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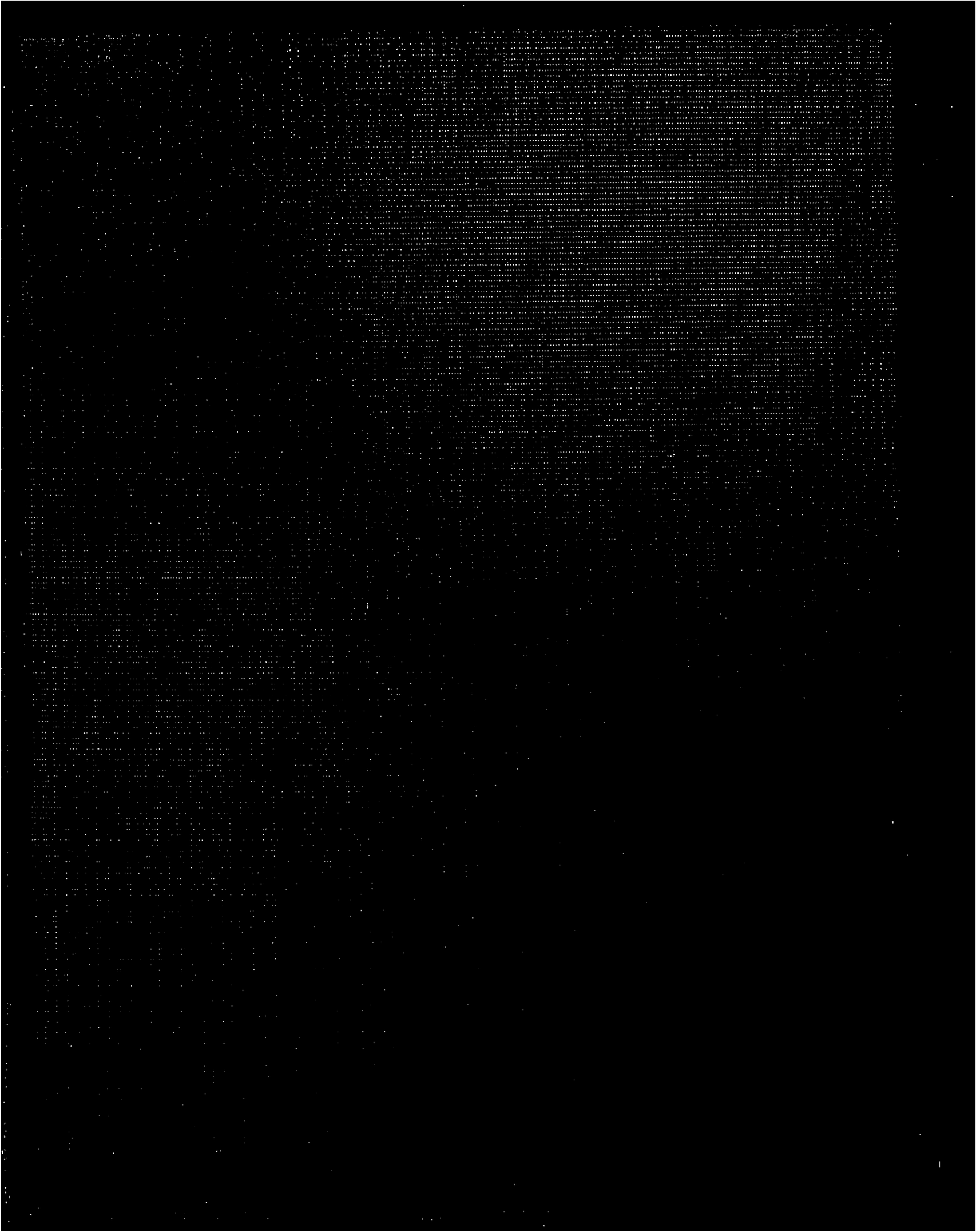
Organic Inferiority and Its Psychic Compensation in Relation to Physical Education

Earl F. Zinn



Mind + body Bib.

Psychoanalysis

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CONTENTS

ORGANIC INFERIORITY AND ITS PSYCHIC COMPENSATION IN RELATION TO PHYSICAL EDUCATION.

By Earl F. Zinn

(1) Purpose and scope

While character has long been a matter of man's prime concern, it is only in recent years that psychology has been in a position to effectively attack the problem. For the first time in its history is this science equipped with both a point of view and a method which give every promise of ultimately solving this most vital and perplexing of human problems. One of the distinctive features of this viewpoint pertains to the somatic relationship. From this, organic integrity and physical health are seen in a new light. This is of decided significance for physical education.

The increased public interest in matters pertaining to physical efficiency, due partly to the revelations of the army examinations, and evidenced by the rapidity with which physical education is being introduced as a required subject in the public school curriculum, is sufficient justification for calling attention to this relationship, particularly as this matter is so infrequently dealt with in the literature.

It is the purpose in this paper therefore, to present the essential points in modern psychology as they relate particularly to character and conduct, and to discuss somewhat in detail the organic basis as suggested by Adler. It is hoped that when this has been done the implication for physical education will be apparent. It is not the purpose to go beyond the delineation of the psychic superstructure which is a product of the inferior organic basis. What can be done with the organic inferiority remains for the scientifically trained director of physical education to determine. This then is not a contribution to method. Rather the endeavor is to emphasize the significance of physical well being for mental health and character.

The aim of physical education may be stated in many ways, but to all scientifically minded teachers of this subject, it resolves itself finally into the problem of providing the physiological foundations for health and happiness and efficiency. President Hall in his recent book has characterized this condition as "morale", of which he speaks as follows:

> " Morale while not entirely definable is best characterized as the cult of condition. It includes many of the best of the maxims of the other standards (conscience, morality, honor, superman) but adds a new factor of its own which gives the old ones a higher unity and greatly enhances their

> energy. Psychophysic condition is the most important factor in any and every kind of success. Men slump morally, financially, in their creeds and even into ill health, because they lose condition.....When we awake after a sound and refreshing sleep, with every organ in tune and at concert pitch and thank whatever Gods we believe in that we are alive, well, young, strong, buoyant, and exuberant, with animal spirits at the top notch; when we are full of that joy that the world is so beautiful, that we can love our dear ones, and can throw ourselves into our work with zest and abandon because we like it; when our problems seem not insoluble and the obstacles in our path not insuperable; when we feel that our enemies are either beaten or placated; in a word when we face reality gladly and with a stout heart, even if it is grim and painful, and never doubt that it is good at the core, and all evil subordinated to good; that even if we are defeated and overwhelmed in a good cause all is not lost; when we feel that we live for something that we would die for if need be- this is morale." (11, p 17)

The phrase "psychophysic condition" characterizes the essential viewpoint of this paper. Whatever our metaphysical theories may be, there is one fact which cannot be ignored. The mind and the body are somehow related; the mind is in some way embodied; and the two develop simultaneously. For all practical purposes, and for that matter all purposes of science, the mind and the body are but two aspects of the same thing. (13,28) What effects one effects the other. Thus the method and viewpoint in physical education which takes this fact most into account, will prosper most.

The body and the mind cannot be trained separately. When the teacher of physical education is seeking to lay the physiological foundations for health through exercise and hygienic habits, he is doing immeasurably more. He is leaving an indelible imprint on the mind and character of the individual as well. To show this is the specific purpose in this paper, hence the major emphasis will be placed upon the psychological aspects. This makes it necessary to devote considerable space to the presentation of the psychological standpoint, and also to the conception of character which is a product of the psychological position taken. The rather detailed survey of the modern psychology is given as a basis for a better understanding of the Adlerian position. Finally the theory of organic inferiority and its psychic compensation will be presented.

