into stocks, in notable contrast to the maps of Pater Schmidt in his recent book " *Die Sprachfamilien und Sprachenkreise der Erde* " (Heidelberg, 1926), where the individual traits of grammar and syntax are mapped out as much as families of languages. The distribution concept has led to the discovery of some traits of universal distribution and some of very wide distribution. To it we owe the remarkable studies of games by Culin, of clothing and footwear by Hatt, and of the cultures of South America by Nordenskiold. It has led to regional studies which might be taken as model, such as those of Kroeber for California, Lowie for some social traits in the Plains Indian area, and Leslie Spier on sun-dances. It was this method of examination

* F. Boas, " The Mind of Primitive Man " (1911), p. 168.
† F. Boas, " Primitive Art " (1927), p. 6.
‡ C. Wissler, " Introduction to Social Anthropology " (1930), p. 309.

that brought forth clearly "the significance of continuity in the distribution of a trait, the prevalence of diffusion and the relative rarity of independent invention in the essential trait elements, the significance of the geographical environment as a localizer, associator or carrier of material traits, or as a continuity factor,"* and at last sublimated the science of the American Indian from a narrow ethnographic problem for specialists, into a page for the study of fundamental problems of man and culture.

The geographical method naturally started with the correlation of traits of human social behaviour, but it was soon discovered as an admirable adjunct to an understanding of time relations as well. In short, what was previously only an archaeological problem became harmonized and synchronized with ethnology. The archaeologist N. C. Nelson, who bridges as it were the Holmes Kidder epochs, showed how the geographical distribution and archaeological stratigraphy tended to have some definite relation,† in short, it was found that a wide geographical distribution connotes an older age. Thus the distribution of a culture naturally was a fair clue to the two other divisions, namely, antiquity and intensity. It has led to fruitful glimpses into the place of origin for specific customs by studying the relation of related distributions and the concentric zones of distribution of elements of a culture-complex.

The Concept of Culture: Culture Area, Culture Center, Culture Processes.

It is remarkable that with the growth of America as a world-power and its consciousness of world interests a new synthetic tone is apparent. It is not *a priori* and speculative, but essentially a product of induction and regional expansion. While German and English thought tended more and more to subjugate the most incongruous diversity under one leadership, however distant or disconnected, merely on the basis of

* Clark Wissler, "Material Cultures of the North American Indians" (American Anthropologist, 1914, Vol. XVI, p. 502).

† N. C. Nelson, "Chronology of the Tano Ruins, New Mexico" (American Anthropologist, 1916, N.S., Vol. XVIII, pp. 159-180).

superiority or priority, American thought objected to doing away with the limiting boundaries of diversity and yet sought the principle of harmony in the diverse systems. Reacting violently against the evolutionary school and the bodily importation of ideas of organic evolution into social evolution, it is noteworthy that the exponents of the new school have a tendency to run to the same extreme as those of the earlier biological school. Thus " the culture-concept " as presented by Lowie and Kroeber " seems to deny the importance of the individual as originating and carrying through social changes .....Similarly, according to Professor Keller (whose work is continuous with that of Darwin and Spencer and of his own teacher Sumner) social evolution is strictly analogous to the process of organic evolution, in that it has in it elements of variation, transmission and selection and goes on automatically and with little chance of human control."* This extreme cultural determination, denying anything to the individual, has only explained the Spencerian superorganic in cultural terms and relationships. However, Prof. Thomas, Prof. Wissler, and Dr. Goldenweiser believe there is "no definite culture determination in human society, but that individuality and personality must also be taken into account in tracing cultural and social processes."

" Culture is indeed the sole and exclusive subject-matter of ethnology, as consciousness is the subject-matter of psychology, life of biology, electricity of a branch of physics..... The cultural facts, even in their subjective aspect, are not merged in psychological facts. They must not indeed contravene psychological principles.....Over and above the interpretations given by psychology there is an irreducible residuum of high magnitude that calls for special treatment and by its very existence indicates the *raison d'etre* of ethnology."† Elsewhere he speaks of the position taken by other leaders in this line of thought; how Levy Bruhl thinks " the

* Charles A. Ellwood, " Recent Developments of Sociology " (Recent Developments in the Social Sciences, 1927, p. 18).

† R. H. Lowie, " Culture and Ethnology," 1917, pp. 1-26.

collective ideas encountered by the sociologist are generally different from the ideas evolved by the individual mind; how Wissler suggested that psychological and cultural processes belong to different levels or cycles and should be interpreted independently of each other."* This extreme position of divorcing all biological and psychological factors in the explanation of culture is laid down with Kroeber's usual emphasis in his "*Eighteen Professions.*"† Like Boas, Prof. Kroeber thinks of the biological and psychological branches of anthropology as irreconcilable with the social or historical. Referring to historical anthropology, history and sociology as history, and physical anthropology and psychology as biology, he formulates his eighteen points of what he calls the historical school: 1. "The aim of history is to know the relations of social facts to the whole of civilization. 2. The material studied by history is not man, but his works. 3. Civilization, though carried by men and existing through them, is an entity in itself, and of another order from life. 4. A certain mental constitution of man must be assumed by the historian, but may not be used by him as a resolution of social phenomena. 5. True instincts lie at the bottom and origin of social phenomena, but cannot be considered or dealt with by history. 6. The personal or individual has no historical value save as illustration. 7. Geography or physical environment, is material made use of by civilization, not a factor shaping or explaining civilization. 8. The absolute equality and identity of all human races and strains as carriers of civilization must be assumed by the historian. 9. Heredity cannot be allowed to have acted any part in history. 10. Heredity by acquirement is equally a biological and historical monstrosity. 11. Selection and other factors of organic evolution cannot be admitted as affecting civilization. 12. The so-called savage is no transition between the animal

* R. H. Lowie, "Psychology and Sociology" (Amer. Jour. of Sociology, Vol. 21, 1915-1916, p. 218).

† A. L. Kroeber, "Eighteen Professions" (Amer. Anthropologist, 1915, Vol. 17, N.S., pp. 282-288).

and the scientifically educated man. 13. There are no social species or standard cultural types or stages. 14. There is no ethnic mind, but only civilization. 15. There are no laws in history similar to the laws of physico-chemical science. 16. History deals with conditions *sine qua non*, not with causes. 17. The casuality of history is teleological (the teleology of history involves the absolute conditioning of historical events by other historical events. The causality of history is as completely unknown and unused as chemical causality was a thousand, and physical causality three thousand years ago). 18. In fact, the determinants and methods of biological, psychological, or natural science do not exist for history, just as the results and the manner of operation of history are disregarded by consistent biological practice." These we find are mostly negative and their value as such is great as a measure of academic discipline for students surrounded on all sides by cheap attractions of ready-made terms as neurones, synapse, conditioned reflex, or adaptation which he might bodily import from lower levels of life and thought to cultural conditions which are positively on a higher level. The causality of culture may yet elude us, it may be a long time before its true nature is fully comprehended, but surely the objective form of a distinct phenomenon has been added to human knowledge. Meanwhile Goldenweiser's tendency has been to consider the psychological aspects as well. "The life of culture belongs to the psychological. It is in the minds of men in society. If the nature of this level is misunderstood, an impetus is given to vicious methodology and one-sided or artificial theory. The historian and the anthropologist are students of life. Life is psychology. Abuse your psychology and it will corrupt your history, your anthropology."* True we might philosophize in Bergsonian terms of mind-energy, or posit a Buddhist Absolute-mind in different planes or levels and different

* A. Goldenweiser, "Anthropology and Psychology" (The Social Sciences and their Inter-relations, 1927, p. 86).

degrees of manifestation or potency behind inorganic, organic and anthropic phenomena, but at present it will do to recognize Prof. Wissler's suggestion "that it is the functioning of the psychic part of man that produces culture." *

Of more practical importance and of great interest as a research lead is the question of the relation of culture to environment. "Because the geographers see how the environment sets limitations to human culture or inventions, they sometimes assert that in it are to be found the causes producing cultures. A more acceptable view seems to be that which recognizes the province of the environment in deciding as to what may not become a part of human experience, but that among the experience it makes possible is a wide range, in fact almost infinite range, of yet to be discovered relationships among which are many that may enter into the culture of the future, if both the man and the hour come. If in the discussion of this question we do not lose sight of the inventive nature of the processes producing material cultures and the curious psychic origin of the underlying relationship of ideas, on the one hand, and the passive, limiting character of the geographical environment on the other, we shall not be led far astray."† This, in its effect on distribution, has been pithily put by Prof. Wissler thus: "The relation between the environment and tribal cultures seems to lie in the incidental limiting of the distribution to some extent, rather than in the active formation of culture traits."‡ Goldenweiser would put it in this way: "A large set of environmental influences, while actual, are not significant for culture; that in another set of cultural phenomena culture and environment co-operate and must be regarded as co-determinants; that in two of its fundamental aspects, that of invention and that of imitation, culture is independent of environment; and that, finally, every culture is largely independent

* Clark Wissler, "Relation of Culture to Environment" (The Popular Science Monthly, 1913, p. 165).

