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THE UNIVERSAL CONSTANT IN LIVING

By F. MATTHIAS ALEXANDER

MAN'S SUPREME INHERITANCE

THE USE OF THE SELF

CONSTRUCTIVE CONSCIOUS CONTROL
OF THE INDIVIDUAL

THE UNIVERSAL CONSTANT IN LIVING

By
F. MATTHIAS ALEXANDER

With an Appreciation by
PROFESSOR G. E. COGHILL
Author of
Anatomy and the Problem of Behaviour

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RECENT APPRECIATIONS

DR. PETER MACDONALD (Chairman of the B.M.A. Representative body) :—

The books of F. M. Alexander set forth a new philosophy covering the whole of life. The effect of this philosophy on education is profound; there are sound reasons for maintaining that all education should be founded on it. No less important are its effects upon health and upon the avoidance of conditions that make for disease. Disease and the effects of disease may be removed by carrying out the technique he teaches. All rehabilitation should be based upon his technique.

* * * *

JOHN SHIRLEY, M.A. (Oxon.), Ph.D. (London), F.S.A. (Senior Canon of Canterbury and Headmaster of the King's School, Canterbury).

I should like to take this opportunity of testifying to the value of Mr. F. M. Alexander's technique in education, re-education, and rehabilitation. There can surely be no question but that his views are scientifically correct, and to my mind it is a tragedy that his methods cannot be adopted in schools throughout the country. Meanwhile Mr. Alexander is doing what he can in pioneer work through his own small school, and every possible encouragement ought rightly to be given to him and to the school, that his work may endure.

* * * *

WE the undersigned have known, and benefited from, Mr. Alexander's work for many years. It was on the advice of some of us that he established the School at Penhill House

in order to train teachers in his technique. During the war the School was transferred to America and, in our opinion, it is a matter of urgent national importance that it should be brought back as soon as possible to Penhill, so that it can be under the direct supervision of Mr. Alexander.

There can be no doubt whatever about the educational value to the Nation of this School. Those who have studied Mr. Alexander's writings, and especially those who have had personal experience of his technique, know that he has produced a complete revolution in the thought and practice of those who, whether as teachers or doctors, have to deal with the correlation of mind and body in human activity. Just as the laboratory and the clinic are necessary to a doctor in order that he may demonstrate the results of his acquired knowledge, so the School at Penhill is necessary as a demonstration of the soundness and value of Mr. Alexander's principles.

We can think of few institutions in this country more deserving of Government favour, or higher in the scale of priority for the labour and materials necessary to restore them to their pre-war standard.

(*Signed*) LYTTON
PETER MACDONALD, M.D.
CAROLINE HASLETT
R. STAFFORD CRIPPS
A. RUGG-GUNN, F.R.C.S.
J. E. R. MCDONAGH

DEDICATED

To the Peoples of the British Empire, Whose Understanding of, and Faith in, the Principles of Liberty and Loyalty, and Whose Confidence in Their Own Strength As Defenders of Their Faith, Enabled Them, Alone and Unaided, to Check the Mad Onrush of Mechanized Means of Destruction which, if Unchecked, Would Have Made It Possible for Evil Forces to Overrun the Whole World and to Enslave the Peoples Living in It.

A THANKS OFFERING

(FIRST EDITION)

I WISH to take this opportunity to offer my thanks to the medical men whose names appear under the letter reprinted from the *British Medical Journal* on page 13, and particularly to Drs. Peter Macdonald, Andrew Murdoch, and Mungo Douglas for their letters which have appeared from time to time in the *British Medical Journal*; to Drs. J. R. Caldwell, Adam Moss, C. A. Ensor, J. E. R. McDonagh, F.R.C.S., Professors John Dewey and G. E. Coghill, Mr. Aldous Huxley, Dr. Trigant Burrow, Mr. T. G. N. Haldane, and Mr. Eynon Smith for their courteous and valuable appreciations included in these pages; to A. Rugg-Gunn, F.R.C.S., for his article, "F. Matthias Alexander and the Problem of Animal Behaviour," in the *Medical Press and Circular* of April 3, 1940; to President Thos. B. Hall, M.Sc., of the South African Chemical Institute, for his appreciative reference to my work in his Presidential Address, "Some Accomplishments of the Chemist"; to Mr. Michael March for his series of illuminating articles in the *Brooklyn Citizen*, one of which drew from Professor G. E. Coghill a eulogy of which he may well be proud; to Professor John Hilton for his broadcasts and for his address "The New Generation of Workers"; to Miss Lucy Silcox for the excerpts from her paper, "Swedish Gymnastic Teaching," in the *Journal of School Hygiene and Physical Education* of March, 1927; to Mrs. Alma Frank for her contribution on page 141; to Mr. Aaron Sussman for his help in so many ways; to Dr. Peter Macdonald, Mr. Arthur J. Busch, and Miss Mary Olcott for their suggestions after reading the MS.; to Miss Mary Olcott and Miss Edith Lawson for their help in the correction of proofs; and to Mr. Anthony M. Ludovici, Miss Irene Tasker, Miss Ethel Webb, and Mr. Walter Carrington for their help in preparing the subject-matter for publication. I must record special thanks to Miss

Ethel Webb, who has been intimately connected with the work since 1911, consistently rendering most valuable help and encouragement to all engaged in it at 16, Ashley Place, whether as pupils or students. I am particularly indebted to her for the patience and perseverance which has characterized her invaluable help in making the subject-matter as clear as possible—in fact, without her help I fear these pages would not be ready for the printers to-day. I am grateful to Dr. John Dewey for his kind permission to quote from his *Educational Essays*, to Messrs. Chatto & Windus for permission to quote from *Ends and Means* by Aldous Huxley, to Messrs. Hamish Hamilton for permission to quote from *Man the Unknown* by Dr. Alexis Carrel, and to Messrs. Macmillan & Co. and The Cambridge University Press for permission to quote from *Man on His Nature* and *The Brain and Its Mechanism* by Sir Charles Sherrington.

I also thank the far-seeing lady—her name is withheld at her request—whose generous gift to the Trust Fund made possible the carrying on of the F. Matthias Alexander Trust Fund school at Penhill, Kent, which, because of the War, was carried on in America at The Whitney Homestead, Stow, Mass., through the kindness of the American Unitarian Association; Miss Margaret Goldie, who is in charge of the school, for her patient devotion to the arduous task of dealing with the problems set in education by the employment of a new technique, and for the progress made towards the solution of them through her loyalty to the underlying principle of the technique; my assistants Misses Irene Stewart, Marjory Mechin (now Mrs. Wilfred Barlow), Erica Webb (now Mrs. Duncan Whittaker), Gurney MacInnes, Richard Walker, Walter Carrington, and Patrick Macdonald (who served with H.M. Forces), who have helped in the school and given such valuable support on the practical side of the work we are interested in; Miss Lulie Westfeldt for her work in New York and in the South; Miss Marjorie L. Barstow for her work in Boston and in the West; Miss Irene

Tasker, who has been teaching for some years in Johannesburg, South Africa, and built up a large connection there; and my brother, Albert Redden Alexander, who has done so much to increase interest in the work in New York and Boston during the last six years, and who is carrying on the school and Training Course for Teachers in the United States.

16, *Ashley Place,*
Westminster,
*London, S.W.*1.

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APPRECIATION

The Educational Methods of F. Matthias Alexander

by

G. E. COGHILL

THE practice of Mr. F. Matthias Alexander in treating the human body is founded, as I understand it, on three well-established biological principles: (1) that of the integration of the whole organism in the performance of particular functions; (2) that of proprioceptive sensitivity as a factor in determining posture; (3) that of the primary importance of posture in determining muscular action. These principles I have established through forty years in anatomical and physiological study of Amblystoma in embryonic and larval stages, and they appear to hold for other vertebrates as well.

In order to make this discussion clear, definitions of certain terms are necessary. Normally, as regards somatic (general bodily) motor function, the organism exists in a condition of mobility or immobility—either as mobilized or as immobilized. The latter condition is illustrated by sleep. In deep sleep the individual is mobilized in regard to its visceral, circulatory, and respiratory functions and the like, but it is immobilized with reference to bodily movement. Reflexes occur, to be sure, to local stimuli, but as an individual the body as a whole does nothing for its own sake. Somnambulism, as a general bodily activity, occurs during periods of imperfect sleep or partial wakefulness. In the condition of immobility the individual may be thought of as in repose. In mobility, on the other hand, the whole individual is mobilized (integrated), or in action as a unit according to a definite pattern. Under these circumstances the organism is in one of two phases of action, posture or movement. Posture is relatively

static in so far as the individual as a whole is concerned; movement is transition through space for the organism or its parts. In posture the individual is mobilized for a definite movement in which the energy mobilized in posture is released in a definite pattern of activity. Of course these differences are relative, and one phase passes over imperceptibly into the other, but in their typical manifestations they are clearly differentiated. Likewise the distinction between mobility and immobility is relative, and no absolute distinction can be made between them, but the distinction is useful if not necessary for a clear understanding of physiological principles. It seems reasonable, therefore, to propose that in posture the individual is mobilized (integrated) for movement according to a definite pattern, and in movement that pattern is being executed. In posture the individual is as truly active as in movement.

Another term that may need explanation is "proprioceptive," which applies to sensory nerves that serve the muscles, tendons, and joints, and the middle ear (vestibular apparatus) and its nerves. The proprioceptive system has nothing to do with local or cutaneous sensation.

Mr. Alexander has found these same principles operative also in man. His work is concerned with the nature of the influence of the working of the psycho-physical mechanisms upon the general functioning of the human organism (posture), and his technique was evolved as an aid in maintaining the general conditions best suited to this working in those in whom they already exist, and in changing and improving them when this working can be shown to be harmful. He has further demonstrated the very important psychological principle that the proprioceptive system can be brought under conscious control, and can be educated to carry to the motor centres the stimulus which is responsible for the muscular activity which brings about the manner of working (use) of the mechanism of correct posture. Of course the time required for this education could be greatly lessened through the assistance of a competent teacher.

To understand the first biological principle mentioned, the relation of the part to the whole, it is necessary to know this relation in the development of behaviour, which I have investigated for many years. My studies have been both anatomical and physiological, those of the one method corroborating, supplementing, and extending those of the other. For these investigations I used a species of Amblystoma, a type of vertebrate that is well known for its lack of specialization of structure and function and in which movement can be observed under controlled conditions from the first. Like the other Amphibia, it is both terrestrial and aquatic, so that the development of locomotion by both swimming and walking can be studied.

In these animals, at the time muscular contraction begins, the whole functional muscular system is organized as to longitudinal bilateral series of segment, the myotomes. At that time there are no appendages other than relatively homogeneous buds composed of undifferentiated tissue covered with skin. These are not functional organs, and will not be for a relatively long time after the motility of the trunk musculature begins. When the axial muscles begin to contract their contraction proceeds from the head tailward (cephalocaudal). If the stimulus is adequate the whole animal responds as a total reaction. There is never a partial response in the sense of a local reaction except in the anterior end, where contraction of a few myotomes may occur in case the stimulus is not adequate to stimulate the entire system, for the organization is such that a stimulus arising anywhere on the trunk or tail must travel headward in the dorsal part of the spinal cord in order to reach the motor centres. Also the motor neurones are integrating neurones of the axial muscles—that is to say, they are at the same time longitudinal conductors in the spinal cord and motor nerves, innervating the muscles simply by means of collaterals (side branches of the axones). These collaterals grow out into the limbs and establish a functional connection with the muscles of the limbs so that the earliest movements of the limbs are performed only as the trunk moves. The limbs are there-

fore primarily integrated with the trunk, and local reflexes do not occur. These are made possible through another type of neurones, which arise from a different source in the spinal cord from the integrating neurones that give rise to the primary motor fibres. There are, therefore, two possible functions of the limbs: a primary one wholly and always integrated with the trunk, and a secondary one in response to local stimuli. The first gives rise to total reactions and the latter elicits reflexes, and reflexes as partial patterns are normally always subject to the total pattern.

In the course of development of behaviour of Amblystoma the earliest partial reactions are postural. If, for example, one can succeed in rolling the animal over from the upright to the supine position by means of a bristle without exciting it to other action, one leg will be elevated and the opposite one depressed in the turning process. The movement has the appearance of a local reaction (partial pattern), but it is not in response to a local stimulus from the skin; it is in response to stimuli arising in the proprioceptive system. There are two possible sources of proprioceptive stimulation. In the first place there are sensory endings in the axial muscles of the earliest reaction stages, and the forced torsion of the axial muscles would stimulate these proprioceptive nerves and they could stimulate the elevation and depression of the limbs. As a second possibility the vestibular system of the ear is sufficiently developed to be functional at this stage of development, and long fibres from the vestibular centres in the brain travel far down the spinal cord and into the motor centres that innervate the limbs. Whether one or both of these sensory systems are responsible for these postural reactions of the limbs it is the animal as a whole that stimulates the response. The earliest postural reaction of the limbs, therefore, is a total reaction, and the sensory factor is in the proprioceptive system. The stimuli arise wholly within the organism.

In the development of Amblystoma I have observed, also, that an appropriate posture is assumed at intervals

for an appreciable time before the particular muscular pattern is geared to action. This occurs in the development of swimming, of walking, and of feeding. Posture, therefore, is a forerunner of action and must be regarded as basic to it.

These are the simple rudiments of movement which Mr. Alexander calls into play by his methods of re-education. For he is pre-eminently an educator. He seeks to restore the functions of the body through their natural uses. His methods of doing this are original and unique, based, as they are, on many years of experience and exhaustive study. Yet they can scarcely be adequately described, although the results are marvellous.

One ordinarily considers that rising from a sitting position in a chair to a standing position is a simple process perfectly understood by every adult. But this pattern of behaviour is not natural. It was introduced into our behaviour, very late in our racial development, with the invention of the chair, the most atrocious institution hygienically of civilized life. Primitive man sat on the ground or squatted when not standing. Primitive man does so still, and the ease and apparent comfort of the squatting position is witnessed among the less privileged classes, who rest in that position for long periods. This posture requires extreme stretching of the extensor muscles of the legs and abduction of the thighs. Habitual use of the chair, on the other hand, prevents this stretching of the extensor muscles and tends to produce adduction of the thighs, even to the extreme of crossing one leg over the other. This unnatural posture tends to stimulate reflex responses which antagonize the normal total pattern of rising to a standing position.

That this is more than theory Mr. Alexander demonstrated to me in lessons which he kindly gave me. He enabled me to prevent misdirection of the muscles of my neck and back, and to bring about a use of these muscles that determined the relative position of my head and neck to my body and so on to my limbs, bringing my thighs into the abducted position. This led to changes in the

muscular and other conditions throughout my body and limbs associated with a pattern of behaviour more natural (in agreement with the total pattern) for the act of getting on my feet. The whole procedure was calculated to occupy my brain with the projection of directive messages that would enable me to acquire conscious control of the proprioceptive component of the reflex mechanism involved. The projection of the directed messages, Mr. Alexander considers, stimulated nervous and motor activity that was associated with better conditions. This leads to the belief that the motor paths of the spinal cord and the nerve paths through the brain associated with the total pattern were again being used.

In my study of the development of locomotion I have found that in vertebrates the locomotor function involves two patterns: a total pattern which establishes the gait; and partial patterns (reflexes) which act with reference to the surface on which locomotion occurs. The sloth, for instance, has the same total pattern (gait) of walking that the dog has, but employs a wholly different partial pattern (reflexes), for he supports himself in suspension with his flexor muscles. Now the reflexes may be, and naturally are, in harmony with the total pattern, in which case they facilitate the mechanism of the total pattern (gait), or they by force of habit become more or less antagonistic to it. In the latter case they make for inefficiency in locomotion. In myself, for example, when I have given attention to details of walking, I have experienced flexion of my toes as if they were trying to grasp the soles of my shoes. This I regard as a reflex brought about by habitual incorrect posture, and antagonistic to the natural gait which my toes, nevertheless, were trying to reinforce.

It is my opinion that habitual use of improper reflex mechanism in sitting, standing, and walking introduces conflict in the nervous system, and that this conflict is the cause of fatigue and nervous strain, which bring many ills in their train. Mr. Alexander, by relieving this conflict between the total pattern which is hereditary and innate

and the reflex mechanisms which are individually cultivated, conserves the energies of the nervous system, and by so doing corrects not only postural difficulties but also many other pathological conditions that are not ordinarily recognized as postural. This is a corrective principle that the individual learns for himself and is the work of the self as a whole. It is not a system of physical culture which involves only one system of organs for better or for worse of the economy of the whole organism. Mr. Alexander's method lays hold of the individual as a whole, as a self-vitalizing agent. He re-conditions and re-educates the reflex mechanisms, and brings their habits into normal relation with the functions of organisms as a whole. I regard his methods as thoroughly scientific and educationally sound.

PREFACE

THE reader of the pages of this and my other books will know that I have been consistently concerned with the nature of human reaction in its bearing upon individual and mass activity, for my experience justifies me in asserting that the nature of a person's manner of reacting at a given time determines the nature of his behaviour.

Is it not natural then that, at this moment of publishing a new book, I am thinking of the possible reaction of my readers towards the evidence that I have to place before them? The subject-matter is the outcome of unique experiences during the past eight years in the field of human behaviour, and the book, like Topsy, has "just growed." Should any readers be disappointed that it has not been built to any definite plan, I would remind them that, in view of the nature of the subject-matter and its source of origin, the limitations that are inherent in a book made to plan have been sidetracked. I am also anxious to address a few words to them on the why and the wherefore of the matter of short and long sentences.

With the help of friends I have given much time to attempts to clarify and simplify what I have written; nevertheless, I am often taken to task for my long sentences.

It is comparatively simple to express some idea or experience in a short sentence or in several short sentences if the idea or experience represents something specific, or something that can be done or gained by the *direct method*, for this involves the concept of separation and disconnectedness. But ideas or experiences concerned with unified phenomena and which involve the *indirect method* for general, instead of specific, application can only be fully expressed by a sentence that conveys the meaning of such ideas and experiences so that there can be no doubt that these are conceived of as a co-ordinated indivisible whole.

I now ask my readers before passing judgment on the experiences described in these pages to apply the test of principle to any evidence emerging from my practice which may chance to conflict with their beliefs in practice or theory, or which runs counter to their individual interests. Then if it is found that this evidence is based upon the same principle as that underlying the practice which it is intended to supersede, judgment should be given against the practice and the evidence discredited. But if the opposite is found to be the case, then the evidence should be put to a practical test by observing the nature of the working of the mechanisms of the psychophysical organism during the consistent application of the procedures of my practice, and if this working leads to the *raising of the standard of general functioning*, judgment must be given in favour of the practice.

16, *Ashley Place,*
Westminster, London.
April, 1941.

PREFACE TO NEW EDITION

SINCE the foregoing was written I have received letters from correspondents at home and abroad which reveal a marked change in the attitude of readers towards the subject-matter of my books. Most gratifying of all is the evidence, conveyed in the writings of authorities in many fields, of a clearer understanding and fuller acceptance of the means-whereby of my technique, associated with an insight into my approach and procedure which has enabled them to put the knowledge thus gained into practice in their daily life.

Articles and letters testifying to the value of my work have been printed in *The British Medical Journal, The Lancet, The Medical Press and Circular* and *The British Journal of Physical Medicine and Industrial Hygiene*, Nov.–Dec., 1945. The basic connection of my technique with education, re-education, rehabilitation, and prevention in general has been stressed by responsible workers in these fields, who have thus given evidence of their recognition of the means-whereby employed in my technique for bringing about those changes in the use of the self which, because of the close association of use and functioning in the self, are essential for the success of any endeavour to bring about a lasting improvement in the control of human reaction. Indeed, success in such an endeavour is essential if the peoples of this world are to develop that attitude towards and understanding of one another's failings and better parts which is necessary for co-operation and goodwill in national and international affairs. But such a fundamental change in human reaction as this calls for is one which man's efforts have failed so far to bring about. I can claim over fifty years' experience in acquiring the knowledge necessary to enable me to help those who have come to me in the belief that I can help them to improve their reaction to the stimulus of living. This experience causes me to conclude that man's failure to make a funda-

mental change in his reaction is due chiefly to the unnatural and unscientific conception on which his attempts have been based. I refer to the separations involved in

(1) man's concept of the organism as "spirit," "mind," and "body" in his attempts to make changes and improvements in himself, attributing to "spirit" a a value greater than that of "mind," and considering "spirit" and "mind" something so superior that the "body" has become more or less ignored and the attitude towards "body" one of disrespect and suspicion; nay, in extreme cases, the "body" has even been castigated as the prime offender in frustrating the efforts of would-be helpers of men;

(2) the concept which led man to make this separation in the experimentation he undertook in order to discover the nature and working of the mechanisms and systems of the human organism, and thus to conclude that separated departments of study and experiment—named anatomy, physiology, psychology, and the rest—were best for his purpose. But we have abundant proof that man's efforts in the directions here indicated, or in any other, have not resulted in a practical knowledge of what is needed even to *prevent* him from developing harmful habits in the use of his mechanisms when responding to stimuli (in other words, in his control of reaction), let alone what is needed in his attempts to change or eradicate such habits. Man remains, in consequence, the slave of habit in thought and action. He is incapable of making that fundamental change in his reaction by means of which he can escape from his present habit-bondage, because in any attempt he may make to change and control his reaction he is still dominated by impulse, the associate of subconscious direction and guidance.

The fact to be faced is that the human self was robbed of much of its inheritance when the separation implied by the

conception of the organism as "spirit," "mind," and "body" was accepted as a working principle, for it left unbridged the gap between the "subconscious" and the conscious. This gap still remains unbridged by the studies, scientific or otherwise, which have been stimulated by the conception of separation. I venture to assert that if the gap is to be bridged so that the self may enter into and enjoy the fuller benefits of "man's supreme inheritance," it will be by means of a knowledge, gained through practical experience, which will enable man to *inhibit his impulsive, "subconscious" reaction to a given stimulus, and to hold it inhibited while initiating a conscious direction, guidance, and control of the use of himself that was previously unfamiliar.*

The crux of the matter is that change demands the use of procedures which are unfamiliar, and in my long experience I have never met a person who, in attempting to carry out a decision to make a given change, was sufficiently endowed with the ability—which the mystics choose to call "detachment"—to keep to that decision, however well-considered, if the procedures decided upon as necessary to make the change were not in keeping with habitual use. We have heard much of the word "detachment," which has long since been a watchword of the mystics. Hence I here suggest that only those who become capable of translating into practice what is involved in the procedure just described can justly claim to have experienced detachment in the basic sense.[1]

16, *Ashley Place,*
*S.W.*1.
January, 1946.

[1] Dr. Wilfred Barlow, whilst serving as a Captain in the R.A.M.C. during the war, was permitted by the Army authorities to make certain observations on a group of Army cadets, an account of which is published under the title of " An Investigation into Kinæsthesia," in *The Medical Press and Circular* of January 23, 1946. The results of Dr. Barlow's investigations serve to support my findings in regard to the vagaries of individual kinaesthetic guidance, direction, and control.

INTRODUCTORY

WHEN my last book, *The Use of the Self*, was finished I consoled myself with the thought that I would not need to write another on the subject of my practice and theory, because a detailed description of the evolution of my technique and its application to different fields of activity was then to be found in my books. Obviously such a description was not as full as one could wish, because any change in manner of use of the self, however brought about, is associated with unfamiliar sensory experiences, and, as is well known, knowledge concerned with sensory experiences cannot be conveyed by the spoken or written word in such a way as to convey the full meaning to the reader.

This serves to explain why, in spite of the frequency with which I have stressed in my previous books the concept of the indissoluble *unity* of the human organism, some readers still adhere to the concept of *separation* in interpreting what I have written, as if the procedures of my technique and their results in practice could be labelled separately "physical" or "mental." Objective evidence of the dependence of thought and action upon the unified working or interaction of "physical" and "mental" mechanisms and processes is to be found in the first chapter of *The Use of the Self*, and my experience has convinced me that these are manifestations of unified human activity which show at certain stages a preponderance of what is called "physical," and at other stages a preponderance of what is called "mental." [1]

Another source of misunderstanding has arisen through my choice of words for which I have often been criticized. While I do not hold a brief for myself in this regard, I have persistently avoided using words which are labels for ideas and "systems" which I am convinced are

[1] Cf. *Constructive Conscious Control of the Individual*, F. M. Alexander, p. 5.

fundamentally unsound, and I am able to state that when reasons for such criticism have been given to me I have always found in my critics a tendency to read into words meanings which fitted in with a particular construction that they were accustomed to put upon them, and I suggest that the habit and the misunderstanding are closely connected. If the reader will remember that the subject of my study has been, and is, the living psycho-physical organism, which is the sum of a complex of unified processes, he will understand why I refrain as far as is possible from using such terms as "postures," "mental states," "psychological complexes," "body mechanics," "subconscious," or any of the thousand and one labelled concepts which have, like barnacles, become attached to the complicated idea we have of ourselves owing to the kind of education to which we have been subjected. Instead I prefer to call the psycho-physical organism simply "the self," and to write of it as something "in use," which "functions" and which "reacts." My conception of the human organism or of the self is thus very simple, but can be made difficult by needless complication resulting from the preconceived ideas which readers bring to it.

Since the publication of *The Use of the Self* much water has run under the bridge. There have been happenings of special significance to those interested in the past and future usefulness of my practice, and in the bearing of its underlying principle of unity upon methods and plans of life in general. Biological and physiological findings which have given support to this principle and practice have been published in pamphlet and book form, and appreciative references have been made in books, articles, and in medical, chemical, philosophical, and educational reports.

It is gratifying to have lived to see the principle I have advocated and consistently put into practice for so long endorsed by authorities in diverse fields of human activity. Unfortunately some of those who in their writings and speeches have given support to the concept of the *organism-as-a-whole* (The Whole Man) do not appear to have understood what is logically implied in putting this into

practice, and so are attempting to help others to solve a problem which needs for its solution knowledge in a field in which they have had little or no experience. When making a statement of technique in my books I have always included a description of the procedures necessary for putting into practice the theoretical conception that was the counterpart of this practice, and I can only regret that some of those who have restated and are now championing the concepts I have arrived at experimentally, make no mention of any technique by means of which these concepts can be put into practice.

I have decided therefore that a new book may be of help in clarifying misconceptions, and in emphasizing the oneness of control and guidance of use and reaction, as well as in stressing the importance of gaining the knowledge and experience required for putting the concept of The Whole Man into practice consistently. This knowledge and experience is essential if our acceptance of the concept is not to remain merely an intellectual belief. A great deal of the confusion and perplexity in the world to-day is due to the acceptance and spreading of theoretical concepts which have not sprung from the personal experience of those who advocate them.

In the educational and medical world especially, writers and speakers have been putting forward the concept of The Whole Man as the one upon which sound methods in all fields of activity should be based, but few among these offer knowledge concerning the means of translating the concept into experience, or give a technique to be employed in applying the principle in practice. Yet as Professor G. E. Coghill writes in regard to the concept of the organism-as-a-whole: "It is a very different thing to state a theory and to demonstrate it as a fact. It is the demonstration that places the concept on a scientific foundation." He continues: "In my own case the concept came through the demonstration. I adopted the concept after I had the demonstration."[1]

[1] See "Psychological Controversy" in the *Brooklyn Citizen*, Brooklyn, N.Y., May 12, 1939.

Dr. Coghill's statement is especially interesting to me as it is entirely in line with my own experience, and clearly removes a scientific concept from the status of an intellectual belief. When I began the observations which led to the evolution of my technique,[1] I did not hold any hard and fast theory as to the working of the organism, though in common with most people I conceived of "body" and "mind" as separate parts of the same organism. But the time came when I saw that the defects in my reaction at a given point, which I and my advisers had tried to change by *direct* method and treatment, were not primarily due to defects in the use and associated functioning of the parts of the mechanism seemingly most immediately concerned (in my case the vocal organs), but were the *indirect* result of defects in my general use of myself which were constantly lowering the standard of my general functioning and harmfully influencing the working of the musculature of the whole organism. The close connexion which I observed to exist between the processes of use and functioning,[2] and which worked as I saw from the whole to the part, was sound evidence to me of an integrated working of the organism; and when in working to this principle I discovered the existence of a control of this integrated working, which, according as it was employed, influenced for good or ill my general functioning, I realized that I had not only come upon the primary control of the integrated working of the psycho-

[1] For those readers who have not read my books, the details of my observations will be found in the chapter headed "Evolution of a Technique," in *The Use of the Self*. This chapter is a statement of technique and includes a detailed account of its evolution, and of how I applied the technique to my own needs.

[2] The phrase "use and functioning" is often used by me in my writings; and as it has been suggested to me that the word "and" in the phrase might be misconstrued as implying a separation between the two processes of use and functioning—that, in fact, I might be accused of breaking faith with my well-known advocacy of unity by using the phrase—I think that reference to the experiences outlined in the first chapter of *The Use of the Self* will clear me from any misunderstanding on this score, because the order of the happenings I have recorded there is in accordance with the order of the words in the phrase.

physical mechanism in the use of the self that I needed to bring about a change in my own reaction, but that, by the objective proof emerging from my observations and the procedures I employed, the concept of the organism-as-a-whole had been placed upon a foundation that could be scientifically established.

The full significance of the foregoing has not been grasped even by those who have written on the practice and theory of my work, but, emerging as it does from the practical application of my technique, it is fundamental to the comprehension of its wide implications and the fuller understanding of their nature in respect to man's reaction in living. It has not been realized that the influence of the manner of use is a *constant* one upon the general functioning of the organism in every reaction and during every moment of life, and that this influence can be a harmful or a beneficial one. It is an influence for ill or an influence for good in accordance with the nature of the manner of use of the self in living, and from this there is not any escape. Hence this influence can be said to be *a universal constant in a technique for living.*

I have in daily lessons for nearly fifty years demonstrated to pupils and others the influence for good or ill of this constant upon their general functioning, and the fact that repetition of the demonstration is possible provides that kind of proof of the soundness of concept and principle, and of the technique, plan, or method based upon it, which is acceptable to the scientific engineer when he finds that in working to a concept or principle he can build a machine that, as a working mechanism, satisfies the need for which he designed it.

My experience and the course of events have only strengthened my conviction that we cannot hope to understand what is essential to the task of bringing about improvement in the manner of human reaction without first acquiring that knowledge of the integrated working of the self that will enable us either to prevent this working from being interfered with, or to restore it if such interference has already intervened. I would say that it is man's

failure to perceive this necessity that has resulted in the tragic events that disfigure and tend to undermine the civilization that he has built up.

As I hope to show fully in what follows, any attempt on man's part to bring about changes in his own reaction or that of others must begin by throwing overboard the conceptions and beliefs that are associated with the feeling upon which he has previously relied for guidance and control in the use of himself in carrying out all his activities. He will need to substitute for these a new conception leading to belief in new procedures, if he is ever to understand what is necessary to the making of fundamental change in reaction. This will call for a change in guidance and control in carrying out the new procedures that have been reasoned out as best for his purpose, but as these lead to changes in the use of the organism which are associated with unfamiliar motor and sensory experiences, sometimes disconcertingly so, much more is needed than a belief arising from intellectual considerations alone, if he is to hold to this belief *during* the employment of these procedures.

I am of the opinion that the presentation of the material that I am now putting forward will make it clear that my technique provides a practical counterpart to the concept of The Whole Man which is stressed in certain of the writings of authorities I shall quote. I have gathered together a variety of significant material from my own experience, to which I am relating the ideas, arguments, and conclusions of others in various fields of activity, and while this material may appear at first glance to be discrete, it is in fact linked together by being analysed and considered in the light of adherence to the principle of the psycho-physical unity in the working of the human organism. To judge from the opinions expressed by authorities in many fields since the publication of *The Use of the Self*, my experience may one day be recognized as a signpost directing the explorer to a country hitherto "undiscovered," and one which offers unlimited opportunity for fruitful research to the patient and observant pioneer.

After working for a lifetime in this new field I am conscious that the knowledge gained is but a beginning, but I think I may confidently predict that those who are sufficiently interested in the findings I have recorded, and who will be guided by them in any further search, will find their outlook and understanding towards the question of the control of human reaction (behaviour) so completely changed that they will see that the knowledge of the self is fundamental to all other knowledge, particularly to that which can make for the raising of the standard of human understanding and reaction essential to a sane plan of civilization. I trust that the reader will appreciate that the subject-matter of this book is a warrant for this prediction, and suggest that if he will embark on the adventure he will find my prediction fulfilled.

CHAPTER I

THE CONSTANT INFLUENCE OF MANNER OF USE FOR GOOD OR ILL

"The classic observations of Dr. George E. Coghill on the growth of the nervous system and the earliest development of embryonic behaviour showed that behaviour first appears as a total reaction of the organism, which is integrated from the beginning, and that the smaller patterns of behaviour, or specific reflexes, arise by a process of individuation from the total pattern." (Extract from the *Six Year Review, 1930–1936, of the Josiah Macy, Jr., Foundation.*)

FEW of us hitherto have given consideration to the question of the extent to which we are individually responsible for the ills that our flesh is heir to; this, because we have not come to a realization of the faulty and often harmful manner in which we use ourselves in our daily activities and even during sleep,[1] or of the misdirection, strain, and waste of energy due to this misuse. We have mostly taken it for granted that we are able to make the best use of ourselves at our work and in everything else we do.

In recent years, however, it has been admitted that all is not well, at least in some fields of activity; certain harmful effects of factory work (as apart from factory con-

[1] So far as investigation has been possible, it has been found that people often tend to exaggerate in sleep the harmful manner of use they employ during their waking hours. It is not generally appreciated that although the need of activating the mechanisms responsible for the process of living may perhaps not be so great during sleep as during the waking hours (because of the generally lowered tone and tempo of the functions), it is nevertheless present, and may be interfered with by the same harmful habits of use as prevail in wakeful activity.

ditions, working hours, ventilation, etc.) have begun to be publicly recognized, and this has led to efforts being made to deal with the troubles of these workers.[1]

Unfortunately, up to now only palliative measures have resulted from the efforts of those most concerned to remedy these troubles, because, in their consideration of what is necessary for the solution of their problem, they did not take into account the part played by the psycho-physical mechanisms of the human organism, both in those activities which are labelled physical and manual, and in those which are labelled mental and intellectual. No matter whether the activity is—

(1) one which calls for the use of the limbs in general movement and locomotion, or for the use of the hands in employing tools and instruments, or

(2) one through which the processes of conceiving, reasoning, and understanding are set in motion, and through which the results of these processes are expressed in speaking or writing, as in education, religion, politics, science, etc.,

the part played by the organism in these two fields of psycho-physical activity is common to both.

With regard to the use of the word PSYCHO-PHYSICAL, *I would refer my reader to what I wrote in my book, "Constructive Conscious Control of the Individual" (page 5): "The term* PSYCHO-PHYSICAL *is used both here and throughout my works to indicate the impossibility of separating 'physical' and 'mental' operations in our conception of the working of the human organism. As I wrote in 'Man's Supreme Inheritance': 'In my opinion the two must be considered entirely interdependent, and even more closely knit than is implied by such a phrase.' Hence I use the term* PSYCHO-PHYSICAL ACTIVITY *to indicate all human manifestations, and* PSYCHO-PHYSICAL MECHANISM *to indicate the instrument which makes these manifestations possible. Psycho-physical activity must not, however, always be considered as involving equal action*

[1] See Appendix D for excerpts from an address by Professor John Hilton, M.A.

and reaction of the processes concerned, for, as I hope to show, the history of the stages of man's development reveals manifestations of human activity which, at certain stages, show a preponderance on what is called the 'physical' side, and at other stages a preponderance on what is called the 'mental' side. I am forced to use the words 'physical' and 'mental' here and throughout my argument because there are no other words at present which adequately express the manifestations of psycho-physical activity present at these various stages, not in any sense because the 'physical' and 'mental' can be separated as such. I wish, therefore, to make it clear that whenever I use the word 'mental' it is to be understood as representing all processes and manifestations which are generally recognized as not wholly 'physical,' and vice versa, the word 'physical' as representing all processes and manifestations which are generally recognized as not wholly mental.' " This also applies where I use the words "physical" and "mental" in this book.

Every living human being is a psycho-physical unity equipped with marvellous mechanisms, and it is through these when set in motion by the stimulus of some desire or need that all reactions take place. Every reaction, therefore, is associated with a particular manner of use of these mechanisms and, because of the closeness of the association, it is this manner of use that constantly influences all manifestations of human activity, whether labelled manual or mental.

Take first the manual or skilled worker. His manner of use influences for good or ill not only his general functioning, but also the way in which he employs the instruments or tools of his trade. All his activity is his particular reaction to some stimulus. The stimulus sets in motion a certain manner of use of himself, and the way he reacts is determined by this manner of use, and in a lesser degree by the comparative strength or weakness of the stimulus in its effect upon it. In this case there is *one stimulus* to reaction—his desire or need to employ tools or instruments as the means whereby he can gain his end.

The position is not so simple when it comes to workers in intellectual fields such as education, religion, science, politics, etc. They employ theories or plans which they have formulated as the instrument or means whereby they can instruct others or convert them to their ideas. Here, even with the help of the very best possible "means-whereby," success in gaining their end depends upon the manner of their reaction not to one, but to several stimuli of varying intensity. For instance, there is the stimulus of the ideas they wish to put forward; there is the stimulus of the desire to convert other people; in certain cases, there is the stimulus of the presence of an audience and so on; and to each of these stimuli they will react in accordance with their habitual manner of use. In addition to all this, their success in the last resort will depend upon the manner of the reaction of the people to be converted or instructed, since these, in their turn, will react according to the manner of use of themselves which is set in motion by the stimulus of the new idea, and also by the stimulus, potent or weak, resulting from the personality and manner of those who are presenting it.

It is surprising how few people realize that reaction is influenced, just as functioning is, by manner of use, and not many, even of these, are aware how intimately the individual's use of self modifies the functioning and reaction of his whole being.[1]

[1] We all know from experience that the obvious often escapes our notice, and that we constantly fail to see things of great importance even when they are close to us. When we come into contact with a new and unfamiliar fact or experience, we do not bring the knowledge and experience we already possess to bear upon it, and so frequently fail to make any connexion between the familiar and the unfamiliar. We therefore miss that new knowledge which we might have acquired if we had connected up the new and unfamiliar experience with what we already know. This explains why so few people among those who know my work have yet fully appreciated the truth of what I have just written as to the nature of the influence of use upon functioning and upon reaction, the association of manner of use of the self and manner of reaction and conditions of functioning being so close that control of one depends upon control of the other. Yet surely this association is the fact of all others which should have emerged from knowledge of my work and study of my books. That it has been overlooked, however,

The question of the nature of use in its relation to functioning and reaction in our daily activities presents a problem requiring solution, and it will be found that the attitude of most people, with very few exceptions, is that Nature makes provision for us in this respect. How often have I been asked, "Why should our use of ourselves go wrong? What is the cause?" and so on.

These questions have been answered very fully in my other books. It is true that Nature has provided us all with the potentiality for the reasoning out of means for preventing wrong use of the self, but we have not developed any preventive measures to this end because we have assumed, quite erroneously, that our manner of use of ourselves cannot go wrong or fail us.

But now that it can be demonstrated that the influence of the manner in which we use ourselves is operating continuously either for or against us every moment of our lives, it is unreasonable to cling to this assumption. A good manner of use of the self exerts an influence for good upon general functioning which is not only continuous, but also grows stronger as time goes on, becoming, that is, a *constant* influence tending always to raise the standard of functioning and improve the manner of reaction. A bad manner of use, on the other hand, continuously exerts an influence for ill tending to lower the standard of general functioning, thus becoming a *constant* influence tending always to interfere with every functional activity arising from our response to stimuli from within and without the self, and harmfully affecting the manner of every reaction.

In estimating the extent of this influence of use upon functioning and reaction, the vital point to consider is whether it is spasmodic or constant. If by chance it is

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will be apparent to anyone who reads the various appreciations of my work which have been published over a long period in reviews, articles, and references in books. Well-known authorities in their own sphere have expressed their opinions endorsing the value and soundness of my practice and theory, but no reference will be found in their writings to what is implicit in the acceptance of a truth which is fundamental to that practice and theory, and which I am now about to stress.

spasmodic, it will have a comparatively slight effect upon the nature of the functioning, but if, as is usually the case, it is constant, its effect upon functioning will tend as time goes on to grow stronger and stronger.

We all know that constant attention to what we are doing in the daily round of life makes for success, that constant energizing in a given direction is the most effective way to produce a given result, that constant application to a given task by a slow, dull person can bring success where a quick, brilliant person who indulges in spasmodic application will fail, that constant dripping of water will wear away stone, that constant pressure on parts of the human body produces irritation and pain, that constant repetition of a sound at a given interval will drive men mad—indeed, has actually been employed for that purpose—and that constant indulgence in bad habits leads sooner or later to irritation, undue excitement, depression, demoralization, and even insanity.

The kind of *constant influence*, therefore, which our manner of use exerts upon functioning is of the utmost importance. If it is one that tends to raise the standard of general functioning it will be a constant influence for good; but if it is one that tends to lower this standard, then it will be a constant influence for ill. *Habit, indeed, may be defined as the manifestation of a constant.*

For this reason we should know and be able to employ the means whereby we can establish a good manner of use as a constant. Readers of *The Use of the Self* will remember that when I was experimenting with various ways of using myself in the attempt to improve the functioning of my vocal organs, I discovered that a certain use of the head in relation to the neck, and of the head and neck in relation to the torso and the other parts of the organism, if consciously and continuously employed, ensures, as was shown in my own case, the establishment of a manner of use of the self *as a whole* which provides the best conditions for raising the standard of the functioning of the various mechanisms, organs, and systems. I found that in practice this use of the parts, beginning

with the use of the head in relation to the neck, constituted a primary control of the mechanisms *as a whole*, involving control *in process* right through the organism, and that when I interfered with the employment of the primary control of my manner of use, this was always associated with a lowering of the standard of my general functioning. This brought me to realize that I had found a way by which we can judge whether the influence of our manner of use is affecting our general functioning adversely or otherwise, the criterion being whether or not this manner of use is interfering with the correct[1] employment of the primary control.

Unfortunately the great majority of civilized people have come to use themselves in such a way that in everything they are doing they are constantly interfering in a greater or lesser degree with the correct employment of the primary control of their use, and this interference is an influence constantly operating against them, tending always to lower the standard of functioning within themselves and to limit or affect adversely their achievements in the outside world.

This adverse influence will still be operative even in the case of patients who are undergoing medical, surgical, or any other form of treatment for the "cure" or alleviation of some specific trouble, for it will tend constantly to lower the standard of their general functioning, not only *during* treatment but also *after* it is finished. And this will be so, no matter how successful as a specific "cure" the treatment may be. This applies in all fields of man's activity and also to pupils being taught under any educational method. Whether they are being instructed in a school subject such as mathematics, French, etc., being coached for games or athletics, or being taught the specific technique of some art or craft, the adverse influence of any interference with the correct employment of the pri-

[1] When in my writings the terms "correct," "proper," "good," "bad," "satisfactory" are used in connexion with such phrases as "the employment of the primary control" or "the manner of use," it must be understood that they indicate conditions of psycho-physical functioning which are the best for the working of the organism as a whole.

mary control of their use will tend constantly to lower the standard of their functioning and the quality of their output.

When, on the other hand, a person's manner of use is such that there is no interference with the correct employment of the primary control, it means that an influence is constantly operating in his favour, tending always to raise the standard of functioning within the self, both in outside activity and during sleep.

The full significance of this will be apparent to those of us who have had the experience of applying my technique consistently to the task of changing use by the indirect method of preventing interference with the manner of employment of the primary control, for this experience involves a practical demonstration that *our manner of use is a constant influence for good or ill upon our general functioning.*

When once we have accepted what this implies, we shall appreciate the part played by wrong manner of use in the bringing about of general psycho-physical inefficiency and ill-health, and conversely, the part played by an improving manner of use in the restoration and maintenance of psycho-physical efficiency and conditions of well-being. We shall also see how important it is that every one of us should know how to estimate the degree in which our functioning is being influenced in one direction or the other by our manner of use, so that we can with confidence check any trend of this influence in the wrong direction. In short, it will be seen that the ability to assess the influence of manner of use upon general functioning provides a basis that is fundamental for diagnosis.

The acceptance of this basis for diagnosis means a changed outlook for all who are seeking to help themselves out of their difficulties, or to make some change of thought and action. No matter what means they may employ for self-help, whether by orthodox or unorthodox methods of treatment, self-discipline, or anything else, the most potent force working with them for the gaining of their ends is the constant influence of an improving

manner of use, tending to a gradual raising of the standard of their functioning in all activities, and so affecting for good their every reaction.

It is only during the last forty years that this fact has begun to be appreciated, so that comparatively few of us to-day recognize that our manner of use has anything to do with the nature of our functioning or of our reaction to stimuli, nor the extent to which our physical-mental well-being depends upon the manner in which we use ourselves during our sleeping and waking hours. Unfortunately, we are not conscious of any interference with our well-being in terms connected with our manner of use, although this interference may be lowering our standard of functioning, but we are conscious of interference in terms of having a temperature, harmful tensions, internal pains or disorders, etc., as when we say we "do not feel in good form" or "are not up to the mark," or, sometimes, "feel ill." We know that under these conditions we are not likely to react to a given stimulus in the same way as we should if we were "feeling well" or "in good form." On the contrary, we show symptoms of irritation, peevishness, perversity, loss of temper, but we do not recognize these as manifestations of a lowered standard of our well-being which is associated with an interference with our manner of use and a consequent lowering of our standard of functioning. When once we appreciate that, even in the absence of symptoms of "not feeling well," the majority of the people to-day have developed a manner of use of themselves which is constantly exerting a harmful influence not only upon their functioning but also upon their manner of reaction, we should be able to see that this wrong use can be a source of individual failings, peculiarities, wrong ideas and ills of all kinds, as well as of that inward unrest and unhappiness which is so evident in the social life of to-day. From my long experience I can now assert with confidence that the underlying cause of our personal and social difficulties will persist until we adopt "means-whereby" which will not only *prevent* the children of our time and of the future from developing a

manner of using themselves that is a constant influence for ill in everything they do, but, in those cases where harmful conditions are already present, will restore a manner of use which will be a constant influence for good. This remains true no matter what other means for alleviating them are adopted.