(2) <u>The psychological standpoint</u>.

There have been some noteworthy advances in psychology in recent years which have given new insight into the problems of human conduct and character. Not only have they enabled the psychologist to more clearly understand some of the deeper problems of the feelings and the emotions which heretofore have been the baffling field, but they have had a wide application to medicine, literature, philosophy, history, mythology, ethics and education. These new insights into the human mind did not emanate

from the study of the normal human adult, but from the domain of the animal and the abnormal psychologists. From the laboratory of the animal psychologist has come the behaviorist point of view, while from the psychiatrist has come psychoanalysis.

The psychology of the orthodox structural school is a static psychology. It views consciousness as a structure, and endeavors to analyze mental phenomena into their constituent elements. The unit of this school is "sensation". In direct contrast to this school is the viewpoint of the behaviorists and psychoanalysts. Theirs is a dynamic conception. Watson in his new book gives the following definition:

> " Psychology is that division of natural science which takes human conduct and activity as its subject matter. It attempts to formulate through systematic observation and experimentation, the laws and principles which underlie man's reactions. Every one agrees that man's acts are determined by something, and whether he acts orderly or not, there are sufficient grounds for his acting as he does act, if only these grounds can be discovered. In order to formulate such laws we must study man in action - his adjustments to daily situations of life, and to the unusual situations which may confront him." (31, p1)

This conception of psychology is most radical in that it entirely ignores consciousness and the mental life which has been the primary concern of the orthodox psychologist. For this reason the behaviorist has been sub-

ject to much criticism. Not so much for the work he does in studying human conduct; this has not been the concern of the orthodox psychologist anyway; but because he dignifies his science with the name "psychology". Watson's position in regard to this criticism is that the mental life is an intangible thing which cannot be directly observed; that it is a constant function of the activity of the organism, hence it is of no consequence. As he states it: "Thought can be safely left to take care of itself when safe methods of regulating behavior can be obtained. What a man thinks is only a reflection of what he does." (33,p54) He believes therefore that by means of observation of the explicit and implicit behavior we can learn all that is possible to learn of the human mind. That is to say, if the mental life is but a reflection of the individual's reaction to the environment, it is better to study the original pattern than the reflection. The behaviorist position involves a thoroughgoing acceptance of the "functional" hypothesis of the mind-body relationship. The method is purely objective which has much to recommend it.

The chief criticism which must be made of this position is one which aims at the limitations of method rather than at point of view. It is true that much can be learned of the mental states through an observation of the individual in action. In all probability if every act

could be observed during a given period, a complete account of the of the mental life for that same period could be given, one which would be just as accurate as the individual could give, perhaps more so, for many of his actions might be unconsciously misinterpreted in an introspective account. The limitations of the objective method however are due to the fact that no individual can be observed all of the time, and if he could be the procedure would be too slow. It would take a life time to study one individual, and generalizations could not be drawn from such a study.

The feeling states and the emotions offer another knotty problem to the purely objective psychologist. Acceptance of the "functional hypothesis" of the mind-body relation admits as the behaviorist assumes, that feelings and emotions are reflections, i.e., sensations registered in consciousness, of physiological changes. The trouble comes from the fact that the external physiological manifestations of different emotions may be identical. For example, we sometimes weep when we are happy, and also when sad. This matter might be solved from a knowledge of the context of the situation. All emotion does not present such obvious external physiological manifestations however to which the behaviorist would reply that in such cases the physiological phenomena would be observed with instruments. It is admitted that at present such instruments

have not been constructed, but even if they should be, the problem could not be solved until a still greater difficulty were overcome. This difficulty lies in the fact that our knowledge is not sufficient at the present time to localize the physiological mechanisms involved. It is true that the periphery is involved, but the criticism that the same physiological changes accompany different sorts of emotions has not been successfully combatted. There is a considerable tendency to accept the peripheral theory at present, but it must still be reckoned with as a theory and not as an established fact. Kempf, in his "Autonomic Functions and Personality" (18) accepts the James-Lange theory without reservation and builds a psychology of the feelings and the emotions upon it. Indeed he even goes farther and localizes the sensations which have their analog in thinking in the kinesthetic sensations, but that does not concern us at this point. On the other hand the group which holds to the theory of cerebrally aroused emotions have not been wholly silenced. Sherrington in his experiments on dogs, and Cannon and Carlson in their physiological researches still hold to the latter theory. Kempf maintains that these students have misinterpreted their facts, and proceeds to utilize their material to substantiate his theory. So the problem for the behaviorist is exceedingly difficult as long as this question re-

mains unsolved. If it should happen that there are identical visceral changes for different emotions, any amount of instrumentation will not tell him about the nature of the emotion. If the cerebral theory should be proven, his problem would be practically insoluble, for the cerebrum has withstood experiment thus far, and it is very likely to continue to do so.

However much this may embarrass the behaviorist, it in no way obviates the "functional" hypothesis. The emotions must be somatogenic and it does not matter particularly whether the central or peripheral theory is held. The dynamic functional conception is the important thing. It is the most fruitful working hypothesis which psychology has ever had.

It is unfortunate that the behaviorist has seen fit to impose such arbitrary limits by unnecessarily restricting his method. Fortunately for psychology the psychoanalytic school supplements the limitations of the behaviorists while in no way modifying the basic viewpoint. This school is "functional" in its concept of mind, behavioristic in its viewpoint yet unlimited in its methods. (3, 10, 14, 15, 16, 17, 18, 26) It recognizes consciousness as a fact and uses it for purposes of probing the unconscious for wishes and desires which are represented in the neuromuscular system as motor patterns or potential behavior.

Consciousness becomes the focal point through which can be passed in review those experiences of the past. Were it not for this focal point and the possibility of again drawing up these experiences, they would be lost forever, except when they asserted themselves in overt abnormal behavior. This fact makes it possible for much of the past of an individual to be laid bare, in a comparatively short space of time. The development of the technique for doing this is one of the outstanding contributions to psychology. This definitely supplements the limited behaviorist method. In the field of the feelings and the emotions, consciousness again serves the same purpose. It affords a satisfactory method of determining the nature of the emotion, the account of which can be verified by the experiences of others.