† Clark Wissler, *Ibid*, p. 168.

‡ Clark Wissler, "Introduction to Social Anthropology" (1929), p. 340.

of its environment in so far as it is a historical complex." * Kroeber would voice the same ideas with more emphasis on historical influences: "obviously natural environment does impose certain *limiting conditions*; but equally obviously it does not *cause* inventions or institutions. . . . the directly determining factors of cultural phenomena are not nature which gives or withholds materials, but the general state of knowledge and technology and advancement of the group; in short, historical or cultural influences."† Here, again, it may "be noted that when tribes are classified according to similarities in culture, they take regional distributions which closely conform to the ranges of the animals or plants upon which the tribes base their economic life."‡ Lastly, it has been rightly suggested that "the extent of dependence of culture on environment and the closeness of the correlation between them is greatest in the lower stages of cultural growth." § In short, the higher the culture the finer the environmental relations it would seek to establish and the more it would be independent of earlier limiting environments. Thus the culture which has discovered the value of oil and its applications would seek to possess it and would ultimately have some relation to the distribution of oil-wells. Similarly, gold-mines would have value and distribution relationships with cultures which have economic use for them. Likewise, if some day there is an invention of machinery for the synthetization of food direct from air and if it is physiologically possible to have direct nourishment of the body from it without the intermediacy of plant life, human culture may be independent of the distribution of its edible agricultural plants, or the edible animals that live on certain plants—but it would have to establish finer environmental relationship with suitable types of the atmosphere from which such food

* A. Goldenweiser, "Culture and Environment" (Journal of Sociology, 1915-1916, Vol. XXI, p. 633).

† A. L. Kroeber, "Anthropology," 1923, p. 182.

‡ C. Wissler, "Introduction to Social Anthropology," 1929, p. 345.

§ R. B. Dixon, "The Building of Cultures," 1928, p. 31.

could be directly synthetized. It is "*culture-areas*," however, that have given to the concept of culture its local habitation and name. It may be truly seen " as a geographical region in which reside a considerable number of relatively independent tribes with similar culture." * These culture-areas or " ethnographic provinces " are the result of organization of American cultures in terms of geography. " These geographically defined types of culture (in America) are gradual and empirical findings. They are not the product of a scheme, or imagination, nor the result of theory. They are not even the formulation of any one mind. They do represent a consensus of opinion as to the classification of a mass of facts, slowly arrived at, contributed to by many workers, probably accepted in exact identity by no two of them, but in essential outline by all; in short, a non-philosophical, inductive, mainly unimpeachable organization of phenomena analogous to the ' natural ' classification of animals and plants on which systematic biology rests."† The process of finding out a culture-area has been described thus : " A culture-area is delineated by listing the tribes with similar cultures and plotting their habitants on a map.—The geographical shapes of culture-areas appear to vary according to the topography and other physical factors that enter into their environmental complex." ‡ The ten culture-areas in North America go by their geographical names. We can take the Plains Area and California region as two typical regions which have been intensively studied. In the former case we find " the tribes have a number of peculiar traits whose distribution, in more or less complete association, is taken as indicating the geographical extent of a type of culture. The fact that these boundaries almost coincide with the limits of the treeless prairies and plains, and that this culture is most intensified among the tribes living in the Great Plains, has given rise to the term Plains Area.....

* C. Wissler, " Introduction to Social Anthropology," 1929, p. 345.
† A. L. Kroeber, " Anthropology," 1923, p. 336.
‡ C. Wissler, " Introduction to Social Anthropology," 1929, p. 346.

There is little correspondence between linguistic stocks and culture-type, for which in some cases the two lines in the map coincide, in others they show no approach whatsoever. .....In a map showing the distribution of the buffalo about 1800 and its relation to the culture-area of the Plains Indians, we find a rather close correlation between the distribution of the bison and culture-traits, the nine typical tribes living where the herds were thickest, and the cultures of the tribes of the border being somewhat intermediate in character." * Several main cultural characteristics are taken to designate this type of culture, such as the use of the buffalo, the tipi, the horse, the soldier-band, and the sun-dance. The most typical tribes were found to stretch from North to South, with the intermediate Plateau group on one side and the Village group on the other. They were a typically nomadic group whose range coincided with the area in which the trees were least in evidence. It was further found that such distinctive traits as the sun-dance, camp-circle band system, the soldier societies, highly developed ritualistic bundles, peculiar geometric, decorative art, the use of the horse and the travois, the skin-covered tipi, the earth lodge, and economic dependence upon the buffalo, which were primary traits, were developed, if not actually invented, within the area. There was also found a few tribes ranging around the center possessing the most typical culture. In the study of the culture-provinces in California Kroeber discovered " certain centers or hearths of the several types of culture " and " the most intensive development or greatest specialization of culture occurred at the center, and it was probable that more influences had flowed out from the center to the peripheries than in the opposite direction. The central and focal groups might have been influential in coloring to some degree the culture of their entire areas, while contributing in each case probably only a very small proportion of the substance thereof."† Thus

* C. Wissler, " North American Indians of the Plains," 1920, pp. 12-13.

† A. L. Kroeber, " Handbook of the Indians of California," Washington, 1925, p. 901.

the culture-area concept, starting with the geographical point of view, elaborated by tribal correlations of culture, ultimately tends to nucleate around some center which Kroeber would call the center of diffusion. The idea of the culture-area may be re-stated in the words of Prof. Wissler: "A culture-area is a region within the bounds of which is a group of tribes, closely similar in culture, which tribes manifest the regional culture type in its purest form and lead in its development. This central group of tribes constitute a culture-center."* In other words, if culture is the energy-complex of an idea system, functioning through some tribal groups, its spatial body will be found to be the culture-area directed by some brain-center as it were within it.

This culture-area is then the center of diffusion or distribution of the culture traits emanating from the culture-center. Diffusion as a fundamental principle of culture, as opposed to independent origin or "parallelism" or "convergence," may be conscious borrowing, or unconscious forcing by conquest, or voluntary adoption as a result of trade and education.—In any case culture-contact is necessary for diffusion of culture traits. Kroeber, in his "*Anthropology*" (Chap. VIII) enumerates many instances of diffusion such as the magic flight tale or tobacco and similar cases of parallels as the invention of the zero or agriculture. Lowie's whole study of Primitive Society may be characterized as substituting for the principles of Morgan's unilinear evolutions, explanations of convergent evolution due to economic psycho-sociological phases. Malinowski takes up an intermediate position. "Every cultural achievement is due to a process or growth in which diffusion and invention have equal shares. As independent entities, neither invention nor diffusion ever takes place in the sense that you could either spontaneously generate an idea, or pour it out from one head to another. Diffusion and invention are always mixed, always insepara-

* C. Wissler, "Introduction to Social Anthropology" (1929), p. 350.

ble."* He goes on " Diffusion never takes place; it is always a readaptation, a truly creative process in which external influence is remoulded by inventive genius. The culture of Egypt is no older than that of China, Mesopotamia, or India, and it took as much from its neighbors as it gave. Civilization is fortunately not a disease—not always, at least —and the immunity of most people to culture is notorious. *Culture is not contagious*! It has neither been invented nor diffused, but imposed by the natural conditions which drive man upon the path of progress with inexorable determinism."† Dixon tries to deal with primary diffusion and secondary diffusion in some detail. " In its origin the new trait rested, in the main, upon the triad of opportunity, need, and genius, and all three of these are also in some degree factors in diffusion."‡ He goes on to point out how " the trait spreads as a result of inter-village, inter-group, or inter-tribal contacts, based on ordinary friendly relations, or on trade, or social or religious ceremonials. It may also spread by intermarriage, or in some cases by individual or family migration from one portion of the group or culture-area to another. War, with its attendant conquests and captives may also play a part in primary diffusion, although its significance is likely to be rather greater in the wider diffusion of the secondary type."§ This process of diffusion has ultimately to be solved satisfactorily by a study of the effects of contact between cultures of different degrees of variation, whereby the protective processes within a culture and the culture conflicts may be objectively studied.—On the other hand, as it appears " the most natural thing in human behavior for one group to imitate another, spontaneous response in the acts of borrowing on the part of a group may be natural and universal."