For a faulty manner of use, whether inherent or developed, will, as time goes on, become a more and more firmly established habit, and therefore more difficult to change. On the other hand, it is easy to picture the beneficial effect of the cultivation and employment of a manner of use of the self that is associated with a gradual raising of that standard of general psycho-physical functioning which is a constant influence for good in the development of the human being.

End-Gaining and "Means-Whereby"

These terms stand for two different, nay, opposite conceptions and for two different procedures. According to the first or end-gaining conception, all that is necessary when an end is desired is to proceed to employ the different parts of the organism in the manner which our feeling dictates as necessary for the carrying out of the movements required for gaining the end, irrespective of any harmful effects due to misuse of the self during the process; a conception which implies the subordination of the thinking and reasoning self to the vagaries of the instinctive guidance and control of the self in carrying out the activities necessary to achieve the end.

It will be seen therefore that end-gaining involves the conception and procedure of going *direct for an end* without consideration as to whether the "means-whereby" to be employed are the best for the purpose, or as to whether there should be substituted for these, new and improved "means-whereby" which, in their employment, would necessarily involve change in the manner of use of the self. This end-gaining plan is one of trial and error, and it proved more or less successful when man's manner of using himself was satisfactory;

but during his experiences in civilization this use of himself has become more or less harmful (a fact that can be demonstrated), so that the end-gaining procedure no longer meets individual needs.

According to the second term, the "means-whereby" conception, this fact is recognized. Consequently, when an end is desired, the procedure is based on the conception that the manner of use of the self is no longer satisfactory, and that the associated mechanisms, being misdirected, are responsible for activity which does not meet the requirements for the gaining of desired ends; that this, therefore, necessitates the thinking out of new and improved "means-whereby" which will ensure that the manner of use of the self will not be associated with misdirection of the associated mechanisms, and so prove a stumbling-block in achieving the end.

This is an *indirect* procedure, and, as has already been shown, it involves the inhibition of familiar messages responsible for habitual familiar activity, and the substituting for these of unfamiliar messages responsible for new and unfamiliar activity.

I wish it to be understood that throughout my writings I use the term "conscious guidance and control" to indicate primarily a plane to be reached rather than a method of reaching it. (Cf. *Constructive Conscious Control of the Individual*, p. 10, note.)

CHAPTER II

THE CONSTANT INFLUENCE OF MANNER OF USE IN RELATION TO DIAGNOSIS AND DISEASE

EVER since I first started taking pupils, medical men have been sending me their patients because they believed that I had evolved a sound technique. I am deeply indebted to them for their encouragement and support, and especially for the effort they are now making to bring a knowledge of my technique to the notice of those who are responsible for determining the range and nature of the medical curriculum with the aim of its being included in medical training. This is evidenced by the following letter signed by nineteen medical men and published in the *British Medical Journal* on May 29, 1937, vol. 1, p. 1137 :—

"CONSTRUCTIVE CONSCIOUS CONTROL"

To the Editor of *The British Medical Journal*

Sir,—In a review of Mr. F. Matthias Alexander's book *Constructive Conscious Control of the Individual*, which appeared in your columns on May 24, 1924, your reviewer wrote: "He (Alexander) would certainly appear to have something of value to communicate to the medical profession."

We, the signatories to this letter, are at one with your reviewer in this belief. As the medical men concerned we have observed the beneficial changes in use and functioning which have been brought about by the employment of Alexander's technique in the patients we have sent to him for help—even in cases of so-called "chronic disease"—whilst those of us who have been his pupils have personally experienced equally beneficial results.

We are convinced that Alexander is justified in contending that "an unsatisfactory manner of use, by interfering with general functioning, constitutes a predisposing cause of disorder and disease," and that diagnosis of a patient's troubles must remain incomplete unless the medical man when making the diagnosis takes into consideration the influence of use upon functioning.

Unfortunately those responsible for the selection of subjects to be studied by medical students have not yet investigated the new field of knowledge and experience which has been opened up through Alexander's work, otherwise we believe that ere now the training necessary for acquiring this knowledge would have been included in the medical curriculum. To this end we beg to urge that as soon as possible steps should be taken for an investigation of Alexander's work and technique, he on his side having given us an assurance that he is ready and willing to give us the benefit of his experience for the carrying out of any plan which those concerned may suggest, provided that in his opinion the plan is one that would make it possible for him to help us to the desired end. We are, etc.,

Bruce Bruce Porter
J. R. Caldwell
J. H. Dick
Mungo Douglas
H. Duffett
C. A. Ensor
W. J. Graham
A. Rugg-Gunn
Percy Jakins
J. Kerr
D. Ligat
J. E. R. McDonagh
Peter Macdonald
R. G. McGowan
Adam Moss
A. Murdoch
F. J. Thorne
Harold Webb
A. H. Winchester

This endorsement of what I wrote in my chapter on "Diagnosis" in *The Use of the Self* comes from medical men who have been associated with my work for many years, and I am particularly anxious that my readers should grasp the full significance of their support of my contention that diagnosis of a patient's condition cannot be complete, unless in making it the medical man can

assess the influence for good or ill of the patient's manner of use upon his general functioning. It means that medical men are beginning to appreciate that a fundamental need in medical training and diagnosis has remained unrecognized until now, to the detriment of the medical man's usefulness and the best interests of his patients.

This should appeal especially to the layman, because prevention and alleviation of his ill-health depend upon treatment which is the outcome of his doctor's diagnosis, and if the diagnosis is not a complete one, any treatment prescribed as a result of that diagnosis can be assumed to be equally incomplete.

Apropos of diagnosis, it has often been tactfully suggested to me in the past that the medical man, by virtue of his training, has made the field of diagnosis entirely his own. The time came, however, when my experience enabled me to suggest—with equal tact, I hope—that this attitude was not justified, since medical investigation and training had covered only a part of the field—indeed, in my opinion had left the most fertile part unexplored, particularly where full diagnosis was required for the purpose of prevention. This reasoning has had effect with a number of medical men and women who have written to me admitting that they have not been able to diagnose what was wrong in certain cases, asking me to try to do so, and, if successful, to help them in any way that would be to the benefit of their patients.

This has been a source of much gratification to me and has afforded me some consolation for the opposition which I have met with in the past when trying to make known what is now recognized as being demonstrably true by many leading authorities, both in the medical and other professions.

For many reasons I have refused up to the present to publish particulars of cases, but I am now tempted to quote from some of the medical evidence at my disposal, because it supports my contention that interference with the correct employment of the primary control of use is a potent factor in inducing and maintaining the

harmful functioning accompanying conditions of ill-health. For many years I have demonstrated in my daily work with pupils that wrong employment of the primary control of use can be checked, and the evidence of my medical friends and supporters encourages me to believe that a fuller understanding of the nature of the working of the primary control, and of the influence of this upon the general working of the organism, will help us to understand more fully the nature of the interference with manner of use and standard of general functioning which is becoming an ever more determining factor in the growing incidence of defects and disease.

In the particulars of the cases which are to follow it will be seen that underlying the diversity of symptoms there is a factor common to them all which is the fundamental cause of interference with conditions of well-being. All that is written about these cases might be applied to many others, and this would show how wide is the range of human ills and ailments to which the technique has been successfully applied. Among cases sent to me by medical men I can mention those diagnosed as neurasthenia, visceroptosis, angina pectoris, epilepsy, locomotor ataxia, *tic douloureux*, migraine, short sight, stuttering, nasal and throat troubles, loss of voice, respiratory and heart troubles, severe damage from accidents. Children and young people have been sent to me because they were considered backward or defective, some of them actually diagnosed as mentally defective.

From these I have chosen for illustration examples which I think will best serve my purpose. They were sent to me for help by their medical advisers because the medical or other remedial measures prescribed had not met with the success hoped for. The striking characteristic which I observed to be common to all these cases was a misdirection and misuse of parts which was associated with an extreme interference with the subject's employment of the primary control of use, leading to such harmful conditions as undue lumbar curve of the spine, undue tension of the neck, arms, and legs, and overaction of

muscle groups of the organism. All these conditions I found to be unduly affecting the extensors at one time and the flexors at another, thus tending to bring about maladjustment, misplacement of viscera, harmful pressure on the joints, ribs, and vertebrae. The use of the anti-gravity muscles was so misdirected that the working of these muscles tended to lessen the anti-gravity influence which is of vital importance in maintaining equilibrium. Any attempt to move the head involved movements of other parts of the organism which should have remained passive. This meant a misdirection of energy and a spasm or overaction of muscle groups, and the greater the desire to turn the head, the more energy was expended in misdirection and consequent overaction of the muscle groups.

To take first the case of osteo-arthritis. Mr. B. was a patient of Dr. Caldwell, of Milnthorpe, Westmorland, and the most striking characteristic I observed in his use of himself was the way his head was tilted backward and downward, and that the degree of tension he employed in activity was such that the head and neck had become practically fixed. There was also an extreme lumbar curve, and in standing and walking the pelvis was brought relatively too far forward. When an attempt was made to move the head from side to side the movement was infinitesimal, but because of the overaction of muscles and spasm which ensued even that movement caused acute pain.

The following gives a fair description of the nature of the disease diagnosed in this case from the orthodox point of view. There were definite organic defects and growths (nodules) which played their part in the fixation, deformity, and wrong axis of the head, and also other manifestations which, collectively, had led to the conclusion that the case was one for orthopædic treatment. As a result a collar, two and a half inches high, was prescribed by an orthopædic surgeon to check any further increase in the pulling down of the head. The patient was wearing this collar when he came to see me.

Mr. B. started his lessons with me on October 13, 1936,

and the collar was removed within a fortnight or three weeks after the first lesson.

About two months after his lessons started Dr. Caldwell wrote to his patient :—

December 19, 1936.

Dear Mr. B.,

I have been so convinced from the very first of the essential rightness of Alexander's technique that I have read his book through four times, and if proof were required that his teaching is fundamentally correct, you provide the living proof.

It is true that, by wearing a collar, the disease might be arrested, but without removing the deformity and without correcting the wrong axis of the head. So that in due course a relapse would be almost certain and recourse would have to be made to the collar.

Arthritis of the cervical spine at your age is a "postural" disease. . . . With the onset of arthritis in the spine, or indeed anywhere, there occurs reflex spasm or overaction of muscle groups which is a vicious circle, as this very reflex spasm further menaces the deformity and increases the pain.

Alexander teaches how to inhibit the reflex spasm; that is the real secret and what I have longed to do for years. . . .

Yours sincerely,
(*signed*) J. R. CALDWELL.

Shortly afterwards Mr. B. sent me a copy of a letter he had just received (December 22, 1936) from the orthopædic surgeon on whose advice he had worn the collar referred to in Dr. Caldwell's letter.

Dear Mr. B.,

Thank you very much indeed for your extremely interesting letter, which I am delighted to have, and to hear all you say is being done for you by Mr. Alexander. There is no doubt he has done you good, not only physically but mentally, and you now have an aim and an object which unfortunately surgery could not give

you, and in that way, if in no other, Mr. Alexander has done you good.

In regard to the exercises, I probably am a sceptic, and I know that as long as the muscles are developed temporarily *by any system of exercise,*[1] you will undoubtedly feel better until ordinary times come and these muscles return to the condition in which nature meant them to be to accommodate with the conditions of your cervical spine. I shall be very interested to hear what your condition is in three or six months' time, if you will let me have another report.

As you know, medical men are frequently blamed for being reactionaries, but it is really not so. We are delighted to know anything new, anything that can improve a patient, because naturally that is all to our credit and to our own benefit; but *occasionally we find systems of treatment which temporarily relieve,* but unfortunately, in at least some cases, the relief is not permanent. *I only hope your relief is permanent* and you do improve, because you have tried hard, and you deserve improvement if any man does.

(*Signed*) M.

By the date of this letter it is clear that Mr. B.'s condition had continued to improve, and this is corroborated by the following:—

December 15, 1936.

Dear Mr. Alexander,

I saw Dr. Caldwell yesterday and he was extraordinarily pleased and interested.

He said that when he had read your book he was convinced that your lines were the right ones.

Caldwell says, of course, the bones in the spine have got on a cant, and the cartilage is probably worn away on the side where the pressure comes.

He said that, with the relief I have now got, this cartilage will grow again, but he expects it will take about two years before that has entirely taken place.

[1] I have italicized the points in this letter which I am taking up in my argument to follow.—F. M. A.

The arthritic nodules which have formed, he agrees will disappear. . . .

He thinks it a very wonderful result.

With kindest regards,

Yours sincerely,

(*signed*) G. E. B.

These letters are of special interest to me as in them Dr. Caldwell has linked up his medical knowledge with that which came to him through observation of his patient's improvement from the time that he came to me and analysis of the nature of the changes he noted. This is shown by the statements in his first letter, where he connects what he has read about my work in *The Use of the Self* with the changes brought about in his patient's general condition by the application of my technique. In this book I am trying to show that the field in which I have worked is one in which those who are interested in therapeutics must also work, if they are to gain the knowledge and experience required for that full diagnosis upon which sound methods of prevention and the restoration and maintenance of conditions of health depend. But beyond this I am hopeful that workers in other fields of activity will be stimulated to follow Dr. Caldwell's example, and link up the knowledge they possess in their own sphere with the knowledge which is now available of the use of the self.

Dr. Caldwell in his letter clearly shows that after reading my book he had no doubt that my technique was based upon a sound principle, and that for a patient suffering from the effects of a "postural disease," called osteo-arthritis of the cervical spine, the means I used for making structural and other changes would prove to be the right means. As the work progressed, what he saw happening in his patient confirmed him in his belief. For not only was the deformity being removed and the wrong axis of the head prevented, but, most significant of all, the reflex spasm which Dr. Caldwell states "occurs with the onset of arthritis of the spine" was being consistently in-

hibited, and the associated pain grew less and less until there was permanent relief.

Now if we look at the letter Mr. B. received from the orthopædic surgeon we shall see that he doubted whether the changes brought about would afford "permanent relief," because, being unacquainted with the nature of my work, he assumed that my technique was some "system of exercise." If he had read my books he would have known that his contention that "systems of exercise" give only temporary relief in most cases corroborates what I have written on this subject, and that in employing my technique no attempt is made to gain specific results by *direct* means. This is indeed where it differs from all "systems of exercise." The changes in Mr. B.'s condition were brought about *indirectly* by improvement in his manner of use of himself, and it was the influence of this improvement upon his general functioning that was also responsible for the other changes noticed by Dr. Caldwell. The abnormalities,[1] so evident in his case, would not have been likely to develop if his use of himself had not been harmful, the fundamental influence constantly operating towards the development of these abnormalities being his habitual interference with the employment of his primary control in all the acts of life. Therefore only by changing his habitual manner of employing the primary control of his use of himself could a permanent improvement in these abnormalities be expected. But as this improvement occurred in the course of applying the technique, the actual changes that Dr. Caldwell described were gradually brought about even in the structural condition.

For instance, the nodules were disappearing, the worn vertebræ were gradually growing back to normal, and the deformity of the cervical spine was corrected. This meant that distinct and permanent changes were also brought about in the bony structure of the thorax (chest) and of

[1] As there is much confusion in the general use of the words "abnormal" and "abnormality" I wish to state that I use these words to indicate conditions which are associated with a manner of use that is tending to lower the standard of general functioning of the organism, and not in relation to conditions which may be variations only.

the spine, and with these changes came changes in the functioning of the abdominal viscera, with an increase in the mobility and capacity of the thorax.

Since these structural changes came about through changes made in the manner of use, it follows that the muscle groups throughout the organism had to play their part both in making the changes and in accommodating themselves immediately and continuously to the changes they were bringing about.

For instance, during the making of changes in manner of use which accompanied the modification of the deformity of the curved spine, the muscle groups were accommodating themselves to the new and better structural conditions which they were bringing about, and *as long as the improvement in the manner of use was maintained*, there could be no question of the muscles reverting to the original conditions to which they had formerly accommodated themselves, for these conditions, including the deformity of the cervical spine, no longer existed. This, as the surgeon points out in his letter, is not the case where exercises, remedial or otherwise, are employed.

Dr. Caldwell throws light upon the bringing about of structural and other changes through action of muscle groups when he states in his letter: "With the onset of arthritis of the spine, or, indeed, anywhere, there occurs reflex spasm or overaction of muscle groups which is a vicious circle, as this very reflex spasm further menaces the deformity and increases the pain." This condition of overaction of muscle groups is not present in cases where there is correct employment of the primary control; but this is not taken into account by those who diagnose postural defects without consideration of the influence of use upon general functioning, and who prescribe the practice of exercises, remedial or otherwise. They do not recognize that the overaction of muscle groups associated with wrong employment of the primary control is constantly exerting an influence towards the formation of bad "postural" and other habits, and that the performance of exercises could only exaggerate this bad influence.

Dr. Caldwell's next statement, therefore, that "Alexander teaches how to inhibit the reflex spasm, that is the real secret," is most significant, for it shows that he understands *why* the particular means employed in my technique in Mr. B.'s case came about as an *indirect* result of the pupil's learning to inhibit the wrong employment of the primary control of his use. When he became experienced in inhibiting the misdirection which led to the wrong employment of the primary control, and *could maintain* the *resultant new manner of use when responding to any stimulus to activity* in his daily life, his reaction no longer resulted in overaction of the muscle group or reflex spasm.

Such a change could not have been brought about without the inhibition of his habitual manner of use, for this was associated with misdirection and the high degree of muscle tension throughout the organism, and was *indirectly* responsible for much of the overaction of the muscle groups resulting in the spasm.[1] The change made in his use through the inhibition of this misdirection brought about many changes in conditions, including a lowering of the standard of muscle tension throughout the organism generally, and, with it, a reduction of the undue tension involved in the spasm.

Dr. Caldwell's generous admission encourages me to believe that others will also wish to analyse the principles underlying my technique, which, although it has been evolved out of experiences gained in a field which is new to them, has a distinct bearing upon the whole question of diagnosis and prevention in all fields of man's activity in living. It is true that my technique, when compared with medical practice, is based upon a new and unorthodox principle, but this is equally true if it is compared with

[1] Hence the futility in such cases of exercises which tend rather to raise the degree of muscle tension than lower it. This applies equally to methods of "relaxation" which in my experience bring about under certain conditions a form of collapse, while in others there occurs with the collapse of certain muscular groups a compensatory overaction of others, tending to increase the irritation and pressure already present.

osteopathy, remedial exercises, physical culture, and teaching methods in general.

I have described in my last book how and why I came upon this new principle. It was not merely the outcome of an idea, a vision, a theoretical conception without a practical counterpart; it was the outcome of practical experience, the at first tantalizing experience of discovering that IT WAS WHAT I WAS DOING MYSELF that was causing the throat trouble which had defied all previous treatment. While I was evolving a technique to meet the needs of my own case I gained experience which convinced me that the orthodox method of treatment which I had tried for my throat trouble, and which had failed, was based upon a wrong principle.

I had worked patiently at the breathing, vocal, and other exercises suggested by my teachers, and had carried out to the letter the treatment prescribed by my medical advisers, but all to no purpose. But when I came to appreciate fully that it was WHAT I WAS DOING in following out instructions that was leading me into the wrong use of myself that was causing my throat trouble, I realized that self-accusation must replace self-pity, and that, in fact, I had to accuse myself of "doing" the undue depression of my larynx, the contraction of my chest, as well as the wrong axis of my head, which were some of the most serious symptoms in my throat trouble, and I saw that what I had needed at the outset was someone who could have explained to me, first, what it was that I was doing in the use of myself that was wrong, and then, as a *primary procedure*, shown me how to prevent this. Obviously, for me to be told by a teacher TO DO something new as a remedy for my trouble practically amounted to my being told to continue using myself in the old wrong way in order to do the new thing he suggested.

For this reason, the idea of going to a teacher working on the old lines was out of the question, and as my medical advisers by their own admission could not help me here, I saw that I must find out for myself WHAT I WAS DOING that constituted a wrong use of myself, and then learn

how to prevent myself from continuing in this "wrong-doing."

At the time I thought this would be a simple matter, and on the face of it it would seem to be so—at any rate, theoretically. But when I came to work out the problem practically I found I was mistaken. Later on, when I had learned through experience what a harmful influence wrong employment of the primary control of use, associated as it is with perverted sensory appreciation (feeling), can exert upon functioning, I came to understand why I had miscalculated the difficulty of my problem.

Obviously, in all "doing" there is a conception of what is to be done and how to do it. Whether we react to this conception by giving consent to do the act, or by withholding that consent, the nature of our reaction is determined by our habitual manner of use of ourselves in which we depend upon feeling for guidance.

It is well known that different people will get a different conception from the same word, spoken or written, and from the same gesture, showing that conception is dependent upon the nature of the impressions taken through the sensory mechanisms which control the functioning of the cells (receptors and conductors) of the eyes and ears, etc. The conception likewise of what is happening within ourselves is dependent upon impressions which come to us through the sense of feeling (sensory appreciation) upon which we must rely for guidance in carrying out our daily activities. When our sensory appreciation is deceptive, as is the case more or less with everyone to-day, the impressions we get through it are deceptive also. The extent of this deception depends largely upon the extent to which our manner of use has been put wrong and the nature and degree of the faulty guidance of deceptive feeling. When a certain degree of misuse has been reached, the deceptiveness of these impressions reaches a point where they can mislead us into believing that WE ARE DOING SOMETHING WITH SOME PART OF OURSELVES WHEN ACTUALLY WE CAN BE PROVED TO BE DOING SOMETHING QUITE DIFFERENT. This is equally true of

things we believe we think, which more often than not are things we feel.

Here then we have a vicious circle. Directly we get a conception of doing something, we react according to our habitual misuse of ourselves, the functioning of some one part or other is thereby impaired and, as the organism works as a whole, this means that all parts will be more or less affected.

In working out my own problem I was immediately caught in this vicious circle, for my habitual reaction to any conception of "doing" fitted in with my own peculiarities of misuse and faulty functioning, and with the deceptiveness of sensory appreciation that went with these. As soon, therefore, as I tried to change my reaction *directly*, I found that these impeding influences stood in my way, and there was no escape from the vicious circle. Repeated experiences of this kind made me see that if I were to succeed in solving my problem, any technique I might be able to evolve must be one which would enable me to eliminate the impeding influences which were baulking my effort, and so *indirectly* bring about a real psycho-physical change in my habitual reaction, for when once we admit that change of some kind must be made in order to bring about improvement in reaction, it is evident that change of habitual use is fundamental to success.

As long as we continue to react in "doing" according to our familiar habit of use, we, *by our own doing*, make change of use and reaction impossible. My experiences, therefore, convinced me that in any attempt to control habitual reaction the need to work to a new principle asserts itself, the principle, namely, of inhibiting our habitual desire to go straight to our end trusting to feeling for guidance, and then of employing only those "means-whereby" which indirectly bring about the desired change in our habitual reaction—the end.

The task of reasoning out and selecting the effective means of bringing about psycho-physical change according to this new principle is not an easy one, but the real task begins when we start to put into practice the procedures

which we have decided upon, for this, as Dewey puts it, presupposes a "revolution in thought and action." It means that on the receipt of a given stimulus to perform some act which we have decided is necessary for the change of our habitual reaction, CONSENT TO PERFORM THE ACT MUST BE WITHHELD, NOT GIVEN, in order that our habitual reaction may be held in check, and the usual messages to the motor nerve and muscle mechanisms which determine our manner of employing the primary control of our use in our habitual reaction not projected. This clears the way for us to project new messages which in time will be associated with new and unfamiliar use of the mechanisms in activity, thus bringing about a change in the employment of the primary control, and thereby indirectly a change in the manner of our habitual reaction.

Here we have two procedures fundamental to our new technique, which, if repeated, will

(1) *cause the habitual means whereby we have energized our old reaction to fall into disuse, and* (2) *enable us to employ new means whereby we may energize the new and desired reaction.*

This new reaction comes in time to take the place of the former habitual reaction, to be equally part of ourselves and therefore to "feel right."

This change, brought about by means which determine the manner of employment of the primary control, goes on throughout the organism, and brings about improvement in the use of the self in general. In my own case, it was not until I could work to this principle that I was able, at the moment when I decided to use my voice, TO INHIBIT THE SENDING OF THE MESSAGES which had been responsible for my habit of bringing about misuse of my vocal organs by overaction of muscle groups and misuse of myself in general.

In this process we have a connecting-link between what happened in my own case and in that of the case of osteoarthritis which we have been discussing. In both there was evidence of overaction of muscle groups due to mis-

use, the influence of which had been constantly operating against any form of treatment. It was the inhibition of the misdirection of my use which finally enabled me to regain the proper functioning of my voice, and it was this same inhibitory process at work which, in the case of osteo-arthritis, led in time to what Dr. Caldwell described as the "inhibition of the reflex spasm."

There was similar evidence of misuse and overaction of muscle groups in the case of spasmodic torticollis and in the other cases sent to me by the medical men referred to later in this chapter. Moreover, this misuse and overaction is happening in all cases where there are symptoms of disease or any of those peculiarities or conditions which are considered to require medical treatment, remedial or other exercises, or physical culture. If there is deformity, pain, wrong axis of the head, or all of these conditions present together, there will also be present harmful psychophysical tension which tends constantly to increase, and to add to the degree of overaction in muscle groups which are already overactive.

To illustrate this point I will refer again to the conditions I noted in the case of osteo-arthritis from the point of view of what *he was doing himself* in bringing these conditions about. To me, they revealed a man unknowingly indulging in the most harmful use of himself in every activity. This was particularly noticeable in his breathing, when he was trying to rest in a chair, when he was moving an arm or leg, or taking part in ordinary conversation. The relative position of the head to the neck, and of the head, neck, and torso to the limbs, was habitually being interfered with. This afforded proof that as soon as he gave consent to perform any act, messages were projected which resulted in an interference with his direction of the primary control, causing overactivity and a gradually increasing tension not only in the groups of muscles concerned, but also in others which were taking a too prominent part in the performance of the act. As soon, therefore, as he gave consent to doing anything in an endeavour to help himself, these impeding influences at once

came into play, operating against him in his "doing" as they would operate against him in any "doing" in physical culture, remedial exercises, or any other method. The deformity of the neck, the fixation of the cervical spine and head, the round humped back, the uneven position of the shoulders, the undue lordosis and slight lumbar curve of the spine, the extreme anterior position of the pelvis in standing, the unduly protruded abdomen, the contracted chest, and the undue tension of the arms and legs even when he was in a sitting position, his habitual tendency to slump when seated—all these were evidence of the vicious circle involving reflex spasm in overaction of muscle groups, which Dr. Caldwell wrote was "further menacing the deformity and increasing the pain." To put it simply, a person manifesting these conditions is being gradually pulled down and bent forward, the forward bend being chiefly from the pelvis, in much the same way as if his feet were fastened to the floor and he were being, day by day, more and more pulled forward and down by means of a rope fixed round the neck.

It is not possible to set down full details of the stages this pupil passed through before he learned to inhibit his end-gaining habit and to modify the undue and harmful tension which he exerted throughout his organism, and which impeded me in my attempts to give him with my hands the experience he needed for improving the employment of his primary control. The time came when the changes made in the relativity of the head to the neck, and the head and neck to the torso and limbs, and therefore in the manner of use generally, tended to reduce the pressure exercised by the old use upon the cervical spine. These changes in relativity were the indirect means of correcting the wrong axis of the head, of modifying the reflex spasm or overaction of the muscle groups, and the comparative fixation of the neck and the accompanying deformity, and last but not least, of diminishing little by little the headache and the pain. As this improvement in use continued, the range of movement of the head from side to side gradually widened, the pain decreased, and the headache

ceased. There was also a continuous lessening of the tension of the legs and arms, and of the tendency to slump when sitting.

I have gone into this case at some length in order to show that the field of experience with which I am dealing is one that is quite outside any which comes within the survey of the practitioner and patient when such a case is dealt with by orthodox methods. The set of conditions such as "wrong axis of the head," deformity, reflex spasm, which, as we have seen, Dr. Caldwell describes and diagnosed as symptoms of a "postural disease" called osteo-arthritis, were conditions which, according to the orthodox outlook, would be recommended for medical or orthopædic treatment or remedial exercises, or in many cases indeed there might be recourse to methods such as those of the osteopath, chiropractor, or bonesetter. But the point I wish to make clear is that the treatment given in the case we are interested in had not been successful, and as Dr. Caldwell testifies that his patient is now a "living proof" that the "means-whereby" which were employed in teaching him were fundamentally correct, I trust I may be pardoned if I emphasize here that these means were not part of a new method of treatment for the condition which Dr. Caldwell described as a "postural disease," but were the outcome of a new outlook towards a fundamental cause of these conditions, and that, on Dr. Caldwell's showing, help is to be found for such cases in a new field, which is not one of treatment, orthodox or unorthodox, but of education in the widest sense of the word, in that it deals with the control of human reaction.

* * * * *

Having dealt with one case very fully I shall now give in brief outline the special characteristics which I observed in other cases to which my technique has been successfully applied.

A. *Spasmodic Torticollis.*

Associated with an overaction of muscles of the neck so extreme as to be apparent to the casual observer, there

was in this case a constant spasmodic movement of the head, undue and harmful lordosis and lumbar curve of the spine, extreme protrusion of the abdomen, and extreme anterior position of the pelvis in standing and walking, which increased the strain and stress in attempts to preserve equilibrium. There was definite injury to the vertebræ resulting from pressure, lordosis and lumbar curve, harmful displacement of the viscera, together with the reflex spasm of the neck muscles. These conditions were so acute that I would not give the doctor any assurance of what I could do until I had given the pupil a fortnight's lessons. In this case aid had been sought from physicians, surgeons, and psychologists, all of whom pronounced the case hopeless.[1]

B. *Stuttering.*

The tendency to fixation of the head and neck, which was so noticeable in the cases of osteo-arthritis and torticollis, characterized this case also. In any attempt to move the head there was a spasmodic movement associated with overaction of neck muscles similar to that of the spasmodic torticollis case. Special to this case was the undue excitement of the fear reflexes in response to any stimulus to move or speak. The orthodox view of this case had led to treatment and teaching for the specific improvement of the use of the organs of speech. The lessons given by teachers were based on the orthodox principle of telling and showing the pupil *what to do* with the tongue and the lips, and how "to take breath" to the best advantage and so on. No attempt was made to change the manner of the pupil's general use of the self, and as a result the attempt to "cure" the stuttering had not only failed but was actually responsible for the cultivation of new bad habits of use and the exaggeration of those already present. The lessons I gave were based upon the principle that the pupil's manner of general use was responsible for the trouble. This being so, the first thing to be done was to

[1] This is the case to which Dr. Adam Moss refers in his letter reproduced on p. 34.

prevent the projection of the messages which brought about this wrong manner of use and so to effect a change in the pupil's habitual reaction to any form of "doing" in daily life, including the act of speaking. Thus the change brought about in the manner of use of the vocal organs was an *indirect* result of the change in the pupil's manner of general use of the self.

C. *Asthma.*

I shall now refer to a typical case of asthma in which the manner of use was what may be described as particularly harmful. One of its results was the misdirection of the musculature of the chest and throat so that the ordinary breathing act was more or less impeded, particularly in expiration; and during an attack of asthma the ill effect of this misdirection was noticeably increased. Misdirection of this kind, no matter in what type of case, always has its source in interference with the working of the primary control, and in the case under consideration this was manifested in an undue and harmful pulling back and down of the head, and in the fixation of the bony structure of the neck in the region of the occipital muscles, while the lower part of the back of the head was pulled down on to the ordinary collar worn by the sufferer. There was an extreme lordosis curve, the chest was raised unduly (pigeon chest), and the pelvis thrown too far forward—all of which conditions tended to decrease the stature and unduly widen the front of the chest, resulting in harmful tension and the minimum of mobility. The act of breathing, even during the slightest attack, led to an exaggeration of the harmful manner of use with increased tension and, as a consequence, the severity of the attack was accentuated. The effect of undue tension can readily be understood when it is remembered that muscular tension tends to induce chest rigidity and breathlessness.

D. *Seriously Damaged Neck, Owing to Riding Accident.*

This pupil was thrown from his horse, and the spine was severely damaged in the region of the neck. After eight

months of medical treatment he was still unable to walk and came to me for help. He was wheeled into my teaching-room in an invalid chair, accompanied by his nurse, and I needed the help of assistant teachers to get him out of it. He was wearing a support to prevent the head from falling so far backward that it became completely out of his control. In a few days he was able with a little assistance to walk from his invalid chair into the house, and shortly afterwards found that the support to the head was not needed and that he could walk without assistance. His improvement has been gradual but continuous, and some time ago he resumed riding.

E. *Tic Douloureux.*[1]

In this case there was extreme mal-coordination and maladjustment associated with undue and harmful interference with the employment of the primary control of the manner of use of the different parts of the organism. The right eye was almost closed, the skin was very dark under the eyes and red and inflamed on the forehead. The abdominal viscera were harmfully dropped, the spine unduly curved in the lumbar region, the head thrown too far back, and the general use was such that even attempts to move the jaw in the act of speaking caused pain which was often intense, and this obtained when attempts were made to wash the face or comb the hair.

Five members of the medical profession who had been consulted decided that the only thing to do was to operate and inject alcohol.

The sufferer came to me three weeks before I left for my holiday at the end of July, and by the time I went away there was a distinct improvement in the manner of her general use and a corresponding diminution of the symptoms, including the pain. Lessons were begun again on September 6 and ended on September 23, when the pain had practically disappeared, the eye was normal, and the general condition much improved.[2]

[1] I am informed that this condition may arise from pressure on the Trigeminal Nerve as it emerges from the base of the skull.

[2] For further reference to this case, see Appendix E.

I will now give further extracts from letters which I have received from medical men with reference to patients they have sent to me.

F. *Sciatica.*

From C. A. Ensor, Esq., M.R.C.P., L.R.C.P., dated April 27, 1937:—

> My daughter's improvement, which began so soon after coming under your care, continued until her complete recovery. Her left sacro-iliac pain was of such long standing and the treatment hitherto given of so little help that I began to fear that the condition would become permanent. Both she and I are very grateful to you for all you have done for her.
>
> June 30, 1939.
>
> My daughter, whom I saw to-day, is very well indeed and has had no recurrence of her sciatica.

G. *Legs Damaged in Flying Accident.*

Extract from letter from S. B., received January 22, 1940:—

> My legs were broken in August, 1914.
> *Right leg:* Tibia and Fibula and Femur; not compound. Lost 2 inches of length.
> *Left leg:* Knee-cap in several bits. This was wired. The right leg was badly set with the toe rather turned in. The left leg was admirably done. Only slight muscle wastage and can bend well past the right angle.
> You completely did away with all lameness.

After examination of this patient, J. E. R. McDonagh, Esq., F.R.C.S., wrote to me on September 17, 1937, as follows:—

> I have seen S. B. and must congratulate you on the work you have done on him. I consider this to be the best example of your work.

H. *From Adam Moss, Esq., M.D.*

June 8, 1939.

Dear Mr. Alexander,

I feel that I ought to place on record the remarkable results of your work upon a number of my patients who had been regarded as derelicts.

Ten years ago I sent to you Mr. D. C., a bad spasmodic torticollis case, about whom a London nerve specialist had written to say that "he had never known such cases to get better."

His stay in London, under your care, was interrupted, but the improvement in the short time was extraordinary.

The next was Mrs. D., spasmodic torticollis[1] in a pitiable condition, having to be fed. She had been seen by consulting physicians, surgeons, and orthopædic surgeons; and just before I saw her she had been for ten weeks in a psychologist's nursing home. I advised that she should see you. She is now perfectly well, living a full life, and driving her own motor-car.

Next Mrs. B., scoliosis, head almost in the axilla, and torticollis on top of that; she had had osteopathic treatment and was wearing a collar prescribed by an eminent orthopædic surgeon; she was partially bedridden. Six weeks after she came to you I was in London and watched you give her her lesson; she was then quite erect—lateral curvature gone. Her brother told me a few days ago how much better she was, and that she was going to you for another fortnight's treatment.

Then Mrs. R., who might be described as a hopeless neurasthenic bordering on melancholia; she had been in and out of nursing homes for four years and had seen many physicians; the last one told her that nothing could be done. She is now well and radiantly happy. There is much more that I should like to say. Your books have been most instructive and thought provocative.

Your personality, your strict honesty of purpose, and the generous way in which you explain your methods and technique have earned you the esteem and regard of your many medical friends, from all over the country, who know your splendid work.

Yours sincerely,

(*signed*) ADAM MOSS.

[1] See note, p. 30.

Old Age.

The following letter from Dr. Millard Smith of Boston, Mass., was addressed to my brother, Mr. A. R. Alexander, who is teaching my technique in New York.

January 20, 1941.

Dear Mr. Alexander,

I want to tell you that the sudden death by cerebral accident of your pupil and my patient Mr. A., at the age of 81, does not alter in my mind the appreciation of the remarkable rehabilitation that you had been able to give him. When I first saw him in 1931, shortly before he became your pupil, he showed a very disabling degree of hypertrophic arthritis of the spine. While it is my belief that most arthritic joints chronically affected should be mobilized, I felt very dubious about carrying out mobilization measures in his case after seeing the marked hypertrophic changes in the X-ray of his spine. The usual course of such a situation at that age is increasing disability, and comfort can be given only by the use of orthopædic appliances that lead to further fixation. There is no question but what he had reached a turning-point in his life's physical activities, and I am sure that there is no known medical procedure that would have resulted in the remarkable rehabilitation that he had shown progressively during the past seven or eight years. He has had a steadily increasing well-being and interest in living, especially during the past two years when he has probably had harder burdens to bear than at any time in his life. From the medical standpoint he has really shown a reversal of the ageing process, and his performance has been quite contrary to what one would have predicted for him nine years ago. His blood-pressure has been lower, and he has lost angina symptoms that he had nine years ago. X-rays of his spine have been taken periodically and they showed a slight diminution, rather than an increase as would be expected, in the hypertrophic process. During the past two years his zest for living has been such that he has taken regular vocal lessons. He has been able to play regularly a very good game of eighteen holes of golf. This fall he skated regularly

two or three times weekly, and I have it on good authority that he did very difficult figure-skating and was excelled by very few of the best amateur skaters. In fact, his sudden death occurred just after he had completed a difficult figure. I consider his death a mere incident to the fact that his work with you had made it possible for him to live a very active, normal, and happy life, as compared with the probability of increasing marked disability when he first became your pupil.

Sincerely,

(*signed*) MILLARD SMITH.

Many of my medical supporters are anxious that I should refer to the influence of use in its relation to functioning during childbirth and the preceding period, and by way of introduction I do not think I can do better than quote the remarks made on the subject of faulty bodily co-ordination and its evil effects on childbirth by Mr. A. M. Ludovici.[1] This will at least draw attention once more to a fact which cannot be too often emphasized—namely, that it is the whole psycho-physical self, the whole human organism with all its manifold functions, which gains in efficiency and well-being from the correct employment of the primary control of use in every activity of life.

Mr. Ludovici writes:—

> This faulty bodily co-ordination affects health and efficiency in men just as much as in women, but whereas the former, I repeat, are not in peace-time called upon to perform any feat which reveals on a large national scale the extent of their deterioration, the latter have their lack of efficiency constantly brought into the limelight by childbearing and childbirth.
>
> Twenty-five years ago Mr. F. Matthias Alexander was probably the only man in the civilized world who was insistently calling attention to this evil and showing us how to correct it. And in two books published respectively ten and four years ago I tried to convey to the English and American reader the fact that in this vicious use of the body as a mechanism we had a veritable

[1] In *The Truth about Childbirth* (London and New York, 1937).

modern plague, which was all the more alarming seeing that there was no escape from it along the ordinary lines of disinfection, medicinal pills, squills, and tablets, or even serological therapy—hence the great importance of Alexander's work.

Again let me avoid Alexander and quote from the much-belated orthodox reformers in this field. In *Body Mechanics* we read: "Much of the gynæcological disability and long periods of weakness following some pregnancies can be explained on the basis that the compensation for long-standing faulty body mechanics has been broken by the burden of pregnancy and parturition, and when once broken the badly used body is unable to regain its compensation and strength."

Suppose that, through faulty co-ordination and wrong use of self—and Alexander leaves us in no doubt about this—we get a general shortening of the trunk so that cavities are distorted, organs dropped, respiratory function hampered, and the abdomen made to bulge and sag. Can a gravid uterus in such a body fail to suffer from the abnormal conditions?

Is it not fantastic to expect normal functioning, or anything approaching easy and pleasant functioning, where such a state exists? And yet Alexander tells us, and has been telling us for over thirty years, that such conditions are almost universal in modern urban people![1]

Since then, however, orthodox orthopædic surgeons seem everywhere to have appreciated that vicious bodily co-ordination is a grave danger to modern man, even if they have not always recommended the best means of correcting or preventing it, and such enlightened books as *Body Mechanics*[2] and such recent articles as that by Mr. Philip Whiles in the *Lancet*[3] show—although, strangely incredible as it may seem, neither mentions Alexander's work—that scientific medical interest is beginning to be directed to this fundamental problem.

Now all that Alexander used to say, when he was alone in saying it, is being emphatically restated by

[1] *The Truth about Childbirth*, pp. 234-238.
[2] By Drs. J. E. Goldthwaite, Lloyd T. Brown, Loring J. Swain, and J. G. Kuhns (London, 1934).
[3] Issue of April 7, 1937.

modern orthodox orthopædic surgeons. And nobody can read the latest scientific contributions to this subject without appreciating the accuracy of Alexander's original criticism of modern man.

Take, for instance, the following: "Poor health may be found with no disease of the organs, but it is always associated with faulty adjustment of the body or what is better called faulty body mechanics."

This may strike many as a passage from one of Alexander's books. But, as a matter of fact, it is taken from the book above quoted, by four orthopædic surgeons, and published in 1934.

There is hardly a bodily function, from digestion to respiration, which cannot be gravely interfered with by faulty bodily co-ordination. And, in view of the wide range of its evil effects, it is impossible to take too serious a view of this question. Nor need I quote from Alexander to show any of the specific effects of this evil, but again turn to the four orthopædic surgeons already mentioned. They say: "Is it not possible that much of that which concerns chronic medicine has to do with the imperfect functioning of sagged or misplaced organs? Is it not possible that such sagging results in imperfect general secretions, or mixtures, that at first are purely functional but which, long continued, may produce actual pathology?"

The Effect of faulty Use of Self on Childbirth

There is neither the space nor the need to deal with the general aspects of this question. And even its immense importance in obstetrics and gynæcology should be fairly obvious. For if it be admitted that, by faulty co-ordination, the normal and natural relations of the organs, their condition and their tone, may be adversely modified; if it be acknowledged that by the wrong use of self an abdominal wall may sag, abdominal viscera may be displaced, and a thorax may expand so inadequately as to restrict the respiratory function, then here alone we have a sufficient amount of mischief to impair not only the course of pregnancy but also, and above all, that of childbirth.

It is with great pleasure that I am able to reproduce the following extracts from a letter from Mr. Gaston M. Martineau after his wife had given birth to her second child. Mr. Martineau writes:—

> A son was born to us early this morning; he is thriving nicely, and my wife is wonderfully well. I am writing to you personally because I want you to know that both my wife and myself will be eternally thankful to you for what you have done for her, because we know that her extremely robust health right through pregnancy and now that all is over to be due to your work.
>
> We think it due to tell you now that the supreme test of birth has been put upon the worth of your work on her successfully that she carried the child right through pregnancy and required no support for the abdomen the whole time through.
>
> When we remember the acute trouble Catherine (the first child) caused and the deplorable way in which the abdomen sagged in the later time of gestation we are both gratefully amazed.
>
> It must be remembered too that a solid five years have elapsed since your training was received, during which time she has enjoyed perfectly robust health, vastly different from anything she experienced before, being entirely without corsets of any kind, so that it cannot in any way be said that the benefit is a "flash in the pan."
>
> Will you accept this short description of her well-being as a small token of our great thanks to you, please Mr. Alexander, for all your share in our possessing it. You will live with us for the rest of our lives even though we never saw you again, because of what you have given us, and because your training is progressive daily through a lifetime.
>
> If this description should be of any help in your work as evidence of long-distance results please use it in whatever way you may desire.
>
> Ever yours, etc.,
>
> (*signed*) GASTON M. MARTINEAU.

My justification for deciding to take Mr. B. and the other pupils I have mentioned was this:—

Experience had taught me that by employing the procedures of the technique which I have outlined one can help a person afflicted, for instance, with osteo-arthritis, or spasmodic torticollis to overcome gradually his habit of interfering with the employment of the primary control of the use of himself, and so indirectly bring about a constant improvement in the manner of his general use. The pupil who, with the aid of his teacher, learns to employ these procedures as the means of gaining the end he desires, begins a process of change by starting with the inhibition of the misdirection of his habitual employment of the primary control associated with his harmful functioning. In this way he influences for good his manner of use and indirectly raises his standard of general functioning, and in the process he gradually modifies the deformity, the wrong axis of the head, and the overaction of the muscle groups (reflex spasm), and with this the irritation and pressure, headache, and pain associated with the condition disappears. At a certain stage of his work the pupil becomes able to project with confidence the new messages necessary to an improving employment of his primary control, and continues this reconditioning process in his daily life. This means a constant influence in the right direction, leading to change which will prove permanent, for it will become associated with a tendency for the defect or disease to be diminished, and when a given point of change is reached, the undesirable symptoms will disappear. The reconditioning process will include a continuous raising of the standard of reliability of his sense of feeling, so that in time he will find it almost as difficult to revert to the old habitual manner of use which once *felt right*, as it was at the beginning of his lessons to employ the new and better manner of use which, at that time, despite all the help given him by his teacher, still *felt wrong*.

I ask the reader to be patient with me for wishing to re-emphasize here that in the cases we have been considering I was not concerned with the *curing* of osteo-arthritis, spasmodic torticollis, deformity, wrong axis of the head,

reflex spasms, headache, or pain *as such*; and this is true of my attitude whenever a case is sent to me by a doctor, no matter what the trouble may be, and is in keeping with the facts which I have accumulated and noted during the varied experiences of a long teaching career. My concern is always to try to re-establish as a *constant* that employment of the primary control of use with its associated standard of functioning which is found present in people who are not in need of "cure," but are instead in what can be described as good health.