But perhaps the greatest contribution of all which these two schools have made is the concept of the "wish" or "motor attitude". In the preface to his little book "The Freudian Wish" (14) Holt says the concept of the wish is the first key psychology has ever had, and to his mind the only one it will ever need. A thorough understanding of the wish is fundamental to an understanding of this new psychology. The wish is Freud's term, "motor attitude" comes from the behaviorists. Fundamentally they mean the same thing. Holt expresses it in these

words:

> "Our present point is that the specific response and the wish as Freud uses the term are one and the same thing. This thing in its essential definition is a course of action which the living body executes or is prepared to execute with regard to some object or some fact of its environment." (14, p56)

As has been pointed out the essential condition of the functional viewpoint is the conception of mental phenomena as a constant function of the reaction of the organism to the environment. This being true, what the organism is doing or is going to do becomes the significant thing. An organism that is about to carry out a course of action has the internal mechanism already set for this performance beforehand. This purpose about to be carried out is already embodied in what we call the motor attitude of the neuro-muscular apparatus, very much as a musical composition is embodied in a phonographic record. That is why it is irrelevant whether the action is carried out at the time or not. Something may intervene, so that the mechanism is not touched off, the stimulus may not be quite strong enough on this occasion, but that the individual ever developed such a set of its mechanism is the important thing. It will be touched off some day, and even if not its presence cannot fail to react on some other mechanisms, or wishes. (14. p59)

The wish therefore is the motor pattern, or motor set of the neuro-muscular system, which goes over into overt action or conduct when, other things being equal, the stimulus is sufficiently strong, or, negatively when the inhibitions are sufficiently weak. When two motor attitudes or wishes conflict, only one can be carried into effect; the other is repressed. This repressed wish is retained however for it has been recorded in the neuro-muscular system as a motor attitude and it can exert an influence, either through its own expression or by effecting the expression of other wishes. Frequently these repressed wishes are expressed in dreams, or in reveries. At other times they can be drawn into consciousness by purposefully adopting a passive attitude permitting the chains of associations to go where they will. This is known as the method of free association. At other times particular situations will recall them vividly. For example the writer can never receive the olfactory stimulus of burning oil, such as comes from a lathe or milling machine when steel is being worked, without having a chain of associations started which relate to experiences which occurred 15 years ago. Ordinarily those experiences are forgotten, i.e. they do not recur except under rather unusual circumstances. These wishes or motor attitudes are definitely registered in the nervous system. Under certain circumstances

they can be recalled. But what is more important is the fact that they can influence conduct. This particular motor attitude may be set off by a stimulus which the individual is not conscious of at the time. This discovery has been the means of explaining a great many of the anomalies of conduct, which heretofore were described but never understood. The hysterias afford a good example. Freud first observed this phenomena in human behavior, and called it "transference". Experimenters in another field, notably Pavlow and Bechterew, observed that a stimulus adequate to cause a reaction, if accompanied simultaneously by an extraneous stimulus of any kind, produced a condition by which the reaction could be obtained upon presentation of the extraneous, or formerly inadequate stimulus. Pavlow's classic experiment is frequently cited. A dog was permitted to see and smell a piece of meat, and the flow of gastric juice noted in a fistula. Then a bell was rung at the same time meat was presented. After a time the bell was sounded without the presentation of meat, and gastric juice was observed in the fistula in response to the stimulus just as if the biologically adequate stimulus had been presented. To this phenomenon Pavlow gave the name "conditioned reflex". Since then numerous experiments have been made upon motor reflexes as well as glandular. It would seem that the same phenomena hold for complex activ-

ities or motor attitudes including emotional responses. While the most favorable factor in building up a conditioned reflex is continued simultaneous presentation of the biologically adequate and extraneous stimuli, the evidence which both Pavlow and the psychoanalysts have amassed would indicate that in extreme emotional excitement the time required for the fixation of the association is greatly reduced, in many cases but a single presentation being necessary.

From this it can be seen that any stimulus can be attached to a given motor attitude or wish, and upon the presentation of the conditioned stimulus the response will be called forth, without the individual knowing the cause, as the attachment can take place without the individual being conscious of the fact. Watson believes that Freud's discovery of this phenomenon of transfer in human behavior has been his greatest contribution. Further digression on this point would lead too far afield for purposes of this paper. For a complete discussion of the conditioned reflex in relation to hygiene and education the reader is referred to Dr. Burnham's article in the Pedagogical Seminar. (4)

In the preceeding discussion the endeavor has been to point out briefly some of the essential points in the new psychology. These may be summarized as follows:

The new psychology is distinguished from the older orthodox psychology by the viewpoint underlying their respective methods. The structural psychology as has been seen, is static, and its unit is "sensation". The new psychology is dynamic, and its unit is the "wish". The structural school views mind as an entity, a substance which can be broken up and its elements studied. The dynamic psychology views mind, not as a substance but as a relation, a function involving always two things- the living organism and the environment. The wishes and desires are motor attitudes which the organism assumes toward the environment. These wishes are potential activity. The fact that they have been formed is the important thing, not whether they result in overt activity or not. Freud makes the point that conscious thought is so incomplete as to be scarcely any index of a man's character. This simply means that there are motor attitudes in a given individual of which he is not conscious, but which result in action at some time or another, or if they are not overtly carried out they are thought, which means practically the same thing. The man can potentially carry them out given a sufficiently strong stimulus. As Holt has expressed it:

> "A man's conscious thoughts, feelings, desires are determined by unconscious thoughts or wishes which lie far deeper down, and which the upper conscious man knows nothing of..... In fact con-

> scious thought is merely the surface foam of a sea where the real currents are well beneath the surface. It is an error then to suppose that the secret behind a man's actions lies in those thoughts which he and he alone can introspectively survey."
> (14 p88)

From this it is clear that the sum total of the wishes or desires or motor attitudes, conscious or unconscious make up the character of an individual. They are the springs of his conduct. It is also readily seen since these wishes are motor attitudes how they are embodied, in the physical organism. It is also clear then that the chief problem for education is to determine the methods of formulating desirable motor attitudes or wishes and preventing or effectively inhibiting those undesirable ones. If the wishes are embodied in the neuro-muscular system as sets or attitudes toward the environment, the implications for physical education are obvious. The integrity of the neuro-muscular system is fundamental. This in turn is dependent upon the efficient functioning of the organism as a whole. If the neuro-muscular system is impaired congenitally or through disease and mal-functioning, the development of a normal, healthy minded individual is impossible. Physical health is logically the foundation for the total super-structure of character. This then is the first and most general implication for physical education which modern psychological thought suggests. The specific implications

in relation to the development of the individual character are seen in the ways by which this training can influence the wishes of the individual. The value of play and games in the development of certain attitudes has been frequently pointed out. The teacher of physical education should be even more conscious of this that he may use it more intelligently and effectively. A further and even more fundamental way by which the physical educator can not only influence the formation of isolated desires and attitudes, but can definitely influence, if not entirely determine the trend which the developing character will take, has been suggested by Adler in his work on the relation of organic inferiority to character development.

(3) Definition and conception of character.

By the term character is meant the sum total of those forces that shape and determine conduct. These forces are the wishes and desires which possess the individual. These are none other than the motor attitudes which the individual has taken at some time or another with reference to his environment, which may or may not have been expressed in overt action. Since man's environment is made up of both physical and social elements, all of these desires may not be gratified; many of them must be repressed. Society has set up certain standards which have attained a sanctity and power that brooks no interference.

