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BOSTON UNIVERSITY

GRADUATE SCHOOL

Thesis

THE RELATION OF WATSONIAN BEHAVIORISM TO CERTAIN
CURRENT RELIGIOUS PROBLEMS

Submitted by

Mabel Esther Bennett

(A.B., The University of Minnesota, 1925)

In partial fulfilment of requirements for
the degree of Master of Arts

1928

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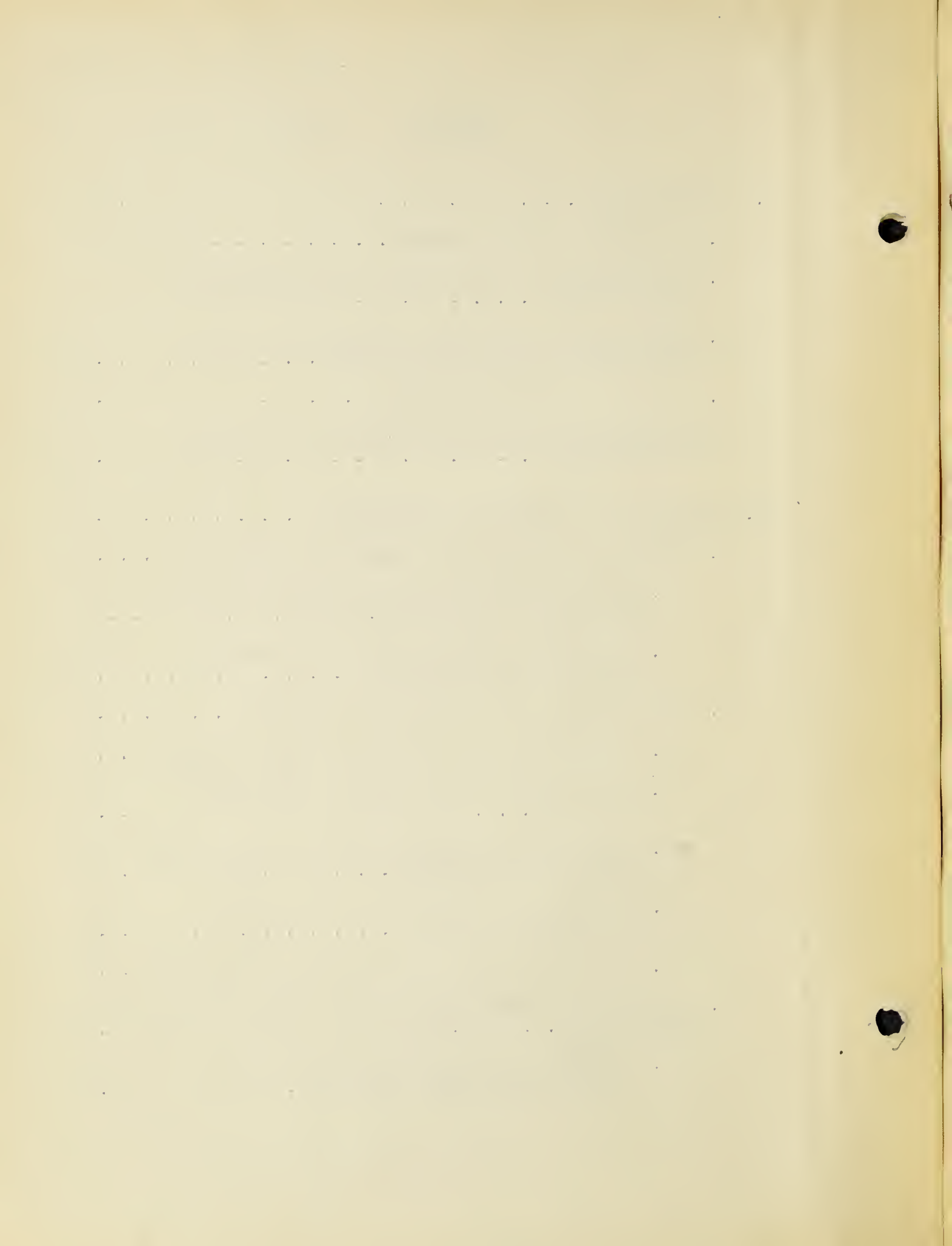
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OUTLINE

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I. Introduction	6
A. The Problem Of The Thesis	6
B. The Importance Of The Relation Of Psychology And Religion	7
C. Developments in Religion and In Psychology Which Affect Their Relationship	8
D. Materials Used In The Thesis	8
E. The Phases of Behaviorism Which Are Treated In The Thesis	9
II. Principles of Watsonian Behaviorism	10
A. The Use Of The Objective Method In Psychology	10
1. Psychology employs the scientific method used by other sciences.	10
2. The "Verbal Report" Method peculiar to psychology is objective	10
B. The Complexity Of The Units Of Behavior	11
1. A stimulus or situation is always complex	11
2. One situation may arouse a variety of responses.	12
3. The important determinants of behavior are within the organism	13
4. A response is the integrated activity of the entire organism	14
5. The conditioning of response is "meaning"	14
C. The Problem of Psychology As The Study Of The "Whole Man"	15
1. Stimulus and response are observed as revealing the total behavior	15