* B. Malinowski, " The Life of Culture, The Diffusion Controversy (1927), p. 30.

† *Ibid*, p. 46.

‡ R. B. Dixon, " The Building of Cultures " (1928), p. 59.

§ R. B. Dixon, *ibid*, pp. 62-63.

The Synthetic Schools.

Well has the editorial staff of the Encyclopaedia of Social Sciences (1930) described it as follows :

" The new synthesis will in all probability attempt to encompass the origin and history of culture. The principal, positive, theoretical position of the early decades of the twentieth century was culture. . . . Culture-traits, culture-complexes, culture-types, culture-centers, culture-areas, culture-circles, culture-patterns, culture-migrations, cultural convergence, cultural diffusion—these segments and variants point to an attempt to grapple rigorously with an elusive and fluid concept and suggest incidentally the richness of such a concept. . . . This common concern with culture has made the division of anthropologists into schools of no supreme importance. The principal line of cleavage into schools centered round diffusionism. But the more formal and recognized division runs rather in terms of the method and interest which the particular anthropologist used in approaching his data."*

A psychological school traced through Wundt and his Folk-psychology, is found to influence Vierkandt, Thurnwald, Van Gennep, Goldenweiser, Sapir and Lowie. Psychology of individual differences not completely submerged in the group is noticeable in the writings of Schmidt, Marrett, Malinowski, Boas and Radin. Crude individual pre-logical psychology adduced to the primitives by Levy Bruhl has not attracted anthropologists proper. The psycho-analytic approach opened by Freud himself with his Totem and Taboo, was elaborated and modified by Rivers and Malinowski and Radcliffe Brown, whose emphasis on the migration or functional aspects has opened up new fields.

The study of the nature of primitive institutional life in many new fields has gone on, as by Rivers and Lowie, and shows the revival of interest in social institutions, tabooed since the death of Morgan.—Malinowski shows that law and

* Encyclopædia of Social Sciences : War and Reorientation, pp. 202-203.

custom among the primitives are obeyed as well as disobeyed —"*Crime and Custom in Savage Society*" (1926). Studies in primitive economics have been followed by Firth in his "*Primitive Economics of the New Zealand Maori*" (1928), and opened up much needed objective studies in this field. Primitive Religion, Law, and Government in the hands of Lowie, and Language in the hands of Sapir, have only seen the elaboration and application of the new methods with new insight. Wissler's synthetic studies on the issues raised, marshalling them into research leads in the fields of anthropology as well as sociology, have focussed attention on the main theme. Anthropology had for long been borrowing the methods and terminology of biology, or geography, but at last it came to make one definite contribution in major thought about group life. The three different planes of activity, the inorganic, the organic, and superorganic or anthropic have long been recognized by Spencer or Powell, and the laws of the first two have been formulated and differentiated. The application of physical laws to the mental plane of individual psychology have been found to be ineffective, for the finer cannot be explained in terms of the grosser phenomena, and so the still finer set of phenomena in a still higher plane of activity, recognized and labelled as culture, is a finding of a great truth. If, as the Hindu thinker, Satyasrayee, states, laws of association of thought in the mental plane are the same as the law of gravitation in the physical plane, we may find in the still finer plane the adhesion of linked traits, going perhaps by the name of culture. Evolution is but a partial formulation of the great Law of Change going on in all planes of creation and it is to the greatest credit of the 20th century anthropologists of America to discover that, in order to understand human activities, they must comprehend processes of change in a cultural plane, quite different from, and as Hindus would think, much higher and finer than, changes in the inorganic or sub-human organic planes. The philosophy of culture is today the great cementing process between the various social sciences, and perhaps

when time heals up its earlier feuds with biological sciences it will be recognized to be inclusive (in a finer sense) of, rather than exculsive and antagonistic to, the imperfect formulations of processes of change on lower planes of life phenomena. J. Rueff, in his suggestive brochure " *From the Physical to the Social Sciences* " (1929), shows how in all the sciences the building up is accomplished by a " creation of causes " the truth of which can only be ascertained by being sure of the coincidence of the consequences they involve with the laws of the world of experience. It is such a " creation of causes " in the science of man that we have formulated for us in the concept of culture.

CHAPTER IX.

Collections and Museums, Societies and Academies.

The Museums and Academies have played a great part in the development of anthropological interests, nucleating them and directing their growth. The history of Museums of the United States deserve to be written in full. The following is a sketch of some important facts in the growth of Museums and learned institutions with interest in Anthropology.

Sometime before the Revolution, a Museum, curious collection of American birds and insects, was opened at Norwalk, Connecticut, by a man named Arnold, to which admission was charged. This may or may not have been the first in the U. S. A. The British Museum, started by Hans Sloane in 1749, was established in 1753, and the Ashmolean Museum of National History at Oxford dates from 1667.

1. *Charleston Museum.*

Museums, 1700-1860.

The oldest Museum in the country. The records have been traced back to 1777 and probably the museum originated several years earlier; it is under the auspices of the Charleston Literary Society.* It was burned by fire in 1778. The Literary and Philosophical Society of South Carolina was formed in 1813—to this the collection was transferred in 1815.† By 1826 it is mentioned with honor as containing " with curious objects in natural

* See " The Charleston Museum : Its Genesis and Development," by W. C. Mazyck in year book of Charleston, S. C., 1907.

† *Vide* " Proceedings of the American Association of Museums " July 6-9, 1915, pp. 53-65.

history, Indian antiquities, foreign and native works of art. It is curious to observe that in 1824 it had led the local *courier* to say editorially " A public museum is as necessary an appendage to a city as a public newspaper or a public library." In 1843, the collection was transferred to the Medical College. In 1850, when the American Association for the advancement of science met at Washington, under Prof. Agassiz's initiative, a movement was set on foot to develop the museum. In 1850, the museum was removed to the College of Charleston. In 1907, a building was provided by the City Council. The collections in Anthropology had rare and valuable material from the Sandwich Islands, acquired in 1798, and some from Mundrucas Indians of the River Tapajos and was visited by Prof. Putnam.

The history of the Charleston Museum, as one of the oldest institutions in the United States, is very instructive. It has experienced the three chief forms of museum organization : (1) society support, (2) college support, and (3) public support. Furthermore it has demonstrated conclusively that the last affords the largest possibilities of development and public service. The museum became a burden upon its host, the college, and a poor investment for its patron, the city. The college ceased to apply any funds to the museum and the city appropriation was gradually reduced until in 1904 it was $250. After its new rehabilitation in 1907, and in 1915 the Charleston museum was incorporated separately, with a board of trustees and made independent of support of college or of learned society.*

2. *Earlier Museums at Philadelphia.*

In 1805, for the first time Arts Museum found its home in Philadelphia under the original name of the Pennsylvania Academy of Fine Arts. The greatest of the older public,

* " Proceedings of the American Association of Museums," 1915, pp. 54-65 Paul M. Rea, " A Contribution to early Museum History in America."

though privately owned, natural museums was the " Philadelphia museum," established in 1785 by the celebrated early American painter Charles Wilson Peale and continued for fifty years. We read that in 1800 " there was a mammoth's tooth from Ohio, a woman's shoe from Canton, nests of the kind used to make soup, a Chinese fan six feet long, bits of asbestos, belts of wampum, stuffed birds, and feathers from the friendly Islands, scalps, tomahawks, and long lines of portraits of great men of the revolutionary war."