(24) Social tradition is one of the ruling forces of life. The greatest problem the individual has to face is that of adjusting his desires to the demands of his group. A few strong personalities in every age possess the courage to defy the dictates of the group; gradually they gather around them those who while not possessing the strength to lead an insurgency, possess sufficient courage to follow, and in time traditions are modified. This is always a slow process, but one that seems to be leading constantly toward a greater freedom for the individual. A freedom which permits of a wider range of individual desires and satisfactions. From the larger biological viewpoint, the final goal must be a balance between the egoistic and social forces. The egoistic forces within the individual are constantly striving for a maximation of individual desire and gratification. The social forces which also constitute a part of his nature, seem to be the negative factor, the inhibiting influence which keeps the egoistic tendencies within limits. If the individual forces were permitted full freedom, society would perish, and with it the individual. On the other hand, if the social forces operating blindly through the mores were permitted to dominate, all individual freedom and initiative would be crushed, and society would perish from the lack of those things which science, invention and art, all products of individual in-

itiative rooted ultimately in the egoistic impulses, have given. What must be achieved in every age is an approximate balance of these two ambivalent forces. But point of balance is relative; it is dependent upon the degree of intelligence to which the group as a whole has attained. In primitive times, the range of individual freedom was practically nil. Gradually as the standard of general intelligence rose there resulted a gradual invasion of the mores. More and more freedom was won by the individual. Concomitant with this increase in freedom came greater individual initiative; a release of more of that creative energy which has its source in the egoistic desires and strivings. Science, invention, and art were born. Man achieved a greater mastery over the natural forces, which in turn gave him greater opportunity to extend his experience and knowledge. This operated toward increasing his intelligence, which in its turn served to win for him more freedom, with a greater release from the repression of the group. All this did not endanger the life of the group; rather it enhanced its security, for as man developed in intelligence his desires took more and more the form of attitudes toward his environment which were in accord with his enlarged experience. Instinctive forces still strove for expression but the form which this expression took was changed. This point is essential. It was not the in-

stinctive strivings which were changed. From this it can be seen that as man's intelligence increases, the amount of freedom which he will have must also increase. As he achieves greater and greater mastery over the forces of nature, as he succeeds in harnessing these forces, compelling them to do his will, he will have more time for leisure and development; his experience will be broadened. All this must influence the nature of his desires, of his attitudes toward his environment, and thereby the form by which he will secure gratification for his instinctive cravings. In this process at times such as the present for instance, measures will be taken which on the surface seem to restrict the liberties of the individual. There will be a more rigid enforcement by the group, of the laws pertaining to the health both of the individual and society. Means will be devised to insure a more just distribution of material goods. Laws controlling the expression of the sex instinct even, to the end that children may be well born, and have as nearly an equal chance as the diversity of human qualities will permit, will be enacted. All these things are being done or will be done by society, but the distinction between this sort of control and that which so completely repressed the desires of primitive man is however the distinction between a rational and an irrational control. One was a control exerted from without, the

other is a control exerted from without and within. As man becomes more intelligent, the more will he realize the validity of such control; he will accept it for himself; his desires will be in accord with it because it conforms to his experience. It will not be in the nature of repression, not an infringement of liberty, because liberty is a subjective matter, and depends upon the nature of the desires which control the individual.

In the process of development, the control will of necessity operate from without for many individuals. All will not have reached a sufficiently high plane of development to realize that the things which society is enforcing are rational. For the more favored members of the group, the control will be an internal one. Gradually more members of the group will come to this realization, with the result that there will be an ever increasing degree of freedom for all.

It has been frequently remarked that the moment a normal human being is forced to do something, he revolts. This is true, but it is due to the fact that his desires are not in accord with the thing which is demanded of him. Either the individual is not sufficiently intelligent or else the thing demanded is irrational. If he has attained a sufficiently high degree of rationality and the thing demanded by the group is equally rational, his desires

and the demands of the group are in accord. When this balance is attained the utmost freedom is achieved. When this is true for all, the need for any form of external control becomes unnecessary. Naturally such an ideal is far from being realized, but it seems to be the conclusion to which the logic of the situation points. Jesus anticipated this when he said, "You shall know the truth and the truth shall make you free".

It is undoubtedly true that much of man's conduct at present is determined by forces that have not yielded to a rational control. The way children are reared, our "pecuniary standards of taste", and a host of other elements in our life are witnesses of the fact. But it seems to be an utter disregard of history to deny that there have been advances toward a rational control, or to assert that this is not the line along which man is developing.

In the meantime, in this developmental period, the conflict between the egoistic desires and the demands of the group constitutes the most elemental and difficult problem which the individual has to face. In this conflict his character is formed. This condition cannot be changed more rapidly than the level of group intelligence can be raised. The specific problem for the present is the development of that type of character which is suited to the age: a type of character that can find the maximum of sat-

isfaction in life as it must be lived at present, but which is not so predominantly egoistic as to either wreck the happiness of the individual or develop the neurotic type which can secure happiness only through a flight from reality. There must be a striving for balance between the two forces in the individual, yet which must guard against the killing of initiative through too pressing social control. The type of character which must be developed must contain in it the element of "divine discontent" toward things as they are, yet which also has this discontent tempered with a wisdom that will not move more rapidly than the intelligence of the group permits. Otherwise individual initiative is crushed or else the radical revolt will lead to destruction. The end is the same in either case, though in the former it may be slower.

This then is the central problem of education; to broaden the experience with reality in such a way as to guide in the formation of wishes or motor attitudes in the individual, through the gratification of which there can be a maximation of individual satisfaction, yet which will not, if universally adopted, endanger the safety of the group. It can be concisely stated as"self-realization within the social medium."

If character then, is conceived of as the sum total of those desires or wishes which shape and control con-

duct, or to speak more precisely are potential conduct, in that they are the motor attitudes organized in the neuromuscular system; the set toward the environment which the individual has taken as a result of his past experience; it follows that an understanding of these desires, their organization and development is essential.

In the mental realm, reaction seems to follow physical law. If a gas is compressed in a closed space, the reaction is in proportion to the compression. Equilibrium is a balance of the two forces. Something analogous to this is to be found in all life, and particularly in social phenomena. We have radicals and conservatives in politics. Both sides go to extremes. The balance is usually found between. This has been true of psychology. Originally this science was a branch of metaphysics. Then came the reaction, and in the endeavor to found the science, students in this field swung to the other extreme. The endeavor was to provide a sound basis of fact, then to establish the somatic relationships. This resulted in much neurologizing, and the founding of physiological psychology. This was the other extreme. Of late years there has been an increasing tendency away from this extreme, toward one which is indicative of greater balance. Freud gave this movement considerable emphasis by his reaction away from neurology. As a result of the reaction toward phys-

iological and biological bases, there was the constant tendency to limit the facts in psychology to those things which could be readily explained by these branches of science. This has served to retard the progress of psychology. It resulted in many curious attitudes, and a great deal of controversy. The field of instinct and emotion probably reflect this most. Instincts are fundamental to an understanding of the wishes and desires which make up character, but until the psychoanalytic school was born, general psychology had comparatively little of importance to offer. No two students agreed in their definition of instinct, and just as wide variance was to be found in the inventories of original nature given. Some investigators thought man's instincts were few, others decided they were even more numerous than those of animals. While every endeavor was made to provide a neurological pattern for every instinct, to conform with the accepted theories of inheritance as formulated by biology, some phases of man's conduct could not be made to conform to the rule, hence nearly every investigator was reluctantly forced to add a list of instinctive tendencies. The number of these also varies with practically every writer. This was the situation in which the psychiatrists found the science, particularly in regard to instinct and emotion. They were forced by their very practical problems to gain aid from some quar-

ter, and since academic psychology did not afford that help, they went back to fundamentals themselves. They set to work to observe human conduct, and formulated their own conceptions regardless of academic psychology, physiology or biology; that is they accepted the facts of psychology on their own merits, and when the other branches of science could not help them they blazed trails of their own. Freud was the guiding star, in his study of the neuroses, and from him came much of the emphasis. All this has been very wholesome for psychology (though some critics of Freud might object to this statement) and is being reflected in some of the current literature of the academic schools. It has served to develop the attitude, that the facts of psychology are just as valid as those of any science. When they cannot fit into the biological and neurological scheme, it remains for both psychologist and biologist to endeavor to discover the relation. In the past the psychologist was the one to yield. Now it would seem that there must at least be a compromise; that the matter must remain an open question until more facts are secured. Undoubtedly both should strive for an organic basis. Here the physician with both physiological and psychological training has been of great service as evidenced by the work of Adler and Kempf particularly.