I have yet to see a person afflicted with the conditions in need of "cure" which were present in such cases as those we have been discussing whose employment of the primary control is not having a *constant* harmful effect upon his manner of general use, and therefore upon the standard of his general functioning.

Should I chance to find such a case, I should at once admit that the contentions I have been making almost all my life were wrong, and I should seek some other outlet for my energies.

CHAPTER III

A REVIEW OF THE REPORT OF THE PHYSICAL EDUCATION COMMITTEE OF THE BRITISH MEDICAL ASSOCIATION

PART I.—FALLACIES AND LIMITATIONS IN PHYSICAL CULTURE

IN November, 1937, a committee, with Dr. (now Sir) E. Kaye Le Fleming as chairman, reported on methods of physical culture for the purpose of offering suggestions for improvement. The opportunity offered them was an exceptional one. It was sponsored by the British Medical Association at a time when, for special reasons, it was considered necessary by the authorities to encourage a national movement in the direction of improved physical development, and to ensure that the very best possible means be employed for putting this idea into practice. The members of the committee were entrusted with the task of examining methods of physical culture in vogue, both to-day and in the past, together with all available knowledge bearing upon this subject up to date. If they decided that any of these methods were unsatisfactory, and they could by availing themselves of recent advances in knowledge offer something better, they were pledged to do so.

When the report was published several copies reached me within a week, some sent by medical men who did not hesitate to condemn it, and others by laymen who urged me to reply to it in the Press or in my next book.

I am about to carry out this last request and shall begin by giving a small quotation that typifies the nature of the whole report:—

> Each of these exercises is designed for the purpose of producing specific effects which, taken together, bring about the desired physical development.

Just so! But the question is, when the members of the committee wrote this, what was the picture of "desired physical development" which they had before their eyes and wherein does this differ from the conception of those whose methods they set out to examine? By what scientific findings were they guided when they arrived at the conclusion that the performance of exercises designed for the purpose of producing a given number of specific effects could, "taken together, bring about the desired physical development"?

Anyone who reads the report will see that the conception of the members of the committee does not differ from that of the traditional physical culture experts and teachers past or present. There is nothing new or original —just the same old idea of muscle development of specific parts by direct means. There is nothing in their suggestions to show that they recognize that all physical effort tends to increase thoracic rigidity and to cause breathlessness, and that consequently the performance of exercises for the development of muscle tension in specific parts tends to develop undue contraction and raising of the chest and to increase any lordosis curve of the back which may be present.

Those who designed the exercises provide no means for countering or minimizing tendencies such as these, which should surely be countered in people who are in a condition requiring help. I admit that the performance of exercises can and does build up the muscles on the outside of the chest, but the tendency to increased rigidity is not thereby diminished; indeed such structural defects as may be present are merely exaggerated. As a good instance of this I will cite that of a famous athlete who advertised that he had a ten-inch chest expansion, his claim being supported by doctors who measured him. One doctor, however, was not satisfied with the methods of taking the measurements and, after making an extensive examination, was able to prove that the man had only a two-inch thoracic expansion, the other eight being due to muscle expansion on the outside of the bony structure of the chest.

Further, anyone who examines the practice approved by the committee will see that the means they advocate for putting their theories into practice do not differ *in principle* from the means which have been employed ever since physical exercises were first devised by man. It is just this: The members of the committee realize that something is wrong with the physical development of many of our people; they therefore advocate physical exercises and recommend people to practise them. This is evidence of a complete misunderstanding of cause and effect. In my previous books, as in this one, I have dealt fully with the defect in diagnosis which has led to this misunderstanding, and so to the adoption of the wrong principle underlying all physical culture methods. I have shown that if there is something wrong with a person's physical development it can be demonstrated that this wrongness is caused chiefly by his wrong manner of use of himself, and that this wrong manner of use is really *what he is doing himself* as a result of depending upon unreliable sensory guidance in carrying out his daily activities, including of course any exercises he may perform. The reliability or otherwise of sensory guidance is a matter of immediate concern and importance in the carrying out of any instructions which are given for physical exercises. Those in need of physical development will always be people whose manner of use of themselves is tending to lower their standard of general functioning, and this will be associated with misdirection of energy to the musculature through unreliable and deceptive sensory guidance (feeling).

To-day the unreliability of our sensory mechanisms is widely recognized, as, for instance, in a deterioration in our sensory observation and awareness. A medical man at a meeting of the British Medical Association at Bath in 1925 was reported to have expressed the wish that something might be done to raise the standard of the medical student's observation and awareness. But in the B.M.A. report the reliability of the sensory guidance of those they wish to help through physical culture is taken for granted.

The committee ignores the fact that those who practise the exercises they advocate will be guided in the performance of them by the same unreliable sense of feeling which has guided them hitherto in all their activities, and has brought them to the pass where they are in need of the help which physical exercises are supposed to give. Hence it follows that the unfortunate victim of faulty sensory guidance and deceptive appreciation of what he is doing will do *what he feels is right* as soon as he starts to do exercises, and, since in this he will be relying upon the same old sensory guidance and appreciation which led him into wrongness, his "right," while he is still so guided, will be wrong. Most important of all, his unreliable sensory guidance will lead him to a wrong employment of the primary control of his use of himself which will be a constant influence working against him during the performance of his exercises, while in most cases the harmful effect of this influence upon his general functioning will be increased by any effort he makes TO DO the exercise "right," because, as already explained, his "right" is wrong in the use of himself.

I admit that it is possible for such an individual to get an exercise "right" as such, but it is hardly possible for him to put his use of himself right in doing so, since this would mean doing what he *feels to be wrong*. For a person to do what he feels to be wrong in order to be right is as unlikely as it would be for him to take what he believes to be the wrong road to a place and expect to arrive there. In fact, one can guarantee that the one thing a person in need of help will not do is what is *right in the use of himself* in performing exercises, no matter by whom they are designed. *All exercises are fundamentally the same in the sense that the activity which goes to their performance is inseparable from the habitual manner of general use of the performer.*

This being so, the reasoning should be: Here are people whose physical development is unsatisfactory, and this is associated with their sensory misdirection of their habitual use of themselves. Surely then, before they are

given anything TO DO in the form of exercises, we should point out to them wherein this misdirection lies and give them the means of preventing it.

I ask any readers who doubt what I have written on the subject to watch the performance of exercises such as I am condemning, and if they will take the time necessary for such observation, they will confirm me in maintaining that the performance of any exercise by those in need of physical development for health not only tends to exaggerate the bad habits of use always present in such people, but cultivates new bad habits.

John Dewey, long before he had lessons with me, had seen that in methods of general education new defects are cultivated during attempts to eradicate old ones, and wrote in his *Educational Essays* (p. 151):—

> It is through a partial and defective psychology that the teacher in his reaction from dead routine and arbitrary moral and intellectual discipline, has substituted an appeal to the satisfaction of momentary impulses. It is not because the teacher has a knowledge of psycho-physical mechanism, but because he has a *partial* knowledge of it. He has come to consciousness of certain sensations and certain impulses, and of the ways in which these may be stimulated and directed, but he is in ignorance of the larger mechanism (just as a mechanism) and of the causal relation which subsists between the unknown part and the elements upon which he is playing. What is needed to correct his errors is not to inform him that he is only misled by taking the psychical point of view, but to reveal to him the scope and intricate interactions of the mechanism as a whole. Then he will realize that, while he is gaining apparent efficacy in some superficial part of the mechanism, he is disarranging, dislocating, and disintegrating much more fundamental factors in it.

Yet I have never heard of a teacher of physical culture who had awakened to this fact in connexion with the performance of exercises designed to eradicate specific defects. Many years ago, when speaking before a child-study

group, I offered to visit any class of physical culture with some of the members, and said that if I could not point out that the pupils during the lessons given for the purpose of remedying some specific defect were cultivating new defects which sooner or later would prove more harmful than those they were trying to eradicate, I would then and there give up my work and seek some other occupation. No advantage was taken of this, but some time afterwards I was lecturing to the students of a College for Physical Training and was asked to demonstrate my technique on a few students chosen because they were considered especially good at their work. I shall never forget how sorry I was for those selected, because from my point of view, in whatever they did for me, their use of themselves could not have been worse.

After the lecture I was asked to look at the back of one of their best teachers, because of a trouble it had been found impossible to remove. It was obvious to me that the trouble was brought about by her bad manner of use of herself generally, which also accounted for other specific defects which I noticed, such as her habit of overstiffening the muscles of her legs and throwing them unduly backward at the knees in her attempts to keep her equilibrium. I pointed this out and another teacher then said: "We teach them to do that in order to improve the condition of the abdominal muscles." Could one have a better example of a harmful by-product being cultivated through the practice of exercises "designed for the purpose" of producing a "specific effect"?

I challenge any or all of the members of the B.M.A. committee to demonstrate to me that the person engaged in the performance of "each of these exercises" will not, in producing a specific effect (obviously the effect believed to be the right means for producing the "desired physical development"), also produce what I call by-products in the way of new bad habits of use, with harmful effect upon the general psycho-physical functioning, making normal physical development impossible. Obviously the greater the number of "specific effects" aimed at, the

greater will be the opportunity for the further misuse of the mechanisms and the production of harmful by-products.

One more point. The committee, in telling us that each of the exercises is "designed for the purpose of producing specific effects," is assuming that the designers know exactly how many specific effects will be required for bringing about the "desired physical development" in people who practise them. Otherwise, how could they have arrived at a calculation of the number of exercises they would have to design for this purpose? Such a task would call for a complete diagnosis of the conditions present in every person whose needs the exercises are designed to meet, for it is a matter of common observation that people's defects in "physical development" differ as much as defects in their handwriting. Those who practise the exercises will almost certainly not be able to diagnose their own physical shortcomings, let alone the defects in their manner of use responsible for these.[1] This means that they will be forced to practise indiscriminately a set of ill-assorted exercises, the effect of which they no more foresee than they can check, and therefore have little chance to avert the harmful effects the practice must have upon their general use and, in the long run, upon their functioning.

In Australia over forty years ago, in the rooms of one of the best teachers of physical culture I have ever known, I had my first experience of observing the results of exercises designed to bring about "specific effects." Although I disagreed then, as I still do, with the principle underlying his and all such teaching, we were both impressed by

[1] In his *Human Nature and Conduct* (pp 27-29) Professor John Dewey discusses what happens when the ordinary man, slouching along with a stoop, is told to stand up straight. He immediately pulls himself up, and imagines that, by conforming to the idea suggested by the command, he is, for the time being, improving himself, and Professor Dewey proceeds: "Of course, something happens when a man acts upon his idea of standing straight. For a little while he stands differently, but only a different kind of badly." That is to say, unless he has been taught the correct use of his primary control, his "standing-up" will only be another form of the wrongness associated with his slouching.

the fact that *the same set of exercises was responsible for quite different effects in different people.* How could it be otherwise?

We all notice differences in people's manner of walking and speaking, and this same difference in use they bring to the performance of the exercises. The specific effect desired, as well as the by-products of one exercise or more, will not be exactly the same in any two people, and if this be so, who is to decide which of the exercises—whether all or only a selected few—are to be used, and in what order they are to be practised if they are to meet the variations in kind of the various mal-conditions which in most people create the need for the "desired physical development"?

Who is to decide what is "cause" and what "effect"? Or which are the particular parts affected and needing attention? Anyone who by training and experience is equipped with the sensory observation required for detecting these differences can satisfy himself, by examining a number of people performing the same set of exercises, that the result will differ according to the difference in conditions present in each.

Suppose, for instance, that two people, one with round shoulders and an unduly contracted chest and the other with an unduly protruded chest and lordosis curve, take up the practice of the same set of exercises selected from among those recommended by the B.M.A. committee. In these two people the habitual manner of use will be so different that the process of gaining the specific effects desired from the practice of any one exercise will make on the muscles immediately concerned a much greater demand in one of them than in the other, and this will be found to be the case in respect of the demand made upon other muscles throughout their organisms.

If the committee should argue that it is not concerned with the effect of the exercises upon muscles, or with muscle development as such, but with the "physical development" generally found in association with health, then their case becomes worse still. The idea of health

cannot be disassociated from that of an optimum standard of functioning, and no person can enjoy an optimum standard of functioning when, in all his activities, there is such interference with the employment of the primary control that his manner of use of himself is constantly lowering the standard of his general functioning. It is certain that the practice of the exercises advocated will tend to exaggerate any such interference with the primary control of use, and so lower still further the standard of general functioning.

With these considerations before us, I repeat the question with which I opened this chapter: By what scientific findings were the members of the committee guided when they arrived at the conclusion that the performance of exercises designed for the purpose of producing a given number of specific effects could, "taken together, bring about the desired physical development"?

To this question there can be but one reply: They could not have been guided by any scientific findings. Only by ignoring a whole field of essential data could the committee have come to the conclusion formulated in the report.

The members of the committee must surely see that if the procedures they advocate for the purpose of producing a "desired physical development" can be shown to make for the development of harmful by-products, these procedures cannot be in accordance with scientific method, which demands that in an experiment the means employed shall produce just the results they are supposed to produce *and no other*, and that the relationship of the results to the means employed shall be subject to sensory observation.

In teaching people who are in need of physical development, some of whom manifest symptoms of chronic disease, my daily experience proves to me that if specific effects are to be secured in accordance with scientific method and in such a way as to be lasting they must be gained not by direct but by *indirect* means[1] which in-

[1] It is interesting to remember the number of valuable discoveries that have been made *indirectly*. For instance, Faraday was interested in the effect of a magnet on a piece of steel, Pasteur in crystals; Watt was first interested in the lifting of a pot-lid by the steam, and so on.

volve a knowledge of the use of the primary control. Anyone who employs the technique described in my books can demonstrate this for himself, for the technique is based on the indivisibility of individual human potentialities in activity, of which the primary control is the governor. But the committee makes no mention of such a control, despite the fact that the findings of the late Rudolph Magnus established its existence, and also that a detailed description of my discovery and use of this control in a technique is to be found in *The Use of the Self*. A medical friend of mine who realized the importance of this in the field of "physical development" assures me that he urged influential members of the committee to take my work into their survey, but they refused to do so. It is inconceivable that the members should have consented to serve on such a committee unless they were dissatisfied with methods of physical development in vogue, and were determined to examine and make use of any available new knowledge on the subject in an endeavour to improve these methods. Yet there is no reference in their report to the contributions made in recent years to a field in which experience has been gained which has an all-important bearing upon scientific physical development. I cannot find anything in the report which has not been in use since I was a young man, and the principle underlying the practice involved in their suggestions can be demonstrated to be unscientific. When arriving at their conclusions they placed themselves at great disadvantage by ignoring

(1) *the discovery of a primary control of use;*[1]

(2) *that the sensory guidance of all people needing physical development is unreliable;*

(3) *that such people will employ their primary control wrongly in their activities, and that this is a* CONSTANT *influence for ill working against them both before and after the practice of their exercises; and*

(4) *that no method of help can meet their needs unless in*

[1] See Anthony M. Ludovici, *Health and Education Through Self-Mastery*, Chap. i, "Use of Ourselves," pp. 23–30.

carrying it out they are taught to employ the primary control in such a way that their manner of use becomes a constant influence for good, tending always to raise the standard of their functioning.

These are the points they could and should have brought forward, not only to prove the shortcomings of present methods but also to bring before the public, now so deeply interested in "physical fitness," new knowledge which would set them thinking along new lines, and so help them to avoid the pitfalls which exist in the practice of physical culture exercises. *This could have been the beginning of a practical campaign in prevention.*

The substitution, however, of preventive for curative measures was not even recommended in the report of the British Medical Association, nor were any "means-whereby" offered which would have made the carrying out of this recommendation possible.

In ordinary mechanics, if we knew that the control or controls of a machine were out of order, we should at once decide to have them put right before expecting the machine to show the mechanical stability and usefulness of which it is capable. But this common-sense point of view must have escaped the committee, for the suggested plan implies that we should take an already ill-controlled piece of human machinery and proceed to increase the work done by it. If their advice is followed, the working of the controls will only be further interfered with and the general misuse of the mechanism increased, with the result that new defects will be produced by the practice of exercises designed to eradicate other defects.

It can be demonstrated by means of my technique that interference with the working of the primary control of the psycho-physical machine can not only be prevented, but also be remedied in those in whom the working of this control has already been interfered with. Anyone who has learned this technique of the correction of interference with the working of the primary control will be able to put it into practice in daily life in any sphere, and in any

form of activity, including games and all forms of outdoor exercise. All that is necessary is to see to it that during games and all forms of outdoor exercise there is no interference with the working of the primary control.[1] In this way any reasonable standard of physical development can be attained without fear of producing harmful by-products, and the act of living itself will become a constant means whereby changes in direction of more and more desirable physical development can be brought about.

[1] In discussing this matter recently with a public official I asked him why the people concerned with health movements were making such a definite stand for physical culture. He said it was because they had not found the development gained through the agency of games satisfactory. I then explained to him that a different result could not be expected, because it is highly probable that those for whom the games were planned were already interfering with the proper use of the primary control, and that they would exaggerate this misuse in playing games. For the same reason, I pointed out, physical culture schemes would prove equally unsatisfactory. If it could be arranged, I should like to take a group of adults or young people who have learned to prevent interference with their use of themselves while playing games or performing exercises, and compare the results in physical development with those obtained by a similar group practising any physical exercises and games in accordance with orthodox principles.

In a lecture given by her to the Ling Society, Miss Lucy Silcox, Class. Trip. Camb., formerly Head Mistress of St. Felix School, Southwold, said: "I have to judge your system . . . as an onlooker, by the eye, and in doing so I take the simple and obvious tests that meet the eye, tests of sitting down and standing up, of running and walking, of speaking and listening. Not in the gymnasium, but in the house and in the field and in the street, I have put these tests; and it is only the rare exception that has, in the simple ways of life, aroused in me the emotion of living, moving beauty, that beauty of movement which, though often found with beauty of form and face, is independent and can and does exist apart. Everywhere that I have gone out and about I have shamelessly made notes, asking myself *quid deficit?* What is lacking? Why is it that of specially selected and specially trained persons, A is unable to stand in quiet repose, B moves across the room with a lurch, and C nods her head whenever she speaks? Why is the heavy step so frequent among teachers and taught? (not, of course, in the drill class). A Head Mistress friend of mine, whose sitting-room was under her large hall, said to me: 'During the dancing class, the movements were almost noiseless; the lesson over, you would say the room was full of rhinoceroses.' What had become of the lightness they had shown? What good was it if it ended with the lesson?"

These questions lead to the core of the whole matter.

Under the committee's plan this "desirable physical development" is to be produced in people by the performance of exercises for a certain time during the day, and we are actually asked to believe that muscular tension, exerted for a comparatively short space daily by people whose habitual use is so defective that they are in need of help, will counter the general wrong functioning which is due to a misuse that is operating against them all day long. To believe this is to carry credulity very far. If the people who are in need of physical exercises are habitually interfering with the working of their primary control to the extent of upsetting their functioning, it stands to reason that any extra muscular tension they exert in the practice of exercises will increase this habitual interference, so that their daily exercises will simply afford yet another opportunity of exaggerating their bad habitual use of themselves, and of repeating and therefore establishing more and more firmly wrong sensory experiences.

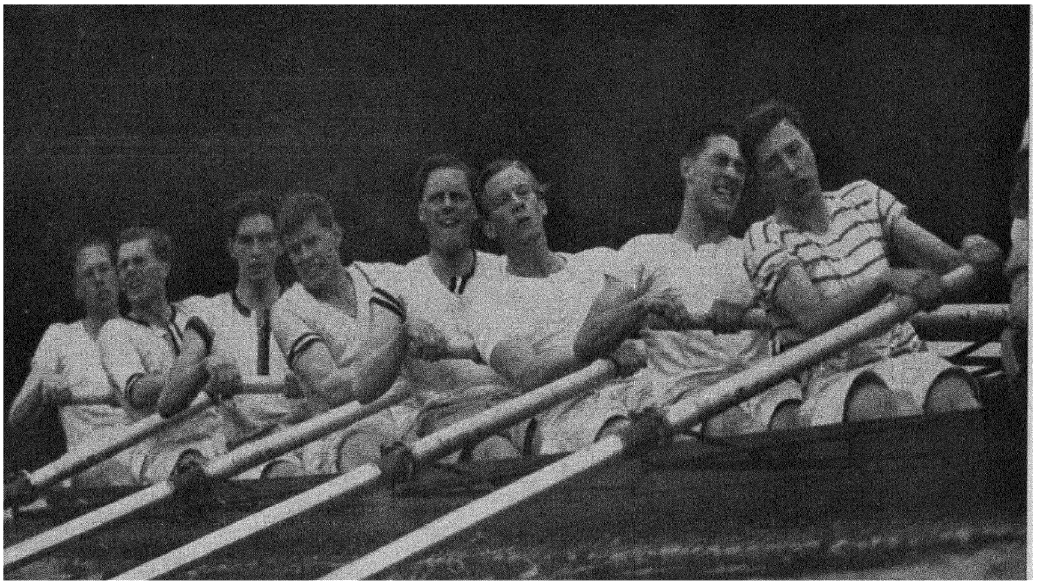
In the practice of my technique the boredom of performing exercises for a given time daily is avoided, and the opportunities for wrong experiences in practice mini-

long as we adhere in everything we do to the
nsciously inhibiting interference with the
the primary control, then our ordinary
:an be made a constant means of psycho-
)ment in its fullest sense. The instinctive
ich led to interference with the employ-
.nary control will be changed to a conscious
ıe use of the self, associated with reliability
preciation.

ıs that it may be possible for us to live a
:ivilization, in which the activities necessary
)port of life can be made as effective in secur-
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ıent, as were the activities of man in uncivilized
ıe when he was a hunter and his very existence depended upon the standard of development required for survival.

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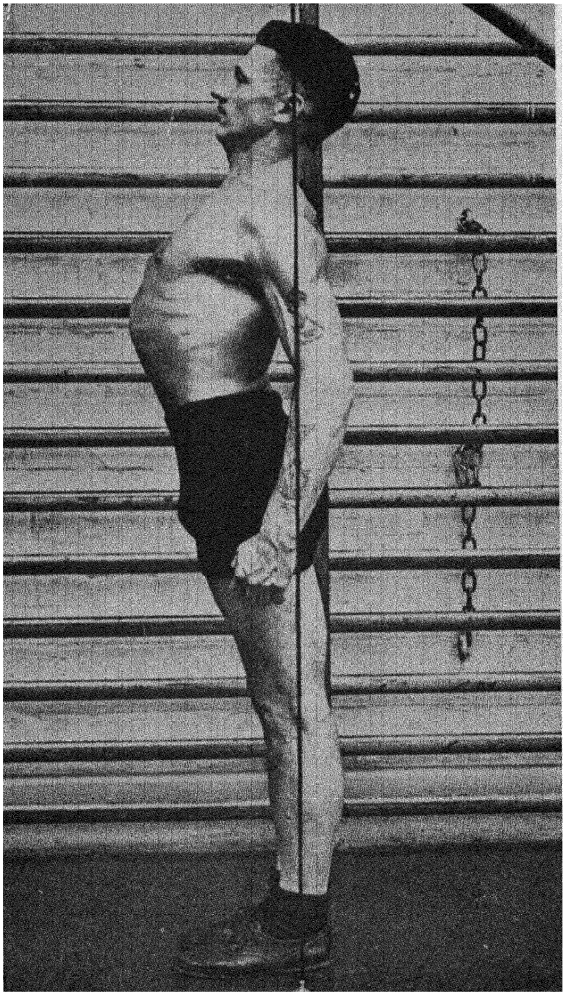
It has struck me that I could not conclude this chapter



THE ROWERS

Fox Photos, Ltd.

And they call it sport! The Oxford Boat Crew showing what *The Evening Standard* called "Determination mirrored in their faces."



Illustrated Sporting and Dramatic News

THE SERGEANT-MAJOR

Building posture on the plumb line.

[*See page* 56

on Physical Culture more appropriately than by reproducing two photographs with the comment they received which have caught my eye in the English Press. Each is profoundly interesting in its own way, as revealing how consistently, both by precept and example, wrong values in matters of physical culture are now being inculcated upon the general public.

The first photograph, entitled "THE ROWERS," appeared in *The Evening Standard*, March 1, 1939, with the following words:—

> This remarkable study of the Oxford Boat Race crew rowing a sharp burst in their training at Henley was taken by long-focus camera. The tenseness of the various facial expressions reveals the effort put into the work.

The caption read:—

DETERMINATION MIRRORED IN THEIR FACES.

I have carefully studied the expression on the faces of the young men in the picture, but have failed to find any justification for the above caption. Four of them look as if they were being tortured on the rack, three as if in a trance, and just one, the third from the left, as if he had taken part in a rowing race and had the right attitude towards a rowing contest. Surely a university boat race should be a friendly contest between men animated by the sporting instinct. Every one of them should wish the victory to go to the best crew. It should be an experience of pleasure, happiness, and healthy recreation to all concerned, not an unnatural struggle involving distortion and loss of consciousness through the "determination" to gain an end even at the cost of personal exhaustion and damage. What difference does it really make in the long run whether or not an Oxford or Cambridge crew wins the boat race in a particular year? None whatever—particularly when we remember that over a period of 111 years Oxford has won forty-two contests and Cambridge forty-eight.[1] People indulging in sport to-day,

[1] There were no contests in the years 1830 to 1835 inclusive, none

whether it be rowing, football, cricket or what-not, seem to be losing all sense of proportion, all idea of relative values. In the interest of all concerned it were far better if we engaged in sport for sport's sake. End-gaining in sport, as in every sphere of life, is in the long view a delusion and a snare.

The second photograph, entitled "THE SERGEANT-MAJOR," appeared in *The Sporting and Dramatic News*, November 26, 1937, with the following caption:

THE FINISHED OBJECT! HOW THE SERGEANT-MAJOR STANDS

This is an example of the harmful result of building posture on the "plumb line" theory and practice.

When shown this photograph, a medical man I know uttered the one word "Monstrosity!" It is just another proof of the ignorance and stupidity that prevails to-day in spheres where experts rule supreme. Study this photograph and use your own common sense in judging the contorted form before you, then look up your manuals of physiology and anatomy and see if you can discover anything in favour of the posture assumed, thanks to the misguided people who advocate this degradation of the human self. You will not succeed in finding anything to justify it, but you will certainly find that in this picture physiological, anatomical, and biological laws have been outraged. The passing of new laws is in vogue nowadays, and as many people are likely in their ignorance to be led into serious error by attempting to imitate the posture of the unfortunate man in the picture and much value is now being attached to health and well-being, I suggest that probably the most important law to be passed at the moment would be one to prevent human forms from being harmed and degraded by physical culturists whose work and ideals lead to the posture shown in our picture.

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in 1837, 1838, 1843, 1844, 1847, 1848, 1850, 1851, 1853, 1855, 1857, and 1915 to 1919 inclusive. There were two contests in the same year in 1849, and one dead heat in 1877(?). This accounts for the apparent discrepancy in the figures.

It would have seemed incredible to me before seeing it that anyone should find it in him to wish to distort the body of a human being in this way, and still more incredible that anyone could be found who would submit to the indignity and folly of procedures that can bring it about.

Large sums of money are being spent in a campaign for physical fitness and well-being, and thousands of people are being placed in the hands of physical culture teachers to be subjected to the carrying-out of special exercises to gain certain ends. It is in the interest of my readers that I am including in these pages this photograph of a man trained in accordance with this plan.

* * * * *

It has been shown that man, by using exercises as a means of improving his physical condition, becomes a specialist in the production of harmful by-products, and that by doing this he not only nullifies anything he may gain at one point, but in the long run tends to lose rather than gain in the aggregate.[1] *In a large majority of cases the practice of exercises leads to the cultivation of harmful psycho-physical habits associated with a lowering of the standard of general functioning. In this way man, in the fundamental sphere of activity within the self, defeats his own ends, and his habit of end-gaining is so deeply ingrained that it persists as a menace to him in his relations with the body politic and the outside world.*

We have proof of this in every field of his activity, scientific and otherwise. It matters not whether he considers it necessary to do something to improve his personal well-being or that of others, to "cure" some defect or disease, or to make some social, political, financial, business, religious, or educational reform; in the long run he will defeat himself by his habit of concentrating on his end without having first thought out the means whereby harmful by-products will not be created in the process of gaining it.

[1] In this connexion I would refer the reader to Appendix G, in which are disclosed the harmful by-products produced by the methods in force in the German Army.

PART II

My indebtedness to Mr. Aldous Huxley for the article that follows calls for my best thanks. I have included it in this chapter because of its bearing upon the subject-matter, and because I believe that the reader will be interested in the happenings which Mr. Huxley has presented in his own characteristic manner.

A NEW TECHNIQUE FOR NEW SOLDIERS

By ALDOUS HUXLEY

"Good news is always less sensational than bad and therefore, even at the best of times, gets less attention. In a world at war there are so many, such horribly absorbing stories of destruction and sudden death that neither journalists nor their readers have much time for anything else. But even in a world at war human decency and reason still survive and actually succeed in scoring their small successes. The record of one of these inconspicuous triumphs may be found, well buried, so far as the general public is concerned, in the correspondence columns of some recent issues of the *British Medical Journal*. Here, from an exchange of letters between Dr. Andrew Murdoch and Colonel Wand-Tetley, Inspector of Physical Training for the British Army, we learn that, in recent months, the physical training of English soldiers has undergone a radical change for the better. The nature of this change is such, and its implications are so important, that it seems worth while to give a brief account of it.

"Physical training for soldiers has its origin in parade-ground drill. Now, parade-ground drill had a two-fold object: it was intended, first, to teach the use of arms and the performance of certain manœuvres; and second, to provide an agreeable spectacle for the important personages in the reviewing stand. Among these important personages a convention grew up during the eighteenth and nineteenth centuries that the most agreeable of all military spectacles was that of large bodies of men standing in

positions of extreme tension and rigidity, moving with the stiff precision of automata, and doing difficult and unnatural tricks like trained animals. Hence those blown-up pigeon-chests, those shoulders stiffly thrown back, those concave spines, those taut necks and raised chins. Hence, too, such horrible monstrosities as the Prussian goose-step and its recent Fascist imitation, the *passo ginnastico*.

"Some fifty or sixty years ago the first signs of a change began to manifest themselves. Physical culture came to be taught in schools and as an adjunct to medicine, and it was found that the traditional military methods were far from giving satisfactory results. Even in the armies, enlightened officers began to talk about physical training for health and general well-being, not merely for smart appearance on the parade ground. But just what sort of physical training would give men health and general well-being? That was the question; and while the experts argued back and forth about the proper answer, soldiers, and to a lesser extent school children, went on being taught in the old bad way. Chests were still thrown out, spines bent backwards, and neck-muscles strained, just as they had been in the days of Frederick the Great.

"Meanwhile many new systems of physical culture were tried out. Most of them were better than the traditional parade-ground drill; but none was wholly satisfactory. For in all of them the organism was conceived, not as a whole, but as a collection of parts, each of which was to be exercised and strengthened in turn; and corrective treatment was aimed at palliating the manifest symptoms of weakness and deformity, not at removing the underlying causes. The trouble was that nobody knew what those underlying causes might be. All that the physical culturists could be sure about was the obvious fact that some people seemed to be naturally gifted with the power to use their bodies well, while others (an actual majority in urban, industrial communities) could only use their bodies badly. Why this should be so nobody understood. Then, in the early years of the present century, an obscure young Australian, F. Matthias Alexander, com-

pletely revolutionized the situation. By long and patient experiment, first on himself and then on others, Mr. Alexander became convinced that the underlying cause of most physical maladjustment was to be found in the faulty carriage of the head in relation to the spinal column. We can summarize his conclusions by saying that, in man as in other animals, there is a certain natural and correct relation between head and spine—a relationship which, when it is preserved, guarantees that all the organs shall be in their proper position and functioning harmoniously. Animals in a state of nature tend to retain this correct adjustment instinctively. It is only when human beings interfere with them that they go wrong. Thus, the bearing-rein was introduced to 'improve the appearance' of carriage horses, by drawing back the head in relation to the neck. The result of its use was that the poor beasts so harnessed suffered great discomfort, lost half their pulling power, and were rapidly exhausted. What men did to their horses by means of the bearing-rein they have done to themselves by means of the bad postural habits acquired under the stresses of urban and industrial civilization. How or why these habits are acquired we do not know; but that they are acquired is certain. And what is equally certain to anyone who has followed the work of F. Matthias Alexander and his pupils is that the correction of these bad habits produces far-reaching results, of benefit to the entire psycho-physical organism.

"The importance of Alexander's discovery was early recognized by that eminently practical philosopher and educationist, John Dewey, who contributed prefaces to his first two books. But in spite of this and of his great success as a teacher, both in London and New York, where he is now teaching, Alexander received, during many years, little or no recognition from official quarters in the field of medicine and physical education. Recently, however, a change has set in. Biologists and physiologists are coming more and more to think in terms of the organism as a whole. Moreover, studies of animals in motion have revealed the significant part played by the head

and neck in the co-ordination of the body. In consequence of all this, official medicine and official physical culture have become increasingly receptive to the hypothesis which Alexander has been so clearly verifying during his forty years of teaching. For the last few years Alexander has been enjoying that curious kind of triumph which comes to unorthodox and professionally unqualified men of genius, who live long enough to see their ideas appropriated (without acknowledgment) by the orthodox and the qualified.

"The latest and most striking tribute paid to Mr. Alexander's ideas is the fact that physical training in the British Army is henceforward to be based upon the principle which he was the first to formulate[1]: that the secret of proper physical co-ordination must be sought in the correct relation of the head to the spinal column. If this principle is properly taught, it means that hundreds of thousands of young Englishmen will be shown how to unlearn the bad habits forced upon them by urban and industrial life and will acquire one of the indispensable conditions of health and well-being, a correct and natural carriage of the body. Because it is not dramatic, because it refers to an event which can produce results only slowly and at long range, this piece of information is likely to go unrecorded. That is why I have drawn attention to it. Good news is too scarce nowadays for us to be able to afford to ignore it."

[1] In a letter to the *British Medical Journal* of November 16, 1940, the late Dr. Andrew Murdoch drew attention in detail to the primary part played by the head-neck relationship in activity, and wrote: "I have been in communication with Colonel Wand-Tetley, and he tells me that, since July, the Army Physical Training methods are being based on the principles described in my letter." It appears, however, that although there may have been *some* appreciation by the Army authorities that the head-neck relationship should not be interfered with, they have relied on *direct* instruction to attain this end, and have therefore fallen into as bad an error as they would have done if they had remained in ignorance.—F. M. A.

CHAPTER IV

A TECHNIQUE FOR PREVENTION

WE are all familiar with the saying, "Prevention is better than cure," and as far as I can gather, the general interpretation of the word "prevention" is that accepted in medicine, where it is understood to mean the doing or taking of something either to make the subject temporarily immune to germ infection, or to slow down, if not to arrest, the progressive aggravation of a functional disorder already present so that it may not become acute or organic, or to forestall and remove the more obvious conditions making for dysfunction or distress at a particular crisis.

People may argue with some justice that this is to narrow unduly the scope of prevention, and that if the word is used in its full sense its primary object must surely be to promote such conditions of well-being in the individual as a whole as will prevent the possible development of specific functional or organic trouble.[1]

In the course of my experience I have found that in cases where such changes for ill have developed, the employment of the primary control is being interfered with in all activity, and there is a constant tendency towards wrong conditions, whereas, and equally beyond dispute, where this control is not interfered with, the tendency towards wrong conditions is changed to a tendency towards good conditions. From this we can postulate that the human being who would be a good subject for

[1] These contentions are supported by the subject-matter of the letter signed by nineteen medical men quoted in Chapter ii. The reader who is not familiar with my books, and is anxious to become better acquainted with the means employed in making changes from unsatisfactory to satisfactory conditions of use, should read *The Use of the Self*, as there is not space in this work for a restatement of the evidence there adduced.

the application of the principle of prevention in the wider sense would be one in whom the employment of the primary control of use ensures the best possible standard of functioning of all parts and processes, as well as the healthiest chemical composition of the tissues.

Unfortunately, the medical man's training, through no fault of his own, does not equip him to work to the principle of prevention in this wider sense, because, as has been pointed out, it does not provide him with the knowledge that would enable him, in making his diagnosis, to take into consideration the influence of use upon his patient's general functioning. Therefore, even if he chances (though this is most unlikely) to be asked to give advice to a patient whose employment of the primary control has not been interfered with, he cannot pass on to him the knowledge which would enable him to prevent himself from doing anything that would interfere with this employment in carrying out his future activities, much less give to a patient who is found to be interfering with the employment of his primary control the means whereby the correct employment of this primary control could be restored. If in this latter case the doctor should attempt to improve the patient's health and well-being by means that do not include the bringing about of an associated improvement in the employment of the primary control of the use of himself, he will be leaving the constant harmful influence of this use upon the patient's general functioning as a legacy for future trouble.

In the same way, if the doctor is to practise prevention in this wider sense with his baby patients, he would need to provide mothers and nurses with the knowledge that will enable them to avoid inducing bad habits in the baby's use by their manner of handling it, or allowing bad habits in its use to be cultivated during its rest and sleep, and particularly while it is getting its first experiences in sitting up and in learning to crawl and walk. It is equally essential that when changes for ill have already been allowed to develop in the growing child, the doctor should

be able to provide the means whereby right conditions can be restored and a recurrence of the trouble be prevented in the future. This, for want of a better name, I will call "comparative prevention," and the technique we employ has been found to meet the demands of this form of prevention as well as of prevention in the wider sense.

When a baby is born with a correct working of the primary control, the application of prevention will resolve itself into providing the means whereby this state of use and functioning could be maintained in living. This would be equally true of the adult in whom conditions had been right from the beginning and had been maintained. But such an adult would be hard to find, for the history of man shows that under the demands of civilized life certain undesirable changes are brought about in the working of the human organism, and the human being of today manifests the harmful effects of these changes in his use of himself not only during his working hours but also during sleep. One has only to watch a child or adult *begin to learn* to dance, skate, play some game, write, read, or take up some kind of work for the first time, to note the beginning of new bad ways of using themselves which, if repeated, will become new bad habits of use and tend in due course to lower the standard of their general functioning.

In support of this I will quote Mr. (now the Rt. Hon.) Ernest Bevin's Presidential Address at the Trade Union Congress in 1937 [1]:—

> "The nation has awakened," Mr. Bevin said, "to the fact that too great a price can be paid for the mad rush to increase production. Notwithstanding all the money which has been spent to cure known diseases, industry is constantly creating others."

One can assure Mr. Bevin with the utmost confidence that not only will industry continue to create new diseases, but that, as time goes on, the victory will remain on the side of industry until the worker knows enough about

[1] Reported in the *Daily Herald*, London, December 7, 1937.

the principles on which the technique of the use of the self is based to enable him to avoid cultivating bad habits of use in meeting any unfamiliar demands made upon him either in prosecuting his particular task, or by unfamiliar environmental conditions.

Any interference with the right working of the primary control of the manner of use during our daily activities is certain to become exaggerated in learning to carry out new industrial work, or in practising physical or other exercises. Witness the extent to which people misdirect their energy in their daily activities, in order to appreciate the opportunity such misdirected activity affords for the development of new harmful habits of use. Hence the fundamental importance of *preventing* the cultivation of these bad habits in learning and learning to do.

Similarly, bad habits are being cultivated by children at school, not only in the sitting or standing positions they assume when learning from a book, or in carrying out their other school duties, but also in playing games and in all other activities which call for the use of the hands or legs or both.

Bad habits are also being cultivated in every hospital and sickroom, particularly when the patient has recovered sufficiently to be allowed to sit up or to begin to walk. I yield to nobody in my respect for the doctors, surgeons, and nurses of our hospitals; but this does not prevent me from maintaining that they have not the requisite knowledge to recognize whether the manner of use which the patient adopts in his early attempts to sit up or move about are impeding him. Hence, whatever the patient's difficulties may be, they are made greater than they need be, and what is more serious still, each successive attempt he makes to carry out instructions only exaggerates the impeding or obstructive manner of use which, sooner or later, becomes habitual. This applies of course equally to the effort of all who are responsible for the welfare of invalids in the home.

The letter quoted from the *British Medical Journal* in Chapter II is evidence that there is a growing body of

medical opinion in favour of including the subject of the use of the self in the medical curriculum. "Diagnosis of a patient's troubles," write the signatories, "must remain incomplete unless the medical man, when making the diagnosis, takes into consideration the influence of use upon functioning." A few months after the publication of this letter, Lord Horder, writing in the *Daily Telegraph* on "The Future Rôle of the Family Doctor," said:—

> And if it be advanced that the doctor's training has not up till now fitted him for work of this sort, then the sooner it does so fit him the better. Inevitably the doctor's work in the future will be more and more educational and less curative. More and more will he deal with physiology and psychology, less and less with pathology. He will spend his time keeping the fit fit rather than trying to make the unfit fit. . . . It is a duty we owe to the panel doctor to enable him to get back now and again to the stimulating and enthralling atmosphere of the wards and laboratories, and—no less helpful—to the atmosphere of his colleagues and teachers.

In this passage, as in his other writings, Lord Horder shows himself to be on the track of prevention. He sees that the successful and useful medical man of the future will be one who can help people to *prevent* unfitness and illness. Unfortunately the plan recommended of sending the medical man back to the wards, laboratories, and medical schools will not give him the help he needs to make his methods "less curative" and "more educational." For up till now medical investigation and experimentation have been devoted to the acquisition of knowledge for the purpose of finding methods of "cure" for disease, rather than knowledge which would enable the doctor to diagnose conditions for the purpose of the *prevention* of disease, the preservation of well-being, and a full understanding of the nature of health. The clue to what is wanted in medical training, if the medical man's usefulness in the field of prevention is not to be limited, is to be found in the acquisition of that knowledge of the in-

fluence of use upon functioning which the group of medical men in the letter to the *B.M.J.* state "should be included in the medical curriculum."

If a knowledge of the influence of use upon functioning, and the experience of applying such knowledge in practice is essential to medical men in general, how much more essential must it be to the doctor working according to a plan of prevention in its full sense, for, when making his diagnosis of conditions in the child at an early age, he should be able to detect those incipient errors in use which are found associated with a lowered standard of functioning and which, if left unchecked, lead in time to the development of disorders, and are the forerunners of disease.

By means of the knowledge which my technique makes available the medical man would be able, when diagnosing conditions in a child, to detect from the very start any interference with use and functioning, and would then be equipped for the work of prevention in its full sense; that is to say, with his help, the standard of the child's functioning would be maintained from its earliest days up to adolescence at a level so much higher than at present that the ills which beset the adult would be lessened and their effect greatly minimized. Moreover, the idea of a "palliative method of cure," which still narrows the practice of medicine, would pass and make way for a new outlook leading to a plan of procedure in which preventive medicine in the widest sense would be a practical possibility.

As matters stand to-day, the outlook of the patient is as much at fault as that of the doctor and of those responsible for the curriculum of medical training. There is a vicious circle in the attitude of all three. The patient does not consult the doctor until he is ill. We all know that most people keep away from their doctor until they are forced to go to him. Probably this is because of the layman's belief that the doctor is a person trained to treat disease. In any case, he goes to a consultation with a fear that there may be something seriously wrong. How different

it would all be if he looked upon the doctor as a person trained to *prevent* the development of disorder and disease!

But prevention, in the sense I mean, cannot become a practical possibility until the attitude of people generally changes in favour of preventive methods, and medical men, in making their diagnoses, are mainly concerned with the influence of use upon functioning. In order to succeed in this field of prevention they will need to subject themselves to a form of training which, to those who undertake it, means the "revolution in thought and action" of which Dewey speaks. The experience they will gain, however, should lead them to see that the art and science of assessing the influence of use upon functioning comes first in the practice and theory of any scheme of preventive medicine, and that any other knowledge required for their medical training can be best applied, not as a principle, but as an auxiliary measure.

Life is the manifestation of use in association with the functioning of the organism, and it is this combination, working as a unity, that makes reaction to stimuli possible. Health in living, therefore, may be defined as the best possible reaction of the organism to the stimuli of living as manifested in its use and functioning. To ensure this we require as a *constant* the best possible manner of use and the highest possible standard of functioning at a given time, in a given environment, and under given circumstances; and this I submit constitutes the ideal of human attainment in the field in which we are interested.

It may be argued that this ideal is unattainable; but those who argue in this way are influenced by past experience of failure in making the changes necessitated by the acceptance of new knowledge, and they fail to realize that they owe their failure to the fact that their end-gaining outlook led them to try to make those changes *directly*. Such changes cannot be made by direct procedures, and should not be attempted with undue speed. The end-gaining outlook, which has been and still is almost universal, must therefore pass and give way to a new

outlook, in which allowance is made for the time required for the consideration and for the working out of the means whereby any particular change can be made.

In many instances this is a difficult problem to solve, but it is not unduly difficult. The first step is to make the necessary training in the subject of the use of the self a feature of the curriculum at as many medical schools as the number of teachers of my technique now available will permit. Qualified men with this training should be engaged exclusively in making diagnoses of conditions of use for their own patients and for the young patients who are sent to their colleagues, in cases where conditions of use are exerting a harmful influence upon the functioning. If required, they could take advantage of the assistance of teachers trained in my work, the number of whom is steadily increasing. Meanwhile medical men generally could avail themselves of the help we can give them now in the diagnosis and improvement of the manner of use of their child patients; for, with the best intentions in the world, medical men class children as satisfactory specimens of well-being when they can be shown to be unsatisfactory specimens of use and functioning. The result is that in many cases a bad manner of use, which should have been diagnosed early, continues to grow worse and to lower the standard of general functioning, until sooner or later functional disorders arise, serious enough to be recognized by the parents. The child is then taken back to the doctor who, from what he finds, diagnoses actual functional disorders, and in consequence begins a course of treatment the need for which could have been *prevented.*

The opposite condition would have come about if in the beginning the doctor had diagnosed the bad manner of use present and had taken measures to correct it. Then, instead of a gradual lowering, there would have been a gradual raising of the standard of general functioning, with the result that the child in question would be enjoying a state of comparative well-being, instead of being beset with conditions which are undermining his consti-

tution and retarding his psycho-physical growth and development. I have recently seen a girl of twelve, with the body frame and general characteristics of a potentially fine type of human being, who had been passed by her doctor the week before as perfectly healthy. It is true that the doctor had suggested that it might be advisable to have her tonsils taken out, but to this the parents would not consent. The mother, however, was not satisfied with the condition of her daughter's back, and for that reason brought her to me for examination. Now in all my long experience I have seldom seen a worse manner of use associated with unsatisfactory conditions than was present in this girl. There was an extreme lordosis curve of the back, a protruding abdomen, fallen arches, and the pelvis was held too far forward.