3. *The Academy of Natural Sciences, Philadelphia.*

It was on the 21st March, 1812, that the Academy had its humble beginning in a small room, with some books presented by Mr. Spekeman and Dr. Mann, a herbarium from Mr. Parmentier, a few mounted birds from Mr. Say, and a few shells and insects from Dr. Barnes. In 1815 the museum and library were moved to a hall built by Mr. Gilliams. Its legal existence was established in March, 1817. A large hall was built in 1826. From 1828 to 1870 the museum was opened freely to the public on Tuesday and Friday afternoons. In 1840, it was removed to a larger hall. Through free public lectures it had already become a useful institution for instruction. It can be recognized as the home of the notable researches of Morton, followed by Meigs and Leidy in Physical Anthropology. Its collections contain Morton Crania, Georgia and Florida mounds (of Moore), North American Indian and Greenland specimens and those from British Guiana. As the first institution exclusively devoted to science, it soon obtained the recognition and co-operation of most of the learned societies of Europe. Original research was recognized from the very first to be one of the primary objects of the Academy. Its publications were made up entirely of the reported results of original research. " The academy was born of the enthusiasm of earnest lovers of science. They had before them a single purpose, the unveiling of some of the laws of nature and the engraving of them

on the tablets of society, that they might be studied by men of all nations. . . . Masters of science have come from all parts of the world to consult the great zoological, botanical, geological and ethnological collections. . . . Members of this Academy have taken a very prominent part in explorations. Thomas Say was a member of Long's expedition to the Rocky Mountains. . . . Nuttall and Townshend, thirty years after the Lewis and Clark Expedition, crossed the continent to the mouth of the Columbia River, and extended their explorations to the Hawaiian Islands, returning around the Horn. . . . Similarly the Audubun expedition upon the Missouri River was financed by one of its members; Dr. Kane's expedition, Hayes exploration and Rear Admiral Peary's first trip to the North Pole were assisted by their Society. Though the Academy is famous in ornithology by the works of Thomas B. Wilson and John Cassien, in palaeontology by the works of Cope and Leidy, and in other branches of Natural History, its work in Anthropology is also great. In Anthropology the works of Morton and later of Harrison Allan are famous. The splendid collection of human crania brought together by the former is historic. Archaeological and ethnological collections comprise the material gathered by Samuel Stehman Haldeman in North America and in the land of the Aztecs, Mayas and Incas. There are also the Wm. S. Vaux collection rich in specimens of the Neolithic Age of Europe, the Robert H. Lamborn collection and the Clarence B. Moore collection of twenty years' exploration in Southern United States."*

4. *Brooklyn Institute of Arts and Sciences.*

In 1823, several gentlemen led by Augustus Graham decided to start a free Library and on November 20th, 1824, the Brooklyn Apprentices Library Association was formed, the

* "Journal of the Academy of Natural Sciences of Philadelphia," Second Series, Vol. XV, 1912, pp. 13-20.

foundation stone of their first building being laid by General Lafayette. A new charter was granted in 1843, and the name changed to Brooklyn Institute. In 1850, it received the permanent endowment fund from Graham of $27,000. In 1888, the work of the Institute was organized on a large scale. In 1890, the name of the Institute was changed to the Brooklyn Institute of Arts and Sciences. In 1897, the first section of the Museum was opened, in 1899, the Children's museum, in 1903, the Museum department of Natural Science, and in 1904, the department of Ethnology. In 1915, the three departments of the Institute were organized as Department of Education, Museums, and Botanic garden. Looking over the prospectus for 1929-30, one finds addresses, lectures, courses of instruction (including ethnology), under the department of education, in co-operation with the public schools of greater New York. This Institute is important in museum history as showing the growth of a museum in a social and educational institution, thus setting the culture-pattern of public instruction in museums which is so marked a feature in America.

5. *United States National Museum—Smithsonian Institution.*

We know of a Lyceum of Natural History organized in New York City in 1817, which had its collection destroyed by fire in 1866; and of the Mineral Cabinet of Doctor Benjamin Waterhouse, started in 1793, which in 1820 had a room 45 by 36 feet, and by 1840 had 36,000 specimens of minerals, rocks and fossils. The first real idea of a National museum was started by an Englishman, James Smithson. His gift of more than half a million dollars and a small collection of minerals, was contributed to establish an institution "for the increase and diffusion of knowledge among men." This was accepted by Congress in 1846. The Museum was definitely organized in 1850. In 1858 the collections of the Wilke's expedition and other surveys were transferred to this

institution. In 1875 the name "National Museum" was first used. In 1876, the collections from the Anatomical Exposition at Philadelphia were transferred to it. The congressional appropriations came to it first in 1878, and its building was opened in 1881. A larger building was completed in 1911. This symbolised once for all the ratification by the state of the advice of Washington in his farewell address, "Promote as an object of primary importance, institutions for the increase and diffusion of knowledge; in proportion as the structure of a government gives force to public opinion, it is essential that public opinion should be enlightened." So museums, with research and public instruction, became a fixed pattern for advancing American cultural life.

Museums, 1860-1880.

The sure indication of the active period of American research was in the building up of its many museums. This was the period when the pattern was definitely established for commercial wealth to endow research institutions and repositories of collections from expeditions. The bequests of George Peabody and of Bickmore in New York aroused enthusiasm throughout the country.

1. *Buffalo Society of Natural Sciences.*

This Society was organized in 1861 "to promote the study of the Natural Sciences; to stimulate and encourage original scientific research, and especially to provide for the people of our city free instruction in those sciences, and thus to further educational work in Buffalo." It began educational work in 1867, and since 1879, travelling exhibits to school have been one of its noteworthy features. These include, besides small mammals and mounted birds, sets exhibiting Indian life. Its collections include North American and foreign archaeology and ethnology, Chiriqui pottery and local archaeology. It is now located in the Buffalo Library building, with the Buffalo Fine Arts Academy and the Buffalo Society of Natural Sciences.

2. *Peabody Museum of Natural History (Yale).*

The Yale University collections date back to 1803, when Benjamin Silliman of the Class of 1796, brought back a traditional " candle box " of minerals from Philadelphia. Charles Marsh, of the Class of 1860, became interested in fossils and enlisted the sympathy and interest of George Peabody, the great international banker, in University studies. He became Professor of Palaeontology in Yale in 1866 and the same year a donation of $150,000 came from George Peabody to establish at Yale a museum of Natural History, to be devoted especially to Geology, Mineralogy and Zoology. As early as 1870, Prof. Marsh began to make a collection of ethnographical and archaeological specimens. In 1876, a building was completed. In 1877, the department of anthropology was recognized by the Yale Corporation, and in 1902, it was put in charge of Prof. G. G. MacCurdy as curator. In 1916, the Harkness gift made it necessary to move the museum from its old residence of over forty years at the corner of Elm and High Streets and brought it to its new quarters, which were completed and dedicated on the 29th of December, 1925."*

3. *Peabody Museum of American Archaeology and Ethnology— Harvard.*

It was in October, 1865, that Prof. Marsh while digging in an ancient mound near New York, Ohio, wrote to his uncle George Peabody (whose other nephew, George Peabody Russell was a graduate of Harvard in 1856) to endow an archaeological museum at Harvard. In 1866, $150,000 was given for the foundation of a museum and Professorship of American Archaeology and Ethnology in Harvard. The fund was given in charge of a Board of Trustees. Jeffries Wyman

* See " Peabody Museum of Natural History," Bulletin 1, No. 1, 1926, pp. 9-23; Charles Schuchert, " The Rise of Natural History Museums in the United States."