One of the values of this reactionary movement in

psychology is seen in the light which it has thrown upon an understanding of character. The desires which make up character root in the instinctive tendencies, and those psychologists who have been interested in human behavior have been concerned with the problem of enumerating these, thus hoping to provide the basis for a science of charac- ter and conduct. It is believed by these students that once these original tendencies are known, their force and direction estimated, the problem will be merely one of con- trolling the situation, so that the desirable instincts could be fostered, and the undesirable ones allowed to at- rophy from disuse. To this end there has been considerable emphasis placed upon instinct recently, and many classifi- cations have appeared. Some students have approached the problem in a priori fashion, defining instinct first, then seeking to fit original nature to the definition. McDougall is a good example. (20) His classification includes sev- en primary instincts; namely, flight, repulsion, curiosity, pugnacity, self-abasement, self-assertion, and the paren- tal instinct; all with their specific correlated emotions. The sex instinct, according to this classification is sec- ondary, and the desire for food is neglected altogether. It should be said in extenuation of McDougall however that this classification is the product of his viewpoint, for he is primarily concerned with the emotional correlates,

which serve as the basis for his sentiments. It is hard to understand why he did not consider the desire for food at least as a secondary element of original nature. Other investigators, notably Thorndike and Watson,(25,31) have approached the problem empirically, in the endeavor to discover the instincts as they appear through a close observation of the child from birth. These investigators however are confined by their predispositions in that they are looking for specific modes of response. This type of work is valuable for psychology, but for an understanding of character, and also for educational purposes still another factor is needed, which would seem to be even more essential and without which a knowledge of instincts would be of no avail. Man's conduct viewed in large perspective suggests the presence of a unifying or integrating factor which gives all of his conduct a unity and purpose for good or ill, which could not come from the operation of a bundle of instinctive tendencies, operating as separate units.

Shand observed this fact, and suggests that there is a law of organization of the mind by which the instinctive tendencies with their emotional concomitants are fused about particular objects, giving rise to sentiments. Of this he states,

"There are in all of us two kinds of

forces or activities, one making for organization and the other for disorganization; the one making us free in the higher sense, or free from slavery to impulse, the other making us free in the lower sense or free from disagreeable restraints. These forces are referred to in the popular distinction between Principle and Inclination. We shall interpret them by the distinction, to be presently explained between Sentiment and Emotion.

"Notwithstanding the theoretic distinction between these two kinds of forces and the profound significance of their effects on character, they are in one respect identical: both pursue ends, and select the means to them: both are systematic; but the systems of the one are relatively comprehensive and permanent, those of the other relatively restricted and temporary.

"There would seem to be, then, a law of our nature transcending the distinction between these two kinds of forces, and embracing both, that works universally to establish some kind of organic connection, never to establish the casual conjunction due to the laws of Association. This is the law of Organization as it is disclosed in the mind." (22, p20)

And further,

"..... The most simple and general fact concerning our conative activity, is that it tends in all its manifestations to form some degree of organization. For, being directed to ends, neither the stream of ideas, nor the field of perception, wholly preserves that chance order which apart from this organizing activity, it would exhibit, but approximates to a systematic order as a condition of fulfilling the ends pursued. The organization of the body and all its parts is reflected in the mind. If the mind did not also tend to organize itself, how would its development have helped in the struggle for life? The most perfect types of mind and character are the most highly organized. This seems to be the

> fundamental law inderlying all other laws of character: Mental activity tends, at first unconsciously, afterwards consciously to produce and to sustain system and organization." (22, p21)

McDougall (20) finds that this law operates cumulatively in that the sentiments become organized about various objects, such as the home, loved ones, one's work, the state, etc., culminating in the self-regarding sentiment. This sentiment is the final arbiter of every problem. It originates in the egoistic wishes and develops as the ego develops, a product of the total experience of the individual. The overt conduct of an individual constantly reflects this self-regarding sentiment; it shows the nature of many desires and is a partial index to his character.

But prior to the work of Shand and McDougall, Freud, Adler and Jung (3,1,16) observed essentially the same phenomenon, though they called it by a different name, and probed more deeply than the former writers. Very early in his work Freud observed a single principle which made for unity in the mental sphere around which all other desires and instinctive tendencies centered. He believes this to be the sex craving, the libido. He gave this word a wider connotation however to include all of those desires which are commonly associated with the word"love".

Adler observed a similar phenomenon, which he characterized as a desire for the maximation of the ego,

a desire for superiority, a concept very closely in accord with Nietzsche's "Will to Power", This included Freud's conception of the libido but only as a secondary principle which was itself subservient to the ego principle, and operated only as a means to the larger end; namely, the achieving of superiority. Jung has endeavored to reconcile the views of Adler and Freud by enlarging the concept of the libido to include both. His rather mystical conception of this force or primary integrating principle has much in common with Bergson's "elan vital".

In this section the endeavor has been to present a conception of character which is in accord with the recent advances in psychology. This may be summarized briefly as follows: By character is meant the sum total of those forces which shape and determine conduct. These forces are none other than the wishes, which are embodied in the form of motor attitudes. Because these desires have their origin in the instinctive tendencies, many of them do not conform to the standards set up by the group. As a result many of them are repressed. The chief task which the individual must face in life is the adjustment of his desires to the demands of the group. In primitive times the control exercised by the group was most severe, and in most cases irrational, i.e., not in accord with the laws which govern the universe, including man's nature. It was pointed out

that a growing intelligence served the function of making man more and more familiar with the laws of life, and that very gradually the conflict between the individual and the group was becoming less intense. This is due to two factors. (1) A progressive rationalization of the social standards, which tends to shape them along lines which are more in accord with reality. (2) A broadened experience on the part of the individual which enables him to better understand his own desires, and select means for their satisfaction, which are more in accord with the more rational group demands. This process results in an ever increasing acceptance on the part of the individual of the group, not because the group demands it, but because the individual himself through his widened experience and greater knowledge realizes that the demands are in his own interests as well as those of the group. This transition from an external to an internal control results in an ever increasing freedom and liberty with all that this means for the individual and the group. This release from repression results in great gains for individual initiative and creative expression. This reacts in turn upon society in the form of science, invention, and art, all of which provide the things which conduce to greater individual happiness and security. The rate of progress however is dependent upon the average level of intelligence, and can advance no

more rapidly than that level is raised. Thus it is that there must be conflict between individual desires and social standards. This pinches the more intelligent group the hardest, yet they should see the situation in its larger perspective and throw their efforts on the side of raising the general level of intelligence so as to secure the more rapid progress, rather than turn their energies toward individual satisfactions entirely. It is the function of education to so relate the individual to his environment, that he may attain the utmost individual satisfaction possible at that stage in social development, yet which does not strain the social bands to the breaking point. This emphasizes the social factor as a very important part of reality, even though a changing one, to which adaptation must be made in every age. Civilization is a progressive development toward greater freedom for the individual, but "none can be wholly free until all are free". It is in this conflict that character is being shaped. The results are varied. Some individuals adapt too easily, others not at all. For many the conflict is too severe, and they must take refuge in an utter disregard for reality. What is the reason for this variance? Is it determined from birth? Is it a product of the environment and training? The answer is both. The controversy centers around the question of which is the dominant factor.