I particularly noticed a bad curve of the cervical spine, and undue tension of the muscles in the left side of the neck due to her wrong employment of the primary control, and the resultant misdirection was apparent in everything she did. The diagnosis of good health given in this case was a clear example of the failure to detect seeds of future trouble which would in time germinate and lead to acute functional disorder.

The following is another example of what can happen if the influence of the manner of use upon functioning is not taken into account in diagnosing conditions. A schoolboy was sent to me because of an impediment in his speech. Various treatments had been tried to rid him of his trouble, but without success. When I pointed out to his parents that his stuttering was due to his harmful manner of use, I was told that he was quite successful at games and was the best boxer in the school. This did not impress me as much as they thought it would, and I went on to explain that they evidently had no idea of the harm that such strenuous exercise was doing to the boy, affecting not only his general well-being but also adding to his difficulty in speaking. I agreed to take him as a pupil, but only on the understanding that he should give up strenuous games and discontinue boxing, at any rate for the

time being. This was agreed to and good progress was made, until at length he reached the stage when a lesson at intervals was all that he needed.

After one of these intervals he came back for a lesson, and I was alarmed by the rapidity of his heartbeat. I questioned him and found that he had been sprinting regularly. I reminded him that I had warned him against strenuous exercise, and arranged for him to consult a relative of his, a medical man in whom the family had confidence; and there for the time being the matter rested as far as I was concerned.

After a much longer interval than usual, another appointment was made for a lesson, but on the day on which he should have kept his appointment I heard from his headmaster that he would not be able to come for the lesson as he had broken his arm at football. I wrote at once to say that I was greatly disturbed to hear that he had been allowed to play football because of his heart trouble, but received the reply that the school doctor had given permission for him to play, as he was of the opinion that there was nothing *organically* wrong with his heart. I wrote to say that I was well aware of this, but pointed out that there was serious *functional* trouble which would soon develop into organic disorder if he continued to indulge in strenuous exercises. Meanwhile I heard from the doctor whom I had advised the boy to consult that he fully agreed with my view of the case, and that he disagreed with the school doctor, with whom he took the matter up.

It is the school doctor who is especially hampered in his work because his training does not equip him as it should for his important job. To undertake to diagnose the condition of children in a school and to advise whether or not they should take part in strenuous games or exercises is a grave responsibility, and not less grave is the responsibility of having to suggest preventive methods to help those children who have already developed functional trouble which, if left unchecked, can lead to serious disorders. As far as my experience goes, the

school doctor seems to diagnose chiefly for organic, not functional, trouble. But if he cannot diagnose those incipient functional troubles of which wrong employment of the primary control of use is the forerunner, it is not his own fault but that of his training. Yet it is just in this field that the real usefulness of guidance on preventive lines is needed. The fact that such advice and guidance are not vouchsafed to the child during school life means that its potentialities for health and well-being are not being fully developed, that in most cases trouble is being laid up for the future, and that the child's efforts in the actual school work are being seriously impeded.

When it is pointed out to the headmaster or to the parents that a pupil should not play strenuous games or be made to drill and perform exercises, it is disappointing to find that the school doctor, when appealed to by the headmaster, almost invariably proves to be the stumbling-block. Yet in all such instances I am able and willing to demonstrate that the manner of use of the pupil is not only leading to functional trouble, but is also associated with it, and that in consequence any strenuous exercise or drill must tend to exaggerate the pupil's habitual manner of use, and so tend to lower gradually the standard of his functioning—the sure and certain way to disorder and ultimately to disease.

I number among my pupils headmasters and teachers who are only too well aware of all this. But they sometimes encounter difficulties, because parents, through force of habit, are inclined to rely upon the school doctor's opinion regarding the condition of their child and its well-being, irrespective of any evidence that may be put forward to confute it. Nor, seeing how little is done to enlighten them in this matter, is this to be wondered at.

Few of them have either the time or the inclination to seek for such new knowledge as would help them to check the school doctor's opinions, or to adopt a new outlook towards the subject of use and functioning in its relation to child welfare.[1]

[1] Similarly, as far as I can gather, a new outlook is required towards

I can hardly leave the question of the child's school life without referring to another aspect of it which is of paramount importance. I mean the influence of imitation on the child and the way the average parent approaches this problem.

Example and imitation are potent influences in education. There can be little doubt that most of us, particularly in childhood, are influenced by good or bad example, and, whether for good or ill, are certainly prone to imitation. It may therefore be interesting here to relate the experience I have had of the parental attitude towards this matter since I began interviewing parents intending to send their children to our school, first at 16 Ashley Place, and later at Penhill. These parents had heard of our successes in the field of prevention with children considered normal, with backward children, and with those who, owing to some disability or other, could not be helped in ordinary school.

Now even the parents of children who, from the ordinary standpoint, would not be considered normal, invariably point out that they would not like their child to attend the school if there were children there with peculiarities which their child might imitate. It never seems to occur to these parents that their own child, whose defects they are prone to overlook, might be a bad example to the children already at the school, and that the parents of the latter might justly raise the same objections to the new recruit as they themselves are raising to the existing scholars.

In order to begin to bring such parents to a more reasonable point of view, I try to demonstrate to them that the habits which are the objects of their dread are the particular reaction of a given child manifested in its

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the food eaten, towards the way it is cooked, and towards many other matters on the domestic side of the child's life. It is during this period that the best quality of suitable food should be supplied, such as will provide the nourishment required for the development of health and strength in the growing young. Admittedly, however, more has been and is being done in this matter than in regard to the question of the manner of use.

wrong use of itself in all the acts of daily life, and that, although they may consider their child normal, I could show them that he displays bad habits of use which other children might imitate. When I succeed in making this clear I draw their attention to the very bad use present in the great majority of teachers to-day, and they quickly appreciate the bad example these teachers set to their pupils. For in such cases the greater the teacher's influence over the pupil, the greater the danger of imitation affecting the child adversely during school hours.

I have always recognized this, and that is why all teachers at Penhill School have to become more or less proficient in employing the technique of conscious control in their own use of themselves before taking up their teaching work, and most of them have been through my three years' Training Course for Teachers. Their first aim is to be good examples of use to their pupils, and the experience of having to apply the technique gives them the standard by which to judge.

Having explained all this to parents, I then answer their original query, and assure them that in our experience children do not copy one another's bad habits of use when working to principle in applying the technique employed in the school to their activities in learning and "learning to do." As a matter of fact, instead of imitating such habits, even the youngest child will, after being at the school for a few weeks, often begin to notice faults and find out how and when they occur, the cause being invariably failure to apply the technique in some activity. The manner of use of both teachers and pupils resulting from the application of the technique is of first importance in our school, because the employment of a correct manner of use of the self ensures that the best conditions possible at a given time will be present in the organism while it is being employed in learning and "learning to do."

CHAPTER V

THE CONSTANT INFLUENCE OF MANNER OF USE IN RELATION TO CHANGE

PART I—THE HUMAN ELEMENT

WE all know how difficult it is to change habit and to keep newly made resolutions which involve our reacting in a different way from that which is habitual to us. Many people will tell you that they have succeeded in doing so by exercising self-control, but as a friend once said to me: "I am coming to the conclusion that what most people call exercising self-control against a bad habit is merely a process of elimination," and I agree with him. My friend was thinking of all those cases of immoderate indulgence in drinking, smoking, etc., in which the persons concerned were forced to give up smoking and drinking entirely, because they found that if they drank and smoked at all they did it to excess.

An attitude of dependence upon instinct (nature) is revealed in the ordinary attitude towards self-control. If a person habitually manifests undesirable emotional or other reactions, such as outbursts of temper, irritability, lying, drunkenness, stealing, etc., it is assumed that, except in special circumstances, these reactions can be controlled by that person, and he is advised or urged to exercise control, or he may decide to do this independently. The same is true of the general attitude towards functional troubles, defects, and peculiarities.

Strange it is that this belief in control, as such, still exists, seeing that few people are intentionally uncontrolled, and that throughout man's experience in civilization the need and value of self-control has been advocated by all moral, educational, and religious teaching. Those who accepted the teaching have met with small success,

however, and this must be evident to any unbiased observer of individual or mass reaction to-day.

The truth is that so far man has failed to understand fully what is required for changing habit if the change is to be a fundamental one, because he has not realized that the establishment of a particular habit in a person is associated in that person with a certain habitual manner of using the self, and that because the organism works as an integrated whole, change of a particular habit in the fundamental sense is impossible as long as this habitual manner of use persists.

True, we have all heard of people who claim to have succeeded in "curing" habits by following precepts of some teaching method, just as others will claim that they have made changes in themselves by "willing" themselves to do, or not to do, on the trial-and-error plan.

Yet it is a demonstrable fact that control of the use of ourselves and control of emotional and other reactions is as closely associated as is control of manner of use and control of all that prevents interference with the raising of the standard of functioning. Therefore, if people beset with defects and bad habits try to make changes in themselves without first making that change in their use which raises the standard of their general functioning, the constant influence for ill associated with their wrong habitual manner of use remains, and any change claimed to have been made may justly be deemed merely a matter of transfer.

Understanding of this whole problem has been retarded by mistaking "cure for transfer" for permanent change. It is true that the activity, which up to a certain time has habitually manifested itself in one form of reaction, may in response to some new stimulus manifest itself in another form, and one which, when taken by itself, may be considered according to individual outlook to be a great improvement on the old reaction (habit). But unless our aim is merely that of suppressing one specific symptom, or of dropping some specific form of indulgence, without reference to the effect upon the organism

as a whole, the value of the improvement brought about by any method of change must be judged entirely according to whether or not the standard of general functioning is being raised or lowered in the process, and in the latter case, whether by-products harmful to the general functioning have been brought about.

To change habitual reaction permanently without the accompaniment of harmful by-products it is necessary to change the manner of use of the self that is associated with it. This reconditions the reflex activity of which this manner of use is a manifestation, and means that for the old reaction associated with the old reflex activity, there is substituted a new reflex activity resulting in a new changed reaction, and a consequent disappearance of the old reaction.

The possibility of reconditioning opens up the way to an unlimited development of control, but not simply a control which results from a fixed conditioning, as in the case of the dog reacting to a prearranged and regularly repeated stimulus along the lines contrived by Pavlov. For, as John Dewey puts it, "the latter, as usually understood, renders an individual a passive puppet to be played upon by external manipulations." The control that is meant by reconditioning in my sense is made possible by that employment of the primary control which—again as Dewey puts it—"conditions all other reactions, brings the conditioning factor under conscious direction, and enables the individual to take possession of his own potentialities. It converts the fact of conditioned reflexes from a principle of external enslavement into a means of vital freedom."[1]

Thus the person who by some direct means has conditioned himself to exercise control which depends upon the elimination of specific stimuli, such as alcohol or tobacco, or those arising from emotional disturbance, some distressing environment, or the like, does not constitute a case of control of reaction by reconditioning in my sense. This calls for that "vital freedom" in reaction (freedom

[1] See Introduction by Prof. John Dewey to *The Use of the Self*.

IN thought and action) which enables us to give effect to a decision previously reasoned out—such, for instance, as the decision to take or not to take alcohol, to smoke or not to smoke tobacco, or to use either in moderation whenever it is decided to do so, and to be able to stop at any time.

In the case of the addict such a decision is difficult to carry out, because of the nature of the sensory experiences which have been habitually associated with his attempts to satisfy his need. As long as this need persists, these experiences are a continuous stimulus to indulgence in his bad habit, and hence the carrying-out of a decision not to indulge implies inhibiting his habitual reaction to the stimulus arising from the sensory experiences which are the background of his craving. These sensory experiences are as much a part of such addicts, and exercise as harmful an influence towards indulgence, as the habitual sensory experiences which influence people towards indulgence in certain harmful ways of using themselves in keeping their equilibrium in standing, sitting, walking, and other activities. The sense of satisfaction which comes from the indulgence in both these cases is associated with "feeling right" and comfortable, although associated with a particular manner of use which is lowering the standard of general functioning and bringing about ill-health and disease.

Bad habits of use are fundamental conditions of abnormality, and it is reasonable to expect them to be associated with such other abnormalities as an excessive craving for alcohol or tobacco, and even more reasonable to conclude that when we begin to eradicate the fundamental conditions of abnormality throughout the organism by changing the manner of use, we are taking the first step to the gradual eradication of other forms of abnormality within the self. In the ordinary way a person who is an addict, whether to tobacco, drink, or drugs, is considered to be "cured" if he ceases to indulge his particular habit or craving, without due attention being paid to other bad habits which are certain to be present, or to new bad

habits which are likely to be cultivated during or after the "cure." Too often the alleged cure leaves him depressed, unhappy, and discontented, and I have known cases in which these after-effects have been so distressing and deleterious that I was forced to the conclusion that the "cure" was worse than the disease.

The close connexion between habit and an associated manner of use has been missed in all schemes of reform, and when we add to this that, concurrently with the training man has derived from past and present methods of education and development, harmful changes in the use and functioning of his organism have been allowed to develop unchecked, we cannot wonder that man's reactions in general seldom correspond to the ideals he professes, but approximate too often to those of the caveman, especially now that the fruits of his invention on the material side are gradually becoming an ever-increasing danger to himself and those around him.

He has forgotten that in the last resort it is the human element that counts, and my work has always been a practical plea for this truth. The forces of mechanization are being used in a way that prevents the full development of human potentialities. This is the price we are paying for so-called progress and improvement, scientific and otherwise, achieved by changing conditions in the outside world regardless of the cost in human sacrifice and of the means employed to gain our end. Unfortunately this so-called "progress" is associated with a lowering of the standard of man's sensory awareness of harmful changes that are taking place within his organism, changes which are recognized only when their harmful effects are manifested as bad habits, defects, and disease.

Hence the importance of understanding the means whereby such harmful conditions may be prevented from developing unknowingly within the human organism, or, if they have been allowed to develop, may be changed back to those which were present before undesirable reactions manifested themselves.

PART II—PROCEDURES INVOLVED IN THE TECHNIQUE. FIRST PRINCIPLES IN THE CONTROL OF HUMAN REACTION

Before going on to consider what is fundamentally involved in the changing of habit by the employment of my technique, I wish my reader to understand that I use the word "habit" in its widest sense, as the embodiment of all instinctive and other human reactions which observation shows to be determined by the manner of use of the self as a constant influence operating for or against us under given circumstances and at a given time.

If we view habit from this wider angle, which shows the link between the manifestation of any single reaction with the working of the whole organism, it will be easier to understand the difficulty we all experience in breaking even simple habits, and that this difficulty increases in proportion to the intensity of the stimulus to indulge in the habit. In the employment of my technique this added difficulty is taken into account from the start of the lessons, and hence, in any attempt to help a pupil to change habitual reaction, I begin with procedures that involve only simple activities on the pupil's part, such as sitting and rising from a chair, in order to give him in the easiest way the opportunity to inhibit his habitual response when any stimulus to activity comes to him.

Unfortunately, even when the work is limited to the simplest activities, there are difficulties to be overcome which are almost incomprehensible to people inexperienced in trying to bring about such psycho-physical changes as we are concerned with, and I shall try therefore to show the why and the wherefore of this.

The attitude of most people towards learning to do things which they hope will bring about the changes they desire is one leading to more or less anxiety and tension, which in many reaches a stage of emotional disturbance, particularly if they are being assisted by a teacher. This is not to be wondered at when we remember that, under orthodox teaching methods, the teacher expects his pupil

to try to be "right" from the very start in carrying out whatever he is asked to do, and the pupil also believes in this idea and acts accordingly. In expecting this of his pupil, the teacher is not only asking him to overcome at one stroke the influence of long-established habits of use, but also to accomplish this feat while being guided by the unreliable feeling which had led him into his wrongness.

To make this point clear, let us consider the case of a person in whom posture and structural conditions and standard of functioning are unsatisfactory, and for whom a course of lessons in physical culture, remedial exercises, dancing or other methods has been decided upon as a remedy. Here let me re-emphasize the fact that as such a person has been guided hitherto by what he has felt to be right in all he has done in daily life, and as this "doing" has led to unsatisfactory structural conditions of posture and functioning present in his case, it is obvious that what in the past had felt right to that person must have been wrong. In other words, his "right" is wrong. If then he goes to his teacher convinced that he must try to be right in all that he does, and so attempts to conform to the teacher's and his own conception of what is right in performing exercises or anything else he may be asked to do, he will continue to do what he feels is right (the known), and so will unknowingly tend to exaggerate the wrongness which is, and has been, the background of his trouble.

The only way in which such a pupil could perform exercises or any other activity so that his practice of them would not have this result would be by doing what he feels is wrong; and he is not likely to do that *for it would be the unknown to him.* It is difficult enough, as experience shows, for a pupil in carrying out any ordinary activity to allow one to do something for him that feels to him wrong, but it is still more difficult to get him to carry out an unfamiliar activity himself by means which feel wrong to him. All of which goes to show that a pupil who believes he must try to be right, and when he comes to a lesson worries about whether he is going to be right or

wrong, adds to the difficulties he is faced with in any case when making changes in his way of doing things. It is almost certain, too, that this same pupil will be convinced that the teacher can and should tell him what is the "right" standing, sitting, or other position, and enable him to acquire and maintain this position in each instance, and that to be a good pupil he must concentrate on trying to be right, and must visualize how he is to carry out his teacher's instructions in the course of his work.

It can be demonstrated that the attempt to concentrate in such cases resolves itself into a condition of increased muscle tension and self-hypnotism, and therefore tends to lessen rather than increase the chance of success. This can also be said of the beginner's attempts to visualize what is to be done and how to do it, seeing that in taking impressions he depends for guidance and judgment upon the same feeling that he has always depended upon in the past, and which has led him into the wrongness he wishes to change into rightness.

Then as to the idea that it is helpful to know and to be able to acquire the "right" position in, say, standing, sitting, or in any other activity, let us for a moment consider the facts. To pass from wrong to right conditions associated with posture and functioning means change, and if a person is to make this change successfully, it must be by a gradual process of change from day to day, so that the effect of the readjustment of the bony structure, the abdominal viscera, the vital organs, the interference with the habitual sense of equilibrium, and the disturbing influence of experience in doing what feels wrong, may not retard the process.

Hence common sense dictates that changes such as these cannot be made in a single lesson or in a month of lessons. If, therefore, at the first lesson, or indeed at any lesson, a pupil visualizes the position of standing or sitting which is advocated on that day as the right one, and henceforward continues to adopt it as right for good and all, he cannot make further improvement. He will be adopting for all time a posture and conditions of functioning which

were advocated as right at a certain stage of his progress, and which he has visualized and worked for at that stage, but he will not get past that point. Whereas if he is to make further change and improvement of conditions from day to day, what he visualized yesterday as the "right" posture will not be the posture associated with future change and improvement.

Hence ideas or methods which lead to fixed right postures do not meet the needs of those who desire to change conditions which are associated with unsatisfactory use, functioning, and postural effects. A satisfactory technique for making the changes we are considering must be one in which the nature of the procedures provides for a continuous change towards improving conditions, by a method of *indirect approach* under which opportunity is given for the pupil to come into contact with the unfamiliar and *unknown* without fear or anxiety.

To this end, from the beginning of the first lesson the teacher does his best to reassure the pupil and allay any anxiety on his part as to whether or not he will be able to carry out instructions rightly. He explains to him that he does not want him to try to be "right" in carrying out any instructions, because this would only mean projecting messages which would result in his reacting to the instructions by the habitual use of himself which "feels right," but that he can prevent this if, on receipt of any stimulus to activity (such, for instance, as a request from his teacher to sit down or to perform some other simple act), he will make the decision to refuse to give consent to carry out the activity by that habitual use of himself which is in accord with his conception of HOW the act should be performed. By adhering to this decision the pupil inhibits his immediate response, and therefore cuts off at its source his habitual reaction to the stimulus of the teacher's request, and the way is thus cleared for the teacher to help him to employ new means whereby he can gain his end by a new and improved manner of use, the responsibility for the pupil's being wrong or right in the employment of these means being the teacher's responsi-

bility alone. It is pointed out to him that under the changed conditions the new use of himself may, and probably will, feel wrong to him at first, but that through the experience he will gain in his lessons the new use will in time come to feel right, and he will come to see that the conception which underlies this new way of using himself is not based on any arbitrary theory of what is "right" in the circumstances, but on a practical knowledge of what change in his habitual use and functioning is required if he is to gain new control of his reaction, with all that this connotes in performing the act.

When these points have been explained and demonstrated as far as possible, the pupil will as a rule find little difficulty in accepting them theoretically. Indeed, like some other people, he is inclined to accept them too quickly, in the sense that he appears to have no doubt that when he receives a request from his teacher to carry out some simple act, he will be able to adhere to his decision to inhibit his immediate response to the stimulus of this request, and to put into practice the new "means-whereby."

In spite of this optimistic outlook, however, it is practically certain that the first time the teacher asks him, for instance, to sit down, the pupil will fail to adhere to his decision to inhibit the immediate response to the stimulus of this request, but will instead give consent to the request and sit down in the usual way because it "feels right" to him, with the result that, as his teacher has warned him, he will merely repeat and probably exaggerate his habitual wrong manner of use of himself in sitting down. As a pupil wishing to be helped this is not what he desires; on the contrary, he wants to change and improve his manner of using himself. My observations as a teacher, however, have shown me that with the best possible intentions a pupil is at first incapable of carrying out a decision which runs counter to all his earlier experiences in the use of himself, because the carrying out of the decision would cut him off from ways of reacting which are familiar to him (habit). To begin with, the methods of training and

education in which he is versed have developed in him a habit of end-gaining through a too quick and unthinking response to stimuli, and hence, at the moment when in order to carry out his considered decision he is obliged to depend upon procedures which are unfamiliar to him, his habit of responding too quickly overrides his new decision, and he relapses once again into doing what he has habitually done to gain his end, repeating experiences known to him.

Another incentive to end-gaining on the pupil's part is his desire to gain in a given time the maximum benefit from his lessons irrespective of the conditions to be changed. Unfortunately for him, in view of the nature of his educational training, this very commendable desire causes him to make a special will-to-do effort in his desire at all costs to be "right." But as his "right" is wrong, this merely means a stronger effort in the wrong direction[1] and an exaggeration of his habitual way of "doing" the very things he must get rid of, if he is to gain the improvement he desires. Only time and experience in the working out of the technique will convince him that, where the "means-whereby" are right for the purpose, desired ends will come. They are inevitable. Why then be concerned as to the manner or speed of their coming? We should reserve all thought, energy, and concern for the means whereby we may command the manner of their coming.

According to my experience, although a pupil may believe or assert that he has reasoned out why he should not give consent to a certain act and consequently desires to inhibit his habitual reaction, he is clearly more concerned at the moment with gaining his end (i.e., carrying out his teacher's instructions, hoping to be right and fearing to be wrong) than with the inhibition of his habitual reaction to the teacher's request. He has yet to learn by experience that *trying* to gain his end, *trying* to be right, is the surest way to failure in carrying out his newly made and reasoned decision. He must become convinced by his own

[1] See *The Use of the Self*, p. 57.

experiences that what he feels is right is wrong, and that the idea involved in trying to do better at one time than another is merely a myth, "a dagger of the mind."[1] Time will be required to help him to stop trying to be right and afraid of being wrong; but, given time, he will learn to withhold consent to the giving of the messages which would be his instinctive response to the stimulus to accede to his teacher's request, and so will be able to inhibit his habitual reaction while giving consent to the new messages necessary for bringing about that change in the manner of his general use which will be present as he moves—say, from standing to sitting in a chair.

The length of time needed for bringing the pupil to this point varies in different people, but as soon as the teacher is satisfied that up to this point his pupil has a satisfactory understanding of the theoretical side of his work, he can take him on to further stages. He will continue as before to employ the variations of his teaching art to prevent the pupil from becoming emotionally disturbed, assuring him

[1] To make my point clear I ask the reader to think over the following: Suppose a friend tells you he is going to do his best to-day. Just ask him to tell you in concrete terms what he intends to do that will be different from what he does at any other time, the times when he is not especially intending to do his best. I have tried this for years and the response has always been—first a blank look, then a recovery and some rather weak explanation. Although I have pressed for a plain, straightforward explanation, up till now I have not been given one. How could it be otherwise? People do not know what they do in the use of themselves in their activities. Apropos of this, I recall the account I read in the *Evening Standard* of the taking of slow-motion pictures of four famous golfers making a stroke. According to the account, they were asked if they knew what they did to make a particular stroke. "Yes," came the reply. "Very well, tell me what you do!" They each did so, and notes were made of their statements. When the pictures were taken, it was found that not one of them had done a single thing they claimed they did in making their stroke. In the same journal I once read an account given by one of Mr. W. H. (Bunny) Austin's friends about an experience Austin had had at Wimbledon. Austin had told him that at one stage in the game he was playing so badly he decided not to try to win the set, but that as soon as he had made that decision, he began to play up to his usual form. In consequence he decided that now he would try to win the set after all, and immediately reverted to the indifferent play that had caused him "not to try." It does seem sometimes as if human beings not only like to be fooled by others but are keen on fooling themselves.

again that as he reaches further stages in the procedure of the technique he does not want him, any more than in the earlier stages of his work, to be concerned as to whether he is right or wrong, but merely to go on as before, seeing to it that he inhibits his habitual reaction to any request from his teacher during the lesson.

This accomplished, the teacher will ask the pupil to give the new messages necessary to carrying out the new "means-whereby" required for bringing about that employment of the primary control of the use of himself which is fundamental in reconditioning reflexes. At the same time the teacher will with his hands give the pupil the actual sensory experience of this new employment of the primary control, and thus will be able to help him to maintain the improving manner of use which results from this new experience in making any movement that may be required in the course of the lesson, such as that of moving from standing to sitting in a chair. By this means a real change, however small, will have been made, and it will be found that this is the beginning of a process of reconditioning leading in time to permanent change in use, functioning, and structural conditions. This is necessarily attended by a variety of unexpected experiences, such as a slight and momentary disturbance of equilibrium and some doubt and uncertainty about the success to be gained by unfamiliar means (although from the start of the lessons it is made clear that the responsibility for being "right" is not placed upon the pupil), together with other misgivings arising from a situation in which doing what feels wrong is paradoxically associated with a gradual improvement in the pupil's general use and functioning. In time, however, these difficulties are overcome by experience, as in any other field of learning to do.

The reader will now see that the technique is based upon the inhibition of the habitual wrong use—i.e., the refusal to react to a stimulus in the usual way—and that the principle of *prevention* is strictly adhered to from the beginning. The habitual wrong employment of the primary control of the pupil's use of himself, responsible for his

reaction in performing such acts as sitting in and rising from a chair, is *prevented,* and is gradually superseded by a new and improved manner of use which, by a reconditioning procedure, is associated with new reflex activity.

By steps more or less slow, according to the difficulties to be overcome, the pupil passes from the stage of preventing the repetition of the wrong employment of the primary control of the general use in such acts as sitting or standing to gaining those new experiences of use in which *the proper relativity* of the parts concerned is brought about. By the repetition of these experiences the pupil develops confidence, and whereas at an earlier stage in these experiences he registered doubt and confusion, little by little the new lines of motor and sensory communication are laid down along which he will sooner or later habitually project his messages.

As long as he inhibits the sending of the old messages the old lines of communication are not used, and as he becomes more and more versed in the procedures of the technique the tendency to make use of them decreases, as does his dependence upon his feeling of rightness associated with them. It was this feeling of "rightness" which in the earlier stages made the pupil feel their employment to be a necessity. Meanwhile the continual communication along the new lines goes on, and day by day the tendency to rely on the new means for sending messages, rather than on the old ones, grows apace. The time ultimately comes when the pupil no longer feels any desire to use the old lines of communication; they fall into disuse, and communicating along the new lines at last comes to feel right and is carried out with confidence.

Up to this point it will be understood that all the pupil has been asked to do is to apply his principle to the circumstances of the lesson, but after some time the pupil can begin the inhibition of the wrong use of the primary control in all the simple and other acts of life, for this is largely a matter of that process of remembering which is involved in "thinking in activity"—a new way of living—and when once he has experienced the joy and satisfaction

of this, it is difficult to believe that the old way could be reverted to. The new way of use will have come to feel right while the old way will feel wrong. As we have seen, one of the serious obstacles to be overcome in helping pupils to change their manner of use is that any change from the old wrong use (the known) to the new right use (the unknown) feels wrong to them, and at each stage of change the new improving manner of use has to be experienced for some time before the pupil can feel that it is right and comfortable, and so develop faith and confidence in the employment of it.

Here is the answer to those who work on the principle that if something is wrong with a person's use and functioning, the teacher should tell the pupil as a primary procedure WHAT TO DO to put it right. It can be demonstrated that the one thing we can be certain that such a pupil will not try to do is to employ the right use of himself in carrying out the instructions, for the simple reason that to him the right use would feel wrong. *People don't do what they feel to be wrong when they are trying to be right.* That the myth implied in the belief I am here condemning has obtained credence for so long is proof that we do not really think as often as we *feel* we do. Sorry, but it is only too true!

* * * * *

Inhibition

Different meanings have been given to the word *inhibition*, and this has led to much confusion. According to the report of a conference held in New York last year, by members of scientific and other bodies, with the aim of encouraging unity of thinking[1] it was admitted that, owing to the departmentalization of human knowledge, language difficulties were encountered among those taking part in the discussions because different groups attached different meanings to the same word.

To make clear, therefore, the sense in which I use the

[1] See Appendix H.

word "inhibition" I would refer my readers to my book *Constructive Conscious Control of the Individual* (1923), where I wrote that in the application of my technique the process of inhibition—that is, *the act of refusing to respond* to the primary desire to gain an end—becomes *the act of responding* (volitionary act) to the conscious reasoned desire to employ the means whereby that end may be gained.[1] I have since been interested to learn that, in a pamphlet entitled *The Brain and Its Mechanism* (Cambridge University Press, 1937), Sir Charles Sherrington wrote:—

> I may seem to stress the preoccupation of the brain with muscle. Can we stress too much that preoccupation when any path we trace in the brain leads directly or indirectly to muscle? The brain seems a thoroughfare for nerve action passing on its way to the motor animal. It has been remarked that Life's aim is an act not a thought. To-day the dictum must be modified to admit that often to refrain from an act is no less an act than to commit one, because inhibition is co-equally with excitation a nervous activity.

The carrying out of the procedures in my technique is just this preoccupation of the brain with the thought responsible for the nervous activity involved in the passing on of messages, whether these result in the prevention or in the carrying-out of an act. The preventive messages projected serve to stop off the misdirection associated with harmful habitual use of ourselves in the performance of an act, and herein we have an activity which is primary to any other activity concerned with the act, and by means of which the way is cleared for the projecting of the new directive messages which bring about a new and improved use of ourselves. As long as the brain is preoccupied with the projection of messages which result in bringing about our habitual manner of use, there is little chance of breaking the vicious circle of the associated reflex activity in "doing." What we feel to be right is wrong, and before

[1] See p. 188; also pp. 139 and 140.

this habitual reflex activity can be changed we need to pass through a series of reconditioning experiences which, because they are previously unknown to us, at first feel wrong, and which must be repeated therefore until the unknown becomes the known and feels right and familiar.

The primary procedure in the technique necessary for gaining these experiences is the inhibition, at a given stimulus, of our habitual reflex activity. To succeed in this means education in the fundamental sense, for it calls for a conscious recognition and understanding of all that is concerned with the formation of habit, and of the means whereby habits can be changed. Our reasoning processes are called upon and, as a result, we must not react at once to a given stimulus, for if we do so react, we merely give consent to a projection of the messages which are responsible for our habitual reflex activity, and we thus make change impossible.

Hence as a result of reasoning on these lines we, on the receipt of any stimulus to activity, make the important decision *not to give consent to doing anything* in response, as this "doing" would be due to our projection of the habitual messages which have led us into wrongness. If we keep to this decision, we shall have gained the first experience which will in time lead to the control of our habitual reaction.

By this initial inhibition change becomes possible, and we pass on to consider what should be our next procedure. Primarily our concern must be to find out in what way we are interfering with the right employment of the primary control, and decide to prevent this interference by consciously refusing to project the messages which habitually bring it about. Only secondarily are we interested in the projection of the new messages which will in time lead us indirectly—that is, through a change in the employment of the primary control of our use—to the change we desire in our habitual reflex activity.

In this whole procedure we see the new principle at work, for if we project those messages which hold in check the familiar habitual reaction, and at the same time

project the new messages which give free rein to the motor impulses associated with nervous and muscular energy along unfamiliar lines of communication, we shall be doing what Dewey calls "thinking in activity." As far as we can judge, mankind has not had the experience of thinking in activity where the projection of messages necessary to the employment of the primary control of his use is concerned. In the ordinary way man has just reacted instinctively to any stimulus to activity, whereas in the new plan which I am suggesting the messages, preventive and otherwise, must be consciously projected *in their right sequence* throughout the activity.

I wrote in *Constructive Conscious Control of the Individual:—*

> The projection of continued, conscious orders calls for a broad reasoning attitude so that the subject has not only a clear conception of the orders essential ("means-whereby") for the correct performance of a particular movement, but he can also project these orders in their right relationship one to another, the co-ordinated series of orders resulting in a co-ordinated use of the organism.

In my experience most people, even those who are recognized as unusually brilliant, find this procedure very difficult. Where they chiefly go wrong is in "forgetting to remember" to inhibit, while the end-gaining habit, which claims most of us as victims, causes them constantly in making a movement to overlook or overrun one or the other in the series of messages they have been asked to project.

This habit of running ahead is the stutterer's difficulty, for when he has several words to say, he invariably tries to say the first word with the formation of lips and use of tongue required for saying the word which follows the one he is trying to pronounce. When movement outruns the messages in this way, it means either that the pupil has ceased to project the new messages or that he is "doing" them, relying upon the habitual sensory guidance

which he has found by experience is constantly misleading him.

Inhibition is a human potentiality of the utmost value in any attempt to make changes in the human self, and my experience has convinced me that it is the potentiality most in need of development. I have found that if a pupil can inhibit his habitual reactions even moderately well when faced with unfamiliar procedures, remarkable changes in his use and functioning can be made in a very short time, changes which judged by ordinary results would seem impossible.

The employment of inhibition calls for the exercise of memory and awareness—the former for remembering the procedures involved in the technique and the proper sequence in which they should be used, and the latter in the recognition of what is happening. In the process both potentialities are developed and the scope of the use of both gradually increased. Moreover the experiences thus gained not only help in developing and quickening the recalling and connecting memory, but cultivate what I shall call the motor-sensory-intellectual memory.

My technique is based on inhibition, the inhibition of undesirable, unwanted responses to stimuli, and hence it is primarily a technique for the development of the control of human reaction.

PART III—THE FUNDAMENTAL APPROACH

In any consideration of means which will meet our need in changing habit we cannot too often remind ourselves of the demonstrable truth that the nature of a person's reaction is determined by the nature of his use and functioning.

This can be seen clearly enough for instance in the case of a person who reacts to some stimulus by losing his temper, and who immediately assumes the attitude of body and limbs and the facial expression of a person "spoiling for a fight." The same is true of animals. The dog manifests a similar change in use and functioning when react-

ing to some stimulus which arouses his fighting instinct; the hair on his back is raised, his eyes roll and glare, the lips are contracted to show the teeth, and the angle of his head, attitude of his body, and the particular action of his limbs are all manifestations of his desire to quarrel and fight.

Innumerable examples could be given to show that change in a person's manner of reacting is associated with change in the manner of his use and functioning, and when this change is manifested by loss of temper and readiness to quarrel, the desire and intention to quarrel will persist, until some fresh stimulus is received. If he reacts to this by recovering his composure, he will be seen to return to the manner of use and functioning which is associated with his habitual manner of reacting when undisturbed, or if he reacts in yet a different way, this change will again be reflected in the tell-tale changes in manner of use and functioning associated therewith.

Losing one's temper and the manifestations accompanying this condition amount to loss of control in use and functioning, and it will be observed that in those in whom this tendency to loss of control is habitual there is also the tendency to react too quickly to the stimuli of their environment and the reactions of their fellows, and to be too much at the mercy of "emotional gusts." No matter in what field of activity we are engaged, or whether the stimuli primarily responsible for our particular manner of reacting are labelled "physical," "mental," or what you will, the same human processes in use and functioning are responsible for the manifestations which constitute our habitual manner of reacting to a particular stimulus, or group of stimuli, and are as characteristic of us individually as is our manner of writing, walking, and carrying on our activities generally, and as easily recognizable by those who know us.

We speak of people being in a good or bad mood, and all of us at some time or other have met people who have quite unintentionally irritated us at first sight by some manner of speaking, general behaviour and so on. To the

observer all such peculiarities and changes of mood are accompanied by changes in postural attitudes, facial expression, movements of hands and arms, in fact by such movements of parts as we are apt to employ in attempting to express what we feel.

I was with a number of people one evening listening to a broadcast on an important matter given by a well-known man who is recognized as an authority on his subject. In the course of a few minutes one of the listeners exclaimed, "That man irritates me," and it soon became evident that these words conveyed only a mild impression of the nature of his actual reaction.

Later on I had the opportunity to discuss the broadcast with him when he told me that it was the voice and articulation of the speaker that had so irritated him, and this in spite of his deep interest in the subject of the broadcast.

Here then was a man whom I knew to be of more than ordinary intelligence finding it impossible to listen with composure to a talk on a matter of vital importance to himself and others, because of the feeling of irritation aroused in him by certain vocal and other peculiarities in the speaker.

The point of special interest to me in this incident was that my friend's manner of use of himself was so bad that it could well account for the way he reacted to the speaker, and hence I was not surprised by the manner of his reaction. It was just another reminder that probably the greatest problem that is still unsolved in the education and development of mankind is the problem of the control of human reaction, because of the close interdependence between the nature of this control and the nature of the associated manner of use and functioning of the self.

It may be of help here in view of what is to follow if I recapitulate certain points which, as some of my readers may remember, I have already dealt with in my earlier books:

1. *That man tends to become more and more a confirmed end-gainer, one who too often insists on gaining his end by*

any means, even at the risk of disaster, rather than take time to consider means whereby the end can be gained so as to ensure the best possible result.

2. *That man has stumbled along the path which has led by gradual changes to modern civilization from an environment which had probably remained static for thousands of years, and in which all the requirements of his mode of life, as of that of his forebears for countless generations, could be met by an instinctive guidance and control of himself in all of his activities, and by a slowly developing self-adaptation to his environment arrived at through experiences of failure and success. From the outset of civilized life, therefore, man has been handicapped because, by the very nature of the case, his experience in adapting himself to the needs of increasingly rapid environmental changes has been, and still is, inadequate. Furthermore he has not gained that knowledge of the use and functioning of the self which is essential to the maintenance of well-being in an environment where instinctive (automatic) guidance has proved inadequate and too often actually misleading, and where, therefore, an ever-increasing demand is made upon him for quick adaptation to new changes. For want of this knowledge the success of the civilizing plan itself, and of the measures man has taken for the well-being of himself and others, is now in jeopardy. Faced with the unfamiliar, his quick reaction too often leads to results both harmful and unintentional because of his reliance upon instincts which have long since survived their usefulness. At the same time he is fearful of change by reason of his limited experience, his preconceived ideas and habits of thought and action, legacies from an earlier and more static environment, adaptation to which made comparatively small demands upon him. This is true of his reaction to changes within himself, especially such as might adversely affect his position in the outside world, with what serious results will be obvious when we consider that without change, that is, without coming into contact with the unfamiliar (the unknown), we cannot make those changes in ourselves, and through ourselves in the outside world, which are essential to fundamental growth and development in an advancing civilization.*

3. *That this problem of change is made more difficult of solution because man's sensory appreciation of what is happening within himself has gradually become unreliable, and is now demonstrably so, whilst his standard of awareness and observation is being gradually lowered.*[1]

In consequence of the unreliability of his sensory impressions, man's interpretation of his own and other people's experience in living is too often faulty and illusive, and he is liable to arrive at false conclusions, and to form erroneous judgments, especially where the motives for his own and other people's behaviour and general activities are concerned. These tendencies, combined with that of a too quick and unthinking reaction on his part due to his becoming a confirmed end-gainer, must continue to block his way to success in his attempts to make changes, and to control his reactions. His success in developing his potentialities to a stage where he is able to translate into practice the ideals of good will and peace which he now sees "through a glass darkly," will depend upon whether or not he can reach a plane of living where he substitutes conscious guidance and control of the use of himself for that instinctive (automatic) self-guidance and control that met his needs in primitive life.

The need for the fundamental change in man's guidance and control of himself that I am here postulating has never, so far as I have been able to discover, been recognized until now by those responsible for methods of training and education; indeed, even among so-called "new" methods I have not found any yet that, in this fundamental respect, differ from those they were intended to supersede.

The advocates of these new plans in every field of reform still seem to think it reasonable to assume that people will be able to make the changes they consider necessary for putting some new ideal into practice, or for substituting new procedures for those which they had

[1] I am aware that this does not always apply in activities where the tendency is towards specialism, and where the opportunity for the exercise of these potentialities is narrowed; but even in these cases, so far as my enquiries and observation go, the standard is too often lowered outside the particular specialist sphere.

previously employed for the gaining of some end, without changing the nature of the guidance and control of the use of the self, the instrument they must employ for carrying out these new procedures.

This misconception comes from failure to recognize that in the majority of people to-day misdirection has crept into the automatic working of guidance and control of the use of the self, and that it is necessary, as a preliminary to making changes, to restore reliable guidance and control, and to this end to employ a technique by means of which we can bring about that manner of the employment of the primary control which has *an integrating influence* upon the mechanisms of the organism.

And as it can justly be presumed that the automatic working of the human organism was satisfactory in a more or less static environment, but nevertheless went wrong as the demand upon man for quicker adaptation to environment increased, there is no evidence to support the assumption that the original reliability of guidance and control of the automatic working of the organism can be restored by specific means, or that, even if this were possible, this working would be less liable to interference than at any previous period of man's history. No matter in what field of activity it is desired to bring about changes, whether so-called physical, mental, or spiritual, the carrying out of the task demands from us a decision to make that fundamental change in the guidance and control of the working of the mechanisms which is inseparable from change in the manner of use of the self, and unless this is taken into account by those who may be responsible in the future for ideals and plans for individual and social reform, they are not justified in believing that these will prove more beneficial than those which have been found wanting in the past.

To act successfully along new lines of thought means (even after the best "means-whereby" have been selected) the carrying out of a decision by an unfamiliar use of the self against the impulse to carry it out by the habitual use that feels right, that is, not only in the face of our mental

conception of HOW that decision should be carried out, but also in the face of real discomfort and "feeling wrong" in carrying it out. For this reason the person who has hitherto depended in all his "doing" upon an instinctive (automatic) use of himself finds it difficult [1] to adhere to a decision to employ procedures which involve a guidance and control in the use of himself which is not in line with any previous experience either in thought or in action.

The new "means-whereby" are unfamiliar, and any attempt on his part to carry them out will be associated with experiences which feel wrong, so that in order to be right in carrying them out, he will have to "do" what he feels wrong—obviously an experience which will be entirely new to him. Hence when the moment comes that he is called upon to employ the new means by a new and unfamiliar use of himself, he finds that in spite of his intellectual acceptance of them as best for his purpose, he is without the necessary sensory confidence to carry out his task, a confidence which would be his if he were asked to carry out "means-whereby" that were familiar to him. Judging by past experience he feels that he is being called upon to take a risk that he should not take, although he is quite willing to take an ordinary risk in familiar situations, as for instance the risk of falling in learning to skate or ride a bicycle. Going to work in his old trial-and-error way, he is willing to take early risks, although in doing so he has always employed a wrong use of himself, but he is unwilling to run the early risks in this new way of learning, although he has decided with his teacher that this new way will lead to an improving use of himself.

This is a unique situation, and one that man, as far as I am aware, has not been previously called upon to face under any method of education, training, or scheme of

[1] This difficulty is continually overlooked by those who pin their faith to the statement of ideological theories, however eloquently put, for converting others to a new point of view, or who put forth plans of reform to help others to make the necessary changes in their reaction in living which correspond to the new ideal they are putting forward.

living, and this situation will persist as the greatest stumbling-block in the way of making fundamental change until we employ means which provide opportunity for gaining the experiences necessary for passing from the familiar (wrong) to the unfamiliar (right) guidance and control of the psycho-physical organism, the only means which we are justified in concluding make provision for change in the fundamental sense.

A teaching experience of over forty years enables me to affirm that with all the help that can be given them by a teacher experienced in the employment of a technique that provides for change in this fundamental sense, most people are unable to carry out decisions successfully when this implies gaining an end by an unaccustomed use of the self, even in such simple acts as moving an arm, lifting a leg, or rising from or sitting down in a chair.

This gives us some idea of the conflicting influences at work when habit is associated with wrong conditions, and it is because this has not been recognized that there is so much confusion and misunderstanding in regard to what is fundamental to success in the carrying out of decisons to make changes. It is also necessary to remember, when considering methods for the changing of thought and action and selecting the means whereby this change can be put into practice, that no one can be said to have really accepted a new idea or approved of the "means-whereby" of putting it into practice, until he has actually had the experience himself of employing the procedures necessary for doing this.

According to the conception of change most generally held in the past and which still persists to-day, "creative power," "willing," and "wishing," as expressed in the words "I will" or "I will not," are means whereby change can be brought about, and those who favour methods based on this conception employ them as an aid to their accomplishment in all fields of activity. In doing this they depend upon instinctive (automatic) guidance and control of themselves on the trial-and-error plan, without giving consideration to the question of HOW to "do" the "doing"

that is inseparable from the practice of "wishing" and "willing."