was curator of the museum until his death in 1874, and was succeeded by F. W. Putnam, who was appointed to the new chair when it was established by the University in 1886. In 1897, the trustees of the Peabody Museum transferred to the President and Fellows of Harvard University all the property held by them. The Peabody gift was divided into three portions, $60,000 for building, $45,000 for collections, $45,000 for professorship. This was augmented by the Thaw Fellowship ($30,000) established in 1890 by Mrs. Mary Copley Thaw for " work and research relating to the Indian race of America or other archaeological and ethnological investigation; " by the Hemenway Fellowship ($10,000) established in 1891 by Mrs. Mary Hemenway for the study of American archaeology and ethnology; the Winthrop Scholarship ($5,000) established in 1895 by Robert Charles Winthrop, D.D.; the Huntington-Frothingham-Wolcott Fund ($10,000) established in 1891 by Roger Wolcott; the Henry C. Warren Fund ($10,000); and the Susan C. Warren Fund ($5,000). Truly could Putnam write in 1898: " The many collections secured by explorations, carried on by the curators of the Museum, or under their supervision, have made the museum of first importance to American Archaeology. . . . The foundation of a museum which should have for its primary object the collection and preservation of such archaeological and ethnological collections as could still be obtained, arrested attention and aroused an interest in the past history of America."*

4. *The Peabody Museum of Salem, Massachussets.*

This originated in the museum of the Salem East India Marine Society, which was organized in 1799, as a social, charitable and semi-scientific club. It gathered " natural " as well as " artificial " curiosities and its ethnological collec-

* " Guide to the Peabody Museum of the Harvard University," Fiftieth Anniversary (1893).

tions were by far the largest and the most important. The Essex Country Natural History Society, formed in 1834, merged with the Essex Historical Society in 1848 and the Essex Institute, began to form a museum of natural history. In 1867 George Peabody of London, a native of Danvers, near Salem, founded the Trustees of the Peabody Academy of Science, purchased the collections of the East India Marine Society and Essex Institute and established the Peabody Museum. In 1889 the new hall of ethnology was opened.* Its primary aim is educational, and special attention has been paid to local collections. Its Hall of Ethnology contains some rare and interesting specimens from the islands of the Pacific Ocean, Malay Archipelago, Africa, and North and South America. There are also many objects from China, Japan and India in the Weld Hall of Oriental Ethnology.

5. *Davenport Academy of Sciences (Davenport, Iowa).*

This was organized on December 14, 1867, as Davenport Academy of Natural Sciences, incorporated in 1868, and took its present name in 1903. In 1905 it received by the bequest of W. C. Putnam all his property, $400,000. The academy museum really began in 1868 and was affiliated with public schools in 1902. So public school work was a primary object. Exploration and research were also pursued by the society. Its collections are mainly of American archaeology with some American ethnology.

6. *University of Vermont Museum.*

Organized as early as 1870, as part of a University. Its collections are largely archaeological, but there is some native and foreign ethnology.

* See "American Association of Museums," Proceedings, 1911, pp. 75-76. "Guide to Peabody Museum," Salem Mass., 1927.

7. American Museum of Natural History, New York.

The American Museum of Natural History was started in 1869 with the project of Albert S. Bickmore, a young naturalist of Maine. Its first charter was granted in 1869, as a Free Public educational institution. The department of Anthropology was set up in 1873. In 1894 it was credited with having the most complete world collection of ethnological and archaeological materials in America. In 1895 Prof. Putnam was in charge of the department. Besides the famous scientific expeditions which have made its name famous all over the world, and its brilliant group of scientific men, its work in connection with public instruction deserves special mention. "Many public museums have developed, as a part of their ordinary activities, a special department of school service in which collections are prepared for direct instructional use and from which they are circulated to schools and other institutions in response to the requests of teachers and other educationists. The outstanding instance is furnished by the American Museum of Natural History in New York, which began this work in about 1904 and developed it to such a pitch of efficiency and to so vast an extent that in 1922 the city of New York, in recognition of the public value of its achievements, granted the sum of $570,000 for the construction and equipment of a special school service building . . . . Lecture-courses, both at the museum and in the schools, the circulation of nature-study collections, talks in the exhibition halls, demonstrations for blind children, the loan of more than half a million lantern slides and the lending of a thousand cinema films are numbered among the activities falling within its province. The work involves the employment of a special staff and the use of several motor-vans."*

* E. E. Lowe, Ph.D., B.Sc., "A Report on American Museum Work," Carnegie United Kingdom Trust, Edinburgh, 1928, p. 26

8 & 9. *N. Y. State Museum and the Ohio State Society.*

The two other museums starting from this period are the New York State Museum, organized as New York State Cabinet of Natural History, with natural history collections from the state survey between 1836 and 1843; established as a state museum of Natural History in 1870 with collections of archaeology and ethnology mainly of the New York State; and the Ohio State Society, organized as a state Archaeological association to exhibit at Philadelphia in 1875, and in 1885 reorganized as Archaeological and Historical Society, which began field work systematically in 1900, and is now housed in a fine museum building on the State University campus.

The great development of museums, 1880.

The quickening of the national life was felt in its building of well-nigh a thousand museums. The more important ones with anthropology may be mentioned as follows :—

1. *State Museum, University of Washington*—started from a small nucleus of ethnological collections in 1880; in 1883 turned over to young Nationalist's Society; in 1899 created as a State University museum with the object of University teaching and instruction. The collections are mainly archaeological and ethnological, notable among them being Tlingit, Philippine, and exposition materials.

2. *Cincinnati Museum Association*,—incorporated in 1881 with the object of public education, having North American archaeological and ethnological and some foreign specimens.

3. *Public Museum of the City of Milwaukee*,—started in 1882 when collections of the Wisconsin Natural History Society were turned over to the city; collections formed or begun about 1857 by the Naturhistorischer Verein von Wisconsin; in 1883 collections were purchased from Ward's, and in 1884 the museum was thrown open to the public.

4. *Free Museum of Science and Art—University Museum of Pennsylvania*—established in 1889—museum of

archaeology and Palaeontology—and the department of Archaeology, University Archaeological Association, organized to furnish funds to promote scientific exploration and to co-operate in archaeological research and publication; in 1891 the museum was constituted as a department of Archaeology and Palaeontology of the University; in 1899 the collections were transferred to the Free Museum of Science and Art; in 1901 Palaeontology was dropped—the subjects at present are American Archaeology and general ethnology; Babylonian, Semitic, Egyptian and Mediterranean archaeology; it provides for instruction and original research in archaeology and for the incidental formation of illustrative collections.

5. *Berenice Pauahi Bishop Museum*—founded in 1889 by Charles Read Bishop; installed in museum building in 1903; its object is the collecting, preserving, storing and exhibition of specimens of Polynesian and kindred antiquities, ethnology and natural history, and books treating of and pictures illustrating the same, examination, investigation, treatment and study of said specimens, and publication of the results of such investigation and study. Its publications, occasional papers, memoirs and bulletins and its collections are now recognized to be the most complete and authentic in the Polynesian region.

6. *Wistar Institute* incorporated in 1829 by the University of Pennsylvania and general Isaac J. Wistar, to preserve and increase Wistar and Homer Museum 1808.

7. *Field Museum of Natural History*—organized and incorporated September 10, 1893, as Columbian Museum of Chicago; name changed to Field Columbian Museum in 1894; received present name in 1905; it is now second only to the American Museum of Natural History in rich ethnological collections concerning North American Indian, Philippines, China, Tibet, New Guinea, Siberia, South America Mexican and Peruvian Archaeology.

8. *Haskell Oriental Museum*—organized in 1894-5 for oriental archaeology.

9. *Walker Museum, University of Chicago*—established by George C. Walker of Chicago in 1893; maintained by University; it has a general archaeology and ethnology collection of about 400,000 specimens.

10. *Philadelphia Museum* (1894)—Geographical and synoptic ethnological collections.

11. *Carnegie Institute Museum*—a department of the Carnegie Institute, Pittsburgh—its work began in 1893 with the object of exploration, research, schoolwork and instruction to the general public.

12. *Anthropological Museum, University of California*—originated in the archaeological expeditions of the University financed by Mrs. Phoebe A. Hearst since 1899; the museum was organized in 1901; its scope is exploration, research, teaching and publication; its collections are archaeological and ethnological, of California, North America, South America, the Pacific, etc.

13. *Philip's Academy, Department of American Archaeology*—founded in 1901 by Mr. and Mrs. R. S. Peabody, with an endowment of $187,000 and 40,000 specimens; its collections are of American Archaeology.