- 2. The study of emotions is necessary to an understanding of the activity of the whole organism 16
- 3. The study of habit is necessary to an understanding of the activity of the whole organism 17
- 4. Thought is a part of the whole bodily response 18
- 5. Personality is the sum of habit reactions . . . 19
- D. Personality Is Built Up Through The Organization Of Unlearned And Conditioned Responses 20
 - 1. The development of personality is a problem of conditioning and reconditioning responses . 20
 - 2. Habits, as units of personality, may be conditioned 20
 - 3. Emotions as conditioned habit patterns may be built into the organization of personality 21
- E. The Effect Of The Disuse Of The Concept Of Consciousness 21
- F. Behavioristic Freedom, A Social Ideal 22
- III. Criticisms Of Watsonian Behaviorism 24
 - A. Introduction 24
 - 1. Content of The Chapter 24
 - 2. The points of view from which behaviorism is criticized are numerous 24
 - 3. The method of review 25
 - B. The Metaphysical Assumptions Of The "Verbal Report" Method 26
 - 1. The objective method is generally accepted . . 26
 - 2. Watson's interpretation of "verbal report" as objective data is significant 27
 - 3. The criticism of behavioristic method resolves into a denial of the assumptions on which it is based 28



C. Watson's Account Of Behavior As Mechanical Does Not Explain Psychological Behavior Nor Account For Meaning And Value	28
1. The differential of psychological behavior is that it is purposive	28
2. Purposive behavior requires "consciousness" as a causal factor	30
3. Comparison of the principle of closure and configuration with that of determination by the whole situation as allowing for purpose and value.	31
IV. Criticism of The Psychological Interpretation Of Religion And The Behavioristic Method Of Controlling Behavior	34
A. The Trend In The Development of Psychology As It Influences The Psychology Of Religion	34
1. Change in psychological method and soul theories have made psychological explanation of religion increasingly difficult.	34
2. The historical method in the psychology of religion has resulted in denial of objective reference for religious experience.	36
a. The data.	36
b. The principles of explanation	36
3. Answers are made which attempt to save religion as a real experience.	37
B. Divergent Assumptions Underlying the Agreement Of Religion And Behaviorism In Their Aim To Control And Reform Behavior	39
1. Behaviorism and religion aim to control and direct behavior.	39
2. The importance of training the emotions is generally recognized	40
3. Assumptions of behaviorism and religion underlying the method of control make fundamental agreement impossible.	41
a. Habit versus Ideal.	41

b.	An ideal points to values	42
V.	The Identification of Behaviorism With Naturalism	
A.	The Problem of The Chapter	44
B.	The Assumptions Of Behaviorism AS Identical With The Presuppositions of Humanism	44
1.	The scientific explanation of phenomena is correct and com- plete	45
2.	Man's highest quest is for the natural good.	45
3.	The source of value is in the natural order rather than in a moral order	47
C.	The Postulates Of Behaviorism And The Meta- Physical Principles Of Naturalism.	48
1.	Behaviorism is related to natural- ism in that it is positivistic.	48
2.	Behaviorism and naturalism agree that the real is qualitatively one.	49
3.	Mechanism is evidence of cosmic indifference to values.	49
VI.	The Restatement of Philosophical Problems	51
A.	Implication Of The Identification of Behaviorism With Naturalism.	51
B.	The Possibility of A Restatement of Problems Dividing Philosophy	52
1.	The present tendency in philosophy to synthesize apparently contradictory ideas points to possible reconciliation	52
2.	Final reconciliation to philosophical controversies is unlikely.	52
3.	The elimination of conflicts through synthesis makes for concentration of problem in fewer forms.	54

a.	The mind-body problem may be stated in terms of mechanism and teleology.	54
b.	A reinterpretation of mechanism and teleology under the principle of causation provides for purposive activity within mechanism.	55
c.	The mechanism-teleology problem may be answered in terms of the limitation of scientific method.	57
C.	A New Materialism Resulting From Restatement of Philosophical Problems Has Conditioned The Arguments Against Naturalism and Behaviorism . . .	58

VII. Conclusion And Summary

A.	Objections To Behaviorism Are Biased By The Identification Of Behaviorism With Naturalism. . .	60
B.	The Effect Of Watsonian Behaviorism On Other Schools Of Psychology Is Reflected In Philosophy And Religion	61
C.	A Synthesis Of Two Important Ideas	61
D.	Religion As Creative Experience Is Prior To Psychological Interpretation	62
E.	Summary	63

THE RELATION OF WATSONIAN BEHAVIORISM TO CERTAIN
CURRENT RELIGIOUS PROBLEMS

CHAPTER I
INTRODUCTION

A. The Problem Of The Thesis

The aim of this thesis is to review the principles of behaviorism and the current evaluations of that psychology preliminary to an attempt to discover therefrom the relationship which behaviorism bears to the more general problems of religion. The thesis is not an evaluation of behavioristic psychology as a groundwork for a program of religious education, nor is it a criticism of the metaphysical implications of Watsonian behaviorism.