It is true that more or less success for this method is claimed by those who use it, but when considering how far such claims are justified, it is essential to remember that it is both the psycho-physical experiences of the individual in use and functioning, and those that he gains when he is applying himself as an instrument in his activities in the outside world, which combine to make up his experience in living, and it is this sum total of experience which determines the nature and value of his judgment. Those who claim personal success for their methods must be able to prove that their experience is sufficiently comprehensive to provide a trustworthy basis for sound judgment, before they can expect their judgment to be accepted at face value. All judgment is based upon experience, and a person with limited experience is hardly qualified to judge the reactions of a person whose experiences have been widened by exploring new fields. Man still relies upon an undue proportion of limited and deceptive experiences as a basis for judgment in too many spheres of activity and in regard to too many problems; and this can account in a great measure for the position in which he finds himself to-day, a position which would seem to show that he has long since been in need of something more than "wishing" or "willing" on the trial-and-error plan, if he is ever to meet successfully the added demands made upon him by changes in living, let alone those that are likely to be made upon him in the future. He has been "wishing" for continued progress, development, and freedom of thought and action, "willing" himself to this end, at one time concentrating upon "physical," at another on "mental" means, and also on "spiritual" means.

But as time goes on his attempts to solve his present-day problems by these means have only served to show their limitations,[1] and he is becoming increasingly aware not only of disaster and confusion outside himself, but also of certain growing disabilities *within himself*, in par-

[1] And never more so than at the present moment (June, 1940).

ticular of a lowered standard of sensory appreciation and general functioning, and uncertainty in making judgments.

This should have warned him that his means have not, and are not meeting his needs; but notwithstanding he still retains confidence in them. His only idea of "cure" for his disabilities is to concentrate still harder on "wishing" and "willing" on the same old plan as before, and therefore the only kind of change he makes is that which comes from ceasing to concentrate on one point in order to concentrate on another, as when, for instance, he claims to be depending more upon "spiritual" than upon "mental," or more upon "mental" than upon "physical" means and so forth. Therefore no matter how much people may differ as to the merits of any particular change in his reaction that he may bring about by his concentrating on his will-to-do decision, there can be no divergence of opinion with regard to the fact that not only during, but after the making of the change by this method, he will not have brought about any change in that manner of use of himself which has hitherto tended to lower the standard of his general functioning; and the resultant harmful influence of this will become intensified through any special effort he makes, and remain a retarding and disintegrating *constant*, associated with conditions of disorder and complication which are bound to lead sooner or later to other harmful habits of use, and gradually to the development of organic trouble and disease.

And when we remember that any new change in his reaction is the result of his "doing" in carrying out his will-to-do plan, and that the nature of this "doing" depends upon his particular manner of use, which in its turn determines the nature of his changed reaction, it must surely be clear that change which results from decisions carried out by the direct method of "doing" guided by instinctive (automatic) control can only be of a palliative nature, and will almost certainly be associated with the development of undesired by-products.

It has been found, indeed, that attempts on these lines to carry out decisions necessary for changing the control

of some specific reaction are accompanied by self-repression, even when according to individual judgment the attempts are considered to have proved successful. Now, however, that repression has been recognized on all sides as harmful, its presence as a by-product of such attempts is evidence of failure in the general sense, despite the fact that by means of these attempts some specific control of reaction may have been gained in special instances.

We will now go on to consider the case of a man who decides to try to change his reaction in such a way as to be able to control some habit or defect which troubles him, without the accompaniment of any such harmful by-product as repression.

For our purpose it matters not what the habit or defect may be, whether a tendency to loss of temper, drink, falsehood, drug addiction, or to other harmful manifestations, so long as he appreciates the need for change and really desires to gain such control of his reaction as will enable him to effect it.

His problem is to resist the temptation to "do" whenever his "doing" can be shown to be causing his trouble, and this calls for the ability to carry out a decision against great odds. But when it has been demonstrated to him that any specific "doing," such as indulging in a particular habit, is always associated with a particular manner of use of himself, he will appreciate that it is futile to try to control this specific "doing" (habit) *directly*, because this would mean leaving unchanged the manner of use and conditions of functioning associated with this "doing." He does not, therefore, try to suppress his desire to indulge in this habit by sheer force of his will-to-do, but instead learns to approach his problem *indirectly* by inhibiting his habitual manner of use in reacting to the old stimulus. Thus he gives himself the opportunity of making a new decision which calls for new and unfamiliar psychophysical experiences in the carrying out of new and unfamiliar procedures, and if he adheres to this decision, and employs the procedures which should be employed for bringing about the required change and improvement in

his manner of use, the new reaction he desires is made possible, and the by-product, repression, will not be present.

The training that this presupposes has already been described, and has proved to be the means of meeting the problem of making and carrying out decisions such as confront those who are trying to improve conditions of use and raise the standard of functioning in the psychophysical self, the forerunner of all fundamental change. The experience involved enables a person in time to carry out decisions which are at variance with his habitual use of himself, and he learns to consciously guide and control his activity in conformity with the new concept he has decided to adopt as best for his purpose, although the sensory experiences associated with the consistent carrying-out of these new means, being unfamiliar, "feel wrong," the crux of the whole matter.[1]

Aldous Huxley, writing from personal experience in his remarkable and enlightening book, *Ends and Means*, speaks of my technique as follows: ". . . no verbal description can do justice to a technique which involves the changing . . . of an individual's sensory experiences. One cannot describe the experience of seeing the colour, red. Similarly one cannot describe the much more complex experience of improved physical co-ordination. A verbal description would mean something only to a person who had actually had the experience described; to the mal-co-ordinated person, the same words would mean something quite different. Inevitably, he would interpret them in terms of his own sensory experiences, which are those of a mal-co-ordinated person. Complete understanding of the system can come only with the practice of it." And again, ". . . a technique . . . working (by a kind of organic analogy) to inhibit undesirable impulses and irrelevance on the emotional and intellectual levels respectively. We cannot ask more from any system of physical education; nor, if we seriously desire to alter

[1] This applies equally with regard to our reaction in other spheres of activity when we are faced with unfamiliar situations.

human beings in a desirable direction, can we ask any less."[1] Finally, he points out that it "is valuable, among other reasons, as a means for increasing conscious control of the body, and, in this way, raising a human being from a condition of physical unawareness to a state of physical self-consciousness and self-control. Such physical self-awareness and self-control leads to, and to some extent is actually a form of, mental and moral self-awareness and self-control."[2]

When all that is important has been said in favour of good thoughts, ideas, systems, and methods advanced in theoretical and conceptional form only for helping mankind to change and improve the present deplorable world conditions, and to ensure an era of peace and good will for all men, the real problem—the practical application of the concepts—still remains unsolved. We are by nature creatures of impulse dominated by habitual reaction, and will remain so, more or less, so long as we are content to struggle on, depending upon instinctive guidance and control of our manner of use of ourselves in adapting ourselves to quick environmental changes, economic, social, educational, etc. No matter what method of plan, system of thought, or ideas may finally be chosen as the best for dealing with man's shortcomings and difficulties in making changes, in the last analysis, success *will depend upon the individual's capacity to carry out a decision to gain an end by the conscious employment of new "means-whereby," involving unfamiliar psycho-physical experiences which feel wrong, discomfort frequently amounting to irritation, and a sense of unsteadiness in equilibrium.*

* * * * *

WITHHOLDING ACTION

or

NON-DOING

In connexion with the foregoing discussion on habit the following considerations may be of interest; for although

[1] In *Ends and Means* (Chatto & Windus), Chapter xii, "Education," pp. 223-4.

[2] In *Ends and Means*, Chapter xv, "Ethics," p. 326.

they may appear to emphasize unduly what has already been said, they relate to a question which in these days calls for special consideration. Everyone is familiar with the words "We have left undone those things which we ought to have done; and we have done those things which we ought not to have done; and there is no health in us."

In my work we are concerned primarily with non-doing in the fundamental sense of what we should *not do* in the use of ourselves in our daily activities; in other words, with preventing that habitual misuse of the psycho-physical mechanisms which renders these activities a constant source of harm to the organism.

During recent years a steadily increasing number of people have come to appreciate that the end-gaining and unreasoned procedures inherent in our present plan of civilization have had harmful effects, resulting in an interference with our manner of use and a gradual lowering in the standard of our general functioning; and realizing that the farther civilization advances on these lines the greater will be the increase in this interference, they are learning to employ means whereby they will be enabled to prevent such interference with their manner of use of themselves, and so ensure that the standard of their general functioning will be gradually raised instead of lowered in the course of their activities.

In this they are making the greatest contribution the self can make to the self in the direction of restoring or maintaining psycho-physical well-being.

But although they may have become convinced that it is *what they themselves are doing* that is responsible for the wrong manner of use they are anxious to change, and that as a first step in acting on this conviction they must learn HOW to stop this "doing," there is little to show that, in learning, their intellectual grasp of the theory furnishes them with the assistance they need for putting it into practice. Nor does it help them to appreciate that in selecting the necessary practical procedures for changing their manner of use, non-doing (in the primary sense of preventing themselves from doing those things which lead to a repetition of their wrong habitual manner of use) is not only of the greatest practical value, but also essential to their purpose.

When to this we add: (1) that they find great difficulty at first in inhibiting their too prompt reaction to a given stimu-

lus, which means that they immediately repeat their wrong habitual manner of use, and (2) that in this too prompt reaction they are guided in their manner of use by unreliable sensory appreciation, the reader can form some idea of what is necessary to the process of changing manner of use, irrepective of the nature of the stimulus and the effect of the new associated experiences at any given moment.

Experience has shown that a person who has had great difficulty in putting into practice the idea of *non-doing* in his attempts to make changes in his own manner of use, will so often be found to be one who consistently advocates the idea of non-doing as practicable for others, as, for instance, when he tries to persuade someone else not to over-indulge in drinking, eating, smoking, or in any habit he considers harmful. His idea of non-doing leads him to advocate the employment of *direct* "means-whereby" of preventing certain misdirected actions ("doing") that can be observed in a person's behaviour (manner of use). In the application of our technique, on the other hand, the idea of non-doing leads to the employment of *indirect* "means-whereby" of preventing such misdirection. It is the first step in the reconditioning essential to the making of those fundamental changes in functioning which *in process* bring about the desired specific result, but unaccompanied by harmful by-products such as self-suppression.

It is a curious anomaly that acceptance of the theory and practice of non-doing should be comparatively easy in attempts to help the self in external activities, but so difficult in similar attempts connected with internal activities. Such help involves a form of non-doing which must not be confused with passivity, and which is fundamental because it prevents the self from doing itself harm by misdirection of energy and uncontrolled reaction; it is an act of inhibition which comes into play when, for instance, in response to a given stimulus, we refuse to give consent to certain activity, and thus prevent ourselves from sending those messages which would ordinarily bring about the habitual reaction resulting in the "doing" within the self of what we no longer wish to "do." It follows that the putting into practice of the theory of non-doing where the manner of use of the self is concerned is a fundamental experience, and is the most valuable experience to be gained by those who wish to learn to prevent them-

selves from harmful "doing" in carrying out activities outside themselves. Such prevention is the form of non-doing which is essential to the changing of bad habits and to the control of human reaction. We have all experienced the difficulty of changing even the simplest habits, and are aware of the comparatively small number of people who succeed in changing what they know to be bad habits, however hard they try. The failure in most cases is due to the constant ill effect of the wrong manner of use upon general functioning, which makes for misdirection of our energies, and thus causes loss of confidence, disappointment, and often distress. By means of the procedures herein described,[1] the constant effect of manner of use upon general functioning will be a more or less good one in accordance with the skill of the teacher and the attitude of the pupil, and even the most difficult cases can be helped to success by the employment of procedures which make for the building up of confidence not only in the pupil's attempts to "do," but—more important still—in his attempts to prevent himself from doing things he knows he should not do, and does not desire to do, first, with regard to his own manner of using himself, and then in applying this use through himself to his activities in the outside world. (Non-doing in the fullest sense.)

[1] Experience of this kind has been gained at 16 Ashley Place, London, since 1904, with pupils ranging in age from two and a half to over fifteen years, and later at the F. Matthias Alexander Trust Fund School at Penhill, Kent, England, with children and young people up to sixteen years of age, and the results confirm what I have written here.

CHAPTER VI

PHYSIOLOGY AND PHYSIOLOGISTS

IT has been suggested to me by a friend that it is important that I should try to get what he called "a physiological explanation for the working of my technique." This interested me so much that I asked him why he considered this of importance. He replied, "Because it would convince medical and scientific men of the soundness of your technique, and enable people to learn to make use of it more easily and quickly."

I pointed out that quite a number of medical and a few scientific men had become convinced of its soundness after taking lessons and reading my books, while nineteen medical men had put their names to the letter which is reproduced in Chapter II. Hence I considered that I was justified in concluding that what is necessary to bring conviction as to the soundness of my technique is now available.

I then went on to say that I could not understand how he had come to believe that a "physiological explanation" of the working of my technique could make its acquisition easier or speedier for pupil or teacher, and that a study of my books should have made this clear to him. For myself I told him I had yet to meet a physiologist or anatomist whose use of himself could be described as anything but harmful, and for that reason I had long since decided that a knowledge of anatomy or physiology or both does not, and cannot, help a person to rid himself of a harmful manner of use, or indeed to know whether someone else's manner of use is harmful or the reverse.

Apropos of this I remember that the first medical man who gave me valuable support advised me to study anatomy and physiology as an aid to the experimentation

I was then engaged in. He interested two of his friends in my ideas and actually persuaded them that it would be worth their while to give me lessons. One was a professor of anatomy, the other of physiology. A meeting was arranged and I received a kindly welcome from the two scientists, but it came as rather a shock to me to observe how badly they were using themselves. Indeed this struck me as most disquieting in men who were so deeply versed in knowledge of physiology and anatomy, the very knowledge that my friend thought would be of value to me in my field of work. I thought the matter over and came to the conclusion that as their knowledge had not brought them to a recognition of the value of a proper use of themselves (let alone the understanding of how to gain such use for their own benefit), it would be a waste of time at the stage I had reached in my career to study subjects which, as they had not been a help to them, seemed hardly likely to be a help to me in my search for a means whereby I could improve my own use and that of others.

I pointed this out to my friend, and he agreed with my decision. No doubt the knowledge of physiology and anatomy that these two men possessed was of great value to surgeons and others, but I was concerned with a technique for dealing with the working of the living human organism as a whole, which called for a knowledge of the so-called mental (psychological) and physical (physiological and anatomical) working of the human organism as an indivisible unity.

For over forty-five years my technique has been seen in operation, and it can be seen to-day by anyone who wishes it. Throughout these years I have been engaged in demonstrating its soundness by the continued employment of experimentally established procedures which are described in "Evolution of a Technique."[1] This being so, I may claim that I am meeting the demands for proof in exactly the same way as an inventor or scientific engineer who points to his machine and shows that it

[1] *The Use of the Self*, Chapter i.

works. There are people who will ask for scientific proof on orthodox lines, although such proof has in the past so often come to be recognized as untrustworthy and productive of error. Indeed, it would not be unreasonable to contend that, in the matter of orthodox scientific proof, the initial step should be to demonstrate that the means whereby scientific proof is established are thoroughly sound. The physiological side of my technique has been the subject of friendly discussion between medical men and physiologists, and I am not aware of any physiological findings having been advanced which are at variance with any of its procedures.

Unity versus Separation

The original conception behind the acquisition of the knowledge called physiology was a very narrow one, and those concerned with it became obsessed with end-gaining methods which they believed would ensure for their work in this field the title of "an exact science." The study of physiology as such implies a complete acceptance of the principle of separation in the working of the organism, and this serves to explain why the experiences of the physiologist during the pursuance of his studies have not led him to see that much more than an understanding of the functions of muscles *as such* is necessary, if his fellow-men are to be able to benefit by his findings in their daily activities, or in the field of prevention and "cure." In principle this applies equally to the medical man who applies his knowledge of physiology in diagnosis. In order to meet the need for a full diagnosis and to give adequate treatment, particularly in the field of prevention, the doctor should be versed in the knowledge which Dr. Andrew Murdoch calls "clinical physiology."[1]

Those who have established physiological data after observing the working of the human mechanisms in living subjects had not the knowledge which could have en-

[1] See Appendix B for excerpts from *The Function of the Sub-Occipital Muscles; The Key to Posture, Use, and Functioning*, by A. Murdoch, M.B., C.M.

abled them to assess either the influence of wrong employment of the primary control upon the muscle action, or of the manner of use upon the general functioning of the subjects they were observing, or of the effect of stimuli upon the latter or upon their own reaction during their observations. This would account for the serious errors and misleading information to be found in authoritative works on physiology.

When my book *Constructive Conscious Control of the Individual* was published, I was criticized adversely because of my insistence on the observance of the principle of unity in the study of the working of the human organism, if that study were to yield the best practical results. The subject-matter of my last book, *The Use of the Self*, shows that I had a practical foundation for my theoretical conclusions. My life-work has been one of dealing with practical procedures based on the principle of unity and with the associated theoretical conclusions which flowed from them. There has recently been a more general advocacy of the theory of unity in the working of the human organism, but this does not mean that the principle has gone beyond theory, for, to quote Dr. P. B. Ballard, M.A., when referring to my technique, "It is in fact that education of the 'whole man' about which so much has been said of late and so little has been done."

Separation—a Limiting Concept

The physiologist may know the names of the muscles and the particular function of every one of them, but in the matter of employing them to the best advantage in a unified working of the human organism in daily life, this knowledge does not help us very much. The reason is that the way of employing oneself in activity is a matter of the manner of reaction, and the influence of this on the subject being observed is not taken into account by the student of physiology, for reaction means much more than muscle activity in any attempt to discover what constitutes a "normal working of the postural mechanisms."

It calls for the unity in action of the psycho-physical processes in

(1) conceiving what is required or desired to be done; and in

(2) withholding or giving consent to doing it;

in other words, it means either refraining from, or giving consent to, sending the messages to the muscles to be employed in accordance with the subject's manner of employing them, this in turn being determined by his manner of employing the primary control.

As can be demonstrated, most people send messages which initiate overaction of certain groups of muscles, and too often bring into action muscles which should not be brought into action at one and the same time, all indications of *misdirection* arising from that faulty sensory guidance and control which is so common in people to-day.

May it not be that the concept of separation which led to the study of the organism in parts—as in anatomy, physiology, and psychology—is responsible for the failure of the work in these fields to discover the existence of a primary control of the organism, or to recognize the influence of use upon functioning in its fullest sense?

Normality and Complexity

In view of the above, the following admission made by an eminent professor of physiology in a letter written to a medical friend is interesting:—

> The underlying basis in anatomy and physiology is a complex business, and personally I am not able to offer a criticism of the theory of the *normal* working of the postural mechanisms.

If I understand this statement aright, it is a significant admission when viewed in the light of the value now placed on the body of knowledge classed under physiology and anatomy, upon which, for instance, the orthopædic surgeon depends for his diagnosis and subsequent treatment; for the statement implies that his knowledge does

not include an understanding of the "theory of the normal working of the postural mechanisms."

Is not this because the method of experimentation of those who have played their part in the accumulation of anatomical and physiological knowledge has been based upon the principle of separation? They obviously assumed that for their purpose they must *separate* the human psycho-physical organism into parts, and that when they had finished their experimentation they could use the findings that resulted as premises from which to make reliable deductions as to the nature of the working of the mechanisms of the organism *as a whole.*

The separation of the organism into parts by the anatomists and the physiologists is very significant, because it has prevented them from recognizing the importance of trying to gain a knowledge of the normal as well as the abnormal working of the postural mechanisms. Had they done this they would have seen that the psycho-physical controlling part is inseparable from the working of the other parts, and is as responsible for the misdirected use of specific muscles and tendons or groups of muscles as it is for that co-ordinated working of the postural mechanisms as a whole necessary to the normal use of these mechanisms.

This demands a recognition of the existence of a central (primary) control which influences indirectly the manner of the working of the postural mechanisms, both in the person enjoying satisfactory use as well as in those who do not. This influence varies for good or ill according to the trustworthiness or otherwise of the motor-sensory controlling and co-ordinating functioning of the mechanisms in all activity. Unfortunately, the influence of misdirection of the central (primary) control upon the working of the psycho-physical mechanisms has not been recognized, and therefore there has not been due recognition of the harmful influence of this misdirection upon the working of the mechanisms responsible for the normal position at a given time of the head in relation to the neck, and of the head and neck in relation to the torso,

etc., upon which the integrated (normal) working of the postural mechanisms depends. Furthermore, in this whole matter of the employment of the central (primary) control the work done by the anatomists and physiologists has not been comprehensive enough to enable them to gain the practical experience necessary for deciding

(1) when the central control of the postural mechanisms is working normally or abnormally, so that they could estimate the influence of this control upon the postural mechanisms;

(2) what constitutes a normal or abnormal employment of the central (primary) control relative to an integrated use of the psycho-physical mechanisms as a whole, and consequently,

(3) what constitutes normal or abnormal working of the postural mechanisms.

I have already pointed out that the opportunity for acquiring the knowledge implicit in the above is not given by orthodox medical training. Consequently, the body of knowledge hitherto known as physiology cannot be said to constitute a "clinical physiology of the human being." Physiology, it is true, does indicate the function of particular muscles, say of the inner or outer intercostal muscles, *but it does not and cannot indicate the means whereby these muscles are operated relatively to the individual's use of his mechanisms as an indivisible unity, so as to ensure that integrated working of the organism which we always find associated with the standard of functioning present in a person in whom the way of employing the primary control is a constant influence for good.*

Hence, in attempting to solve their problems, the anatomists and physiologists put their faith in the comparatively limited knowledge to be gained from a study of the nature and relative position of the bony structures and the specific working of the muscles, tendons, and the like, which are only the means of motivating the postural mechanisms.

My experience as a teacher of the technique is derived

from demonstrating daily to every one of my pupils that there is a primary control of the use of the mechanisms of the self, and that in taking full advantage of the influence for good in correctly employing this primary control we hold the key to the bringing about of the "normal working of the postural mechanisms" as a whole. Furthermore, the gradual influence for good exerted by the correct employment of the primary control on the general functioning throughout the organism can be readily appreciated by the least attentive observer, and orthodox tests of such functioning have never failed to verify the observer's findings.

Those who laid the foundations of our present knowledge of physiology and anatomy were ignorant of the existence of this primary control. This no doubt accounts in great measure for their conception of what was necessary to a study of physiology, and of the "means-whereby" resulting from this conception upon which they and their disciples were content to depend in "their quest for certainty." Some twenty-eight years after I had discovered this control and employed it in a technique the late Rudolph Magnus announced his discovery of it and its function, and Sir Charles Sherrington referred to this announcement in his Presidential Address to the Royal Society.

Turning again to the statement of the physiologist quoted at the beginning of this section, where he writes that "the underlying basis of anatomy and physiology is a complex business," I would point out that where the employment of the use of the mechanisms is satisfactory, complexity in the working of these mechanisms presents no difficulty. I contend that this would apply equally to the physiologist's inquiries and experimentation if he had had a theoretical and practical knowledge of the use of the primary control of the mechanisms he is concerned with. It is only when the use of the mechanisms is misdirected, so that there is interference with the employment of the primary control, that the working of the complex mechanisms becomes complicated and gives rise to

difficulties, just as it is the complications in a therapeutic case that increase the difficulties in medical diagnosis and treatment. Small wonder, when we consider that for the reasons already given, the diagnosis upon which the treatment is based cannot be complete.

The ability to estimate the influence of the primary control for good or ill upon the working of the mechanisms in the use of ourselves would enable the diagnostician to recognize the complications due to the misdirection of this use, and to employ means whereby complicated conditions may be changed and gradually become less and less complicated, although the working of the mechanisms would still be complex.

It has not surprised me that physiologists, anatomists, physical culturists, and others should not have troubled to examine the facts concerning my discovery of a primary control of manner of use of the self even after I had demonstrated its existence in practical application, for, after all, I am an outsider. But what has surprised me is that the findings of an eminent "insider," the late Rudolph Magnus, should not have aroused sufficient interest in the fields of physiology and medicine to lead to a "re-orientation of the viewpoint"[1] towards the study of physiology, not only in the interests of medical men and physiologists themselves, but also for the sake of those who can benefit by their work, especially as Magnus's findings were the result of the orthodox experimentation to which they are all pledged.

> To take an illustration, Mackenzie showed and proved clinically the disassociated action of auricles and ventricles in fibrillation, and the structural basis of this was shown much later.

This quotation from the physiologist's letter touches a matter of great interest. It is not for me to say whether from our standpoint this is a fair illustration or not, but I do wish to point out, however, that the disassociated action of the auricles and ventricles which Mackenzie

[1] See Appendix C for excerpts from *Re-orientation of the Viewpoint upon the Study of Anatomy*, Mungo Douglas, M.B. (1937).

observed was not really disassociated, any more than any other function can be disassociated from the indirect influence of the use of the primary control. So far as I can judge, Mackenzie was unaware of the existence of a primary control, and of its influence upon the working of the mechanisms of the organism functioning as an indivisible unity. Consequently, he is not likely to have been aware of the nature of its influence upon the functioning of the auricles and ventricles in the living human being. If I am right in this belief, and I should welcome proof from Mackenzie's writings if I am wrong, the theory of this disassociation in action which Mackenzie worked out from his experimentation and findings is open to doubt, because the data arising from his experimentation and findings cannot be considered other than incomplete.

Another quotation from the physiologist's letter is as follows :—

> I wonder if you could not get together a body of clinical observations, showing the disorders, on the basis of Alexander's views, and the results of his treatment? It would provide a definite problem for anatomists and physiologists to work upon.

What I have already written has a distinct bearing upon this point. If the reader will glance once more at the above quotation, and read it in the light of what I have written about separation and the experimentation which I submit has led to a sound theory of the "normal working of the postural mechanisms," he will perceive that the physiologist, in spite of his admissions in the several extracts that I have quoted, was still under the delusion that the clinical and physiological problems he refers to could be solved in the way he suggests. Curious, is it not, that failure or comparative failure to solve important problems in a given sphere has not led physiologists to suspect that in making the deductions upon which they based the means employed for gaining their ends they had overlooked essential premises? A re-examination

on these lines to-day would surely lead them to admit the existence of the primary control, and that this is the fundamental premiss in any deduction on which to base the solving of their problems. All that would then be necessary would be for them to gain the experience of its employment and comprehend the nature of its influence upon use and functioning by observing their own manner of use and that of others. In this way they would acquire important knowledge which cannot be gained in any other way.[1] In such a case I would invite them to my rooms to apply any tests they suggest, when they would very soon be in a position to set down in black and white the very knowledge they have been, and still are, searching for; and I submit that a key to the practical solution of this problem is to be found in the subject-matter of *The Use of the Self*, because the results there described came about in the process of employing my technique.

* * * * *

Unity and Cell Functioning

As bearing upon unity, it may be of value and interest to restate here accepted facts concerned with the unity of activity in cell-functioning involved in the functioning of the sensory mechanisms. The sensory mechanism receives an impression by means of the *cell receptors*, and this impression is a *stimulus* to the *excitors* resulting in a *reaction* in the form of the *production of energy*.

The undue and harmful distribution and misdirection of *energy* for a given need can be prevented by the *inhibitor*, and in such case the energy required will be directed to the proper destination by the *conductor*.

It therefore follows that the standard of receptor, excitor, conductor, and inhibitor functioning must not be

[1] As John Dewey wrote in his Introduction to my book *Constructive Concious Control of the Individual*, Introduction, p. xxx: "With respect to distinctively human conduct, no one, before Mr. Alexander, has even considered just what kind of sensory observation is needed in order to test and work out theoretical principles. Much less have thinkers in this field ever evolved a technique for bringing the requisite sensory material under definite and usable control."

lowered if the psycho-physical condition associated with the well-being of the individual is to be maintained.

If one studies closely the process involved in the generating and conducting of energy as set forth above, it will be evident that it becomes operative through the receipt of sensory impressions, and that only so long as there is unity, and not separation, between the generating and conducting systems can the process remain operative. I venture to assert that such unified working is characteristic of fundamental life processes, and that every manifestation of activity in living will, if carefully studied in the light of demonstrable knowledge, provide as convincing an example as the foregoing of the impossibility of separating so-called mental, physical, or any other processes responsible for human manifestations in living.

* * * * *

Comparative Biological Evidence Which Reveals Integration as a Working Principle in the Use and Functioning of the Human Organism in Accordance with the "Total Pattern of Behaviour."

I am pleased to be able to print the following words of appreciation from Professor G. E. Coghill, the eminent Biologist and Professor of Comparative Anatomy, formerly of Wistar Institute, Philadelphia:—

Gainesville, Florida,
June 4, 1939.

Dear Mr. Alexander,

I am delighted to have the books you sent. . . . I am reading them with a great deal of interest and profit, amazed to see how you, years ago, discovered in human physiology and psychology the same principle which I worked out in the behaviour of lower vertebrates. Yet until now we have never come into personal touch. Possibly this is because we are technically laymen so far as the medical profession is concerned. I am glad to see that the British profession is now recognizing your accomplishment and that you are now getting the credit and the hearing which you so richly deserve.

(*signed*) G. E. COGHILL.

I am also permitted to quote the following extract from a letter which Prof. Coghill wrote to Dr. Millard Smith, of Boston:—

> "Mr. Matthias Alexander owes me nothing in regard to the principle of the 'total pattern,' for he and I worked in total ignorance of each other until the last year or two. That he should discover the principle in the human organism is marvellous, and he deserves all the credit that the medical profession and humanity can give him."

For those interested in biological observations and findings a comparison between Prof. Coghill's work and mine may be of interest, for his aim was to study the nature, growth, and development of the life processes of the lower organisms, functioning in association with conditions considered to be normal. I, on the other hand, was occupied from the beginning with the observation of human material in which abnormality had become established, and it was therefore necessary, in view of my conclusion that it was *what I was doing myself* that was the cause of my throat trouble, to detect the nature of this wrong doing by observation of the working of my own organism. This led me to discover that a particular relativity of the head to the neck and the head and neck to the other parts of the organism tended to improve general use and functioning of the organism as a whole, and that the motivation for this use was from the head downwards, and, further, that any other particular relativity tended towards the opposite effect.

This finding corresponds with that of Prof. Coghill, who observed that the primary impulses in the lower vertebrates involved in tissue development and behaviour are projected along motor and sensory lines of communication from the head downwards towards the tail, and further, that any interference with the working of the mechanisms associated with the "total pattern" affects adversely the growth and working of the "partial pattern," which means a tendency of the "partial patterns" to gain a more or less dominating influence over the

"total pattern," causing interference with growth and development.

These findings furnish again an analogy with observations that I made when dealing with my own problem, for I observed an interference with the working of specific parts of my organism connected with my throat trouble (partial patterns), and found that this was brought about by interference with the working of the organism in general (total pattern). But, valuable as these findings were, the essential task still lay before me of learning, first, HOW to prevent myself from continuing to "do," at a given moment, what interfered with the working of my mechanism as a whole (total pattern of behaviour) and brought about wrong working of the specific parts (partial patterns of behaviour) which constituted abnormality, and secondly, how to bring about such changes in my "doing" as would lead to a gradually improving working of the mechanisms as a whole, and finally to a normal working.

Summed up, Prof. Coghill occupied himself with the all-important task of discovering the nature of the processes of normality and the effect of interference with these processes upon general functioning, while, because of the nature of my personal need, I had to try to discover the means whereby I could so change conditions of use and functioning that the trend of the change would be from abnormality to normality, and finally, having reached this desired result, to observe the manner of the working of the mechanisms associated with normality. The experience inherent in the carrying out of this work led as a natural consequence to the evolution of a technique by means of which desirable conditions of normality can be restored and maintained.

A friend of mine in whose judgment I have confidence, and who is familiar with Prof. Coghill's "classic observations," has suggested that the fact that Prof. Coghill and I, working independently, from different standpoints and with different aims in view, should have discovered the same principle in behaviour, he in observing

the lower vertebrates, and I in observing the human organism, beginning with the observation of myself, is striking evidence in observed phenomena from different angles and sources of the working of the principle of integration in the "total pattern" in life's processes and in the development of behaviour. I suggest that those interested should in their survey of data give due consideration to the following extract from Professor John Dewey's introduction to my book *The Use of the Self*:—

> The school of Pavloff has made current the idea of conditioned reflexes. Mr. Alexander's work extends and corrects the idea. It proves that there are certain basic, central organic habits and attitudes which condition every act we perform, every use we make of ourselves. This discovery corrects the ordinary conception of the conditioned reflex. The latter as usually understood renders an individual a passive puppet to be played upon by external manipulations. The discovery of a central control which conditions all other reactions brings the conditioning factor under conscious direction and enables the individual through his own co-ordinated activities to take possession of his own potentialities. It converts the fact of conditioned reflexes from a principle of external enslavement into a means of vital freedom.

The following extract from a letter of March 2, 1939, written by Dr. Trigant Burrow, Scientific Director of the Lyfwynn Foundation, New York, and well known as a Psychiatrist, to Mr. Walter Carrington, may be of interest in this connexion :—

> One cannot fail to recognize in reading his book, *The Use of the Self*, that Alexander has done much in getting at certain physiological reactions, and I was greatly impressed with the originality of his method and the very thorough and precise procedures he developed in the observation of his own behaviour. My own feeling is . . . that his work, expressive of innate scientific endowment, needs no endorsement beyond the objective evidence upon which it is based. To me his patient, painstaking, and carefully controlled observations repre-

> sent an amazing achievement in the field of human behaviour. I myself could not possibly lay claim to having contributed anything of a like nature. . . . . Alexander's contribution in the field of behaviour is, as you mention in your letter, a half century old. His thesis has indeed become a commonplace.

Further, may I point out that my practice and theory is not affected by the question as to whether or not reflexes are primary and integration of the "total pattern" secondary in behaviour, for the employment of the primary control in my technique is inseparable from the inhibitory procedures necessary to the reconditioning of the reflexes and to integration of the "total pattern" involving the same procedures in a unified process.

The same is true from the practical standpoint of the question as to whether wrong use or wrong functioning is the primary cause of disease. For it can be demonstrated that wrong use, which is always associated with wrong functioning, can be changed indirectly to right use by changing the employment of the primary control, and that in the process wrong functioning is restored to right functioning; whereas any attempt to restore right functioning specifically by direct means can only be palliative, because it still leaves the patient beset with the constant harmful influence of use which will consistently tend to lower the standard of his general functioning.

Sherrington on Standing

The MS. of this book was almost ready for the printer when I received from a pupil (a medical man) the following extract from Sir Charles Sherrington's recently published book, *Man on His Nature*. In view of the nature of my subject-matter, I cannot but believe that this passage will be of special interest to my readers, and I will include it in this chapter.

The passage sent me is as follows:—

> Take this act of "standing." Suppose my mind's attention be drawn to it, then I become fully aware that I

stand. It seems to me an act fairly simple to do. I remember, however, that it cannot be very simple. That to execute it must require among other things the right degree of action of a great many muscles and nerves, some hundreds of thousands of nerve fibres and of perhaps a hundred times as many muscle fibres. I reflect that various parts of my brain are involved in the co-ordinative management of all this, and that in doing so my brain's rightness of action rests on receiving and despatching thousands of nerve messages, registering and adjusting pressures, tensions, etc., in various parts of me. Remembering this I am perhaps rather disappointed at the very little that my mind has to tell me about my standing. When it gives attention to my standing it can make me fully aware that I am standing; but as for telling me how it is that I stand, or as to helping me to analyse my standing, I get extremely little from it. The main thing I get from it seems the unequivocal assertion that it is "I" who stand.

. . . If the standing goes on too long I get similarly an unequivocal assurance that it is "I" who am tired of standing. It seems that this power within me, which identifies itself with me and calls itself "I," and wills the body to stand upright, and the body does so, or wills the body to sit down and the body does so, does not know how the body does these things. For all its effort and for all the attention it can give it does not seem to be able to get inside the act which it yet assumes it does. It cannot think itself into the "how" of the body's doing these things.[1]

As comment on this passage my pupil wrote me:—

This introspective account by a pre-eminent neurophysiologist is very interesting. . . . What he has discovered about his own "standing" is about as much as anyone would discover if his investigations stopped there. *It is only when an investigation is made into "changing" one's "standing" that any further discoveries*

[1] *Man on His Nature*, by Sir Charles Sherrington, O.M. (Cambridge University Press, England; Macmillan & Co., New York), Chapter vi, "A whole presupposed of its parts," p. 174.

> *are likely to be made.* His statement that we are unaware of how we stand is correct so far as the mechanism of Postural Integration is concerned, but you have shown that we can become aware of how we interfere with that mechanism. My view is as follows: there is a mechanism of Postural Integration which is used by animals unconsciously, but efficiently. It is also used by human beings unconsciously, but not efficiently; it is in fact misused. What one becomes aware of in your work is the misuse, and the primary "directions" (orders) are physiologically inhibitory ones. If the mechanism was not already present, even if functioning badly, it could never be discovered, and improvement in use consists entirely in not interfering with the mechanism.

I have italicized the point of particular interest in this comment. Sir Charles Sherrington's statement as to what is required for the act of "standing" should be of wide interest, particularly when taken in conjunction with his admission that he is disappointed at the very little that his mind has to tell him about his "standing," despite his knowledge of the intricate working of the central nervous system. The consciousness of this disappointment might have made him conscious that his conception of what was required for a full study of the central nervous system could not have been a comprehensive one, because the knowledge that he had acquired through this study did not help him to meet a need that he had assumed his mind would enable him to meet. He found himself, in his words, "though fully aware that I am standing," unable to tell himself "how it is that I stand"—that is, without that knowledge of the "means-whereby" of the direction and despatching of the messages through the nerve fibres, and the registering and adjusting of pressures and tensions throughout the organism—the "all this"—which results in the act of "standing." These "means-whereby" are all-important, because upon them depends that employment of the primary control of the use of ourselves by means of which we learn to know *how* we do the thing we are doing. Moreover, we come to a standard by which

we recognize the "right degree of action" and "co-ordinative management" of the psycho-physical mechanisms in the performance of any act, whether that of "standing" or any other. Further, when for any reason the integrated and complex working of these mechanisms is interfered with so that this working becomes complicated and disintegrated, it is by the knowledge of the "how" of the conscious employment of the primary control of our use that we are enabled to restore "right degree of action" and "co-ordinative management" to the mechanisms. If Sir Charles's study had led to this knowledge of the use of himself, he could have found out "the how of the body's doing these things," and should he then have become aware of any misdirection of energy and misuse of parts in his way of "standing," sitting, or carrying out any other activity, he would have the knowledge of the "how" of restoring rightness of direction and right degree of action.

CHAPTER VII

THE THEORY OF "THE WHOLE MAN" AND ITS COUNTERPART IN PRACTICE

THE conception of unity, as expressed in such phrases as "The Whole Man" and the "organism-as-a-whole," has become almost a commonplace in scientific and popular discussion; but nevertheless we rarely find that the individual outlook or understanding of those who accept it as a working principle is influenced in such a way that they work consistently to this principle when the opportunity comes to them to do so in attempting to deal with their problems. Indeed, when we give consideration to the activities of those who advocate this principle of unity, we find that the plans of procedure which they suggest or adopt are more in keeping with a belief in the organism as a composite product of which the separate parts can be controlled, affected, or examined independently of the rest, than with a belief in the working of the "organism-as-a-whole."

In view of this, I think that it may now prove helpful if I give a number of examples of this inconsistency which have been afforded by a wide diversity of important writings in recent years, together with some comments which may make a small contribution towards a change of outlook and understanding, and may serve to show what is demanded of the individual in making the change.

As my first example I will quote a sub-leader which appeared in *The Times* of London of May 5, 1938, entitled "The Whole Man":—

> Anyone might be forgiven for feeling hurt or angry if he were told that he is only half a man. But there are smaller fractions of humanity than a half. A distinguished educationist has recently made public confession

that in his days of school-mastering he was prone to the error of dividing each boy, Gaul-like, into three parts, and trying to deal with mind, body, and character as if they were separate entities in watertight compartments. He himself looked upon mind as his primary and main preoccupation. In the revulsion from this misleading analysis he sees education as a process of discovery and development in all three fractions at once. He draws a distinction between education and training. Mind, body, and character might be subjected separately to intensive training without securing real education as the result. The mind concentrated, for instance, on obtaining a particular certificate or scholarship; the body put through a rigorous course of drill or gymnastics; and the character thrown, to sink or swim, into the troubled waters of a prefectorial or monitorial system—the trio may easily fail to add up to a truly educated man. It is a big problem. All three factors are essential to the upbringing of the young. They cannot all be in the hands of one and the same preceptor for each boy, and yet, to secure the grand result, there must be somewhere that supervising, guiding influence which will, in the light of some clearly seen ideal, attune the separate treatments to one another and so mix the elements that the final verdict will be "This is a man." It is a great ambition. Like all worthy objects, it has its difficulties. The hopeful sign is a visibly growing impulse to discuss it wherever educational experts are gathered together.

The mistakes against which protest is thus entered flow from the fallacy of treating the results of abstraction and analysis as if they were self-subsisting entities. Body, mind, and spirit are all obviously present in the individual. But the individual is something more than the sum of all three. There is a virtue in their combination which vanishes under dissection. Every man has to admit that if he undertakes an honest self-examination. He may find it pleasant—most of us do—to pay special attention to the needs of his body, that insatiable element whose appetite seems to grow the more it is indulged. Or he may, as some few do, make the claims of mind paramount and become a dry-as-dust highbrow with a starved and withered body. Worst of all, he may fail to

see any need to labour at developing the powers and possibilities of that third partner, the spirit, which seems to direct the activity or decree the inactivity of the other two, and to have the mysterious faculty of brooding over thought and deed and passing judgment upon them and upon itself. It is noteworthy that moral verdicts proceed from that third partner. To body and mind things may be pleasant or painful, desirable or undesirable, but it is the spirit which says that they are good or bad. Even that high privilege does not make it independent of its coadjutors. A body wasted and mortified may impair both intelligence and spiritual perception. A misdirected or morbid mind may sap the foundations of right judgment. Each must contribute in its kind of its very best, but always to a common fund. The whole man transcends the addition of his parts as Abt Vogler's three sounds made in combination "not a fourth sound, but a star." It is not for nothing that health means wholeness.

Comment.

Here we have a good example of the inconsistency of which I speak, for although it is pleasing to hear of the conversion of a distinguished educationist to a belief in the principle of unity as the basis for "true education," it is still more disappointing, in view of the "big problem" involved, to find that the only means suggested by the writer for avoiding "the error of trying to deal with mind, body, and character as if they were separate entities" is that "there must be somewhere that supervising and guiding influence which will, in the light of some clearly seen ideal, attune the separate treatments to one another and so mix the elements that the final verdict will be 'This is a man.' "

This is indeed to beg the whole question. For even if the means to "attune" and "mix" the products of the three separate treatments were forthcoming (and the subject-matter of these pages shows clearly the fallacy in this and like conceptions), the proposal represents an outlook towards change that, while accepting *in theory* the principle of unity in the working of the human or-

ganism, leaves the essential task of putting the principle *into practice* to the mercy of disintegrating habits of use of the self which "feel right," and to an associated instinctive sensory guidance that is unreliable.

I would put it to the writer of this article and to the educational experts who, he tells us, show a "visibly growing impulse" to discuss the question, that the unity of THE WHOLE MAN in activity cannot be gained by the means suggested; for before the conception of unity can be put into practice consistently, we need a new understanding, through personal experience, of that manner of use of the self which is an integrating influence upon the working of the mechanisms of the human organism, and therefore a constant and improving influence upon functioning; we need, as Mr. Aldous Huxley has pointed out, "the knowledge of some general principle of right integration and, along with it, a knowledge of the proper way to apply that principle in every phase of physical activity."[1]

If, as the writer of the article puts it, "education is to be a process of discovery and development in all three fractions at once (mind, body, and character)," it demands from the individual as a "primary and main preoccupation" the education of himself as a consciously changing integrating entity; and this implies an outlook towards change that welcomes the experiencing of a series of previously unknown psycho-physical changes in the manner of use of the self, which, though they may "feel wrong," are fundamental to the process of changing and controlling the procedures associated with the new conscious sensory guidance (feeling) in use and functioning, which is to supersede the old unreliable instinctive guidance and control.

This applies equally to the task of making changes in dealing with human problems in the outside world. Success in carrying out a new plan to take the place of one which is considered to be a failure must in the last analysis depend upon the nature of the individual human being

[1] In *Ends and Means*, p. 222.

engaged in the task of carrying out the new plan. Conditions in man which have a disintegrating influence upon his general functioning will render him a disintegrating element in the carrying out of the procedures of any plan or method, and this will militate against success; whereas the opposite is the case when conditions within him have an integrating influence upon his use and functioning, making it possible for him to function in "mind, body, and character" as a WHOLE MAN when attempting to put into practice the changes he thinks necessary in carrying out his reforms and other activities.

Two of my pupils who saw *The Times*' sub-leader, and were struck with its relation to my work, thought it called for some comment, and although the letter addressed to the editor by Mr. T. G. N. Haldane was the only one published, and even so, was not published in full, I propose to reproduce his letter together with that of Mr. Eynon Smith, of St. Paul's School, who was the unsuccessful correspondent.

Mr. Haldane's letter was as follows:—

THE WHOLE MAN

Sir,

Your extremely interesting sub-leader in last Thursday's issue will have been read by many who have been thinking along similar lines. One need only refer to such distinguished names as those of Mr. Aldous Huxley and Professor John Dewey, and to the review of the work of The Rockefeller Foundation, during 1937, recently published by Dr. Raymond B. Fosdick, who writes: "Just so far as medicine fails to encompass the whole man, it will fail to understand him. Medicine runs the risk of letting synthesis wait too long upon analysis, of ignoring the whole in the knowledge of some parts."

In Mr. Huxley's *Ends and Means* and in the writings of Professor Dewey similar views are expressed. Although the general public may be interested in this idea, it will naturally ask "How is this idea to be applied in practice?" Your article does not, however, give much practical guidance. Mr. Huxley and Professor Dewey,

on the other hand, pay tribute and bear witness to the pioneer work of Mr. F. M. Alexander, who for over forty years has applied the principle in practice and has worked out a technique the success of which can only be described as astonishing. The evidence is, I think, now overwhelming, but it is open to anyone who doubts to test the matter by direct personal experience.