14. *South West Museum, Los Angeles*—founded in 1907 by South West Society, archaeological Institute of America; its collections are archaeological, of the regions of California South West, Peru and Bolivia.

15. *Oakland Public Museum*—founded in 1909 under Oakland Free Library; Anthropology was the most active department; small collections general, special attention to Indians of Pacific Coast.

16. *Museum of the American Indian*—actually begun in 1903 when Heye began collecting; in 1916 museum was definitely established with board of Trustees, in 1922 the present museum was opened to the public.

Societies and Academies, 1700-1860.

To understand the activities of this period, we have followed the history of individuals, but equally important is their behaviour in the

groups which were the institutions they brought into being, and which in turn brought them fame and glory and necessary contacts for healthy growth. The societies tended to follow the general English pattern. Their most important function was to give a permanence to the fruits of research, affording a vehicle for criticism and recognition by providing means of publication. The setting up of research funds was also initiated at this period.

1. *American Philosophical Society.*

It has been pointed out by Dr. G. Brown Goode * that the foundation of the Royal Society of London 1661 was associated with a proposal to leave England and establish a society in the new colony (Connecticut) under governor Winthrop, the intimate friend and associate of Boyle, Bishop Wilkins and other learned men.

We read in Du Ponceau's history that in 1727 Benjamin Franklin, then barely 22, formed most of his ingenious acquaintances into a club, the Junto, which afterwards became merged in the Society. In 1743 Franklin made, in a circular letter, a "Proposal for promoting useful knowledge among the British plantations in America . . . . that one society should be formed of virtuosi or ingenious men, residing in the several colonies, to be established in the city of Philadelphia, as the most central place and to be called 'The American Philosophical Society.'"† In 1769 they united with the American Society and the present name was adopted. It was incorporated in 1780. Fifteen of its members were signers of the Declaration of Independence and eighteen were members of the constitutional convention of 1787. According to the New York Times "nine Presidents of the United

* G. Brown Goode: "The Origin of the National Scientific and Educational Institutions of the United States" (New York, 1890), p. 5.

† "Historical Account of the Origin of the American Philosophical Society" (Philadelphia, 1914), p. 12.

† *Ibid*, pp. 28-29.

States have been chosen from among its members and twelve have been members of the United States Supreme Court and four chief justices. Every one of the seven Americans who received the Nobel Prize was a member of the Society ''* Its '' Transactions '' (issued since 1769), and '' Proceedings'' (since 1838), are almost a complete record of scientific and philosophical thought since the last quarter of the eighteenth century. Heckewelder's writings are to be found here and Du Ponceau was its President.

2. *American Academy of Arts and Sciences (Boston).*

The Academy originated '' While the war of Independence was still in progress. . . on the plan of the philosophical Societies in Europe, laying down among others the fundamental principle that as true Physics must be founded on experiments so all their enquiries should, as far as possible, be carried on and directed by them.''† This Academy with the American Philosophical Society, are still in existence. While the latter copied the Royal Society of Great Britain, the founders of the Academy which originated '' at a time when Britain was regarded as an inveterate enemy and France as a generous patron, placed on record their statement that it was their intention to give it the air of France rather than that of England and to follow the Royal Academy rather than the Royal Society. And so in Boston, the Academy published '' Memoirs '' while conservative Philadelphia continued to issue '' Philosophical Transactions ''‡ Dr. Goode goes on to say '' In time, however, the prejudice against the motherland became less intense, and the Academy in Boston followed the general tendency of the American scientific workers, which has always been more closely parallel with

* New York Times, Sunday, April 13, 1930, XX. 5.

† '' Memoirs of the American Academy of Sciences,'' Centennial Volume, Vol. XI, 1888, pp. 6 and 8.

‡ G. P. Goode, '' The Origin of the National, Scientific and Educational Institutions, etc.'' (1890), p. 11.

that of England than that of continental Europe, contrasting strongly with the disposition of modern educational administrators to build after German models.'"*

Thus "When Washington became President there were no scientific foundations within this Republic, save the American Academy in Boston, the American Philosophical Society, Bartram's Botanic Garden, the private observatory of Rittenhouse, and Peale's Natural History Museum, Philadelphia."†

The Colleges and Universities at this period, were Harvard (1636), William and Mary (1660), Yale (1701), College of New Jersey, (1746), University of Pennsylvania (1751), Columbia (1754), Brown (1764), Dartmouth (1769), University of Maryland (1784), North Carolina (1789-95), Vermont (1791) and Bowdoin (Maine, 1794).

Coming back to the American Academy we may note that it has pursued with zeal its object to cultivate every art and science which may tend to advance the interest, honor, dignity and happiness of a free independent and virtuous people. Its publications are "Memoirs" begun in 1785, and "Proceedings" begun in 1846. The Rumford Fund was established here by Benjamin Thomson (Count Rumford) in 1796, providing a medal to be awarded to the discoverer of any useful improvement of light and heat published in America. Appropriation might also be made from this fund to aid in researches that would lead to the award of such a medal. In 1891 the Cyrus Moors Warren Fund was established to encourage and advance research in the fields of science or chemistry.

3. *Connecticut Academy of Arts and Sciences.*

This society was founded in New Haven on March 4, 1799, and succeeded the Connecticut Society of Arts and Sciences founded in 1786. It was incorporated in 1799, but

* *Ibid*, p. 11.
† *Ibid*, p. 14.

was comparatively inactive from 1842-1862. Its object was the cultivation of every art and science which may tend to advance the interest and happiness of a free and virtuous people. The main publications were " Memoirs," 1810-16, and " Transactions," 1866-1903. Since 1907, the transactions are issued in the publications of the Yale University. Its Library is deposited with Yale Library.

These three societies clearly indicate the earlier tendencies at the three early centres of culture in the United States, Philadelphia, Boston and New Haven (in the last place especially) gradually overshadowed by the growth of the University.

4. *American Antiquarian Society.*

It was at the end of the 18th century that great interest was evinced in Europe in antiquities. The Society of Antiquaries started in England long ago was incorporated in 1751 and began to issue publications in 1770. Soon came the Antiquarian Society of Scotland (1780) of Upsala, Sweden, and Denmark (1742). The starting of the Asiatic Society of Bengal in Calcutta (1784) marked the beginnings of Comparative philology and Comparative mythology, by the discovery of Aryan family affinities in language.

The American Antiquarian Society was founded in 1812 by Dr. Isaiah Thomas and others, who addressed a petition to the State Legislature which stated in the Act of Incorporation, 1812, " whereas the collection and preservation of the antiquities of our country and of curious and valuable productions in Art and Nature have a tendency to enlarge the sphere of human knowledge, etc., therefore be it enacted." In 1819 the President built for the library an edifice and its scope was enlarged to make it national. It was then stated " the chief objects of the inquiries and researches of this society will be American Antiquities, natural, artificial and literary."*

* " An Account of the American Antiquarian Society " (prepared for the International Exhibition, 1876, Worcester, Mass. 1876).

Charles G. Washburn in an address delivered at Worcester has pointed out how the society began its existence at the time of wars both at home and abroad; it was the turning point in the industrial life of America. "In 1808 only 8,000 spindles were being employed in the spinning of cotton in New England, and in 1815 it had become 500,000; at Waltham in 1814 was set up, by Mr. Francis Lowell of Boston, a factory for cleaning, carding and wearing and the first trip from New York to Albany in Fulton's steamboat was made on the 17th of August, 1807. It was in 1780 that Benjamin Franklin wrote "America will not make manufactures enough for her own consumption thousand years;" and John Adams had acquiesced in reply, "The principal interest of America for many centuries to come will be land and our chief occupation agriculture." *

At the meeting of 1813 a committee was appointed "for obtaining accurate surveys of all the ancient mounds, whether fortifications or otherwise, in the western part of the United States, and for collecting on the spot, all the facts and information which throw light on these interesting movements of American Antiquity." This resulted, in 1820, in Caleb Atwater's researches being published in "*Archæologia Americana*," Vol. I. Its second volume of papers is also connected with a great name familiar to us, Albert Gallatin, whose work, "*A Dissertation on Indian History and Languages*," later known as "*A Synopsis of Indian Tribes within the United States*," etc., was published in its volume of 1835. Thus the society had given the start to the first real archæologist and first good philologist here. Mr. S. F. Haven, the first historian of United States archæology was also the distinguished librarian of this society.