The desires which possess the individual originate in the instinctive tendencies. Psychology has as yet not inventoried or explained the workings of these forces. It has discovered however that these instinctive forces operating separately could never result in a unified personality. Just as there is an integrating principle at work in the body, so there is such a principle operating in the mental domain which transcends any instinct taken alone. An understanding of this principle will contribute much toward an understanding of the problems of character development. It is the purpose in the final section of this paper to discuss the operation of such a principle.

(4) Organic inferiority and its psychic compensation.

It was pointed out in the preceeding section that several investigators observed some principle at work which served to integrate the character and conduct of the individual. Shand concluded that there was some law, which he called the law of organization operative in the normal. McDougall thinks it has its ultimate expression in the self-regarding sentiment. Freud, Adler and Jung all found evidences of this principle in the abnormal. Freud, the pioneer, thought this to be the sex instinct. He believes this is the strongest instinct, and that all the other elements in life are arranged around it. Since he enunciated this theory, much work has been done. It is not too

much to say that at present there is a relatively widespread tendency not to claim for the sex instinct all that Freud does. Adler was the first to break away from this school, because he held divergent views. Later Jung ceased to follow the Freudian theory and presented a theory of his own which was an attempt to reconcile the divergent views of Adler and Freud. Without denying the great role which sex plays in the life of the individual, nor disparaging Jung's concept of the "libido", the endeavor will be made here to present the views of Adler to illustrate the integrating process in the mental life. This arbitrary selection has been made largely because he offers an organic basis for his psychology which is in strict accord with the psychological viewpoint from which this paper has been written. As White expresses it in his introduction to Adler's book, "The Neurotic Constitution";

> "The distinctive feature of Adler's approach to the problem of the neurotic character traits is that it approaches from the organic rather than from the functional side, and in this way I think affords a very valuable viewpoint because it tends to bring together the organicist and the functionalist, who have too long been separated by the misconception of the irreconcilable differences between mind and body. No small part of the opposition to the whole psychological movement as represented in psychoanalysis has come from the inability of the man who has been brought up to look at things from the point of view of the internist to be able to ac-

> cept many of the clinical observations which were offered and which tended to show the development of clearly organic disorders as a result of a disturbance of the psyche. Adler's approach to psychoanalytic problems is admirably calculated to break down such prejudices". (1, pXX)

Although this work of Adler has been done in the abnormal field this should not of necessity vitiate applications being made to the normal individual. On this point Adler says,"None of the neurotic traits are essentially new. He shows no single trait which cannot likewise be demonstrated in the healthy individual." (1, pXIV)

The line of demarcation between the normal and the abnormal is not sharply defined. The distinction is largely one of degree. All of us are neurotic to a certain extent, at least a part of the time. In the case of the neurotic, the traits are accentuated. This is advantageous for purposes of study, for there they can be observed more readily than in the normal. Not infrequently has psychology, because of this fact, learned valuable lessons from abnormal psychology.

The underlying principle in the Adlerian conception of character has already been mentioned. It is to be seen in the desire for a maximation of the ego, a desire for superiority, for security. This desire has its roots in the "will to live". It becomes accentuated by the fear of failure; its ultimate antithesis is the fear of

death. All the energies, all the instinctive tendencies of the individual are subordinated to this fundamental end. Man's life is a constant struggle to achieve success, to win the approbation of his fellows, "to be a complete man" in every respect. Adler quotes from a letter written by Goethe to a friend which illustrates this well. Goethe says;

> "This longing to elevate as high as possible the apex of the pyramid of my existence, the base of which is placed in my possession, outweighs all else and is scarcely a moment from my thought."
> (1, p 38)

This it is which gives unity and direction to life, it is the dynamic back of all achievement and progress. Its expression may take many forms. When the struggle for existence is less severe it is clothed in softer colors, but when existence , or the security which comes from the feeling of superiority is threatened, it comes more clearly to light. It can be satisfied through selfish or umselfish conduct, depending upon the situation and the individual's past life. Even in Jesus it achieved its ultimate gratification when he accepted for himself the role of the Messiah. In the fictive realm it can defy reality, transcend pleasure and pain even to the extent of defying death. Quantitatively its demands are not the same for all individuals. What is success and superiority for one is

not superiority for another. Qualitatively, in the sense of the subjective feeling states which the abatement of the will to live engenders, it is the same regardless of the goal. As President Hall has pointed out, the goal of most people is humble. They do not want more than normal-ity, which is to them the feeling of superiority and se-curity. They can attain the feeling of superiority with less achievement. But the fear of not achieving this hum-ble goal is just as effective in producing anxiety as is the fear of the individual who has set up a more ambitious goal. The anxiety may be conscious or unconscious. Values lose their true worth and flight from reality results. The inner momentum is arrested. The life of the individual be-comes disrupted. Decisions are hard to make. All force and punch and drive are gone unless in some way this fear can be converted into anger. (12)

The conception of the desire for superiority is not new. It has been stated in many ways. Ambition is one of its most familiar synonyms. Nietzsche's "Will to Power" is essentially the same principle. Adler's contribution was not in its enunciation, but his analysis of its meth-ods of operation which revealed the principle of compensa-tion. At the organic level this principle has long been known, and at the psychic level it has been vaguely sensed, but it remained for Adler to demonstrate its mechanism,

and significance in determining character traits. Inferiority, fear of failure, fear of death, all mean varying degrees of the abatement of the will to live, the repression of the ego urge, to use Tridon's phrase. (26) The repression of this impulse always results in fear which is the most disrupting influence in life unless it can pass over into anger. The more intense and prolonged the fear, the more disastrous its effects upon the organism. Cannon, (7) has shown that it produces changes in the cells identical to those produced by extreme fatigue, or toxic poisons. The psychiatrists have amply demonstrated its disintegrating influence upon the psyche. But while fear can easily become man's greatest curse, it can also serve as his greatest stimulus. If it is not too intense or its onset too sudden as to entirely disrupt the functioning of the organism, (21) or if it is not too prolonged it can be compensated for by anger which turns all the powers of the organism into attitudes of aggression, by which it seeks to annihilate the thing which was the immediate cause of the fear. Frequently however the object which causes the fear is not objectively sensed; the feeling state is diffused, producing the feeling of anxiety which is much more difficult to deal with. But whatever the form which the fear state may take, its origin will always be found in the abatement of the will to live.

The antithesis then of this desire for superiority is the feeling of inferiority. The endeavor to escape the feeling of inferiority is man's greatest dynamic. These ambivalent tendencies are the main springs of character and conduct. The method which the individual takes to achieve superiority is the index of his character. Healthy minded individuals meet directly the situations of life, face them squarely, fight to the uttermost if need be, but always in terms of reality. Not so with the mentally ill. The chief criterion of normality is adaptation. When an individual fails to adapt to his environment, when he takes refuge in exaggerated conduct, when he loses his sense of perspective, when he resorts to dreams and phantasies for superiority, these are symptoms of the neurotic disposition. Many normal individuals when placed in situations where much is demanded of them, when their powers are apt to be tested to the utmost, succumb to fear, but only temporarily. They succeed in mastering their fear; they are able to see things in proper perspective, and face the situation intent upon doing the best they can. There are great individual differences here however which afford the basis for the statement that the line of demarcation between the normal and the abnormal is not sharply defined. Every person has set up his "fictive goal", the attainment of which means superiority to him. In the normal individu-

al this is not so fixed that there can be no deviation from it. Once he sees the impossibility of attaining it, he conforms to reality and modifies his goal with no loss of self esteem. Even in a strong, well-balanced individual however such a situation can be very uncomfortable if he has been drilled in the belief that failure to attain a given goal is a mark of inferiority. He may have told no one of his desires. He may have been but vaguely conscious of them himself, yet if he has been taught to look upon defeat as a stigma, if too much has been made of success and failure in his training, the feeling of inferiority becomes intensified. In this regard Dr.Burnham has said;