The importance of the psycho-physical approach to man can scarcely be exaggerated; it gives that unification which, in the process of knowledge, the human mind must always seek. In this it is to be compared perhaps with recent developments in physics where, in the theory of relativity, scientists have succeeded in passing from the abstractions of space and time to the unifying conception of four-dimensional space. This analogy, although interesting, does not, however, illustrate the enormous practical importance to the human race of the psycho-physical approach and the technique which has been developed by Mr. Alexander.[1]

Yours faithfully,

(*signed*) T. G. N. HALDANE.

Letter from W. H. Eynon Smith, Esq., of St. Paul's School:—

Sir,

Your leading article, "The Whole Man," gives a much-needed emphasis to the most difficult problem in education. Over-specialization has led to a disastrous division of function between teachers of "body," "mind," and "spirit." Clearly, if the organism is a unity, a specific change in one part requires a general adjustment of the whole, and cannot be satisfactorily made by a teacher who is not equipped to make such a general adjustment. If attempts are made at specific changes without reference to the whole, as is bound to happen with present methods owing to the complexity of the organism, they may appear to succeed, but will in fact, because they are not based on a general co-ordination, lead to tension and disorder in the organism as a whole. This is most readily seen in "physical" education, where, while it is easy to

[1] This paragraph was not printed in *The Times*.

secure outward conformity to arbitrary standards of posture and movement, there is no means of observing or communicating the deeper co-ordination essential for efficient activity. Hence the frequent failure in performance of the fine stylist and the success of many who appear to break every law. Hence also the uselessness of "physical training" in imparting the correct bodily functioning so important in activities not obviously "physical"—for example, problem-solving and spiritual meditation. The same argument applies to the training of "mind" and "spirit."

The fact is that neither teacher nor pupil knows with precision what he is doing. Since our judgment of the correctness of what we are doing depends on feeling, and since there are no adequate means of communicating the sensory experience of the performance of a given act by the whole man, the pupil is in the position of being unable to perform an act correctly until he has had the experience, and unaware of the experience until he has performed the act. The accepted way out of this impasse is to lay down the end to be achieved and trust to luck that the infinitely complex means will be learned by trial and error. The sort of result produced by this method will be familiar to any teacher who has ever watched a class consciously "concentrating." It is not surprising that we appear to many to be physically deteriorating and spiritually bankrupt, and that there is in the average mind a growing impression that life has "got out of control."

I believe that a solution of this problem is to be found, as your correspondent Mr. T. G. N. Haldane maintains, in the work of Mr. F. M. Alexander, whose technique provides a means of access to the whole man and, in your own words, "that supervising and guiding influence which will . . . so mix the elements that the final verdict will be 'This is a man.' " As a schoolmaster, I think that little further progress can be hoped for in education until this technique has received the widest and fullest consideration.

Yours faithfully,

(*signed*) W. H. EYNON SMITH.

The next quotations are from a *Six Year Review, 1930–1936, of the Josiah Macy, Jr., Foundation,* of New York, of which Dr. Ludwig Kast is the president. In his Foreword[1] to this journal Dr. Kast writes:—

> 1. (The Foundation) does urge, however, that within any comprehensive or systematic plan for providing medical services in the health-care of a nation it will be necessary to allocate responsibilities and functions under a division of labour that will preserve the unity of the patient as a psychosomatic being.

Elsewhere in the journal we find:—

> 2. . . . additions to medical knowledge and equipment . . . have shifted the attention of the physician more and more from the patient as an individual to the disease as an entity, or to some particular organ or tissue as the seat of the disease (p. 16).
>
> 3. . . . the extension of scientific research brought about a rapid increase in technical knowledge in medicine . . . and created a bewildering multiplication of specialties. Although all these specialties originate from and depend upon common scientific principles, they have become separated in medical education and in practice, and therefore the specialist often subordinates the *patient as a whole* to his preoccupation with an organ or symptom (p. 23).
>
> 4. There is an increasing need, therefore, for the integration of these techniques and findings both in diagnosis and treatment. Such a synthesis requires not only a clear conception of the patient as a *total organism* but also for the patient as an *individual personality* . . . (p. 17).
>
> 5. The advantages which may come from a greater appreciation by the public of progressive medical schools can be realized only through a closer co-ordination of medical practice and medical education, graduate and undergraduate. Such organized medicine requires the greater concern for the personality development and

[1] The italics in this and the following quotations are mine.—F. M. A.

emotional maturity of medical students, for the goals can be realized only by those who, in addition to their intellectual and technical training, sense social values. *Only integrated personalities can deal effectively with those patients in whom disturbance of integration is a part of the problem they bring to their physician* (pp. 25 and 26).

Comment.

The fundamental problem to be solved in the psychosomatic plan is that which is stated in the sentence which I have italicized in paragraph 5 above. No suggestion is made, however, as to any solution, nor reference to any means by which the medical student can be helped to acquire the knowledge of the integrated working of his own psycho-physical mechanisms or that of others, which is surely the basis upon which an integrated personality must be built up.

6. . . . the Foundation has . . . aided several experiments in the hope of revealing leads to new ways for the integration of thinking, or, what is more important for discovering minds capable of synthesis (p. 28).

7. Investigation of these problems can best be conducted through integrated clinical, physiological, and psychological studies within the various clinical branches; for until the family physician, the pediatrician, and the surgeon, as well as the various specialists, understand and deal with psychosomatic problems, no real advance can be made. When they do so the term itself will be obsolete, for the practice of medicine will have become the practice of psychosomatic medicine (p. 32).

8. Analytical methods are indispensable tools for the observation and study of the human organism, and have been of unparalleled fruitfulness; but for understanding man as an active and responsive being in his "life-space," as an individual personality immersed in his culture, a "symbolic" or integrated concept is necessary, for the *totality of an organism cannot be represented by merely adding up what is found by taking it apart* (p. 21).

Comment.

The matter in this paragraph (8) is of special interest to me because all that is suggested as means to an end, both in relation to methods of analysis employed as "tools for the observation and study of the human organism," and also to methods of synthesis in the linking-up of observed facts "for understanding man as an active and responsive being," has for many years been used in my work. The reasoned procedures employed for this purpose are described in my books, together with a detailed account of the discovery that the primary procedure in activating the integrating and reconditioning process throughout the human organism (total pattern) was a certain employment of the primary control of the manner of use of the self.

My life's work has demonstrated that by means of this reconditioning process conditions in man can be changed gradually from the abnormal to the normal, although at certain times and in certain circumstances he will have to surmount impeding experiences in his psycho-physical activities. Over and above this he can reach a standard of self-awareness and self-confidence which is denied to those who still continue to depend upon the guidance of instinct in living.

In view of this, how can we expect that until man has reached a stage of development by means of reasoned procedures, where he can depend upon conscious guidance in the control of his psycho-physical self, he can possess that knowledge of himself which is essential for the eradication of undesirable reactions, and thus transcend the limitations which are characteristic of the creature on the animal plane of evolution?

One more point. If it is true that "the totality of an organism cannot be represented by merely adding up what is found by taking it apart," then it is difficult to understand the significance of the word "integrated" in this paragraph in view of the method adopted in practice, and

this applies equally to the use of this word in paragraph 9.

I will now go on to quote from a journal entitled *Psychosomatic Medicine*, Vol. I, No. I., January, 1939 (published quarterly with the sponsorship of the Committee on Problems of Neurotic Behaviour, Division of Anthropology and Psychology, National Research Council, Washington, D.C.). In their Introductory Statement the editors write:—

> 9. Psychosomatic Medicine is an expression which has not yet obtained citizenship. . . . Like all new expressions, the term . . . may lead to misconception and misunderstanding unless a definition is provided. . . . Its object is to study in their interrelation the psychological and physiological aspects of all normal and abnormal bodily functions and thus to integrate somatic therapy and psychotherapy (p. 3).
>
> 10. In recent years an increasing number of observations have been made concerning the correlation of psychological and physiological processes in the human organism. . . . In the interests of unity and of further progress this journal aims to correlate contributions from the special fields (p. 4).
>
> 11. . . . (psychosomatic medicine) is an essential approach to every medical specialty in so far as it is *fundamental in all diagnosis and treatment* (p. 4).

Comment.

With regard to the words I have italicized in extract 11 above, "fundamental in all diagnosis and treatment," I would refer my readers to the letter on page 13 signed by nineteen medical men, in which the signatories support my contention that "an unsatisfactory manner of use, by interfering with general functioning, constitutes a predisposing cause of disorder and disease, and that diagnosis of a patient's troubles must remain incomplete unless the medical man in making the diagnosis takes into consideration the influence of use upon functioning."

I fail to find in the pages of the psychosomatic journal even a casual indication that might lead one to believe that those responsible took into their survey the constant influence for good or ill of manner of use upon the function of the self when they formulated their plans of procedure for diagnosis and treatment.

> 12. Reading the expression "psychosomatic medicine," he (the medical reader) may be reminded of scientific or philosophic writings, which were so common in the last century, devoted to new, theoretically postulated, scientific disciplines . . . which were essentially non-existent. . . . A malicious critic of much of the nineteenth-century psychology and philosophy might have justifiably observed that the main occupation of psychologists and philosophers consisted in writing introductions to scientific disciplines that did not yet exist (p. 3).

Comment.

The quotations already given in this chapter will have shown that this "occupation" is that of too many people to-day, and this statement on the part of the editors of *The Journal of Psychosomatic Medicine* may well prove to be rather nearer the truth than the writers perhaps suspected or intended. Unless they themselves are able to demonstrate the existence of the "scientific discipline" which is "theoretically postulated" and described as "psychosomatic medicine," it will not be the "malicious critic of nineteenth-century psychology," but the gentle reader of the present day, who will be left wondering whether, after all, they also are not engaged in "writing introductions to scientific disciplines which do not exist."

In his article, "Psychological Aspects of Medicine," in the same issue of *The Journal of Psychosomatic Medicine*, Dr. Franz Alexander writes:—

> 13. It belongs to the paradoxes of historical development that the greater the scientific merits of a method, or scientific principle, the greater will be their retarding influence in a later more advanced period of development. . . .

> With the introduction of the microscope the localization of the disease became even more narrowed down: the cell became the seat of disease. No one was more responsible for this particularistic concept in medicine than Virchow, to whom pathology owes more than to anyone else. He declared that there are no general diseases, only diseases of the organs and of the cells. His great achievements in the field of pathology and his great authority made of cellular pathology a dogma, which has influenced medical thinking up to the present day. Virchow's influence upon etiological thought is the most classical example of the above-mentioned paradox of history. *The greatest accomplishments of the past become later the greatest obstacles against further development.*

Comment.

If it is true, as Dr. Alexander states in this paragraph, that "the greater the scientific merits of a method, or scientific principle, the greater will be the retarding influence in a later more advanced period of development," then it is certain that the principle upon which the method is based must be a false one; otherwise the employment of a method could not prove a "retarding influence," but would help towards a "more advanced period of development."

Dr. Alexander seems to believe that this paradox is inevitable, for while he states that Virchow is more responsible than anyone else for a concept that he describes as one "of the greatest obstacles against further development," he intimates at the same time that pathology owes more to him than anyone else. I would point out that this inconsistency on Dr. Alexander's part could not have come about if in his consideration of diagnosis and treatment he had taken into account the effect of harmful use and lowered functioning *as a forerunner of cell and organic disease.* Having failed to recognize this, he has also failed to see that, when put into practice, Virchow's "particularistic concept in medicine" has been responsible on Dr. Alexander's own admission for a

method which limits the scope of both diagnosis and treatment, and is characterized by a narrowing down of the localization of the disease. It is therefore unscientific, and furnishes still another instance of the danger of the *direct* method of approach to the acquisition of knowledge in medicine or in any other field of man's activity. Further on in his article Dr. Alexander writes :—

> 14. Not less impressive is the statement of Dr. Allen Gregg ("The Future of Medicine," *Harvard Medical Alumni Bulletin*, Cambridge, October, 1936), a man who views the past and future of medicine from a broad perspective. "The totality that is a human being has been divided for study into parts and systems; one cannot decry the method, but one is not obliged to remain satisfied with its results alone. What brings and keeps our several organs and numerous functions in harmony and federation? And what has medicine to say of the facile separation of 'mind' from 'body'? What makes an individual what the word implies—not divided? The need for more knowledge here is of an excruciating obviousness. But more than mere need there is a foreshadowing of changes to come. Psychiatry is astir, neuro-physiology is crescent, neuro-surgery flourishes, and a star still hangs over the cradle of endocrinology. . . . Contributions from other fields are to seek from psychology, cultural anthropology, sociology, and philosophy, as well as from chemistry and physics and internal medicine, to resolve the dichotomy of mind and body left us by Descartes" (p. 9).

Comment.

I do not think I can do better than quote here some notes on this passage which were sent to me by one of my students, Mrs. Alma M. Frank, of New York.

> The quoted statement of Dr. Allen Gregg presents the essential problem. The procedure he suggests, however, requires consideration. It requires serious consideration, for on all sides to-day, as well as throughout this issue of this new publication, we find the follow-

ing conviction: *correlation* of accumulated data *in all fields* will solve the problem.

Here is the rub: can we get rid of the dichotomy of mind and body through the so-called sciences, when the very sciences themselves and their development rest upon that same dichotomy? Is it not that the dichotomy is the parent of "psychology" and "physiology" as separate sciences? In reality they are dependent for their existence as separate sciences upon this dichotomy inherited from Descartes. It stands to reason, therefore, that we cannot see anything in this direction that will rid us of the dichotomy, and it is obvious that we may expect greater accumulations of data which defy correlation.

What then do we need if not the correlation of more and more data from all "sciences"? The answer is: new principles to be applied in all fields of research, principles which will not only deny the dichotomy of mind and body (which all are now eager to do), but will free us from continuing our research with the same concepts, labels, and separatistic tools that were born of the dichotomy we wish to be rid of.

Mrs. Frank's contention here is well supported by the following extract from Dr. L. K. Frank's paper "Structure, Function, and Growth"[1] (p. 233):

These criticisms of analytic procedures and of the use of time concepts are associated with the organismic conception, which has been developed as a protest against this parcelling out of an organism according to the variety of data which it may yield; it marks a movement toward the explicit recognition of the idea that an existent such as an organism will yield as many different kinds of data as the investigator has the technique for discovering and recording, and that among these data there will be certain relationships arising from the very nature of an organism as an energy complex in a four-dimensional universe, with multiple "fields" in various stages of development. This does not mean that these different data must or should be correlated, since within an

[1] Published in *Philosophy of Science*, Vol. 2, No. 2, April, 1935.

organism, especially when growing or developing, the process of change and adjustment and the interactions of "fields" occur with varying degrees of lags and efficiency. The study of individual organisms as they grow and develop is still so new that little is actually known of development. The analytic tradition of science that insists upon breaking down an organic whole into discrete parts and attempting to correlate two variables is the chief obstacle to the study of organisms. Many investigators assert that the study of an organism instead of the restricted problem of two variables is not scientific, probably because they prefer the abstractions of anatomy and physiology and creating methods for obtaining data and establishing their meaning, which are of course primary to the study of organisms. Here again we see how the study of organic growth and development is impeded by the conceptual framework of contemporary science.

I will next quote some excerpts from the *Review* of the work of the Rockefeller Foundation for 1937, by President Raymond B. Fosdick.

15. Just so far as medicine fails to encompass the whole man, it will fail to understand him. Medicine runs the risk of letting synthesis wait too long upon analysis, of ignoring the whole in the knowledge of some parts. With all its wisdom, if medicine neglects what integrates and harmonizes the functions and organs, its picture will be out of focus and its comprehension incomplete.

16. The average layman, observing the more scientific aspects of the practice of medicine, and reading almost daily accounts of new scientific discoveries, is perhaps tempted to conclude that man knows nearly everything there is to know about the constitution and behaviour of the human organism. As a matter of fact, of all the things that man really knows, he knows least about himself. His knowledge of the stars is probably more complete and more reliable than his knowledge of his own body.

My friend, Mr. Michael March, has made the following

comments on this *Review*. In the *Brooklyn Citizen* of March 28, 1938, he wrote as follows:—

> In the *Review* of the work of the Rockefeller Foundation for 1937, just published, President Raymond B. Fosdick has occasion, during his discussion of the work being done in the fields of psychiatry and medicine, to lay bare one of the important dilemmas currently facing mankind, to wit: How can science deal with individual man as a whole? The dilemma is implied in the attempts made to integrate the essentially unrelated techniques of medicine with those of psychiatry, or, in other words, to fuse two techniques which had their origin in the wholly false assumption that mind and body are separate entities.

Mr. March then quotes the statement (15) above and continues:—

> And by adding that "psychiatry is a headland of medicine and not an island of speculation," Mr. Fosdick believes that psychiatry, which is being heavily backed financially by the Foundation, is the potential integrating factor, an attitude which is certainly not very sound in the light of the fact, as I have implied, that it is sheer folly to try to fuse two techniques, each of which originated in the false theory that mind and body are separate entities.
>
> It is interesting to find such statements in the pages of a publication by the Rockefeller Foundation, whose funds are devoted to the advance of knowledge. But the dilemma which gives rise to such speculation is widespread. An impasse has been reached in science's approach to man, and the need for dealing with the individual as an integrated whole is imperative. "The need," says Mr. Fosdick, "is so great that there is little danger at the moment of overstressing it." In the face of this it is curious that the Foundation remains unaware of the existence of a technique which actually employs an integrating principle that is demonstrably practical and scientific. For with a knowledge of the principles and technique of F. Matthias Alexander it is not likely that Mr. Fosdick would ascribe to psychiatry the function of

integrating man's "functions and organs." In place of psychiatry, which is at best only a speculative technique, he would have reported enthusiastically upon Alexander's principle of the primary control and his technique for employing it in the integrated action and reaction of the human organism as opening up new avenues into the future well-being of humanity.

In his book, *Man the Unknown*, Alexis Carrel of the Rockefeller Institute has dealt with this dilemma by the suggestion that the mass of knowledge which is now "disseminated in technical reviews, in treatises, in the brains of men of science"[1] should be correlated by some superman or supermen who will be able to study this mass of acquired and unrelated knowledge, weld it as it were together, and make it applicable to the practical need for which it is intended. In this connexion Dr. Carrel writes:—

> 17. . . . is it possible for a single brain to assimilate such a gigantic amount of knowledge? Can any individual master anatomy, physiology, biological chemistry, psychology, metaphysics, pathology, medicine, and also have a thorough acquaintance with genetics, nutrition, development, pedagogy, esthetics, morals, religion, sociology, and economics? It seems that such an accomplishment is not impossible. In about twenty-five years of uninterrupted study one could learn these sciences. At the age of fifty, those who have submitted themselves to this discipline *could effectively direct the construction of the human being* and of a civilization *based upon his true nature.*[2]

To me this is a remarkable statement. Dr. Carrel asks whether it is "possible for a single brain to assimilate such a gigantic amount of knowledge," or whether any individual could "learn these sciences." Strangely enough he does not appear to think this impossible, but what is still more strange he does not seem to question whether such

[1] *Man the Unknown*, by Alexis Carrel (Hamish Hamilton).
[2] *Ibid.* (The italics are mine.—F. M. A.)

a person will be able to link up the different data he has acquired into a connected whole. Yet in my experience people who have studied and accumulated knowledge in a number of different fields are too often unable to connect up the different data they acquire in this way. They thus miss the opportunity of collecting all the premises possible before making the deductions upon which to build their constructive plans. If those who have spent so much time in accumulating a mass of unrelated knowledge had linked up new knowledge as it came to them with the knowledge they already possessed, they would not now be faced with the task of selecting and then correlating contributions from the special fields in "the interests of unity and of further progress."

Dr. Carrel also believes that those who "could learn these sciences" and "have submitted themselves to this discipline could effectively direct the construction of the human being and of a civilization based upon his true nature." In reply to this I would point to the subject-matter of this book as evidence that the knowledge most fundamental to this great task is not mentioned among the "sciences" he has named. This fundamental knowledge is that of the integrated working of the psychophysical mechanism involved in the use of the self, and the experience necessary for the acquisition of this knowledge cannot be gained by workers in any or the whole of the sciences on Dr. Carrel's list.

I submit, therefore, that this all-important premiss was not taken into consideration by Dr. Carrel when he made the deductions which led him to indicate the means whereby his superman could be fully equipped with what he needed for "the construction of the human being and of a civilization based upon his true nature," and also for diagnosis and treatment of this human being as a "total organism" and an "individual personality."

I can assure Dr. Carrel that unless his superman has a conscious knowledge of the procedures which activate the integrating and reconditioning process involved in bringing about that relationship in the working of the parts

of the organism which constitutes the employment of the primary control, he will be without the fundamental knowledge essential in preparing himself for his task of effectively directing "the construction of the human being and of a civilization based upon his true nature."

Only when human beings are in possession of this knowledge, and are able to put it into practice, can Dr. Carrel expect as a result a civilization which will show any fundamental change for the better; only then can we hope for the coming, not of one superman, but of a large proportion of men and women who, profiting by change in their outlook and approach to the conception of the unity of the living organism and the philosophy of truth, would refuse to bolster up any plan (or examine the results of its practical working), unless they were convinced that their deductions were made from complete premises. Neither could they continue to adhere to methods of acquiring knowledge which, being evolved to meet the needs of investigators working only upon a part or parts of the organism, have led to differentiation and specialization in the past, and have effectively prevented them from acquiring the knowledge that would enable them so to treat the organism that it may be changed *in the process* of reconditioning from a disintegrated to an integrated whole.[1]

[1] See Appendix H.

CHAPTER VIII

AN OSTEOPATH'S IDEA OF A NEW TECHNIQUE

I HAVE been much interested in an article entitled "Re-education in Technic," by Mr. Paul Van B. Allen, D.O., published in the *Journal of the American Osteopathic Association of Chicago*, not only because of its generous reference to my work but also because it illustrates in a remarkable way the difficulty experienced even by those who accept my principle in theory in appreciating the full implication of this principle when they start to put it into practice. As I have tried to make clear throughout this book, the point of issue is of such importance in any consideration of the control of human reaction that I ask Mr. Allen to believe that in making the following criticism I desire only to clear up what must inevitably tend to confuse and mislead the colleagues he is so anxious to help.

Mr. Allen starts his article by describing at some length certain deficiencies in the osteopathic technique as generally practised. He says:—

> . . . We propose to show that in almost every instance our technic falls far short of what it should be, both as to the skill with which we apply our own methods, and as to our ability to broaden and increase the scope of those methods by the adoption of new technic. This is true, first, because we are constantly concerned with the end to be gained to the almost total exclusion of any consideration of the means whereby that end is to be obtained; second, because we have followed the process of intuitive imitation both as we began to learn technic and later in any effort to add new methods to our armamentarium; third, because we have followed the trial-and-

> error method rather than that of reason; and fourth, and quite inclusively, because of the very nature inherent in the methods by which we learned and continue to learn technic.
>
> . . . It follows that no matter how much we seek to improve and polish our technic, no matter how skilful it becomes, it is conditioned by the necessity for making it "feel right," in terms of this habitual familiar sensory impression which because of its genesis is almost certain still to be incorrect and misleading. Hence, however much we will to incorporate new and better methods into our habitual procedures, we fall far short of what we ought properly to expect of ourselves unless we analyse the subjective factors of our technic in a critical and objective manner.

At this point Mr. Allen refers to what I have written in my book *The Use of the Self* as to the difficulty I experienced at first in correcting certain bad habits in the use of my voice, and proceeds to deal approvingly with the theory and practice of my technique, and not only to recommend it to his colleagues but to outline a way of employing it. He specially commends to their attention my "basic contention that man living under modern conditions possesses a distorted sensory appreciation that is thoroughly inadequate and unreliable," so that what is wrong in the use of ourselves has come to "feel right." He goes on to show how "sensory appreciation pertains in the case of osteopathic technic both to the sensing of what is to be done . . . and the sensing of our own muscle and nerve activity in response to the mental commands," and that, in whatever he does, the osteopath is faced by a serious problem when he tries to make the change in the use of himself that he considers necessary, because the end-gaining methods adopted in osteopathy tend constantly to perpetuate any bad habits in the use of the self that had already become established and which "carry over from the old to every successive attempt at self-improvement." He writes:—

> Our mind is so fixed upon the end which we have in

> view that we disregard the means whereby that end is to be gained, and intuitively fall into the habitual wrong use of our organism, the while having the sense of right feeling and of satisfaction with our work. The result of this process is that the harder we try, the more fixed is our attention upon the end to be gained and the more we revert to the habitual and wrong use of our organism.

And he concludes his analysis thus:—

> . . . we seem to be left running in circles in a blind alley, except that the same Alexander comes to our rescue with a means of extricating us from our predicament.

I have quoted Mr. Allen thus fully because, in view of his very careful and clear-sighted diagnosis of this "predicament," when he goes on to discuss the practical application of my technique to osteopathy, he does not give his colleagues any help in solving the problem that confronts them in their attempts to make the changes in the *use of themselves* which he advises. He gives descriptions of my procedures and certain general verbal directions as to what should be done to put these into practice, but it seems to have escaped his notice that those who may try to carry out his suggestions will in so doing be trusting to the same sensory guidance upon which they had previously relied, and as he does not make any provision in his plan for restoring sensory reliability, it is difficult to understand why he should believe that they would be more successful in carrying out his suggestions as to procedure than they had been hitherto in carrying out those which they attempted in their osteopathic training and in their other efforts to improve themselves. Mr. Allen writes:—

> Alexander faces this impasse with the principle of *inhibition*[1] of the *immediate response* . . . one gives the mental order, and then consciously inhibits or holds in

[1] The italics in this and following quotations from Mr. Paul Van B. Allen's article are mine.—F. M. A.

> abeyance the active response to that order, consciously reviews and senses again in detail what the body must do. . . .

But how can those in the predicament Mr. Allen so graphically describes put this principle successfully into practice? For on his own admission their problem (which is no different from that of others whose sensory appreciation of what they are doing is untrustworthy) is that in their attempts to improve themselves, the moment they get the stimulus to act they rely for guidance upon feeling which Mr. Allen admits is unreliable, and thus, by immediately responding through the instinctive habitual use of themselves which "feels right," continue to indulge in the same bad habits of use they are trying to correct. This is precisely where their predicament lies. The same misunderstanding of their problems underlies Mr. Allen's advocacy of "visualizing" and "sensing," both of which activities he appears quite mistakenly to include in my technical procedure, as, for instance, in the passage just quoted or when he writes "every detail of the lesion must be visualized," and again, "He (one) senses in advance the feel of his own muscles as he expects them to act to accomplish his purpose," and "he (one) visualizes the smooth acceleration of force, etc. etc." Such "visualizing" or "sensing" would necessarily be dependent on the same unreliable sensory appreciation (feeling) which had led to the errors it is desired to eradicate. It is therefore curious that Mr. Allen, who is so definite in his warning against trusting to unreliable sensory impressions during attempts to make changes in the use of the self, should not see that if a person whose sensory appreciation is untrustworthy places reliance upon a picture he "visualizes" or a feeling he "senses," he is depending, in Mr. Allen's own words, on "an illusory basis of rightness." Unless then some provision can be made for changing and improving this condition of unreliable sensory appreciation (and of this Mr. Allen makes no mention), in what way can these procedures be of benefit to him?

It is, moreover, unfortunate that in his description of my technique he does not refer, even in passing, to the essential part played by the right employment of the primary control in bringing about an improving use of the self, together with a gradual restoration of sensory trustworthiness. In the first chapter of my book *The Use of the Self* I related how attempts which were made with the aim of correcting certain defects by *direct* control led through their failure to the discovery of the existence of a primary control of the use of the self, and then to the further discovery that when once the habitual wrong response to the stimulus to activity was inhibited, the right employment of this primary control led *indirectly* to the gradual disappearance of the defects; that, indeed, these defects were found to be by-products of a wrong employment of the primary control.

The discovery of this control made possible the evolution of a technique, and the understanding of the right employment of this control is fundamental, therefore, to the application of my technique, or indeed to that of any other that could meet the needs outlined by Mr. Allen. Much of the misapprehension in his description of my technique undoubtedly arises from his having apparently missed this connexion in reading my book, together with the further point which proceeds directly from it, that the changes in the manner of use of the self brought about through my technique emerge as an indirect result of means which are conditioned by, and dependent upon, the right employment of the primary control.

From this it follows that the inhibition of the "immediate response" which Mr. Allen quotes as my solution of the "predicament" in which his colleagues find themselves is *primarily the inhibition of the habitual response to any activity which results in the wrong employment of the primary control.* This point has been missed by Mr. Allen, else he would surely have recognized that if those who have no knowledge of the working of the primary control try to follow out my procedures from his verbal descriptions, they can only be said to be making one more

trial-and-error attempt to gain an end regardless of the right "means-whereby," and one which is bound to land them still further in their predicament.

When once he has gained this knowledge of the working of the primary control and has learned to put it into practice, the osteopath, like anyone else, will be able to use himself to the best advantage in the carrying out of the technique, or in anything else which he may wish to do, and this knowledge is essential to his success in any attempt to put the technique into practice in his osteopathic work or any other occupation. For in order to carry out any new idea or instruction given to him with the aim of bringing about a new use of himself, he would at first have to do what "feels wrong" to him, and experience has shown that, however much he might desire or decide to carry out the new instructions for improving his use, *in practice* he would almost certainly be unable to abide by his decision, but the moment he started to carry on his osteopathic work would do what he felt was "right," and instinctively relapse into the wrong use associated with his habitual reaction to any stimulus to activity which would bring with it the satisfaction of "feeling right."

Here again Mr. Allen is under a serious misapprehension as to what is fundamental in the application of my technique, for he writes:—

> In applying his [Alexander's] method to this problem, the first emphasis is laid upon the fact that the new and better technique contemplated must be worked out step by step, in detail, *first* as to the precise conditions of the lesion and the mechanics of the correction; and *second*, as to each successive step in the particular and correct use of our own bodily mechanism in such a way as adequately to meet the requirements placed upon it by the nature of the lesion.

And again:—

> Let us outline very briefly a few of the factors to be considered in such an analysis of a procedure of technic. It is assumed that one has already visualized the

> mechanics of the lesion which determined the direction and the distance through which the corrective force must move. . . . One *then* considers the use of his own body, etc.

This is indeed to put the cart before the horse. Throughout my writings I have tried to make it clear that in my technique the emphasis is laid *first* and always on the consideration of the right manner of use of the self, and that only on having reached a point where one is able to command the "means-whereby" of a satisfactory use of the self can one safely go on to apply this satisfactory control of use to an outside occupation. Mr. Allen appears also to have missed the significance of what was set down in the chapter on Golf in *The Use of the Self*, otherwise it is difficult to understand how he failed to appreciate that if he is to help himself and his colleagues to carry out the new procedures in my technique which call for a manner of use that is unfamiliar, the education in this new technique should *begin* with the re-education of their manner of using themselves; better still, that if possible, this re-education should be carried out before beginning their training in osteopathy, starting their osteopathic work only when they had reached the point where they could maintain a constantly improving use of themselves while putting their osteopathic technique into practice, or indeed during any other activity they may desire to carry on.

This applies to every field of activity. Let us take as an example the case of a singer or actor who has been taught, say, deep breathing or some other "breathing exercises" as a preliminary to singing and acting, regardless of the effect the performance of the exercises will have upon the manner of use of either the breathing or vocal mechanisms. I am able to write from a very wide experience in this field.

The artist trained in this way goes on to the stage or platform with a definite specific idea of "how to breathe" while singing or acting. The bad results of this method are too much in evidence to-day to need enlarging upon,

and where they are present they make it impossible for the singer or actor to maintain his highest standard of functioning as an artist. The idea underlying such methods of training arises from the belief that it is possible to give specific help to separate parts of the organism, as if the breathing mechanisms of the artist for instance functioned separately and apart from his vocal mechanisms or his general use of himself, and, what is more to the point, as if the use and functioning of these mechanisms could be separated from the use and functioning of the organism as a whole, whereas they are as closely associated and as dependent upon one another as are the parts of our mental and physical make-up. It can be demonstrated that the person who learns to use himself properly by relying upon the correct employment of the primary control of his use of himself will breathe to the best possible advantage in singing or speaking, as well as in all the other activities of life. He will not need the help of specific "breathing exercises" for doing anything that is necessary in carrying out his activities, even though these may include the task of putting into practice the procedures of a technique such as is employed, or may in the future come to be employed, in osteopathy or the like.

The generous appreciation of my technique that Mr. Allen expresses led him to advocate it to his colleagues as a contribution of value to osteopathic method and treatment, but he has missed the point that in the recognition and conscious employment of the primary control lies the fundamental difference between the theory and practice of my technique and that of osteopathy, and that the two methods of approach, the direct method of osteopathy as described by Mr. Allen and the indirect method as exemplified in my procedures, cannot be combined or brought into line with each other, as they are based on principles of working that are irreconcilable. The confusion of ideas which has caused him to overlook this is, I suggest, foreshadowed in the title of his paper "Re-education in Technic."

It is possible to re-educate a person who is to carry out

a technique, but I am at a loss to see how he or she can be re-educated in a new technique. That would surely imply education, not re-education. Re-education means a gradual restoration of something that has been previously experienced, something which we have been educated in, but for some reason have lost, as for instance when a person whose use of self has been gradually interfered with over a period of years manifests, as time goes on, more and more harmful effects of this interference in his general use and functioning. *Re-education is not a process of adding something, but of restoring something.* It was to meet the need of restoring actual conditions of use and functioning which had been previously experienced and afterwards lost that my technique for the re-education of the use of the self was evolved. But when Mr. Allen offers this technique as a contribution to osteopathy he is offering something new to his colleagues, something not previously experienced (the unknown) by them, and as so often happens when a person versed in a theory and practice based on a principle which is familiar is led to consider and approve a theory and practice based upon a principle which is unfamiliar, he was misled in his conception of the "means-whereby" that were required for the successful adoption of this new technique.

He gives his reasons for believing that he and his colleagues could not be certain whether or not they were doing their work in the way best suited to their individual make-up, and that, because of the deceptive guidance of their sensory appreciation, they were likely to become less rather than more proficient as they continued to practise their manipulative work. He believed he could free them from this predicament by passing on to them knowledge he believed he had gained through reading my books. His practical suggestions, however, fit in, not with my practice and theory as set forth in my books, but with his own interpretation of it. For, as I have already pointed out, he has overlooked the important—the all-important—part played in the practice of my technique by the primary control of use, and has not seen that if the influence of

the right employment of this primary control is unrecognized or ignored in the practical working out of my theory, my technique cannot prove more useful than any other in extricating his colleagues from their "predicament."

His diagnosis of cause and effect in considering my technique as an aid in helping his colleagues or patients was therefore incomplete. This, however, is not to be wondered at, seeing that his previous experience and training did not enable him to realize, any more than did that of the original founder of the method of osteopathy, the far-reaching influence of use upon the functioning of the human organism, nor the impeding and harmful effect of the constant lowering of the standard of general functioning in a patient by reason of the bad habits of use of the self which are responsible for this lowered standard of functioning. This applies equally to his diagnosis of the manipulator's shortcomings, defects, and individual peculiarities in his use of himself during each manipulative act, for without a knowledge of the right employment of the primary control in the use of himself, a reliable diagnosis of the manipulator's defects or those of his patient is not possible.

Neither the training of the osteopath nor that of the doctor includes that knowledge of the influence of use upon functioning which is necessary to full diagnosis if changes made in structural and functional conditions are to be permanent and unaccompanied by any harmful by-products. Osteopathic treatment, like all other forms of treatment, is impeded by the fact that the patient who is being treated is beset by a constant influence for ill, because of the harmful effects of his wrong habitual use of himself upon his general functioning—harmful effects which osteopathic treatment not only cannot change, but, if I may judge by my experience with pupils who have been treated by osteopathy, tends to exaggerate. No treatment given under the osteopathic method includes the "means-whereby" of restoring that right employment of the primary control which is associated with a manner of general use of the self that ensures a constant influence

for good upon the patient's general functioning. To put the position in accordance with Mr. Allen's viewpoint and contention: If what he says is true about the theory and practice of osteopathy and of the method of training students, then I think it can justly be concluded that their method both of diagnosis and treatment was based upon premises that were incomplete, and that judged by the by-products—i.e., by the harmful effects upon practitioner or patient and the consequent lowering of the standard of the work of treatment—the demands of scientific method have not been met.

I have a keen appreciation of Mr. Allen's attempts to help his colleagues, and hence it is with reluctance I am forced, in justice to my work, to try to correct the impression of my practice and theory conveyed to his colleagues in his article. Above all, I am anxious to impress on them that in trying out procedures which are new to them they have to depend upon the guidance of their sensory appreciation which Mr. Allen points out is too prone to be defective, and that it is through trusting to this guidance that they have been led into the errors in the use of themselves that they desire to change.

As the result of many years of teaching experience I would warn all those who, like Mr. Allen, are endeavouring to help others to make the changes in the use of themselves that they desire, that both they and the people they wish to help must face the fact that the very essence of change demands coming into contact with the unknown, and that therefore their past experiences (the known) will not help but rather impede them. Unless those who are attempting to change their habitual reactions in the use of themselves can obtain from experienced teachers, or from such long study as I gave to it, the means whereby they can gain the new sensory experiences that are associated with such process of change, they are not likely to solve the problem which is inherent in the process of substituting conscious for instinctive control of human reaction, whether for "effecting lesion correction" or for any other end desired.

CHAPTER IX

THE TEST OF PRINCIPLE IN NEW WAYS FOR OLD

THOSE who are desirous of drawing up new plans of action to supersede plans they have followed in the past but now find wanting should be careful to include in their preliminary survey the experiences that came to them in the course of following out their earlier plans. Especially should they take note of the principle on which the earlier plans had been based and which accounted for these experiences, and compare it with the principle on which they propose to base their new plan. By this means they can apply a test, the test of principle, to any plan they formulate. If, when tested in this way, the new plan is found to be based on the same principle as the plan they have decided to discard, then it should be rejected, as it can only lead to experiences as disappointing as those which were associated with the old plan. If on the other hand the principle underlying the new plan is found to be different, then it should be welcomed as one with possibilities and be put to the test in its turn. This test of principle, when applied generally, will be found to be a dependable means whereby the value of new plans can be gauged, and the formulators of new plans for the reform of conditions, whether educational, social, or otherwise, who fail to apply the test of principle to the plans they advocate, are devoid of a due sense of responsibility to those they wish to help and are untrue to themselves.

Even if they succeed in their advocacy of a new plan which is based on the same principle as the one which it is to supersede, they will be putting back the clock of civilization for a further term while it is being tried out, thus increasing the difficulties in the future for those who

are not satisfied with such trial-and-error attempts to solve their problems.

Too many people develop a mania for assuming the rôle of one to "show the way" without first developing the mania for gaining the knowledge and experience which would justify them in assuming the rôle. Too many people want to teach others that which they are not prepared to learn themselves; and hence we have a gradual increase in the numbers of the blind leading the blind. For these to teach or to lead others is too often an end to be gained, not a "means-whereby" to an end which their experience and training has justified them in trying to achieve. Such people are little concerned with the consideration of principle as a test of value in such an undertaking or as a guide or aid in arriving at decisions. It is doubtful whether it has ever occurred to them to work to principle in anything they have decided to teach or to reform.

For instance, if we study the technique that those employ who claim that by their method they succeed in changing conditions in others and are working for the progress and development of the individual and the mass, we shall find that in their plan of procedure no provision, in the fundamental sense we are interested in, has been made for bringing those they are desirous of helping into contact with what is unfamiliar and unknown. Yet progress and development depend upon the making of this contact, not only by the acceptance in theory of the new and the unfamiliar, but also by facing the unknown in the consistent carrying out of the procedures which are demonstrably the practical counterpart of the theory. If we do not continue to gain new experiences, or if the conditions present in our organism this year are present in the following year, then we can conclude that we have not succeeded in making progress or in furthering our growth and development. Unfortunately, in most of us, the impediment which blocks the way to our acceptance of facts which do not fit in with our beliefs and theories is a deeply rooted subconscious reaction, amounting to what might almost be described as an obsession for clinging

blindly to the orthodox or the familiar, and is due to habits of thought which orthodox methods of education do little to correct and much to encourage. If anyone should doubt this, let him mention something which his listeners have not heard before and await their reaction. It will almost certainly be one of doubt, scepticism, and too often a sudden emotional reaction revealing unreasoning resistance and prejudice, particularly if the acceptance of what is put forward would be likely to affect adversely in any way the interests and desires of his listeners. This would not be so if we really stood for progress, development, and truth, for then the mention of something unknown to us would immediately stimulate our interest. The unorthodox would be welcomed and investigated with the same sense of responsibility as is aroused by any great opportunity for service, for opportunity is a great thing.

For years now the technique described in my book *The Use of the Self* has made possible the gaining of previously unknown experiences by reasoning from known to unknown experiences in the process of bringing about changes in manner of use. By this means any harmful influences associated with the habitual manner of use are changed to influences for good by becoming associated with a new and previously unknown manner of use by which the raising of the standard of general functioning can be ensured.

The thought and action necessary for the establishment of these influences for good call for the discarding of cherished beliefs, the giving up of familiar ways, and the learning of unfamiliar ways of doing things. Hence the need for a technique which enables us to put into practice new beliefs in new ways of doing things in the process of making changes in the habitual use of the self, and it is necessary for us to gain the experiences involved in this before we can possibly understand the significance of change in the working of a *constant* (use) which can influence for good or ill the general psycho-physical functioning of the individual. The acceptance of the need

of new "means-whereby" for the carrying out of the desired "doing," the inhibition of familiar ways and all that is necessary for the new way of doing things, call for thinking along unfamiliar lines, and for a wide range of human experiences which I believe to be indispensable to man's growth and development.

But except in rare instances man has chosen to think along familiar lines, and his enthusiasm for end-gaining methods has always been in striking contrast to his reluctance to undertake the difficult task of providing the best means whereby he could carry out consistently the decisions necessary to the success of the plan of civilization. In face of any situation demanding a reasoned decision as to the best line of action to adopt, he has the habit of reacting more in accordance with his unreasoned fears than with any balanced appreciation of his fundamental needs and requirements, and in this respect he has been no more successful in the sphere of religion than elsewhere.

Past and present teachers in the field of religion as in other fields offer us in their writings and instructions theoretical help, good thoughts and advice as to what we should or should not do to realize their ideals, but their methods are on the trial-and-error plan and do not provide those they wish to help with adequate "means-whereby" for the gaining of their end; especially in the matter of making changes in the self, these people, with all their stimulation of our will-to-do, provide no means whereby we are enabled to carry out consistently the well-intentioned decisions which result from this stimulation, leaving us in the dilemma in which St. Paul found himself when he made his agonized exclamation : "For the good that I would I do not; but the evil which I would not, that I do" (Rom. vii, 19).

Here we have an indirect admission by St. Paul that the "means-whereby" at his disposal did not meet his needs in enabling him so to control his reactions that he could consistently put into practice his well-intentioned decisions for self-help, and this is not surprising in view

of all we now know of the influence of use upon functioning, and of the effect of unreliable sensory guidance upon our attempts to gain ends which conflict with our habitual reaction.

The plan of putting forward ideas, good thoughts, and the like has persisted from early times, but that this plan profiteth little is shown by the terrible state of world affairs to-day, the result of man's reactions and of his attempts to carry out decisions on the trial-and-error plan in the myriad fields of his activities.

The effect of this habitual manner of reacting upon the individual has been noticeable in the people who have come to me for lessons and to whom I have tried to explain the nature of the errors it involves. For although my teaching experience is a large one, and I have numbered among my pupils a great variety of types, I have so far failed to discover any difference in their capacity to carry out a decision demanding an unfamiliar manner of reacting to a given stimulus in the use of themselves, a capacity which only becomes possible when, in the course of the lessons, the habitual reaction is inhibited while experience is gained in reconditioning the requisite reflex activity for the new reactions desired.

The disquieting fact is that the originators of good ideas, and the adherents of religious and other sects, such as Christian Science and the Oxford Group, all rely upon feeling for guidance in putting their ideas into practice, as well as upon the emotional reaction of both converter and converted in judging the value of results. Their wish is not only "father to their thought" but also to their judgment.

As the Oxford Group has been much to the fore of late it may be both helpful and interesting to relate some experiences I have actually had with friends and pupils connected with the group who have come to me for lessons. I have found them particularly difficult to teach because of their over-excited fear reflexes and of their habit of instinctively seeking the easy way, even when admitting that it is not the best for their purpose. They

are self-hypnotic to a high and harmful degree, and find the inhibition of habitual reaction much more difficult than most other pupils. Until their manner of use has been improved, which means that some reconditioning has been effected, it is almost impossible to get them to use their reasoning processes in trying to understand new "means-whereby" to their ends. One of them actually said: "I don't want to understand what I am doing." He really meant that he had no desire to use his will-to-do in carrying out consciously the new procedures he had decided were to his advantage.

The projection of messages necessary to the carrying out of new procedures is inseparable from previously unknown sensory experiences of use and functioning, and tends to excite unduly the fear reflexes in all people who are faced with the difficulties of the pupil we are discussing. As we all know, fear is the most fundamental source of human frailty, and in this connexion I have just received from a friend who wishes to remain anonymous an Open Letter which gives a most interesting and pertinent instance of the effect of fear development.

> Dear Mr. Alexander,
>
> At this present time there are many people searching for security and peace, for some means for restoring stability and order, and of coping with all the sudden, unforeseen, disruptive, and revolutionary influences which are upsetting the course of life, and in this search many are turning once more to that ancient consolation of the human spirit—religion. People have always been ready to pay lip-service to religion as the time-honoured custodian of morality[1] and social order, and this trend will therefore no doubt be applauded by many, but it occurs to me that it may involve great dangers, and for this reason I venture to write to you in the hope that you will deal with this problem in your next book.
>
> The need for solving it was brought home to me recently when talking with a friend whom I have known

[1] An eminent friend of mine has pointed out to me that the word "morality" is not to be found in the Bible.

for a considerable number of years. He had always seemed especially interested in religion and punctilious about religious observances. We had often talked about these things, our general outlook apparently being almost identical; but it was not until this occasion that I realized we differed in one fundamental respect.