5. *The Academy of Natural Sciences, Philadelphia.*

In connection with museum activities we have already dwelt on the short history of this society and its contribution

* Charles G. Washburn: "An Address, etc." (Boston, 1912).

to Anthropology. Founded in 1817, the American Entomological Society was incorporated with it in 1875, and its various sciences were organized in various departments : Conchology (1866), Biology and Microscopy (1868), Entomology (1876), Botany (1876), Mineralogy and Geology (1877) and Ornithology (1891). Its object is to cultivate the study of natural sciences by publishing discoveries, collecting natural objects and a library, extending and making useful a knowledge of nature through lectures.

6. *New York Academy of Sciences*

It was organized on February 24, 1817, as the Lyceum of Natural History, incorporated on April 20, 1818, and reorganized under its present name in Feb. 21, 1876. Its affiliated societies are the Linnaean Society of New York, founded in 1878, the Torrey Botanical Club, founded in 1867, the New York Entomological Society, organized in 1892, the New York Microscopical Society, incorporated in 1878, the New York Mineralogical Club, instituted in 1886, the Horticultural Society of New York organized in 1900, the Brooklyn Entomological Society founded in 1872 and incorporated in 1878, and the American Ethnological Society organized in 1842, and incorporated in 1916, with the object of promoting enquiries into the origin, progress and character of the races of man. The Academy has a section of Anthropology and Psychology. There are specific funds, *e.g.*, John Strong Newberry Fund ($50 annually), Esther Hermann fund ($10,000) and centennial endowment (to be raised to $100,000) for research. Its object is the advancement and diffusion of scientific knowledge.

7. *Boston Phrenological Society—started in* 1835.

It had a hundred or more skulls for the study of different races and shows that this was once a popular part of racial studies.

8. *The Algic Society.*

Started in 1831 in Detroit, by Henry Rowe Schoolcraft, it was devoted to the archæology and ethnology of the Indian. Published "Algic Researches."

9. *American Oriental Society.*

It was organized on September 7, 1842, and incorporated on March 22, 1843. Its object was the promotion of learning in Asiatic, African and Polynesian languages, encouragement of research, promotion of knowledge and publications.

Its Library has been deposited with the Library of Yale University. Its journal begun in 1842 and its edition of Sanskrit books have earned for it a very high place in Oriental studies.

10. *American Ethnological Society.*

Organized in 1842 and reorganized in 1871 as the Anthropological Society of New York and returned shortly to the original name. It was revived in 1899 after a long period of inactivity and was joined by Anthropological Club (which had been formed in New York in 1897) and was reconstituted in January, 1900. It was incorporated in 1916. Its object was inquiries into the origin, progress and characteristics of various races of man. Its publications are, Transactions (1845-53), Bulletin (1860-63), Journal (1871-72), Memoirs (1905-). It is affiliated with the American Anthropological Association.

11. *American Association for the Advancement of Science.*

Formed after the model of the British Association started in 1831 in England. It met at Philadelphia in 1847 following a resolution of a meeting of American Geologists and Naturalists at Boston in the previous year. It was incorporated in Massachussets in March 1874. Its object is to promote intercourse between those cultivating science in America. Thus it has been the means of fostering fellowship between

different scientists, gradually tending to build all the sciences more or less according to the same pattern. It has also become the medium of co-operation with other organizations for the advancement of learning. Through its publication "Science" it tends to reach a wider public. It has now a permanent residence and a considerable permanent endowment. It is a great co-operative organization for accelerating the advance of learning in the American Continent.

In early years the society was organized into sections, varying in scope and character. Since 1851, Anthropology was represented in Section E—Ethnology and Geography. In 1856, Anthropology came to be considered under Section B—Natural History. Since 1857-59, it was considered under natural History, as Ethnology. In 1876-77 came the permanent subscription of Anthropology under natural History. In 1878, Geology, Sociology, Botany and Anthropology came in the same section. In 1879-80, there was a permanent sub-section of Anthropology under Natural History. Since 1882, Section H (as in the British Association) represents Anthropology. Morgan was the first Chairman. The papers more often dealt with local subjects, archæology first coming in for the largest share of attention, and then ethnology.*

Societies and Academies, 1860-1880, after 1880.

It was the latter part of this period that marked a rapid transition which bore fruit in the subsequent synthetic age. The tendency here was to specialize and we find the American Social Science Institution (founded 1865), American Philological Association (organized 1869), Archæological Institute of America (founded 1879), synchronizing with the activities of Morgan, Du Ponceau and Gallatin, as well as Bandelier. The greatest science building institution of the period however was the Bureau of Ethnology (organized in 1879) which, under Powell, brought to America the lead in state research in Anthropology from 1877-90. One other of the permanent effects

* See G. G. McCurdy: "Twenty Years of Section H, Anthropology" (Science, N. S., Vol. XV, No. 379, pp. 532-4, April 4, 1902, Washington).

of the grouping of the galaxy of the Powell School at Washington was the starting of the Anthropological Society of Washington (1879), whose organ, the "American Anthropologist," still maintains the highest level of Anthropological contribution in America. The organization of the International Congress of Americanists also began in 1875 in Europe and in 1895 was held in Mexico, not until 1900 was the rule laid down that alternate meetings should be held in Europe and America. Thus this marks the recognition of the deep importance of the science of the Indian, in Europe in the seventies and the passing of the leadership in Anthropological thought to America by the twentieth century.

Since 1880 there have been a few additional societies, such as the American Society of Naturalists (founded in Springfield, Mass., April 1883), the Geological Society of America (organized in 1888), the American Folk-lore Association (organized in Cambridge, 1888), the American Philosophical Association (organized in 1901) and the American Anthropological Association (organized, June 30, 1902). The real movements have been the building up of the synthetic units and the societies nucleated at the National Research Council became the common meeting ground of the Museums, Universities and amateur scientific enterprises.

This period saw the great rise of the anthropological departments in the Universities. It is very hard to say whether anthropology in the Universities has outgrown the museums and societies. In places like New Haven, the University has a tendency to absorb the other activities, shown by the depositing of the libraries of the societies in the University in several cases. In New York, on the other hand, the American museum has become the venue of the learned societies and the University centres to-day pre-eminent in Anthropology are those which had their start in the subject in museums.* This

* See G. G. McCurly: "Teaching of Anthropology in the United States" (Science, N. S., Vol. XV, No. 371, pp. 211-216, Feb. 7, 1902) and "Extent of Instruction and Anthropology, etc." (Science, N. S., Vol. X, No. 260, pp. 910-17, December 22, 1899.)

led to a great difficulty in the earlier days, making Anthropology win its way as an independent subject in Universities. The scientist in the learned Society or the University, or the Museum, to-day has been building higher integrating institutions like the Institute of Human Relations. The barriers between them appear to be giving way and there is some prospect of building an international bureau of research.

SUMMARY AND CONCLUSION.

History of Anthropology as a Culture Trait in Modern America.

It has been truly remarked that the history of a science is largely the history of its geniuses and so in the words of Prof. Wissler " Anthropology is but a group of problems pursued by men and women who call themselves anthropologists." But the men themselves are limited by the nature of the institutions that support them in the pursuit of their objective and the idea-system or the culture-pattern of their age and region. In America the new aboriginal people and the new environment were the absorbing problems and Anthropology started with and grew round the study of the American Indian. On the other hand American psychology has concerned itself with finding out the adaptive value of mind to its environment. But while the new Psychology started with its own laboratories created by Stanley Hall and Cattell in the nineties, Anthropology had begun earlier as the collector and the connoisseur's aid in getting specimens for Museum and papers for learned societies of Natural History or Antiquities. Thus though the Universities had started quite early (Harvard in 1636 or Yale in 1701) Anthropology mainly developed as a Museum subject, divorced from academic discipline, making field-work and specimen-collecting the primary objective first of the antiquities of the American Indian and later of his living culture. It was the American Antiquarian society, which supported Atwater, the Smithsonian Institution with its Bureau of Ethnology and the Peabody Museums that gave us the major portion of our best Anthropological work and made Museum interests dominant in research. Then again the period of maturation in anthropology has synchronised with the growth of the American nation, especially between the seventies and the nineties of the last century, when the foundations were being laid for its present dominant status.