> " Of course in a world like this, where failure is common, and every day brings its disappointments as well as its successes, it may naturally be asked if mental hygiene has no words of encouragement for those who are defeated. The answer is that hygiene does have a message definite and positive for those who experience failure more than success. The help comes in the insight that after all the doing itself is the significant thing, that the fun is in the fight, and that the battle of life is worth making for its own sake. When one can make his goal effective doing, without special regard for success or failure, then the doing itself from a psychological point of view, becomes success; and thus we find strong men everywhere fighting losing battles, and the heroes of defeat are no less sane and healthful mentally than those who succeed as the world counts success. We find such men as President Harper on the one hand, who, stricken with an incurable disease kept up his

> work to the last, and men like Jack London at the other extreme who felt that even the gamble of life was worth while for its own sake." (6, p 8)

The guiding principle or fictive goal which Adler finds so pronounced in the neurotic, is not to be conceived as a definite objective ideal in the sense of a vocation, or profession or even the emulation of a given individual. These specific objects may be taken as patterns which serve as means to an end, but the guiding fiction in the Adlerian sense is a more diffused thing, rather an attitude to be adopted in every situation, a desire to play the role of a complete man, to be above or superior, an ideal of personality. The particular vocation or profession chosen, frequently will be one which most effectively fulfills the requirements of the guiding fiction. The psychic mechanism employed here is for the most part unconscious.

If the guiding fiction of the healthy minded individual is elastic and can be modified to conform to reality, the reverse is true of the neurotic. Of this Adler says;

> "This fixed guiding point of our efforts which in no sense possesses reality is absolutely decisive for the psychic development, for it enables us to make steps in the chaos of the world, as does the child when learning to walk and keeping his eye on the goal which he strives to reach. Far more unwaveringly the neu-

> rotic keeps his eye on his god, his idol, his ideal of personality, and clings to his guiding principle, losing sight in the meantime of reality, whereas the normal person is always ready to dispense with this crutch, this aid, and reckon unhampered with reality. In this instance, the neurotic resembles a person who looks up to God, commends himself to the Lord, and then and there awaits credulously for his guidance; he is nailed to the cross of his fiction. The normal individual too may and does create his diety, feels drawn upward, but never loses sight of reality, and always takes it into account as soon as he is called upon to act."... (1, p 67)

The rigidity of the guiding fiction is directly proportional to the intensity of the feeling of inferiority. The individual thus afflicted thinks of himself as incompetent, degraded, insecure. In order to attain security he sets up this rigid standard, but he overcompensates and sets his goal beyond the scope of his abilities, thus departing from reality. This results in exaggerated modes of conduct, which are nothing more than safety devices to insure security. Thus;

> ".....He exaggerates his cautiousness, begins to anticipate all sorts of disagreeable consequences in starting out to do something, or in experiencing an injury; he endeavors to hear further and see further; belittles himself, becomes insatiable, economizes constantly, strives to extend the boundaries of his influence and power over space and time and at the same time loses that peace of mind and freedom from prejudice which above all guarantee mental health. His mistrust of himself and others, his envy and maliciousness become gradually more pronounced;

> aggressive and cruel tendencies which are to secure for him supremacy over his environment gain the upper hand; or he endeavors to captivate others by means of greater obedience, submission and humility which not infrequently degenerate into masochistic traits; thus both heightened activity as well as increased passivity are expedients ushered in by the fictitious goal of an increased power, of a desire to be above, of the masculine protest." (1, p XIII)

Since the purpose here is to enumerate the psychic mechanisms which underlie the formation of the character of the normal as well as the abnormal individual, further illustration of neurotic traits is unnecessary. As a result of the ego urge, and its antithesis, the feeling of inferiority, the individual formulates a guiding principle or fiction, which is his ideal of personality. This principle is the integrating factor of the personality. All the instinctive cravings and wishes of the individual group themselves around and in accordance with it. This fictive goal becomes more and more fixed as the conviction of inferiority is accentuated, and in the neurotic it can attain such rigidity as to divorce the individual from reality. From the point of view of a positive control of character development it is evident that an understanding of the causes of this feeling of inferiority is fundamental. This leads directly to the heart of the Adlerian conception of character.

As a result of his study of pathology Adler came to believe that the origin of the feeling of inferiority is to be invariably found in an organic inferiority, which may be morphological or functional in character. This somatic inferiority is congenital in origin. Practically everyone has had experiences which will testify to the general validity of this assumption. Everyone experiences changes of mood which cannot be accounted for by the elements in the environment at the time. At times when we are in good health we feel equal to almost anything. Again, when the vital forces are running low, when we are suffering from a cold, or some physical indisposition there comes over us the decided feeling of incompetence, inferiority, inadequacy. Even when placed in the most trying situations which test our mental forces to the utmost, it is much easier to rally courage and confidence if the body is functioning efficiently. Invariably our best work is done when we are at the top notch of condition. Undoubtedly the psyche reflects the physiological condition.

Few if any individuals are born without some organic defect. Why do these not prove fatal, or cause illness? It is due to the principle of compensation at the organic level. As President Hall pointed out, (12) experiment has shown that up to a certain point each organ differentiates and grows independently of each other organ,

and independent of the organism as a whole. Each develops of its own hereditary impetus without any vital bond. Then at a certain time which varies with different species, in man it seems to be approximately at the time of birth, the central nervous system steps in and assumes control, integrating the organism. At this point in the developing individual, growth depends upon function, and the nervous system takes up the task of integrating the functions for the welfare of the whole organism. This is the time of subordination and coordination. At this point the law of compensation begins to operate. A fundamental characteristic of the sub-normal organ is its plasticity and adaptability. Under stimulus of the nervous system organs which are morphologically or functionally inferior, must either be jogged up to do their work, or another organ must vicariate for the inferior member, if the organism is to survive. As Adler points out, a cardiac hypertrophy is frequently found as a vicariate for a deficiency in the kidney or lung. Thus it is with all of the organs of the body. (2, p 11) The law of compensation may operate in two ways. The inferior organ may develop a functional superiority under the stimulus of the nervous system, if the inferiority is not too marked. Thus Adler says;

> "A particular viewpoint has taught me how often a morphologic or functional deficiency of an organ is converted

into a higher development of that organ.The stuttering boy Demosthenes becomes the greatest orator of Greece, and up to the present day we seldom find any such heaping up of defects of speech and signs of degeneration of the mouth as are observed in orators, actors, and singers." (2,p22)

And further;

"Functional and morphological formation of the organ and its nerve tracts will make the inferior material functionally capable, as in normal development, partly as a result of stimulus, partly owing to continued effort. Ordinarily the central nervous system will play the largest share in this compensation. And not only physically, say by the particular development of the nerve tracts, and associative fibres by the transformation of hereditary lack of reflex to an increase of reflex capability, but above all in a psychical manner, for the reason that a particular interest seeks to protect the inferior organ and endeavors to ward off the harm by constant attention, and the psyche on a small scale, perhaps gives the impulse to awaken the attention, to increase it and connect it with that organ." (2, p 57)

As a further illustration of this principle Adler points out the degenerative disposition of Mozart's ears, Beethoven's otosclerosis, and numerous other men of genius who suffered from organic inferiority, yet who compensated in the line of their inferiority. In our own day we have an excellent illustration in Roosevelt. Weak and sickly as a child, he became the leading advocate of the strenuous life.