As you know, I have always taken some part in formal religious activities myself; but while I cannot pretend to have gone into my motives very deeply, I should say that, apart from upbringing, I do so because I like it and because it is a way of responding to an inner need which I appreciate. If I may judge by what my friend told me, this was not so in his case, but he spoke of a constant, semi-rationalized fear. Since early childhood the fear of an unknown after-life with its possibilities of retribution and punishment had been held over him, until this had become the mainspring of his religious activity, and indeed of much of his general behaviour. Prayer and other religious exercises were for him duties which it was necessary for him to perform on pain of severe penalties. His conception and practice of prayer, in particular, were restricted to the repetition of requests for some sort of divine intervention and as a means of evading personal responsibility for his actions.

This outlook was so foreign to my own feelings and experience that while I knew that fear of the unknown is supposed to be the basis of all religion, it had never occurred to me that this might be true of the religion of civilized man to-day, still less of anyone whom I thought I knew so well; but what my friend told me presented the question of religion in a new light, and I realized for the first time that its practice may involve great dangers.

You have pointed out in your books that fear paralyses growth and development in us, and it seems to me that such a religious outlook as I have described would not only arouse fear but even stimulate it. Such people as my friend, of course, can be under no illusion that a more fervent practice of religious exercises will enable them to cope with life as they desire; all their experience of failure and frustration in this connexion points to the contrary, and it is because I am anxious to prevent others from disillusionment, who may turn to religion for help

in like difficulties, that I think if you could find space to say a few words about this matter in your new book it might be of great interest and value to a number of your readers.

Yours sincerely,

In reply to my friend's request I will point out that in this and my other books I am offering a psycho-physical approach to the problem of translating ideals, theories, and beliefs into practice, and have shown that this calls for that fundamental change in the use of the self by means of which the standard of general functioning is raised and psycho-physical defects and ills, whether fears or any other emotional reactions, are overcome. This means psycho-physical reconditioning, and such reconditioning cannot be effected by means of ideals alone, any more than man can live by bread alone.

The appeal to what John Dewey calls "emotional gusts," and reliance upon feeling as a guide both to manner of reaction and to judgment of results, have always been the basic principle in all revivalist movements, and the fact that both orthodox and unorthodox religious bodies still think it necessary to make a special effort to rouse interest in the revivalist method as a "means-whereby" is surely an admission that the results of this method in the past could not have been what they were claimed to be, and hence have failed to secure lasting results in the desired direction. What greater proof could there be of the need for test of principle?

Emotional appeal is always more or less dangerous, for, no matter what its immediate specific result may be at any particular time, experience has shown that this result cannot be permanent and that judgment of results by the guidance of feeling can be deceptive and can too often lead to dangerous and even harmful perversions. Furthermore it is to be condemned because, in dealing with their problems, it encourages people to rely more and more upon instinct and ever less and less upon thinking and reasoning. Where this method is used there is an in-

creasing tendency to react as creatures of impulse, and to become ever less capable of developing that fundamental control and that understanding of oneself and of others which in this world of crises is the most pressing need of the moment. Throughout the ages the rousing of mass emotion has been the means employed whenever it has been thought desirable or profitable to induce people to do what it would never have occurred to them to do under the guidance of thinking and reasoning.

Until something is done to help mankind to evolve beyond this point, which is too close to the animal plane of evolution, and to get a better control of his reactions, it is difficult to see how we can expect any improvement in mass reaction to any potent emotional stimulus. At present man is at the mercy of any individual or people who may think out some means of playing upon his emotions, no matter for what purpose. In the past few years we have seen some startling and terrible results gained in this way and used in an attempt to destroy all that is best in men and women. People have been robbed of their most priceless heritage—freedom of thought and action—despite all the suffering and bloodshed by which these sacred rights have been won in the past.[1] It must be obvious that too many of the individuals prominent in world affairs to-day are "creatures of impulse," and it is in countries where the masses have in their reaction been for centuries more influenced by impulse than by thinking and reasoning, or have chosen the "easy way" of allowing others to think for them, that the irresponsible individuals to whom I refer are able by the imposition of their demoralizing regimen to rob people of all that makes life worth living, and force upon them a way of life which is nothing more than a degrading and devastating form of slavery.

One of our most vital problems is concerned with the changing of thought and action, so essential to the suc-

[1] What has happened will not be a surprise to those who read the chapter "Evolutionary Standards" in my book *Man's Supreme Inheritance.*

cessful carrying out of any plan for individual self-help that calls for the acceptance of new ideas involving unorthodox beliefs and attitudes. But the urgency of the subject does not lessen the difficulties to be overcome in dealing with it, and for the very reason that the problem, from our point of view, has not yet been understood, let alone solved, in the fundamental sense. Many people will contend that they can change their habitual thought and action, others that it has been done by the individual and the mass and so on. But the viewpoint of such people is that of those who claim that change has been made, for instance, when at a revival meeting someone states that he has been "saved" and will henceforth renounce his past beliefs and give up his bad habits, or when the peoples of a country are forced by ruthless individuals, backed up by an armed minority, to live under debasing conditions imposed on them by brute force and murder. These are not changes of thought and action such as we are here concerned with, and it is because such changes in the past have not been fundamental in meeting man's needs that conditions in human beings are as we find them to-day: the individual incapable of making changes in his thought and action without the accompaniment of harmful by-products within the self, while change and reform in the masses has been made too often by brutal methods of suppression, especially of those ideas and beliefs for which men and women have fought and died in the past, and which to-day are still the mainspring of their longing for freedom of thought and action.

CHAPTER X

A NEW PATTERN AND WORKING TO PRINCIPLE

FEW people will deny that the affairs of the world to-day are "out of shape," and that the pattern of the parts which go to make up the whole in the scheme of civilization is a bad one. Yet it is demanded by the "powers that be" that any new pattern, no matter how valuable, must fit into the old pattern if it is to receive even the smallest consideration.

The skilled artisan and craftsman on discovering that a pattern is either bad or unsatisfactory would at once discard it and replace it by a new one, no matter how valuable for its purpose it may have been, and this is indeed the only rational course. In these pages a new pattern is offered to enable man, as an adventurer in the task of putting forward the clock of civilization, to deal with the new and unfamiliar situations that are now confronting him. This pattern provides him with the means of changing and controlling his reactions in face of the difficulties which are inevitable in his attempts to pass from the known (wrong) to the unknown (right) experiences essential for the making of fundamental change.

This new pattern is designed both for the youth and the adult, but it cannot be fitted into any present pattern, orthodox or unorthodox, and if it is to be used, the pattern that it is to replace must be discarded. For young children the adoption of the new pattern is a comparatively simple and easy matter, and the system of work in the F. Matthias Alexander Trust Fund School, at Penhill, near Bexley, Kent, an undertaking made possible by the foundation of the Alexander Trust Fund, has been modelled upon it. This pattern takes shape and form through

the application of the "means-whereby" of the technique, and we now know that it meets the primary need in the education of the child by providing not only new situations, but also the opportunity of developing the potentialities of the child, so as to help him to gain the experience of dealing with the unfamiliar and unknown as the adult adventurer does.

Let us then consider the situation of the child, youth, or adult about to begin the "great adventure" involved in the adoption of a new pattern which calls for change in the fundamental sense from an instinctive to a conscious and reasoned way of living, and it will be seen that the principle upon which the "means-whereby" of change is based will be the same, whether the object be to gain new experiences in the development of potentialities or to prevent the development of some functional trouble by learning *how not* to interfere with that working of the primary control which restores a manner of use associated with a satisfactory standard of functioning.

In the case of children and most youths the decision to try to benefit by means of the technique will be made by the parent or guardian. But the necessity for the step will be brought to the child's notice and his interest gradually quickened by explanation and demonstration on simple lines. This interest will be further increased when he discovers that by not giving consent to the gaining of an end along familiar lines he can prevent any wrong use of himself that he is led to recognize is habitually impeding him in his attempts to carry out some action in which he wishes to excel, and that this makes possible the employment of new means whereby a desired end can be gained by an improving use of himself. His interest will be further aroused when it is made clear to him that not giving consent in the foregoing circumstances is analogous to not giving consent in those circumstances when he refuses to "do" some act he does not feel inclined to do, is afraid to do, or for some reason of his own decides not to do. The same psycho-physical processes are at work in these cases, but the difference in the benefit to be derived

is that in the one case he is consciously improving his use during his employment of new procedures, while in the other cases the benefit is limited to that which results from the prevention of a repetition of his harmful habitual use. Children are naturally interested in the working of machinery, and this interest can be turned to most valuable account.

In the case of the adult the decision to benefit from the technique is usually made independently, and since it presupposes the recognition of a need, where need is so rarely recognized, the decision implies a full recognition of responsibility for the care of the self in the sense indicated in these chapters. "To thine own self be true and it must follow as the night the day thou canst not then be false to any man."

The recognition of the responsibility to which I refer is the essence of all that is indicated in these words—for it is being true to the self in this fundamental sense which alone makes possible the end which Shakespeare indicates. Furthermore, it means the acceptance of an individual responsibility which, so far as I am aware, has never been accepted by man before; one which has been unthinkingly left to the "curative" agency of Nature with all the consequences which are now causing distress, pain, discontent, and disorder within and without man's organism. Being true to oneself in the sense advocated here presupposes being true to others, and if this had once been established not merely as an ideal but as an habitual reaction for several generations, the resultant sense of responsibility might, I believe, lead to a consideration for others and their well-being such as has never yet, except in isolated instances, resulted from educational, religious, or other means for the cultivation of desirable human qualities.

In therapeutics the effect would be just as fundamental. For being true to the self implies an acceptance of the unfamiliar idea of individual responsibility for that manner of use of ourselves which makes for the preservation of the highest standard of functional well-being,

the natural antidote to all individual shortcomings and defects, disease, and organic troubles.

But the stumbling-block in the way of those who wish to help towards such ideals as this are the habits of thought, the preconceived ideas, inherited beliefs and prejudices, which have formed in most people in the process of becoming dominated by orthodox methods of training and education, causing many people whose reactions are reasonable and just in familiar situations to react, when they are faced with the unfamiliar, as if they were suddenly bereft of their ordinary judgment, common sense, self-control, sense of justice and reasoning.

The pages of man's history are full of such blots as the persecution of people with foresight like Galileo, who did no more than confront his fellow-men with a new belief subsequently recognized as a great truth. It is only necessary to read of the treatment meted out by orthodox thinkers, including men of science and religion, to the discoverers of other epoch-making truths—such men as Jenner, Semmelweiss, Pasteur, Lister, Simpson, Hunter, and others—to appreciate the importance of so educating the child, the youth, and the adult that their reaction to the unfamiliar will be one of inquiry, tolerance, and sympathy rather than hostility. Only in this way can they be given the opportunity for examining the unfamiliar and for employing all possible means for finding out whether or not another valuable discovery may not have come to light.

Those who have read the account of the evolution of my technique in *The Use of the Self* will be aware that I was continually led into unknown experiences, and when employing new "means-whereby" found myself in unfamiliar situations, and experiencing impeding and illuminating adventures in dark places.[1] This was appreciated

[1] As a medical friend wrote to me after reading *The Use of the Self*: "The only criticism that I can offer of your new book is that it is just about the most interesting that I have ever read. It beats the usual explorer's yarn into a cocked hat, because you wandered through a much darker country than any of them did."

by the late Joseph Rowntree when he said of my technique that it was "reasoning from the known to the unknown, the known being the wrong and the unknown being the right."

This experience of passing from a "known" to an "unknown" manner of use of the self is the basic need in making a fundamental change in the control of man's reaction, and he will remain impotent in meeting it, unless it is possible to give him the opportunity of accepting an unfamiliar theory and of acquiring the experience of employing consistently the unfamiliar procedures which are its practical counterpart, by means of an integrating process of reconditioning associated with experiences of use and functioning previously unknown to him. Although these experiences feel wrong at first, they will gradually replace the old experiences which felt right, and in time the new experience becomes established as a *constant* in the use of the self in daily activity.

The professional golfer, footballer, cricketer or other expert in games, artist or craftsman, who remains dependent upon instinctive guidance and control in his activities, will not have had the benefit of these experiences, and therefore it is almost certain that the constant influence of his use of himself will be a more or less impeding one in his games and other activities. This can account largely for the fact that professional athletes can and do play at times like second-class amateurs, and so often fail to do their best when the occasion most demands it. It is probable that anyone with a knowledge of what constitutes interference with the employment of the primary control of use would be able to observe in these players such varying interference with this control as could account for the variation in the standard of their play at different times. The manner of interference varies with the different ways of using the self, and the degree of interference tends to increase with repetition.

This is not surprising seeing that experts in games, as in arts and craftsmanship of all kinds, do not recognize the existence of a primary control of their use or that

the manner of the employment of this control is indirectly responsible for the manner of working of all the other parts of the organism. This means that in each attempt to gain an end in learning or playing their games or in pursuing their art or craft they are doing a great deal to lessen their chance of success by cultivating undesirable habits of use in their trial-and-error efforts to gain their end.

We are all aware that a person performing acts under different circumstances can be subject to varying influences leading to different results—in one set of circumstances to a good result, and in different circumstances to another. For instance, there is the influence of the wind, or of rain-sodden ground, whether in golf, cricket or football. Emotional strain and health conditions may affect artistic production, craftsmanship or even the simplest acts of life. Even routine actions, like sitting down or rising from a chair, may under the unusual conditions of being watched by others become altered and complicated. In cricket the effect of some unexpected happening, such as the failure of the first two batsmen, upon the rest of the team is notorious.

In such circumstances the people concerned will be aware of impeding influences, but will be unaware that they are the result of their harmful interference with the employment of the primary control of their use of themselves. In their attempts to counter these influences they instinctively react to their desire to be as successful under the unusual and adverse circumstances as at any other time. This too often results in comparative failure, because it is simply another trial-and-error attempt to achieve success under circumstances of emotional stress and undue anxiety.

An analogy from the world of machinery would be found in the experiences of a driver struggling to get his car moving over ground that is unsuitable, particularly if the controls and adjustments of the car were interfered with as if by magic as the wheels met unfamiliar and more and more difficult ground. In such circumstances the functioning of the car and driver would not be up to the

standard that would be present if the controls and adjustments of the car had not been interfered with, and this applies to the human being who depends upon instinctive guidance and control when reacting to unusual circumstances in games and other activities. A degree of composure and confidence is essential to success in unfamiliar situations, and particularly in those which allow us only one opportunity of scoring a success, as is the case with games and examinations.

Compare the chances of success enjoyed by the human machine working as an integrated whole with that of a person in whom energy is being more or less misdirected, as it must be in all those who do not have a knowledge of the employment of the primary control of the use of themselves. Think of the different effect upon the self of a plan which makes for a maximum of successes instead of a maximum of failures. The one is a builder of confidence, satisfaction, happiness, and conscious control of the self, while the other places us more and more at the mercy of the vagaries of emotion and habit, and tends to undermine our confidence in ourselves and in our manner of doing things, and to make for dissatisfaction, irritation, and discontent.

I read the following in a newspaper (*Sunday Pictorial*, Jan. 9, 1938):—

> In his reply to the toast of "Our Guests" at a Golf Club Dinner at Galway, the Bishop of Galway, Dr. Brown, said that golf developed in most men a deep and profound sense of humility. . . . "In fact," he added, "there is one thing I have noticed about golf, and that is that I have never heard of it being played by dictators."

If the good bishop had been speaking of my technique with the same knowledge of it as he has of golf, he would have substituted the word "all" for "most" in his first sentence. But while the trial-and-error experiences which develop that valuable quality of humility in the playing of golf lead to increased uncertainty, loss of con-

fidence, loss of temper, and irritation, the experiences to be gained in employing consciously directed "means-whereby" lead to the development of humility by reason of the fuller understanding of relative values which follows expanding experience in the employment of any technique.

The chapter on golf in *The Use of the Self* and all that has been written on the subject in my other books reveal the why and the wherefore of the golfer's difficulties. I have shown that these arise chiefly from bad manner of use, and are too often increased by his attempts to improve his play by the adoption of practical procedures based on a wrong principle, his own preconceived ideas and those of the professional teacher. Working to this principle, the golf pupil attempts to gain his ends by direct means, without taking into consideration the influence of his manner of use upon the means he employs, a use which in the case of most golfers will be an impeding influence. It may be said that he knows of no better plan than this, but from personal touch with such golfers one finds that hardly one in a hundred would take the trouble to go through the process necessary to change his habit of use even if he were convinced that it would improve his game. The majority prefer to go on with their trial-and-error attempts, and in consequence fail to make a success of their game (their end).[1] This would not be serious but for the fact that it brings about a condition of affairs which causes emotional disturbance and disappointment.

And what is true of games is true of man's activities in life in general. If the thousand and one activities involved in the business of living are to be performed without exerting unknowingly a constant harmful influence upon the organism, there is just as much need for the average modern person to change his habits of use of

[1] It would sometimes seem as if the experiences of golfers and others in their efforts to improve their game or other activities bring them to the point of Shakespeare's words, when they would rather "bear those ills they have than fly to others that they know not of."

himself as for the golfer, tennis star or any other skilled player of games. The time has come for realizing that by means of a conscious employment of the primary control of use we can with confidence ensure the best possible manner of use of ourselves at all times and in all circumstances, and that by this indirect means our psycho-physical self can be energized and controlled to the best advantage, no matter what our activities may be.

In this way "trying to do our best" becomes a practical reality instead of a pious hope; it amounts to no more or less than putting the psycho-physical machinery of the self in order on the lines of the scientific engineer who overhauls his engine so that the particular individual machinery shall be constantly capable of optimum functioning.

Learning to "do" by this procedure is not learning to "do" exercises on a trial-and-error plan, but learning to work to a principle, not only in using the self but in the application of the technique outside the self. A person who learns to work to a principle in doing one exercise will have learned to do all exercises, but the person who learns just to "do an exercise" will most assuredly have to go on learning to "do exercises" *ad infinitum.*

However resourceful, for instance, a man may be who has learnt to play cricket in the orthodox way, any interference with the working of the primary control that was present when he began will have tended to increase as time went on. Any success therefore he may have achieved will have been because of his natural gift for the game and *in spite* of the constantly impeding influence of any interference which will have tended to lower the standard of his functioning not only in cricket but in all his other activities.

On the other hand, if he had known how to employ the primary control of his use so that it would tend to raise the standard of his general functioning in his game, he would have shown a constant tendency to improve in his manner of employing it, and his success would have been

the greater because of this. Most important of all he would have learned to be able to work to a principle, and to take advantage of this when learning to play any other game, or in learning to "do" in any sphere of individual activity.

CHAPTER XI

STUPIDITY IN LIVING

MR. (now the Rt. Hon.) HERBERT MORRISON, when speaking at a public dinner recently, is reported to have said: "It is an irony that man, so skilled in learning, should be so stupid in living."[1]

He might also have referred to the irony that man is so skilled in the nature and working of the machines he has invented, but is so very unskilled in the nature and working of the mechanisms of his own organism; he knows all about the means whereby he can keep the inanimate machine in order, and considers it his duty to make proper use of these, but he knows little or nothing about the means whereby he can keep in order that animate human machine—himself.

The great majority of people are, in Mr. Morrison's words, "so stupid in living" that they have not yet awakened to the great and growing need of such "means-whereby," and so have not yet appreciated that these are essential to the art of living healthily, happily, and in harmony with one another.

Even among those people to-day who accept the ideal of "wholeness" there are few who are sufficiently skilled in the art of living to put the ideal into practice, and their failures may be ascribed to the fact that knowledge of the use of themselves, as it affects the guidance and control of their reaction, is not part of the foundation on which present civilization has been built, nor is this knowledge part of the equipment of those who undertake to teach and rule humanity. In my own case, the experiences which preceded

[1] I regret that being out of my own country at this time (September, 1940) I am unable to refer to my papers to give particulars of date, etc., of Mr. Morrison's speech as reported.

my attempt to work out a technique, as well as those which were gained in the process of working it out, led me to a gradual realization that man's most tragic mistake has been his failure to acquire knowledge of himself as an individual functioning as a psycho-physical whole in his daily activities, for this has deprived him of the key to knowledge which could give him a new technique in living. It is useless to urge people to live the full life without the "means-whereby" to wholeness in the motivation and activation of the human self.

So far man has been content to occupy himself in acquiring relatively unimportant miscellaneous, and in many respects unrelated, knowledge concerned with his activities outside himself, never having seemed to appreciate that accurate and full knowledge and control of the integrated working of his own self was essential to success in making use of that other knowledge upon which he relied for carrying on his activities in the outside world, or that a knowledge of himself was actually necessary to prevent him from gradually becoming more and more mal-co-ordinated and maladjusted as a result of his increasing misuse of himself in applying the knowledge he had acquired in meeting his needs in living.

Had he given due attention to the study of himself, and had he turned this study to good effect, he would have gained the experience in the guidance and control of his mechanism in activity, which would have led him to appreciate the unity in the working of his organism in use and functioning. Then if he had brought the result of this study of his individual self to his study of the wonders of the universe, and had postulated unity instead of separation as a working principle, he would inevitably have studied everything as a whole and not piecemeal.

The fact that the opposite has been done until now, both in the science of man and of the world outside, has resulted in many people now beginning to wonder whether if there be a creative principle, it had any other purpose than destruction. In recent years, however, a small minority have come to see farther than their fellows in this

matter, but this minority is still tied down to orthodox methods of procedure in their attempts to gain the new ends indicated in their new theories, because they have not the means of putting into practice the principle of unity in the carrying out of educational procedures. Educators themselves are bewildered by a situation which grows worse in proportion to the increase of theories advanced to cope with it. Recognition is widespread that something must be wrong with a system that sets youth adrift in a chaotic world in a state of confusion which, as I shall show, can be attributed to a want of knowledge of the self, and of the guidance and control of that self in daily activity.

This, which is too often the tragedy of modern youth, is strikingly typified in a recent article by Miss Dorothy Thompson,[1] who recounts the case histories of four young men who graduated from college with high scholastic honours, but whose stories concerning the effect of their education upon their lives were very distressing to Miss Thompson, as they must have been to all who read her very moving article. These stories comprise a serious indictment of American education, so serious in fact, and so pertinent to the whole theme of this book, that I feel justified in quoting at some length from Miss Thompson's article:—

> . . . For they testified that what their education had done had been to break down their belief in any *positive values*,[2] to weaken their faith in their country, in its history, in its traditions, and in its future; to put them, themselves, into *intellectual and psychological confusion*, and into inner despair out of which they had sought refuge in various ways at various times: one through casting his lot, temporarily, in with Young Communists, because "they alone seemed to be perfectly clear in their minds where they were going"; another, and for a period, into complete scepticism and cynicism; another into "the

[1] "On the Record": A Footnote, by Dorothy Thompson, *New York Herald Tribune*, October 4, 1940.

[2] The italics in this and the following quotations from Miss Thompson's article are mine.—F. M. A.

only thing that seemed solid—my own egotism and self-interest."

One of them had come near to the edge of a nervous breakdown. He had left college in the midst of his course, and gone home to be pampered, on the ground that he had "been working too hard." His solicitous family had sent him to a psychiatrist. "Then one day I had it out with myself, and I knew that unless I pulled myself together I should be in the hands of a psychiatrist forever. Somehow I managed to tell myself the truth: that I had not been overworking, but underworking, and that the real truth was that I didn't have any guts."

This was the same boy who said: "When I went to college I was full of enthusiasm, particularly interested in history and philosophy. I wanted to find out what made the wheels go round in this world. I wanted to prepare myself to do something—not just make money—not just be a 'success' but achieve something—something bigger than I am—I wanted to be part of something. But by my junior year I had become convinced that there wasn't anything that could be believed. Everything was relative. And *I was swimming around in space.* I was like the guy in that rhyme of Gelett Burgess's: 'I wish that my room had a floor. I don't so much care for a door. But this floating around without touching the ground is getting to be quite a bore!' "

Another of the boys—the most articulate and thoughtful one—took it up. "We were told to maintain the critical attitude. We were soaked in historic relativism. I tried to maintain a 'healthy scepticism.' The trouble was that I observed, in reading history, that the people who moved this world were people animated by a passion for something. I could see that you couldn't write off faith as one of the prime moulders of history, and that when there wasn't any faith, pure gangsterism and piracy broke loose. I could see that if I and my generation were going to mean anything in this world and not just be dots and specks pushed around by forces we couldn't control, we had to find out what our convictions were. But meanwhile I had lost my moorings."

In the light of all I have written concerning the unity

in working of the human organism, and the influence of use upon functioning, it should, I think, be clear to the reader wherein the educational system had failed to equip Miss Thompson's four young men for success in living. In spite of their scholastic achievements, their high degree of intelligence, and, as Miss Thompson says, "their fine physical type," it is all too tragically clear that these young men were not in a condition of psycho-physical well-being, and had reached a point where the standard of their general psycho-physical functioning had become seriously lowered. They had, although they were unaware of it, become the victims of a constant influence for ill, which adversely conditioned their reaction to their education as well as to all their activities of life.

I have always found in persons afflicted with "nervous breakdown" and so-called mental disorders, who have been sent to me for help by their medical advisers, harmful conditions of use and functioning associated with "intellectual and psychological" (and, it should be added, "physical") "confusion," which, in my experience, lead ultimately to reactions that are concomitants of "inner despair." The serious element in the situation of such "emotionally and spiritually unemployed youth" as Miss Thompson describes is that although they recognize that they have "lost their moorings" through the breakdown of "positive values" in the pursuit of their academic studies, they remain completely unaware of a much more serious, because fundamental, breakdown in connexion with the working of the self, as manifested in the use and functioning of mechanisms, organs, and processes of thinking and reasoning. The knowledge of the integrated working of the organism in use and functioning which alone establishes and maintains well-being within the self has not been an integral part of the educative process. It has had no place in the educational curriculum and hence has been no part of their preparation for life, so that these youths have actually been deprived of the study that could have led to belief in the one "positive value" which their academic education could not have broken down—namely,

knowledge of the working of the self in its application to living. Thus deprived, it followed as the night the day that, while they were acquiring a variety of external knowledge, the influence of harmful use was a *constant*, lowering the standard of the general functioning of the instrument of learning, and therefore lowering the standard of their judgment of "positive values."

It is this which is at the root of the dilemma facing modern education. For if, in the education of these boys, they had first been taught to appreciate the value of the principle of the unity in working of the psycho-physical organism, and had been given the means of maintaining this unity in working in all their daily activities, they would have gained experience in assessing the value of the changing conditions accruing at the different stages of development leading to psycho-physical health, that basic experience which could have given them a standard of judgment of the subject-matter submitted to them. Without this knowledge they were bound from the very outset of their education to drift into a danger zone, to "lose their moorings." Small wonder, then, that they developed "mental" and "nervous" disorders.

So much then for the education of these four young men. But there is an epilogue, which Miss Thompson calls "a happy ending," and which concerns the vastly important subject of re-education, or fundamental change. Miss Thompson continues:—

> Fortunately, this particular story has a happy ending. These young men came into contact with one professor, a remarkable teacher, who *bucked them up*, and told them they had power in them and beauty. He opened their eyes to the real world: he taught them something about the survival values of history; he brought to them some intellectual convictions regarding character, and thus *he saved their souls*. And a very good job he made of it too, and the immediate response indicated that this generation is by no means lost, even though so clever as to be on the verge of limbo. I concluded that it would not take a great deal to undo much of the harm that has

been done. *But it would take a new orientation in education—and there one is up against the system.*

One is up against the "system" indeed, for one is up against those habitual reactions to stimuli by which human beings are so often enslaved. Fundamental change, as I have shown in Chapter V, involves the re-education and the readjustment of the individual *as a whole.* A mere change of "mind" or of belief does not change the habitual manner of psycho-physical use and the associated conditions of general functioning. And without in any way wishing to question Miss Thompson's estimate of the professor's methods or of his good intentions, I must put one or two questions. Firstly, in what way does the means that she tells us the professor employed embody a "new orientation" in outlook and education? Secondly, in what way does the method employed by the professor differ from those employed by "remarkable teachers" throughout the history of civilization? Religion, philosophy, ethics, and education have always sought to inculcate such ideas as cheerfulness, confidence, courage, altruism, justice, compassion, etc. Thirdly, if such methods were any more than palliative, why such widespread intellectual and psychological confusion, such prevalent "jitters" to-day? There has been no dearth of good advice, no lack of wise precept. Most of us know *what* we ought to do (ends), but are sadly lacking in knowledge of *how* to do ("means-whereby"), and unfortunately seem to be unaware of the dangers incurred by palliative methods which attempt to inspire enthusiasm and belief in ideals which, however admirable in theory, are not based upon knowledge of the self as the instrument of the "doing" required for putting them into practice.

Miss Thompson's "remarkable teacher" bucked up these misguided young men, but, in the light of my experience in teaching people who were said to have been "changed" by such methods, I cannot find any reason, for instance, for supposing that, despite the change brought about in his "intellectual convictions" for the time being, the one

young man will not again "come near to the edge of a nervous breakdown," because the general working of his organism and the associated conditions remain unchanged.

It is just in this failure of the professor to take into consideration the influence of use upon functioning in "bucking up" the depressed young men that we may appreciate the inadequacy of the educational system itself, and in another paragraph Miss Thompson adds, quite unintentionally, to her indictment of the educational system where she writes:—

> It was out of just such a generation of emotionally and spiritually unemployed youth—youth whom "dynamic and historic relativism" had left *utterly rudderless*—that Hitler made the leadership of a movement that has plunged a large part of the earth into destruction. I knew just such youth fifteen years ago in Germany, and with fascinated and horrified eyes I saw how easy it was for the first leader, *appealing to their confused unconscious longing for a faith,* to sweep them with him, *merely by affirming the barbaric standard of blood and soil.* Our colleges are full of youths who think that Hitler or Stalin . . . are great men. Why should they not, since *they have no measuring-rods* by which to test greatness.

Here we get a remarkable parallel between the method of the professor in dealing with the four confused youths, and the method of Hitler in dealing with the "rudderless" youths of Germany, a parallel that should be clear to those who have followed my thesis through the earlier chapters of this book. For the two methods (and I write *methods* not *ends*, please bear in mind) are alike in principle however much they may differ in aim, and this principle considered as means to an end—in this case the making of fundamental change—is the antithesis of the principle of psycho-physical unity in the working of the human organism as advocated in these pages. Whereas Hitler, according to Miss Thompson, appealed to "their confused unconscious longing for faith merely by affirming the barbaric standard of blood and soil," the professor appealed to the same "unconscious longing for a faith"

merely by affirming the loftier standards of "power and beauty," "intellectual convictions regarding character," and "the survival values of history"; and the fact that the objectives (ends) of the dictator and those of Miss Thompson's teacher are as the poles apart does not alter the fundamental point, to wit: *that in neither case were the youths given any standard of self-judgment.* In Miss Thompson's words, "they have no measuring-rods by which to test greatness." Certainly there is no evidence that the young men who came under the influence of the inspiring teacher, any more than those who came under the influence of Hitler, were given any means by which they could confidently evaluate the ideas, convictions, standards, etc., presented to them, and therefore, in making their judgment, they were forced to rely upon their obviously unstable emotions and untrustworthy feeling characteristic of their habitual reaction which in all such situations had tended to block off the operation of the processes we call reasoning. Ideas and ideals were merely affirmed and believed, but the underlying psychophysical use and functioning, I must repeat, remained unaltered, so that fundamental change affecting the whole man could not have taken place. The world just now is overridden by conflicting ideologies, plans, ways of life—all "ends" which lie in ambush to trap the confused and rudderless youths of the world. Millions, the highly endowed and the average alike, are left to find their way out of "utter confusion" the best way they can by drifting to whichever leader appeals most to their organic instability.

"Out of this youth," Miss Thompson writes further, "should come the intellectual, spiritual, and political leadership of to-morrow. . . . But if the intellectually gifted, the naturally superior, and the relatively privileged, *are rendered impotent of leadership by their education,* then the power will certainly pass into the hands of those whom Whitman called 'powerful uneducated persons,' who have at least the realistic education of the shops and the gutters, the discipline of the factories and the farms, who

have learned that you can't debate with hurricanes or hunger, or with tanks, or guns, or machines."

A disturbing analysis indeed! And it is because of my awareness of the tendencies which result from our present educational systems that I have for so long advocated a new orientation in education. My work is in the wide sense educational, but it cannot by any stretch of the imagination be labelled a "system," for that implies something limited, complete, calling for the employment of direct means in the gaining of ends; whereas in my technique the procedures are carried out by indirect means which lead the pupil from the known (wrong) to the unknown (right) in experience, the first imperative in the employment of these procedures being to provide for the child, adolescent, or adult the "means-whereby" or standard by which, first, to judge and direct his own psycho-physical mechanisms in the activities of life, and then, in accordance with this standard, to judge the value of ideals and suggestions proposed to him in experience. Individuals who are equipped with this knowledge of their own psycho-physical tendencies towards unduly depressed or excited emotional reactions, together with that of the means whereby they can hold such tendencies in check, cannot easily be influenced by others to the extent of becoming mere puppets, a danger to themselves and to their fellows.

Working in accordance with the principle underlying these procedures obviously brings one, as Miss Thompson says, "up against the system" of both orthodox and unorthodox education, as that word is at present understood. But the individual so educated (or re-educated in the case where something lost needs to be restored), can be developed to the point where he will be able without confusion to inhibit his tendency to be "carried away" by his desire to gain his "end," before he has set in motion conscious impulses in the laying down of new lines of communication in the use of self (his instrument). In this way he will learn how to "think in activity" even at moments of greatest stress. This new knowledge of himself in use

and functioning will give the modern youth a firm basis for the acquisition of other knowledge, and for putting that knowledge into practice, enabling him to make those endless adjustments to his environment which life in civilization demands of its members if they are to survive.

A typical example of the effort that is being made by professional educators to adapt the educational system to what has come to be known as "a changing world" is to be found in a recent pamphlet[1] by Dr. William Heard Kilpatrick, of Columbia University. Dr. Kilpatrick discusses his subject very learnedly, beginning with the nature of behaviour and ending with the theoretical objective, to wit: Education of *The Whole Child;* but his discussion does not advance beyond the academic stage, as with so many other of the tentative and experimental remedial ideas which have made their appearance.

Dr. Kilpatrick's pamphlet interests me because he advocates the concept of "the whole organism in each learning act," and employs such phrases as "Integration of the Self," "Conscious Direction," "Conscious Action," and "Re-making of the Self," and declares that the term "self is a very convenient one with which to treat certain manifestations of behaviour." Such statements are especially interesting because in *The Use of the Self*, published in 1932, I made a statement of technique which was wholly concerned with the use and development of the self as a manifestation of all, not merely certain, kinds of behaviour. This technique, moreover, was shown to have been based upon the principle of unity in the integrated working of the psycho-physical organism, whether in the act of "learning" or in any other activity, and to have provided the practice which makes possible the "conscious direction" without which there can be no "remaking of the (psycho-physical) self" and therefore no sound education. From this practice emerged the theoretical conception put forward in all my books. Yet here we find Dr.

[1] *A Reconstructed Theory of the Educative Process*, by William Heard Kilpatrick, Bureau of Publications, Teachers' College, Columbia University, New York City, N.Y.

Kilpatrick, in 1935, advocating similar concepts applied to the "educative process," but apparently without considering it necessary to go beyond mere theory.

Certainly a reading of the pamphlet makes it difficult to believe that Dr. Kilpatrick fully understands the nature of the practice required to support the concepts he advocates. Let us, for example, examine the following passage quoted from the pamphlet:—

> Where the organism faces a sufficiently novel situation, old responses will not suffice. A new response is called for or failure confronts. If fortunate, the organism will contrive a response new to it and adequate to cope with the novel difficulty. Such a contriving we call "learning." A dog is upset at being shut up in an enclosure. He finds or contrives a way out. It works. Therefore, if shut in, he uses his new-found exit (or, more exactly, his newly contrived response). He has "learned" how to meet the situation.

Dr. Kilpatrick's conception in the matter of *response* to the stimulus to carry out the activity or activities necessary for "contriving" is open to serious question. Upon the attitude towards the nature of response rests the success or failure of any educational process, for the simple reason that the primary response to the stimulus to any activity in animal or human being is, in fact, the motivation of the mechanisms that leads to activity within the organism—activity which makes "contriving" possible in the gaining of some end, such as the satisfaction of a desire or need.

> The word "motivation" is here used to convey that which takes place within the self immediately before the mechanisms are activated. It is the primary response that *leads to* activity; the process that, in a sense, mobilizes the organism as a whole at the instant of the receipt of a stimulus. To consider the word in the usual sense as a "mental" act or influence would not be correct, since, as always, the whole organism is involved even though activity of the mechanisms has not yet taken place.

> It is interesting to find the following quotation from J. Martineau in Webster's *New International Dictionary*: "There are but two varieties of *motive* (i.e., of influence tending to volition): a blind impulse from behind, and a conceived good before us." The first kind can be attributed to Dr. Kilpatrick's dog, whose motivation is the outcome of a "blind impulse from behind," and the second also, in so far as it "conceives good" in gaining its ends by making its escape; but only the second can be attributed in any fundamental sense to the person who "conceives good" in that use and functioning of the self as the instrument of learning and learning to do, which is the outcome of experience in conscious guidance and control of the psycho-physical mechanisms of the self.

I join issue with Dr. Kilpatrick when he contends that it is a "new" response (or "newly contrived response") to a novel situation when the organism of the dog "contrives a way out." Anyone who has had experience with wild or tame animals knows that they are the victims of habitual response. It is for this reason that the hunter and the bushman arrange "novel situations" for the animal they are trying to capture, for they know quite well that it will respond in the new situation as it has always done in familiar situations, become confused and render itself the more easily captured. Wherever or whenever a dog is enclosed it will repeat its habitual tactics (response) of smelling, pressing, nosing, on the trial-and-error plan, with the end in view of trying to find a weak spot which it can tear down or squeeze through or jump over in order to achieve its freedom (end). In these activities the habitual motivation of its mechanism will be repeated as a *primary* response to its desire or need to "contrive a way out" from an enclosure, or to meet any other need. How then can its response to a novel situation be termed a "new" one, when in fact it is responding as it always does in accordance with inherited instinct, repeating the means to its end which have been the dog's habit through countless ages of experience in "finding a way out"? One of

the most striking instances of the persistence of habit is that of the tame bird which, after picking up each seed, instinctively looks around in self-preservation, although in a situation that has become familiar and in which it has never experienced danger, just as it did in the "novel situation" in which it found itself in the early days of the taming process.

I assume that Dr. Kilpatrick employs the illustration of the dog to support the theory upon which he proposes to reconstruct the educational process. With the utmost desire to analyse his theory at its full value I must point out that, whether he is aware of it or not, he in his pamphlet is advocating the automatic trial-and-error method while at the same time stressing the importance of "conscious direction" and the necessity for "conscious action." This inconsistency is further revealed in the lack of any concrete knowledge to support his plea for "remaking the self," and, when referring to behaviour (response to stimuli), in such statements as: "Rather does each new way of behaviour mean in some degree a remaking of the whole organism," or "Learning builds structure," or "Correlative with all said above is the effect of the self as it lives," and again, "We must think always of the self." The point of course is that nowhere in the pamphlet is to be found any knowledge of that use and functioning of the self which determines the nature of "each new way of behaviour," and ensures "desirable structure building" through the "remaking of the self" in living by gradual change and improvement in manner of use of the self.

If the manner of use is a harmful one, as it is in most people to-day, it is a constant influence for ill upon the whole organism, and therefore, in each "new way of behaviour" or in "the remaking of the whole organism" it will be one that is constantly lowering the standard of general functioning, impeding and undermining the "structure building" within the organism in learning and learning to do, bringing about those functional disorders which precede organic disorders and disease.

Dr. Kilpatrick's illustration shows that he is only inter-

ested in the dog's behaviour in gaining its end in "contriving a way out," *not in the use it makes of itself as the instrument in gaining it.* In other words, he is concerned with the end, not with the "means-whereby." And this is exactly what is wrong with the existing educational system, under which it is generally considered that a child has made a good response when it gains the end set for it by the teacher, although it can be demonstrated that the primary response in that motivation of the child's mechanisms which leads to a certain manner of use of itself in the gaining of the end is having a constantly harmful influence upon the general functioning of its organism. One is forced to conclude that Dr. Kilpatrick does not take into consideration the influence of manner of use, harmful or otherwise, upon the functioning of those who may be subjected to his educational process. Therefore no matter what benefit he may claim can accrue, he cannot escape the serious charge that he is allowing his pupils to remain the victims of a constant impeding influence upon their general functioning, and one that will continue gradually to undermine their psycho-physical energy and potential development in the employment of their thinking and reasoning processes in learning and learning to do, as well as in all other responses to the stimuli of living.

"If we who deal with children," he writes, "will bring ourselves to understand both the possibilities of the situation and the dangers of going astray, we can the better help those under our care to grow in clear-eyed vision of things as they are and in the use of the means appropriate to change them—not mere wishful thinking, or spineless acceptance of injustice, or rash insistence on our way." To which I would reply that in this book I hope I have shown why they cannot be made "to grow in clear-eyed vision of things as they are" (and, I would add, as they should be) unless they are given that knowledge of the use of the self which includes the means whereby (means appropriate) they are enabled to inhibit the habitual (automatic) reaction to the stimuli of daily living, which, as I have been teaching since the beginning, must be inhibited be-

fore any such fundamental change can be brought about in the psycho-physical organism as would make possible the change in educational procedure that is Dr. Kilpatrick's objective.

In view of this it is interesting that John Dewey, a colleague of Dr. Kilpatrick, writing of my technique in the Introduction to *The Use of the Self*, in 1932, said :—

> The technique of Mr. Alexander gives to the educator a standard of psycho-physical health—in which what we call morality is included. It supplies also the means whereby this standard may be progressively and endlessly achieved, becoming a conscious possession of the one educated. It provides therefore the conditions for the central direction of all special educational processes. It bears the same relation to education that education itself bears to all other human activities.

CHAPTER XII

KNOWING HOW TO STOP

"Oh, what a fall was there, my countrymen!
Then I, and you, and all of us fell down,
Whilst bloody treason flourished over us."
(Shakespeare, *Julius Caesar*.)

THE combined efforts of men and women in many parts of the world have resulted in the production of the atomic bomb. This means that they have succeeded in harnessing energy which, when released, can cause devastation on a scale not previously experienced. As a human achievement the atomic bomb is hailed with huzzas; as a means of destruction it is viewed with horror; as a possible means of the destruction of civilization it is universally feared. Only as a possible aid in supplying future needs of mankind, and thus tending to improve his way of life, is this discovery welcomed by many. But apart from and above all these considerations and possibilities, it will be welcomed by people who now see that its advent will force mankind to cry a *HALT* in many directions—particularly by those people of foresight who have long since realized that it has become essential to cry a Universal Halt; this, in order that a change can be made in human reactions and in the relations of human beings with one another, based as these are on a way of living that has become unbalanced, and is becoming more so, with increasing rapidity the world over.

Mankind is now faced with new, unexpected, and tremendous problems. An all-important one is that of human relations, for the solution of this problem calls for knowledge of means whereby human reactions can be changed, controlled, and gradually improved. Unfortunately, com-

paratively few people have ever come into contact with such knowledge. Had this been otherwise, sufficient people might have been so influenced in foresight and outlook by the change that the crisis of 1914–1918, and the rapidly following world crisis of 1939–1945, could have been prevented. But all this, as we shall see, was inevitable when we remember that throughout his long career man has been content to make progress in acquiring control of nature in the outside world, without making like progress in acquiring its essential accompaniment, the knowledge of *how to control nature within himself*—that is to say, how to control his own reactions to the outside world. Up to now he has been so engrossed with the making of changes in the means whereby he could acquire what he considered necessary to his needs in inanimate things, that he has failed to give equal thought to the means whereby he can change and control his animate self. Consequently, as time has gone on, his achievements in controlling nature in the outside world have been discounted by a disintegration within his psycho-physical organism, so that he continually errs in his judgment of relative values and fails in his relations with his fellow-men. Meanwhile he is becoming less and less able to change and control his reactions even when he attempts to do this by the use of means which he approves and which he tries as best he can to put into practice. The urgency for directing attention to exploring this field of activity is obvious when we consider that on account of this one-sided development man has created, in the atomic bomb, a Frankenstein monster which if not handled wisely will prove a constant danger to all, because he has not developed that self-awareness and control of his reactions that is needed if he is to keep control over the monster he has created. As it is, he appears stunned and bewildered by this, his latest discovery, and is afraid to trust himself or his fellow-men with the knowledge that led to its discovery, lest they should react to it in a way that would bring irreparable destruction on the world. There is implied in this a frank admission of the present unsatisfactory nature of man's reaction in general, and

this should prove a "blessing in disguise" if he realizes that this nature must be changed and improved if in the future he is to escape the harmful effects which have resulted in the past from his attempts to meet adequately the demands involved in adapting himself to the constant, and progressively more rapid, changes in the world outside of himself. Such a change in the nature of human reaction is essential if mankind is not to remain saddled with frustrating static and obsolete beliefs, ideas, conceptions and relative values which have long since outlived their usefulness. Obsolete indeed as were many of our ideas, conceptions, beliefs, and so on, before the advent of the present crisis, the past few years have completely altered the foundations of our previous ways of life, and it has become a matter of prime necessity to re-examine the pedigree of all such ideas, conceptions and beliefs with which our overt activities are associated.

To succeed in this, and to set about making the necessary changes to this end, we shall be forced to come to a FULL STOP. This may well prove to be the most difficult and valuable task man has ever undertaken until now, for he has gradually been losing a reliable standard of control of reaction, and the ability to take the long view, in his efforts to improve his conditions when he is faced with the need for changing habits of thought and action. This should not surprise anyone who remembers that in most fields of activity man's craze is for speed and for the short view, because he has become possessed by the non-stop attitude and outlook: he is a confirmed end-gainer, without respect to the nature of the means whereby he attempts to gain his desired end even when he wishes to employ new means whereby he could change his habits of thought and action.