In the introduction it was pointed out how, when comparing two distinct culture zones, *e.g.* India and America, we find coincident developments in the schools of spiritual thought in India on the one hand, and objective science in the Euro-American culture region on the other, each evolving according to the specific culture patterns of the place and time and each showing the maturation of the thought processes of the whole of humanity as a possible factor. America has always been an integral part of the Euro-American region, so the thought of the entire area has to be taken as a whole, though the frontier from the very first, as we have seen, made important modifications in this American sub-centre and made it more objectively inclined. The new Anthropology, like the new Psychology, got its body from Germany though its mind had been swayed by Darwin and Galton of England. When Cattell in America was trying to spread light by the torch, brought from Wundt and Galton, Boas in the Columbian University was following the lead of Ritter and Ratzel in Germany and the statistical methods of Galton.

Relations between Anthropology and Psychology.

Thus as in the earlier years of Anthropology the dominating influence of Agassiz, Dana and Asa Gray had led it towards a natural science and to being classed in the same group as Natural History in the American Association for the Advancement of Science and in Natural History Museums. Its later history has been in intimate relations with psychology as is evident from its position in the National Research Council and the National Academy of Sciences. Psychology in the laboratory of Broca or the institute of Galton was in an Anthropological setting and Rivers and Myers were making their first contributions in field ethnological expeditions. There has been a good deal of unconscious influence on anthropological thought in America emanating from Cattell and Stanley Hall. Of the three earlier major concepts in Anthropology, *viz.*, linguistic affinities (about 1808), the Darwinian concept (1858) and the Biometric Law or the Law of variation (1870),

the two latter had profound influence on both psychology and anthropology. As early as 1798 Kant entitled his brief treatise "Anthropology in its Practical Aspects" followed by Jacob Friedrich Fries (1773-1843), who in his "Anthropology" actually considered psychological facts from the available empiricai data about primitive peoples. So in the early 19th century the psychological anthropologists were trying to correlate data from physiology, psychology, ethics and epistemology for a science of man in line with the natural sciences by an insistence on empirical methods. Gall and Spurzheim's phrenology was the forerunner of physical Anthropology and the location of brain centres. Linnaeus (1707-1778), Lamarck (1744-1829) and Darwin (1809-1882) had been the greatest influences in the biological sciences and the early anthropologists before Morgan were all anxious for classification. Tylor in England and Morgan in America are the fathers of Anthropology, having made it systematic by the idea of evolution which also dominated Herbert Spencer's Sociology, August Comte's Positivism and Steinthal and Lazarus' Folk-psychology. This application of ethnological data to social problems can be traced in Sumner's Folkways and in the writings of Giddings and W. I. Thomas. The tendency of American Sociology has been even with Ward's (*Dynamic Sociology*, 1883) psychological and objective, and with Ross, Allport Young and Ogburn it has been more and more the study of modern culture-patterns in a psycho-anthropological way. Wundt's *Volkerpsychologie* (completed 1900) though not so epoch-making as his *Grundzüge der physiologischen Psychologie* (1867) or his founding of the first psychological laboratory at Leipzig (1879) nonetheless set the pattern for the anthropological study of psychological reactions of man in different culture levels, already begun by Morgan in America and carried on by Powell. Furthermore the influence of Wundt may be traced through Cattell, Prof. Boas and other synthetic cultural anthropologists, who have always kept psychological interpretation in the forefront of their studies. Though Anthropology had begun vigorously in the Museums

in America somewhere about the seventies, the first psychological laboratory founded by Stanley Hall in 1883 was followed in ten years by nine laboratories in nine universities and by 1900 there were twenty-six altogether. As experimental Psychology had to fight its way to recognition among learned bodies in which Museum anthropologists were already prominent so later on when Anthropology had to fight its way in the University curriculum it found a stout champion in Psychology. Thus the tendency in American Anthropology has been to drift more and more away from the biological and to coalesce more with the psychological along with its rise in status in the Universities—in contrast with the British and German cultural Anthropologists who have stuck to natural history and distribution methods. For example, Boas published his German edition of "*The Mind of Primitive Man*" as "*Kultur und Rasse*" showing the different appeals in the different lands. The Anthropological approach to religious problems led to Tylor's discovery of Animism or beliefs associated with the dual conception of the world, material and immaterial, and has also left its mark on Stanley Hall's studies of Childhood and William James' Variety of Religious Experience (1902). To both Psychology and Anthropology belong equally W. H. R. Rivers, C. S. Myres, Emile Durkheim, Le Bon or Levy Brühl and all the leading social Psychologists of America. Psycho-analysis tried on Anthropology by Freud himself (*Totem and Taboo*, 1913) has yielded fruitful results in the hands of Rivers and Malinowski. In the measurements of Intelligence the works of Wissler, Woodworth, Garth, Hunter and Sommermier are contributions to Psychology and Anthropology. So these two vital aspects of the study of man have tended more and more to join hands to discover man's mental reactions or aptitudes conditioned by groups on different cultural planes.

The Methods in Different Periods.

In the days immediately following the discovery of America, the finding of new peoples gave rise to the science

of the American Indian through theological speculations as to the origin of man from the standpoint of orthodox Biblical tradition. This led gradually to the method of cultural comparisons as between the customs of Semitic peoples and American Indians, as found in the writings of Adair in 1775. Linguistic comparisons also started with the needs of the missionary and Jonathan Edwards nearly discovered the secret of linguistic families in 1787. It was in 1808 however that the Aryan family of languages came to be established in Europe and, following this lead, philological studies in America were soon on a firm footing under Heckewelder, Du Ponceau, Gallatin and Pickering. Archaeology started at the same time with Caleb Atwater, followed by Squier and Davis in the State of Ohio mounds. Though Lewis Morgan had begun his work before the rise of Darwin, he it was who sponsored the Darwinian concept in his Ancient Society. The rise of Museums under the Peabody bequests and the genius of Powell and Putnam in organisation, made ethnology highly objective in its outlook and its regional studies exhaustive. The growth of the historical school, after German models, coincided with the rise of experimental Psychology and in consequence geographical and psychological methods ousted the earlier Natural History and Biological methods. This in turn led to the distinct contribution of the American school, the concept of culture as a condition of human group activities.

The Asiatic origin of the American Indian and his migration *viâ* the Behring Strait was found to be very old, and the Jesup expedition of Boas in 1897 only rediscovered the philological argument of Du Ponceau in 1827 and the still earlier conjectures of Adair (1775).

Need and Justification for a Historical Review.

In the Social Science Encyclopaedia (1930) it is thus written : " The first of the newer Social Sciences is Anthropology. A study of early man, historic and prehistoric, became possible only after the rise of some sciences like Geology. The

unearthing of primitive artifacts—tools, implements and ornaments,—led to the discussion of their uses or social connotations and the later progress in the study of the still existing primitive groups broadened the comprehension of all manner of early customs'' (p. 45). But our regional study of science in America has shown the rise of Anthropology here from the science of the American Indian, beginning with the discovery of the New World in 1492, and the theological speculations arising therefrom. Thus it has been eminently objective and regional from its very start. Philology, Geology, Prehistoric Archaeology and still later evolutionary Biology only modified its outlook. Its Museum methods, its German geographical lead and its close association with the remarkable development of Experimental Psychology and Social Sciences, mark American Anthropology by the very history of its existence, as distinct from the Anthropology of Europe. It is not a mere accident that the British school of Anthropology should be non-regional or evolutionary, or that the French should be speculative of social origins since Rousseau, or devoted to the study of its classic field of prehistoric archaeology, or that the German school should develop ethnographic distribution from museum objects divorced from historical considerations. Each of the sub-regions in the Euro-American culture area has developed its own type from objective study of the facilities available. It has been highly fortunate for America that it had ready at hand highly different groups of American Indian, so that its contributions on Man and Culture have been free from the broad generalisations of Frazer or Elliot Smith, and have yet made a definite contribution by discovering the new plane of psychological activities, *viz.*, culture.

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