But this law does not always follow the line of

of hyper-compensation of the inferior organ, which develops a functional capacity exceeding the normal. In many cases the inferiority is so pronounced that the organ in question is not able to do its own work. Or it may be that there is a manifold inferiority which precludes the possibility of this sort of compensation. In such cases some other organ or organs take over the work of the inferior member. This is well illustrated by the increased auditory and tactile sensitiveness of the blind. In such vicarious compensation there is always loss. The inferior organ atrophies, while the vicariating organ must do the work of both. It may develop a greater functional capacity but by virtue of its original normality it has not the plasticity of an inferior organ, which makes the possibility of any appreciable change in functional capacity extremely doubtful. In regard to this point Dr. Hall (12) holds that when a higher organ is called upon to do the work of a lower one, the vicariating organ cannot fulfill its own function to the point of efficiency, hence there is always loss. General success in life is dependent on having the lower organs do their own work. This principle is offset however by compensation effecting the inferior organ directly, resulting in greater functional capacity than would have been present normally. In spite of this though, compensation has its limits, particularly vicarious compensation. Too much work

will break down any organ.

But direct compensation is none the less limited. As has been noted the principle of compensation becomes operative at the time when the central nervous system assumes control of the various functions of the organism. Prior to this time each organ is operating on its own evolutionary impetus, regardless of the others. From this it is evident that the central nervous system becomes the chief factor in compensation. Direct compensation is ultimately limited by the nature of the brain and nerve material. As Adler points out;

> "..... We shall grasp the meaning of our former conception only if we exclude neither the spinal cord nor the brain from the investigations of the inferior organ. Indeed it must be emphasized that the simultaneous, manifold organ inferiority already characterized, extends itself to sectors of the nerve tracts of the central nervous system, and that very often there corresponds to the value of each organ a naturally proportionate value of those nerve tracts that conduct to them their stimulation and lead from them their impulses..... The inferiority may remain for a long time at unchanged level, and may be confined only to the organ or parts of it; or else the requirements of life, domestication, culture, produce an over-compensation, which if sufficient will make its way particularly in the central nervous system. The quantitative differences which show themselves by the degree of inferiority, by the localization, by the degree of compensation, can only be perceived as qualitative when looked at from the psychologic standpoint, a fact which becomes comprehensible at once when one compares the

> three most important constellations, from the organic and nerve inferiority field with their results: degeneration, neurosis, genius." (2, p 56)

But this over-compensation which is the product of the requirements of life and culture are themselves limited by the nature of the brain material, the degree of inferiority which attaches to the nervous system itself. For Adler asks;

> "But what happens when the compensation itself is not successful, when the psychic impulse arising from the physical need- on the one hand insufficiency of the organ, on the other pressure of life and culture- meets with more unserviceable brain material, when the compensatory activities get only half way? A condition of high psychic tension naturally arises from the psychophysical relations, which causes those persons who undergo such tension to be no longer capable of contending with any sort of heightened requirements...."(2, p 6)

In the idiot, imbecile and feeble-minded, compensation is operative on an organic plain sufficient to maintain life at least. The nerve structure which leads to and from the organs however has not been sufficiently augmented to effect the psychic superstructure, due to an inferior brain and nerve material. In the neurosis, the compensation has gone further, but it has met with unserviceable brain material, or the requirements of the environment have been too severe, or both. In the genius, the finest fruits of the compensatory process are manifested. From this it is

seen that inferiority of the brain and cord, if not too great, may develop a functional capacity, in some cases to exceed the normal. However if the inferiority is too great, compensation cannot occur, unserviceable material is met with and there is no organ to vicariate. Thus there are limits set by heredity, within which the law of compensation can function. When the inferiority attaches to the cord or brain, compensation will be proportional to the degree of inferiority. Probably the genius is the only person who does not suffer from some degree of inferiority in this regard; with him compensation is complete. For the vast majority of individuals there are limits beyond which they cannot go, who if pressed to or beyond this limit would manifest all of the symptoms of the neurotic. For the neurosis is a relative condition, and is a function of the guiding fiction and the ability of the individual to compensate.

While this view is deterministic, the significant thing for education is the fact that few if any of us really succeed in attaining our individual limit. We do not compensate to the degree which our nerve and brain structure would permit. Why is this? While Adler does not deal with this problem it would seem to follow logically from what he has shown that anything that further burdens inferior organs would interfere with the compensatory process. This would refer to any inferior organ, including the cord and

brain. Unhygienic habits of living, or anything in our life that induces to ill health, which could be avoided would put a still greater burden on the already inferior organs. Granted that the brain material was sufficient to permit compensation within the limits, any aid which hygiene can give would materially aid the process. For example Adler says;

> ".....if the performances of the organs are not brought about by a surplus from the central nervous system, but at the expense of the latter, the over-work will be lastingly felt and on suitable occasions chance causes will produce a disturbance of compensation, which will result, according to the degree of disturbance and the psychical constellation present at the time, in neurasthenia, anxiety and compulsion neuroses and hysteria."
> (2, p 57)

In other words if the surplus of energy from the nervous system can be increased or made available as the case may be, or if the pressure from various inferior organs can be decreased, through hygienic living, it would follow logically that organic inferiority could be more completely compensated for, that we could all live on a higher plane. Education would have the best possible material with which to work, and its possibilities would be greatly increased.

But we also saw that inadequate compensation resulted invariably in an intensification of the feeling of

inferiority, with its attendant effects upon the character and conduct of the individual. Every person sets up his fictive goal, his ideal of personality, but when the conviction of inferiority becomes more pronounced, it results in an over-compensation of this fictive goal. This we saw gave rise to all of the symptoms of the neurotic. These always mean an intensification of the desire for superiority, along lines divorced from reality.

It was also pointed out that one of the functions of education was to develop that type of character which provided for a maximum of self-realization within and through the social medium. The neurotic becomes so entirely self-centered because of the rigidity of his guiding fiction that it is impossible for him to see the social environment in its true perspective; evaluate it properly. The result is that he may easily become a menace to society.

It remains therefore for the teacher of physical education and hygiene to tell us what can be done with the physical organism that a maximum of compensation may be possible. But it is essential that in working with this problem he should have constantly in mind the fact that he is dealing with a psychophysical organism; that he is providing the very foundations for education and for character; that his contribution to the individual and the race

is absolutely fundamental.

It should not be inferred from this paper that this is the whole story. While the basis for the neurotic character is to be found in organic inferiority, this is not the only factor in our complex life which can induce fear, and feelings of inferiority. From a biological viewpoint our social standards at present are symptoms of a neurotic society, and adjustment to them may wreck the organism, yet if the individual failed to so adjust he would be considered queer by his fellows. The desire for social approbation in all of us is so strong that we hesitate before going contrary to the dictates of the group even in such a trifling matter as dress. Perhaps the degree to which these things will effect a given individual is in direct proportion to the degree of organic inferiority; yet while this is the organic basis, it is extremely doubtful if it is the only determining factor, even to a tremendously important one.

Then again Adler has not dealt with the conditioned reflex, and its possibilities in shaping the character and conduct. This however is a subject that warrants separate treatment, and is not specifically related to this subject.

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