These habits of reaction which hold him in slavery are the inevitable accompaniments of his out-of-date beliefs and the associated judgments which are too often unsound and frustrating. He will therefore find it difficult to take the long-view outlook of his activities which is inseparable from the ability TO STOP when faced with the need for

changing habits of thought and action. Man, controlled by impulse and instinct at this stage of his evolution, rarely fails to react according to pattern, no matter under what circumstances. He may claim to be an advocate of freedom *of* thought and action, and may even be a person who acts up to this theory in his daily living; but he cannot, in consequence, claim to be able to put into practice that greatest of all attainments—freedom *in* thought and action—until he has gained that knowledge of the means whereby he can command the best use and functioning of himself in activity which is essential to change and control of reaction in the basic sense. This demands the employment of a technique which makes possible the gaining of experience in KNOWING HOW TO STOP (prevention—inhibition) when dominated by the influence of impulsive uncontrolled reaction. Provision is made for this by procedures in the technique here described as the means whereby those who need it can be helped to gradually change and improve the control of their reaction. The first step in the procedure is an inhibitory (preventive) one—that of refusing to give consent to the habitual (subconscious) reaction; and it is the basic beginning of the means whereby one may change and control reaction. The next step is a volitionary one—that of consenting to employ the second procedure and also the succeeding procedures by a continuity of conscious directions in giving consent to new procedures whilst still withholding consent to the habitual reaction (the first procedure). Thus the first procedure, which is an *inhibitory* act, in being linked with the other procedures, becomes the beginning of a *volitionary* act which involves thinking *in* activity and enables us to gradually change and improve the general use and functioning which is a manifestation of the nature of our reaction.

By these means, as can be proved by *operational verification*, we are enabled *in process* to bridge the gulf which has for too long separated subconsciousness and consciousness in the control of reaction, and at the same time to widen the gulf between the human and the animal stages

of evolution. Full comprehension of the need for the employment of these means could change and improve the basic nature of man's impulsive and instinctive reactions which have developed hand in hand with his static beliefs and outlook. Man's basic nature has not changed as it should have done during past centuries in respect of conscious direction of his use of himself or in regard to his judgment and control in human relations. Hence on every hand he is faced with the impeding effects of "emotional gusts," such as are associated with the too common and frustrating human failings which are manifested in prejudice, jealousy, greed, envy, hatred, and the like. These are the outcome of reactions which ruin man's chances of establishing such relations in national and international affairs as could lead to a better understanding of what is essential to the engendering of goodwill and peace in a world in which changing conditions and new discoveries in the outside world make new and ever-increasing demands for increasing change in, and control of, human reaction.

CHAPTER XIII

IN CONCLUSION

In this unparalleled crisis, characterized by almost unthinkable human manifestations, there is evidence of a burning desire in the great majority of people to fix the blame for the mistakes or wrongdoing inseparable from such a crisis upon some individual or individuals, some government or governments.

I have listened to the charges made against some of these and have questioned others who have done the same, but I have failed to meet or hear of a person who, when making these charges, realized that he should take his share of the blame for the mistakes or wrongdoing attributed to individuals or governments. This particularly applies to those who have been active participants in fostering the outlook, intent and misunderstanding which, taken all together, have made possible the present recrudescence of barbarity, rendered more and more hideous by the means of destruction and disaster that are now placed within the reach of the irresponsible through the labours of scientific man, who, in gaining his ends, has been little concerned with the solution of the problem of how man could be prevented from making harmful use of the products of his research, although only too well aware that without these the present devilish orgy of murder and cruelty, unprecedented during man's long and chequered career,[1] would certainly not have been possible.

The desire in man to fix blame upon another is on a line with his innate resistance to self-accusation, as revealed in his habit of attributing any personal ills and shortcomings to Nature or some other cause, when he is

[1] See Appendix A for excerpts from the Presidential Address entitled *Some Accomplishments of the Chemist*, given by Thomas D. Hall, Esq., B.A., M.Sc., before The South African Chemical Institute.

not prepared to shoulder the responsibility. For instance, when the idea of universal suffrage came to him, he believed that he welcomed it because of the greater opportunity for freedom of thought and action that it brought to him and to others; but, even if we admit this, there is no getting away from the fact that the influence of that fundamental desire in man to be relieved of responsibility caused him to see just this relief in the act of voting for his member of Parliament and henceforth holding him responsible for the nature of all national and international happenings. Hence his member and members of the Cabinet are specially selected by him for recrimination and too often abuse, as soon as something happens which, from his point of view, is the result of an error of judgment, of neglect or of some other cause; but not for a moment does he suspect that he is in any way responsible, although he is well aware that he chose as his member one of the men who made up that Parliament, and that from the members of that Parliament come the Cabinet Ministers who carry out the measures enacted in Parliament. Whether or not their combined efforts are good or bad, every voter is more or less responsible, and a recognition of this would stop much useless and unjust criticism, and thus prevent the bitterness as well as the hatred which is so often engendered by it.

This failing in man's reaction was in evidence in recent happenings, when there was a genuine desire for peace by the "powers that be," strongly supported by the great majority of voters. The measures taken to this end were generally approved, and I well remember the scene in a large cinema house in London when the announcement was made that Mr. Chamberlain had returned with a signed document for peace. The enthusiasm manifested in that house was general throughout the British Isles; but strangely enough when it became known that one of the signatories had defaulted, as it was known he had done before, the enthusiasts, though well aware of the reputation of the defaulter, became denouncers of the very man whose act they had originally approved. The

attitude revealed in making one signatory responsible for the honesty and decency of the other is just another instance of the blind, instinctive shortcomings in man's make-up which enable him to try to escape from his obvious responsibility without any recognition of the injustice which is involved in this.

If we face the facts, every honest man and woman on this earth to-day must admit that each and every one of us is more or less responsible for the crises of 1914 and 1939. Should any person join issue with me in this, I would ask how could Hitler or Mussolini or any such have reached the position they occupied during the war unless on the one side they had had the necessary support, and, on the other, the ideas and principles they stood for had been acceptable to the people who supported them? And again I ask how could these men have built up an armed force greater than that of the total forces of their opponents in this war unless the peoples of the rest of the world were foolish and short-sighted enough to allow them to do it? Neither the resources of Germany nor Italy, nor both, embraced the necessary sinews of war. So many essentials for the making of armaments had to be purchased from other countries and stored in quantities greater, as was well known, than was necessary for their home consumption, and yet the free supply of these essential materials was permitted until war was declared, and even after. The cutting-down process was unbelievably slow, and even supposing for the sake of this discussion we admit, as some people contend, that these nations could not be prevented from building up a gigantic war machine, surely in such case sanity demanded that the rest of the world should have seen to it that they defeated them in the armaments race at any rate, as a necessary preliminary to defeating them when they plunged the world into war as they were certain to do. I know many people will try to explain all this away by telling us that we wanted peace. No one will disagree, but the trouble lay in the nature of the "wanting," which was too closely allied to the attitude of "willing" and "wishing" as such. What, I wonder,

is wrong with the letter W? I ask this because it is the first letter in these three words, and it is rare that either of these are found to be brothers or sisters of responsibility. If this were not so, surely those "wanting" peace would have accepted the responsibility of the carrying-out of the only reasonable means to that end—the prevention of the importation of essential materials into Germany and Italy in quantities necessary for the creation of a gigantic war machine greater than was possible with the combined resources in material of these countries alone.

Most of the peoples of the world have been concerned with the effort necessary to bring this conflict to an end, to a quick end if possible. Their thoughts have been bent upon this and rightly so, but now I want if I can to direct the thoughts of every person to the great problem to be solved if, now that the war is ended, history is not to be repeated. This solution is to be found, as is that of all fundamental problems, in the development of the potentialities of the individual by means which make for improvement in and control of human reaction, and the speed of this improvement and control must more than keep pace with man's progress and advancement in the outside world. As John Dewey put it in his Introduction to my book *Constructive Conscious Control of the Individual:*—

> Through modern science we have mastered to a wonderful extent the use of things as tools for accomplishing results upon and through other things. The result is all but a universal state of confusion, discontent, and strife. The one factor which is the primary tool in the use of all these other tools, namely ourselves—in other words, our own psycho-physical disposition, as the basic condition of our employment of all agencies and energies—has not even been studied as a central instrumentality. Is it not highly probable that this failure gives the explanation of why it is that in mastering physical forces we have ourselves been so largely mastered by them, until we find ourselves incompetent to direct the history and destiny of man?

Man has not complied with the basic demands in living, and this could account in the wide view for his innate objection to taking responsibility wherever and whenever he can escape from it, and also for his many errors of judgment and want of foresight. These characteristics have been manifested in a too tardy response to urgent demands for prompt action in the upholding of the principles and protection of the rights for which mankind has striven, in the face of strong opposition and at great sacrifice, during his experiences in civilization, and the non-compliance with these demands has resulted in the serious situation in human affairs we are face to face with to-day.

In this matter of taking responsibility and the laying of blame much has been written and spoken as to the relative responsibility of leaders and people of the nation that fired the first shots in the wars. One of the most common arguments is that the people of that nation are to be freed from blame because they were led into it by specious arguments and the personal influence of an unscrupulous man. But in my opinion they are not the less to blame on this account; rather the more, for it is an admission that the reaction of these people can be so easily influenced by evil forces that they remain a menace to the peace and safety of the rest of the world. Their outlook towards life, their innate egotism and their astounding misunderstanding of the outlook and disregard of the welfare of the peoples of other nations has always been characteristic of them. Add to this their mania for shelving individual responsibility on to the shoulder of some leader or leaders, their desire to be told what to do and what not to do, and the instinctive self-hypnotic docility, too firmly associated with barbarity, which they have for so long manifested, and who can then be surprised that this nation, claiming as it does a highly civilized outlook and *Kultur*, is guilty in the manner of waging war of the most criminal outrage upon human society that can be recorded in history?

The improvement and control of man's reaction, and the

bearing of its influence upon the matter of taking responsibility, is the premiss that calls for first consideration in any survey of man's experiences and of the "means-whereby" upon which he has depended for progress and development in every field of his activity up to the outbreak of war. When this premiss is examined in the light of man's reaction to the events which have led up to this world conflict and to those which have occurred since, how can we come to any conclusion but one? Namely, that if past experiences are not to be repeated, and man is to gain a better understanding of the nature of the aims and characteristics of the peoples of other nations as well as his own, he must have new "means-whereby" for living in the future. There must be a reorientation of our viewpoint upon education, culture, religion, politics, economics, medicine, science, industry and, last but not least, upon class and social relations and intercourse. Such reorientation as I envisage is not possible without that fundamental change in guidance and control of the self which is the theme of the subject-matter of this book. This will demand a radical change in the methods of education of the young child right on to adolescence, and also in the methods to be adopted by man in his future intercourse with his fellow-men in his social, business and other activities in the outside world. Essential to this will be his realization of the need for accepting responsibility for all that has made for troubles and difficulties within himself, and of the need of some means for ridding himself of these. If and when he accepts this primary responsibility, existing as it were on his own doorstep, the experience will be the best possible preparation for the acceptance of responsibility in his contacts with the outside world, that sense of his own personal responsibility which includes being true to himself, and equally so to his fellow men.

* * * * *

In the midst of the conditions prevailing to-day people are being driven to a revaluation of the "means-whereby" of all that has made up the way of life called democracy,

for in the view of most people it is the "means-whereby" that is at fault, not the democratic way of life. This very viewpoint should in its turn lead to a revaluation of all that man has depended upon as the "means-whereby" of progress and development within and without himself. If those who do this are not prejudiced by past beliefs and ideas and take the wide view, they will find that man's educational plan for the development of the potentialities of the individual self has been a meagre one as compared with his plan for development outside himself. The knowledge that he has accumulated of the world outside himself, being out of all proportion to his meagre knowledge of himself, has become a Frankenstein monster, in that it has led him to bring about the very conditions which are menacing his democratic way of life to-day. He adopted the democratic ideal as the way to freedom *of* thought and action, but he failed to understand that in order to realize this ideal, he would need to develop to the full his potentiality for *thinking in activity* in the general use and functioning of the self, for which is essential not only individual freedom *of* thought and action but individual freedom *in* thought and action, and which gives in process control of individual and therefore collective reaction in the way of life essential to the putting into practice the theory of democracy.

My teaching experience has shown me that a person who has accepted the idea of freedom of thought and action, and has consistently advocated it in daily life, is not on this account any more capable of commanding freedom *in* thought and action when trying to keep to a well-considered decision to employ procedures which demand, for their successful carrying-out, a use of the self which is not his habitual reaction in thought and action. F.M.A.

APPENDICES

Appendix A

Extract from the Presidential Address entitled *Some Accomplishments of the Chemist,* by Thos. D. Hall, B.A., M.Sc., and delivered to the members of the South African Chemical Institute.

After describing "Chemistry's Bewildering Possibilities" and its various benefits to industry and living generally in the modern world, Mr. Hall continued :—

We have added to the material wealth of the world and increased its tempo by many beats. There is, too, enough for all, but the majority do not get enough as the materialistic and mechanized world has outrun its social and economic development. Nature has warned us throughout geological ages that one-sided or unbalanced development always ends in disaster. It truly seems as if the world might be better off if the chemists, for some time to come, made no more new discoveries with which further to embarrass our economists and social workers. . . .

The wizard workings of the chemist have changed life in all aspects and altered the habits of man, but unfortunately not always for the better. There are indications that despite the achievements of medical science in saving life, particularly in its younger years, and thus increasing the average span, more diseases of the mind and body are developing in later life. Various remedies for the ills of the world have been suggested by as many prophets in the fields of religion, economics, social welfare, and politics.

The Deterioration of Man and its Remedy.

Hamlet's words seem most appropriate to our age and ourselves:

> The time is out of joint; O cursed spite,
> That ever I was born to set it right.

I am not even going to try, but I've found a scapegoat, or rather I should say a philosopher and teacher who has new precepts and teachings, and, despite his wonderful and original discoveries, more modesty than the chemist. Quietly and thoroughly he has pursued his studies scientifically for over thirty years and has proved his theories step by step. He has been studying man not as dead bones or a physical body only or mentally only, but as a co-ordinated, pyscho-physical living being, and has come to the conclusion that man has developed so fast mentally and changed his material environment so rapidly that his instinctive or subconscious control is no more reliable in guiding him in the correct use of his body.

So quite unbeknown to himself man is using his body wrongly, even in the simplest acts of life, and doing himself untold functional harm. This is quite unlike the animal or the savage, whose instincts guide them aright in a fairly stable environment.

This deterioration he thinks has proceeded most quickly during the past hundred years. I should like to quote the opinion of the eminent American philosopher, Professor John Dewey. He states:—

> Mr. Alexander has demonstrated a new scientific principle with respect to the control of human behaviour, as important as any principle which has ever been discovered in the domain of external nature. Not only this, but his discovery is necessary to complete the discoveries made about non-human nature, if these discoveries and inventions are not to end by making us their servants and helpless tools.

From what I have gathered from Alexander's writings he has little hope of the world improving its condition until these fundamental wrongs are appreciated and corrected. When around the council tables of the nations sit men with slumped and shortened spines, contracted thoracic regions, crowded vitals, unhealthy paunches, with poor circulation and breathing wrongly, monuments to the instinctive, incorrect use of their bodies and of which they are blissfully unaware, how can the world hope for any solutions of its problems from such sources?

He further explains that the present physical exercise revival, which is an acknowledgment that something is seriously wrong with man, will not help matters, because it is a case of the blind leading the blind, and that while these exercises will correct some physical faults they will only accentuate others, as no exercise can benefit a body as a whole in which instinctive control is wrong and where there is a lack of proper co-ordination. He has, however, in his thirty years' work discovered a method by which man can obtain the conscious control of his psycho-physical being and bring about perfect co-ordination of all his bodily acts. "His procedure and conclusions meet all the requirements of the strictly scientific method," says Professor John Dewey. When our instincts are unreliable, what seems correct to us is often wrong, and Alexander states that we have to relearn the simplest acts and obtain a new sensory appreciation of ourselves before these faults can be remedied. Unfortunately this new sensory appreciation and correction comes slowly, as each person needs individual attention from a properly trained teacher for a month or more, and at present there are few of these available. More efficient results are obtained by training children in school or at an early age in these methods as more individuals can be handled in this way.

Those of you who would like to know more about this remarkable system, which has already received some recognition in the *British Medical Journal,* are referred to the books by F. Matthias Alexander, *Man's Supreme Inheritance, Constructive Conscious Control of the Individual,* and *The Use of the Self.* . . .

Some of you will no doubt be thinking, "Well, what has all this to do with chemistry?" We have seen enough, I hope, to realize that the wonderful achievements of the chemist are perhaps not all as beneficial to the human race as we should like to imagine. As I have nothing personally to offer you, I think it is only intellectually honest to tell you about the man who I do sincerely believe has the best remedy so far evolved. Again I shall quote Professor Dewey in substantiation:

> "In the present state of the world it is evident that the control we have gained of physical energies, heat, light, electricity, etc., without having first secured control of ourselves is a perilous affair. Without control of ourselves

> our use of other things is blind; it may lead to anything. Moreover, if our habitual judgments of ourselves are warped because they are based on vitiated sense material as they must be if our habits of managing ourselves are already wrong—then the more complex the social conditions under which we live, the more disastrous must be the outcome. Every additional complication of outward instrumentalities is likely to be a step nearer destruction, a fact which the present state of the world tragically exemplifies."

Alexander believes that man's evolution will never be complete until conscious control of himself has replaced the instinctive or subconscious. He has given a new outlook and a new hope to the harassed human race. I truly believe that when his teachings are properly appreciated and put into effect for a generation or more, it will then be realized that they have done more good even than the wonderful work of Pasteur, which had the advantage that it could be applied impersonally and in the mass, whereas this system is most personal, and will thus take longer to produce visible effects on a national scale.

That Alexander . . . will one day be among the immortals along with Pasteur I do not doubt. When once the human race has achieved this proper conscious control of itself and is able to adapt itself advantageously to the rapid changes brought about by chemistry and other sciences in its environment, then the future discoveries of the chemist will be a blessing, but in the present state of the world there are many who think that they are a blight.

Appendix B

EXCERPTS from *The Function of the Sub-Occipital Muscles: The Key to Posture, Use, and Functioning,* by A. Murdoch, M.B., C.M. Paper read at the Hastings Division of the British Medical Association, May 5, 1936:—

. . . When I was elected President of the Sussex Branch of the British Medical Association I used the occasion of the

Presidential Address to refer to Alexander's work, and as a result of the publication of a Synopsis of it I received a request from the Editor of the *Journal of Massage and Medical Gymnastics* to write a paper on Posture, with special reference to Alexander's Theory.

While searching for fresh material for this paper I examined the dissection of the Sub-Occipital region as shown in the Edinburgh Stereoscopic Atlas of Anatomy, since which time I have also examined the dissected specimen in the Royal College of Surgeons' Museum. With the idea dominant in my mind of the head being a weighty mass, poised on the summit of the vertebral column, the peculiar and distinctive arrangement of the muscles seen in the Sub-Occipital space seemed to me to be such as might have been designed purposely for holding the head securely on the joint, and for giving it the necessary movements in the delicate function of balancing. The muscles in the group are the following: Rectus Capitis Posticus Major and Minor, Superior and Inferior oblique (posteriorly), Rectus Lateralis (one each side), Rectus Capitis Anticus Major and Minor (anteriorly). They all arise from the Atlas or Axis, and their function would appear to be that of moving the head at the Atlanto Occipital and Atlanto Axial joints and are the *intrinsic* muscles of these joints. The large neck muscles are outside this ring of muscles, their insertions being chiefly posterior to the Atlanto Occipital joint, while their origins are so widespread as to enable them to function as head and neck and body muscles. They are not purely head muscles like the Sub-Occipital group. The appearance in the photograph as well as in the dissected specimen is as if the head were poised on the tips of so many fingers, represented by the Sub-Occipital muscles which act as so many muscular ties between the head and the first two Vertebræ.

I sought the opinion of the Assistant Curator of the Museum, and Dr. Cave kindly wrote me this letter:

> "In reply to your queries, the head (skull) and first two vertebræ are associated intimately on grounds of development, gross anatomy (human and comparative), and function. The name I coined for this apparatus (Arris and Gale Lecture, unpublished, 1932) was Cervico-Cranium, a term of convenience if not of strict

Etymology. Both Atlas and Axis suffer the profoundest modifications in their structure and development in consequence of their being handmaids of the Cranial Globe, as functionally they are through life. Special ligaments and specially differentiated muscles serve to maintain this close association, and the upper Cervical Pole of the X-ray is simply a manifestation of this anatomic physiological entity—the Cervico-Cranium."

Here then is an association of parts—Cranial Globe, Atlas and Axis and Sub-Occipital muscles, related in development, in structure, and function, but the function of the combination has never been alluded to, much less defined.

My observations and Dr. Cave's views of the relationship between the Cranial Globe and the Vertebræ and the Sub-Occipital muscles raise the following questions:

Has this system, "this apparatus," any special function?

Does it contain a mechanism which we can direct and use to control ourselves?

Has it any relation to Alexander's theory of the Primary Control and his technique for re-educating it?

The function of balancing requires a co-ordinating apparatus. Wright says "the vestibular apparatus serves to adapt the position of the trunk and limbs to that of the head, and it supplies afferent impulses which enable the erect position of the head and the normal attitude of the body to be maintained."

An extract from Dr. B. Kinnear Wilson's *Modern Problems in Neurology* (page 130) is most explicit as to the influence of the head in determining every attitude of the body, but, like every other authority, gives no indication as to what muscular mechanism causes the "displacements" or movements of the head. This is the extract: "The apparatus for the auto-regulation of attitude must be in being if cortical excitations are to effect movements and acts. Winekler expresses the same idea when he says *that with each displacement of the head a given attitude of the whole body is determined*, and it follows that for *each voluntary movement* the body finds itself in such a position as to enable the appropriate contraction of the muscles to be attained at the moment of production of that voluntary movement."

This is Alexander's theory in a nutshell, as this dominating

influence of the head was discovered by Alexander more than thirty years ago and was called by him "The Primary Control," but "the apparatus" and its mechanism were unknown to him. By means of the Primary Control it is possible *to condition* all the known reflexes discovered by Magnus and others, as well as those still to be discovered regarding the inter-relations between the vestibule and the nerve-muscle systems of the body, whenever a change of posture or a complex muscular movement has to be executed. But the neural paths, and the means whereby these inter-relations are affected, must be left to be worked out by the anatomist and the physiologist.

This co-ordinating apparatus—the Vestibular apparatus—is situated in the substance of the Petrous portion of the Temporal bone and in close proximity to the Atlanto Occipital joint, so that the slightest movement of the head at this joint would be communicated to the delicate media in the Vestibular apparatus through the action of the Sub-Occipital muscles, and it is my suggestion that it is the delicate movements of the Sub-Occipital group at the Atlanto Occipital joint which activate the media in the Vestibule; that although the movements at this joint are limited (30 degs. backwards and 20 degs. forwards) they are enough for balancing and maintaining our muscular co-ordinations, which are constantly changing, because of our constantly changing postures, and require movements that are as sensitive and delicate as those of the needle of the compass.

The question might be asked at this point: Why is the Vestibular apparatus situated in bone and not in the soft substance of the brain, if it be not to prevent it from being affected by any other stimulus than its own normal stimulus, from the delicate movements of the head, at the Atlanto Occipital joint? as otherwise the delicacy of the movements of the fluid in the canals would be interfered with, by the varying pressures, from the varying conditions of the circulation in the brain.

The Cranial Globe containing the Vestibular apparatus is a passive agent and requires some muscular agency to move it for its special function, and my suggestion is that the Sub-Occipital group is the obvious and appropriate mechanism as they are handmaids of the Cranial Globe, according to Dr. Cave. These muscles are voluntary muscles and are

therefore capable of being used voluntarily, and as they have the special function of moving the Cranial Globe at the Atlanto Occipital and Atlanto Axial joints, I suggest that these muscles are the primary movers of the Cranial Globe and constitute the primary mechanism used in the control of ourselves. I submit that these movements should be primary, and being due to the action of voluntary muscles are therefore under control, so that their use establishes a mechanism man can use for conditioning his muscular reflexes through the medium of the Vestibular apparatus. The neural control of the mechanism may be considered as the *Muscular Control Centre* and is comparable to the centres governing other systems of the body—e.g., the Cardiac, the Respiratory, the Vaso-motor centres, etc.—but with this vital and important difference, that according to the manner in which we use this Primary Control we are actually imposing the external conditions under which all our vital organs and systems function.

The limited movement at the Atlanto Occipital joint contrasts with the wide range of movement of the Cervico-Cranium at the middle of the neck through the action of the large neck muscles. This again points to a difference in function of the two groups of muscles. The first is a comparatively small movement within another very large movement, and I submit it has been overlooked in experiments carried out on the functions of the labyrinth, and that the significance of the Sub-Occipital system as the primary mover of the Cranial Globe has been missed—attention having been given solely to the larger, freer, wider movements which take place at the middle of the neck, when the Cranial Globe with the Atlas and Axis move together. The smaller movement is the all-important one of maintaining a proper balance of the Cranial Globe and so allowing the co-ordinating and regulating apparatus—the labyrinth—to maintain proper and correct relationships between the Cranial Globe and the body. Such bringing of the whole of the muscular apparatus into correct co-ordination, creates the correct conditions in our external body wall for the functioning of the vital organs, and constitutes the Primary Control which Alexander has postulated and taken advantage of and which Magnus described, but did not locate, many years after.

The control of this function of the Cranial Globe through the action of the Sub-Occipital muscles in the great majority

of people has been lost—it never has been consciously learnt —and with it our power to maintain a proper poise and posture, and from this loss come many of the disabilities from which man suffers.

From the nature of the arrangement of the parts, and the fact that man is the only erect mammal, it has been impossible to investigate the function of these muscles in their relation to the Cranial Globe, in the usual experimental manner, but Alexander, by a long series of experiments on himself, has been able to devise a technique to re-educate these muscles and bring back their original function, with the result of an alteration in poise, posture, and functioning as a whole. Invariably this re-education is accompanied by the disappearance of maladjustments and usually of their associated symptoms of disease.

In order to understand the importance of Alexander's discovery and its significance, together with the perfection and simplicity of his technique, one has to remember that in no text-book of Anatomy or Physiology, or Physical Culture, is there any hint of using the Cranial Globe as the organ or key to play such an important part as the apparatus for rectifying defects of posture as such, or to connect such widely differing conditions as Asthma and Flatfoot, or even Neurasthenia, with the manner in which the Cranial Globe is poised relatively to the Vertebral Column.

In estimating the importance of Alexander's discovery of the Primary Control and his manner of directing it to restore better use and functioning throughout the body, one should contrast it with the barren results as regards the practical application to our daily needs of the discovery of the Central Control by Magnus through experiments on animals. The different results are due to the fact that Alexander's experiments were done on a human being with all his critical faculties alert, and with the object of finding out the cause of the recurring hoarseness and inflammatory conditions of his vocal organs, which medical treatment had failed to prevent and which threatened to ruin his career as an elocutionist.

On the other hand, the physiologist's experiments were made on animals whose postural conditions were always normal and whose use of themselves would always be correct —i.e., they would always do the same things in the same way.

They could not be made to use themselves wrongly for lengthy periods as man has done, and so create bad postural conditions with their accompanying disabilities which might be investigated as to cause and effect as in Alexander's case.

Appendix C

EXCERPTS from *Reorientation of the View Point Upon the Study of Anatomy* by Mungo Douglas, M.B. (1937):—

Two important discoveries in the last thirty years have led to vantage points from which anatomy can be re-viewed. Firstly, the late Rudolph Magnus of Utrecht revealed that the use of the head and neck in relation to the torso conditioned uses throughout the body. Written anatomically this would be thus—that groups of muscles in their working as well as adjusting the relation of parts to parts do work which is, in fact, a linking in a chain without which assumedly specific action in more ultimate parts could not occur.

Secondly, and more important than Magnus, F. Matthias Alexander of London, studying living men and women in use, observed that, although all human beings were provided with the same mechanism, divisible into anatomical elements, these elements in use showed a diversity of structure as elements and as a means to produce human edifices of bewildering variation. The observation was not of similars varying in magnitude, for that was an observation to be expected and accepted as in the course of things, but of similars directed without law to utter dissimilarity.

From his studies Alexander was able to deduce certain conclusions which anatomically may be written thus: that there were certain functions certain groups of muscles could not be considered to perform, although human beings so used them, and for the reasons that, firstly, from such use obvious hurt resulted to the mechanism in part or whole, or, secondly, functions in ultimate parts were hindered or stopped.

Proceeding further he discovered that, by using that function of the central nervous system called inhibition, certain usages of groups of muscle could be stopped, whereupon the remaining usages of these groups could be used both to

produce movements of parts about joints and maintain relations of parts to parts with least friction.

Essentially he discovered that these usages of groups of muscles lying in the neck posterior to the spine were those that first must be inhibited before it was possible to permit all groups of muscles to perform movements of parts about joints, and maintain relations of parts to parts, with least friction.

Viewing anatomy in the light of these discoveries it is seen that the function of muscles is twofold—namely, movement of parts about joints, and directive of part to part. . . .

Basically it becomes essential that anatomy shall recognize that the relationing function of muscle is the primary function of muscle, and that movements of parts upon parts is secondary.

Secondly, it must be recognized that the primary relation upon which all more ultimate relations depend is that relation established by the small group of muscles which comprise the atlas-occipital, axis-occipital, atlas-axis system.

The stupendous importance of this relationing function of muscles cannot be realized by the mere description of its existence. The failure to recognize the conception is charged with a heavy responsibility, since it means the approach to all living and human endeavour with but an imperfectly formed knowledge of physiological means.

Appendix D

EXCERPTS from an Address delivered by John Hilton, M.A., Professor of Industrial Relations, Cambridge University, England, at a Conference of the Institute of Labour Management held at Buxton, England, October 17, 1936:—

SMOOTH RHYTHMS OR SHOCKS

. . . Now a word on the physique of the worker of the new generation. The children that are coming forward are being better cared for, better fed, better housed, better looked after medically, than those of our immediately preceding generations. In that respect you will have more promising

material. But in another respect they are going to be more difficult, more fragile, than their predecessors. They are going to be more highly strung. Their nerves are going to be still more on edge. You had better be aware of that.

Why should it be so? In great part because of the stress under which we live our lives in these days, and, more than anything else, because of the extent to which we use or are used by racing, throbbing, vibrating machinery.

I wonder has it ever occurred to you that through the hundreds and thousands of years of his history man knew no vibration more rapid or sustained than the jolt of a wheel on the rough road, or the whimper of a taut sail, or the murmur of a scudding hull—no more than that, until as lately as a hundred years ago. The physical frame of man is matched to smooth rhythms. In this last infinitesimal phase of our development we have been subjecting that frame to sustained shocks and vibrations of the most intense kind. Do you wonder that our nerves go wrong, that our controls get out of order! And not only vibrations, also speeds. Have you ever thought, I wonder, that our physical and nervous systems have developed through hundreds and thousands of years, attuned not only to gentle rhythms but also to smooth movements at low speeds, quickened only in moments of stress and danger?

In the last hundred years we have come to have the power-driven machine by us, under our hands, in our service. Almost without our knowing it the machine has been setting a new pace for our bodily motions. We ape the machine. Our bodies were not made for such movements.

The result of this fantastic mimicry is movements of sharp jerks, plucking, wrenching movements of the limbs. See the overstrung man or woman, child indeed, with the tense, rapid, jerking walk. See what the novelist calls the "quick nervous gestures." Every movement destructive of nervous tranquillity. But vastly more destructive, the quick, jerky movements of head and body—of the head relative to the body, of the body relative to the head.

Unknown to ourselves, by unconscious mimicry, we set our pace by the machine; and the pace destroys us by destroying our most sensitive and delicate co-ordinations and controls.

Do you wonder we have so many nervous wrecks? Do you

wonder that our madhouses are ever filling? We are the descendants of four generations of machine mimics. Will you wonder if the workers of the new generation are touchy, apt to fly off the hinge, apt to go down with mysterious disorders and leave you in the lurch? Will you wonder if you yourselves get more rattled, more inclined to daily exhaustions and annual breakdowns than your forefathers were?

Among you are medical men. I'm going to talk to you like an uncle—and make no apology for doing so. All this that I am saying, about the co-ordination of the controls of the body that are being dislocated and deranged—thrown out of flunter we say in Lancashire—by almost all of us at almost every moment of our waking lives—in our striding, and stretching, and reaching, and bending, and sitting down, and standing up, and looking, and speaking; all this that comes to us from the unconscious mimicking of machine speeds and is daily destroying our poise and our power and our health and our sanity; all this has been explored and expounded by a quiet genius of whose immensely important discoveries your medical authorities have decided, in their organized professional capacity, to take no notice.

These things of which I speak are not, alas! of my discovering, though I have been hunting them all my life; they are the discoveries of F. Matthias Alexander. If you don't know about the work of Alexander, and of his technique for neutralizing the errors into which we have fallen for re-educating ourselves and for restoring the co-ordinations of the body so lately disastrously lost by civilized man, I beg you do so at once.

Shortly you will be hearing of the confirmatory discoveries of distinguished men of your profession who have stood out against the ban upon any serious notice being taken of Alexander's work. If you want F. M. Alexander's own account of his researches, his discoveries, and his technique, read his book *The Use of the Self*, or his book *The Conscious Control of the Individual*. If you want a philosophical elaboration of the principles underlying Alexander's discoveries and of their significance to the future of mankind read Aldous Huxley's latest book, *Eyeless in Gaza*.

If you want to know what effect a series of jerks can have upon the nervous system, jerks that shake the head relative to the trunk, try filing out with vigour and in haste a rough

round hole with a file that jams at every other stroke. Try it. You'll know better than any words of mine can tell you the effect upon the physical and nervous structure of shocks to the sub-cranial controls of the body. Or if you would like a demonstration of the extreme effects of a displacement of the head get Max Schmelling or Joe Louis to hit you under the jaw, slightly sideways, just once.

When you come round, go into the works, and watch the workpeople who are under your medical guardianship or managerial charge. You will see right and left one and another doing to himself or herself, by his overstrained, overtense, and jerky physical movements, exactly what the blow under the chin did to you. In a milder degree, of course, but doing it perhaps sixty times to the hour for eight or more hours a day.

The workers of the new generation will come to you with already ingrained bad habits in poise, in movement, and in co-ordination. If you don't know these things that Alexander has brought to light you will not only let him keep his bad uses of his limbs and head and body, you will set him tasks that will aggravate them, and then you won't know why he goes sour and goes sick, you won't know why he can't stand a day's work.

Ah, some of you say, we're up to all that. We encourage our youngsters to join physical culture classes and do exercises. Do you? I'll only say that the exercises prescribed and taught by most of our physical culturists are popularly known as "Physical Jerks." I make no comment: "Physical *Jerks*." I'll add that only the strongest can survive an orthodox course of physical culture. I have seen, and read, the Report of the Physical Education Committee of the British Medical Association. I have looked for any mention in it of the crucial matters I am putting to you now. None. Not a word. You say it isn't true—it can't be true. I tell you, not a mention, not one word.

The Report of the Physical Education Committee of the British Medical Association is not merely the play of Hamlet without the Prince of Denmark. It is the play of Hamlet with only two characters: Rosencrantz and Guildenstern. They are a bad lot, you remember, and die in the middle act.

Will you medical men here make amends? Go into this thing. If you will, collectively, I'll work in with you. Alex-

ander has not a hundred years to live. We'd better learn from him, get his knowledge and technique, while we can.

I've covered Man the citizen, and Man the being of flesh and blood, living in a machine world for which he was never meant. One last word on Man the creature of imagination, of passion, of honour, of dignity. I'll say again, what I said to some of you not very long ago. There are four needs of the human spirit, which must somehow be satisfied even at our work: To be looked on as a somebody. To use our faculties. To feel that we belong. To respect ourselves for the work we do.

There are those who say: We can't be bothered with all that. Tell them, you who know better, that if they can't be bothered with all that, their schemes, however well built and apparently sea-worthy, will run on the rocks, for the most dangerous of all rocks is frustrated human nature.

I remind you again of what the Prince of Denmark said. You will remember how old Polonius, when told to take the players in and use them well, said he would use them according to their desert; and I hope you always remember Hamlet's reply: "Od's bodykins, man, much better: use every man after his desert and who should 'scape whipping? Use them after your own honour and dignity." I think the secret is there. Not only for the employer to the workman, but for the workman to the employer. Let each use each after his own honour and dignity. Only so, I think, will the whole race of mankind and the whole industrial process that it is building up " 'scape whipping."

Appendix E

Tic Douloureux. The following letters were received from this pupil:—

August 4, 1938.

"I have been home a week. . . . I am feeling decidedly better and the pain is gradually lessening in the daytime. I have eaten several meals without having to mop my eyes—a great improvement! The pain is still rather tiresome at night. . . . I am doing my best to carry out your instructions and have not had so much as a sniff of coffee!"

August 12, 1938.

"Here is another good report:

1. The pain is not nearly as bad in bed now, and I am having much better nights.
2. My left eye is now as wide open as the other one.
3. I am beginning to feel a new woman.
4. Friends keep telling me how much better I am looking. I hope you will consider this satisfactory."

August 20, 1938.

"I came up here yesterday by car, taking nearly three hours, and with the exception of about one minute did not have a scrap of pain all the way—it was the best day I have had. Miss M. says the difference in me, since we parted at Euston, is amazing and that I am looking better than she had ever seen me.

"I do not think that I could send you a better report."

August 27, 1938.

"I am very pleased to send you another good report. I am having comparatively little pain now, and it seems to have quite gone from the back of my head. It is just the left side of my forehead that is tender and sore and very painful when touched by anything; but the pain only lasts for about a minute or so and is soon over. I'm sure you will open your eyes at my improved appearance. Miss B. thinks the change in me is marvellous."

October 3, 1938.

"I do not know how to express my thanks for all you have done for me . . . everyone I meet is amazed at the tremendous difference in me."

October 22, 1938.

"Here is a very good report for you. That bruised place in my forehead has greatly improved this last week. I can scarcely feel it at all now. It is a joy to be able to wash my face all over and powder my nose! without pain. I am carefully carrying out your instructions and still being complimented on my altered looks."

Appendix F

THE following has been sent to me by Dr. Wilfred Barlow, and as I have been taken to task for certain statements made in my books regarding the incidence of disease, I have obtained his permission to the printing of the matter here.

There is a tendency in some quarters to speak as if the main battle against disease and ill-health has already been won, and to suggest that an extension of our present methods of prevention and cure would solve the problems of health. It is easy enough to point with pride to the declining infant and maternal mortality rates, to the mastery of most of the infections, and to the greatly increased expectation of life as compared with a hundred years ago. It is all too easy when considering the mass of statistics which relate to the lives of our people, to be carried away by quantitative assessments of isolated factors, and to ignore the common-sense view-point which takes into account the *quality* of these lives. It should be apparent to anyone who keeps his eyes open that a very great number of men and women spend most of their lives functioning far below their maximum level, and it is surely unduly naïve to believe that increases in height, weight, length of life and so on are necessarily an index that the health of the community is satisfactory. It is interesting to read the following extract from *Health and Social Welfare 1944–45* (Advisory Editor, Lord Horder) :—

> The major problem which confronts us, however, is the incidence of ill-health and disabling sickness. There is evidence from National Health Insurance Statistics that morbidity has been tending to increase in recent years. It is not, in the main, a question of death-dealing diseases. The highly dramatic forms of death—like cholera, smallpox and typhus—have been conquered in this country. What remains is the less dramatic but widespread incidence of 'dis-ease,' of departure from normal health. In this field we shall have to tackle for example the problem of peptic ulcer, of gastric disorders, and a variety of psycho-somatic troubles. All these diseases give rise to a mass of inefficiency and suffering among large sections of the population. Essentially the approach will have to be one of pre-

> vention, and of building up a concept of positive health. The task is a formidable one; and if the nation is to succeed in achieving a higher standard of health in the future, the problem will have to be placed among the first priorities of reconstruction (*Progress in Public Health*, M. Caston).

This brings out the point which you have made in your writings for the past 40 years—that there is a great amount of "dis-ease" which is not being touched by our present methods of medical approach. The investigations at the Peckham Health Centre showed that out of 1,666 "normal" individuals examined, there were 1,505 cases of classifiable disease; but in addition to this, the investigators described a widespread condition of "devitalization," characterized by an overwhelming sense of fatigue and loss of vitality. This finding is in accordance with your own description of widespread ill-health, as manifested in fatigue, sleeplessness, "emotional gusts," irritability, nervousness, abnormal desires in eating, drinking and smoking and the like. In your work you have demonstrated very definitely certain manifestations and standards which distinguish the individual in "full health" from the individual with "no demonstrable disease." The present importance of this demonstration is shown by the following words of Professor Ryle, Professor of Social Medicine at Oxford:—

> How much remains to be done! We have not seriously begun to study health itself within its considerable ranges of variation for age, sex, and occupation, or to determine the manifestations and standards which distinguish the individual in "full health" from the individual with "no demonstrable disease."

An investigation into these problems of "dis-ease" and "devitalization" will have to take into account your demonstration of the *constant* influence of the manner of use of the organism in every reaction and during every moment of life. Any diagnosis which ignores this constant influence is incomplete; any plan of treatment or re-education which fails to take it into account must leave behind a certain predisposition to disease and mal-functioning.

Appendix G

IN Number 20 of *Bulletins from Britain* for the week ending January 15, 1941, published by The British Library of Information, 50 Rockefeller Plaza, New York, N.Y., will be found the following "damning series of reports prepared by German medical officers" concerning the mental and physical results of youth training in Germany :—

On the mental qualities produced we have the following: "When the young cadets present themselves for the officers' examination they usually excel in a remarkable lack of logic. Logic and disciplined thinking are usually replaced by an incredible tendency to using meaningless claptrap."

(*Militar-Wochenblatt*, December 10, 1938.)

"The psychological examination of the cadets has become necessary because the candidates to-day exhibit very grave lack of knowledge and, to a very great extent, have a rather faulty point of view in regard to mental work. Stupidity and laziness of mind are always defects of character."

Dr. Simoneit (Head of the Psychological Laboratory at the War Ministry), in a lecture at Hanover, November 23, 1937.)

This is not surprising when we read in *Deutsche Wehr* (periodical of the German Officers' Corps, August 9, 1936) that "the next war will require the highest degree of brutality"; in May, 1934, Goebbels demanded that the high schools should produce "tough guys" and stated that "the intellect is a danger to the shaping of character."

FLAT FEET AND DISEASE

One might have thought that with this "exaggerated physical training" at least the bodies of German youth might have benefited. Here, however, is the Army's verdict on the health of the young men of Germany:

"Military examinations indicate that an alarming number of conscripts are incapable of service in the army because of flat feet."

(*Munich Medical Journal*, April 2, 1937.)

"More than 50% of those on worker's duty and liable to military service suffer from foot weakness and weakened spines."

(*Report on examination of "Jungvolk,"* May, 1937.)

"Inflammatory conditions, which were formerly found principally among apprentices and in the years of adolescence, now often appear among school children, at an age when they never used to appear. The reason for this is that too much is demanded of the feet of these boys and girls through marches on hard roads, carrying heavy burdens besides—in other words, exerting them to tasks beyond their strength."

(*Munich Medical Journal,* April 2, 1937.)

Official German figures, too, show progressive increases in children's diseases:—

	Scarlet Fever.	Diphtheria.	Infantile Paralysis.	Dysentery.	Meningitis.
1933	79,830	77,340	1,318	2,685	617
1935	112,509	133,843	2,153	3,430	1,362
1937	117,544	146,733	2,723	7,545	1,574

(*Statistisches Jahrbuch,* 1937).

Appendix H

My attention has been drawn to an article in the *New York Times* of Sept. 30, 1940, entitled

UNITY OF THINKING TERMED BIG TASK

But It Is Possible And Vital To Democracy, Philosophers Agree After Conference

In this article a report is given of a three-days' "Conference on Science, Philosophy, and Religion in Their Relation to the Democratic Way of Life" at which "500 leaders" in these fields "concluded a first attempt to unify the thought of democracy," in "an effort to bring together the various compartments into which human knowledge has been separated by specialization during the past century," an effort which, as the writer of the article truly

says, "was long overdue." My special interest is in what the writer gives as the statement of the special group of thinkers who had the task of communicating to the Press the achievement of the Conference so far—namely, that "it had found it possible to engage in 'corporate thinking,'" and that the first product of the corporate thinking in the last week was as follows:—

> The conference was unanimous in its conviction that modern civilization can be preserved only by recognition of the supreme worth and moral responsibility of the individual human person.

I quote this with great satisfaction because of my persistent crusade, in the face of much opposition, on behalf of the individual person, and because, as readers of my books are aware, I have not only persistently contended that the realization of this ideal implied the need for a new technique in living, but have succeeded in demonstrating that the "means-whereby" of the new technique I have evolved will enable the individual to consistently develop his potentialities in his "doing" in daily life. I would suggest, therefore, to the leaders of this conference that if they wish to accomplish their aim they should at least take into their survey the evidence accumulated during a lifetime by a fellow-worker, who has employed personally the technique he has advocated in teaching others to employ it, and in this way has gained for himself, and enabled others to gain, the personal experience and realization of a new way of living in the fundamental sense.

Another point of interest to me in view of what I have written regarding human reaction is the following (again quoted from the article):—

> In their [the Group's] judgment, the greatest achievement of this first conference was the demonstration that they could come together not merely for the purpose of expressing their individual minds but also in a willingness to change their minds, at least their attitude towards each other. . . . There was some delicacy as to

> whether the sessions should be labelled "Conference of Science, Philosophy, and Religion" or "Conference of Religion, Philosophy, and Science." Happily (the writer goes on), both sides were satisfied when the scientists accepted first mention on the principle that leaders come first; while the theologians accepted last mention because in religious processions the highest dignitary brings up the end.

Accepting this as stated, I venture to point to the significant fact that the general satisfaction did not come from what the order of the words signified, but from an arrangement which in the carrying out did not call for any change in the habitual reaction of anyone present to the stimulus of individual interest or belief.

F. M. A.

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