B. The Importance Of the Relation of Psychology and Religion

The significance of the relationship of psychology to religion is perhaps often exaggerated because of the practical bearing which psychology appears to have on religion. The historical study of religion has provided the data for a so-called psychology of religion. Psychology applied in many fields is touching the practical matters which concern religion. Questionings result. The interest of religion in the practical problems of control is perhaps secondary to its concern for values. It is here that religion is likely to find itself at odds with certain types of psychology. For psychology, whether it will or no, assumes certain metaphysical principles. The

practices of religion are rooted in metaphysical assumptions. So psychology becomes doubly implicated in the control problems of religion.

The preservation of religious values appears to demand that certain types of psychological theory be rejected. The fate of values is inextricably bound^{up} with an important issue in psychology, that of the nature of mind or consciousness. Since behaviorism of the Watsonian type is the clearest, most logical, most unambiguous in its position as to the nature of consciousness, when religion and behaviorism meet, the general issue between psychology and religion becomes more evident. Religion has always had its scientific foes. Psychology is at the present time playing the role of the enemy.

C. Developments In Religion and In Psychology Which Affect Their Relationship

The development of both religion and psychology in the recent past has brought their problems closer together. It is fashionable just now to define religion as a "way of life". Psychology is a science intimately concerned with the "ways of life". In religion a priori conclusions on the nature of God have in large part given way to an examination of the religious experiences of men, as the point where God may be found. The source of authority in religion, in Protestantism, is experience. The use of the experimental method in the study of religion has brought religion into closer contact with an experimental psychology.

Through methods in religion on the one hand and through the philosophy of religion on the other, the findings of psy-

chology affect religion. Methods in religion must be psychologically respectable. The proponents of religious education have here a particular interest. Psychological theories, they believe, will determine the method and goal of education and influence the content of doctrine. (1)

Psychology in the form it has taken in behaviorism has practical and philosophical implications which relate most vitally to religious practice and belief. The concentration of behaviorism on the physiological description as a full account of life and its denial of consciousness appear to eliminate all responsibility and free moral action. In its strict monism behaviorism outlaws the old mind-body problem. (2) Religion demands that some kind of a "consciousness" be left to man. Behaviorism has all the difficulties of any psychology in its relation to religion, plus this opinion about consciousness. It is this "plus" that makes the conflict acute.

D. Materials Used In The Thesis

Everybody thinks that he knows himself as something more than a "mere machine". This is the source of attack of many of the opponents of behaviorism whether they be laymen, scientists, philosophers, or theologians. The variety of arguments is profuse. Behaviorism is laughed at as an absurdity, tolerated as a satisfactory partial method, critically examined for scientific or philosophical fallacies, or intuitively and immediately known to contradict the deeper experiences of life. These attitudes are reflected in as many grades of writing; non-scientific, polemic, irenically judicial, and technical.

The motives are varied. One writer makes a remarkable confession. It is much more intellectually respectable to find behaviorism to be self contradictory or logically impossible and therefore false than to find it contradictory of one's assumptions and therefore wrong. This latter position is admitted by the writer mentioned. Such honesty is worthy of a quotation.

"A student...taught to reverence what has been called the soul, finds himself...confronted by developments in the field of psychology which seem to give the lie to much,...of that body of philosophy, ethics, and religion upon which a working and sustaining theory of life has been built". (3)

It is impossible to take into account here the arguments of such a variety and multiplicity of views. In fact, the different criticisms from scientific and philosophical viewpoints alone can scarcely be correlated into a unified discussion. In this thesis use is made of only those evaluations of behaviorism which purport to be disinterested and objective. However, since religion is as broad as life and finds expression in many forms, these unacknowledged protests are not to be forgotten. It may be that these objections become estimably articulate in the more academic writings.

E. The Phases Of Behaviorism Which Are Treated In The Thesis

Only those theories of behaviorism which are relevant to religious problems are given any consideration. The practicality of behaviorism in the control of life and the metaphysical implications of its method and aim are to be considered, since they have a bearing on the method and content of religion.

CHAPTER II

PRINCIPLES OF WATSONIAN BEHAVIORISM

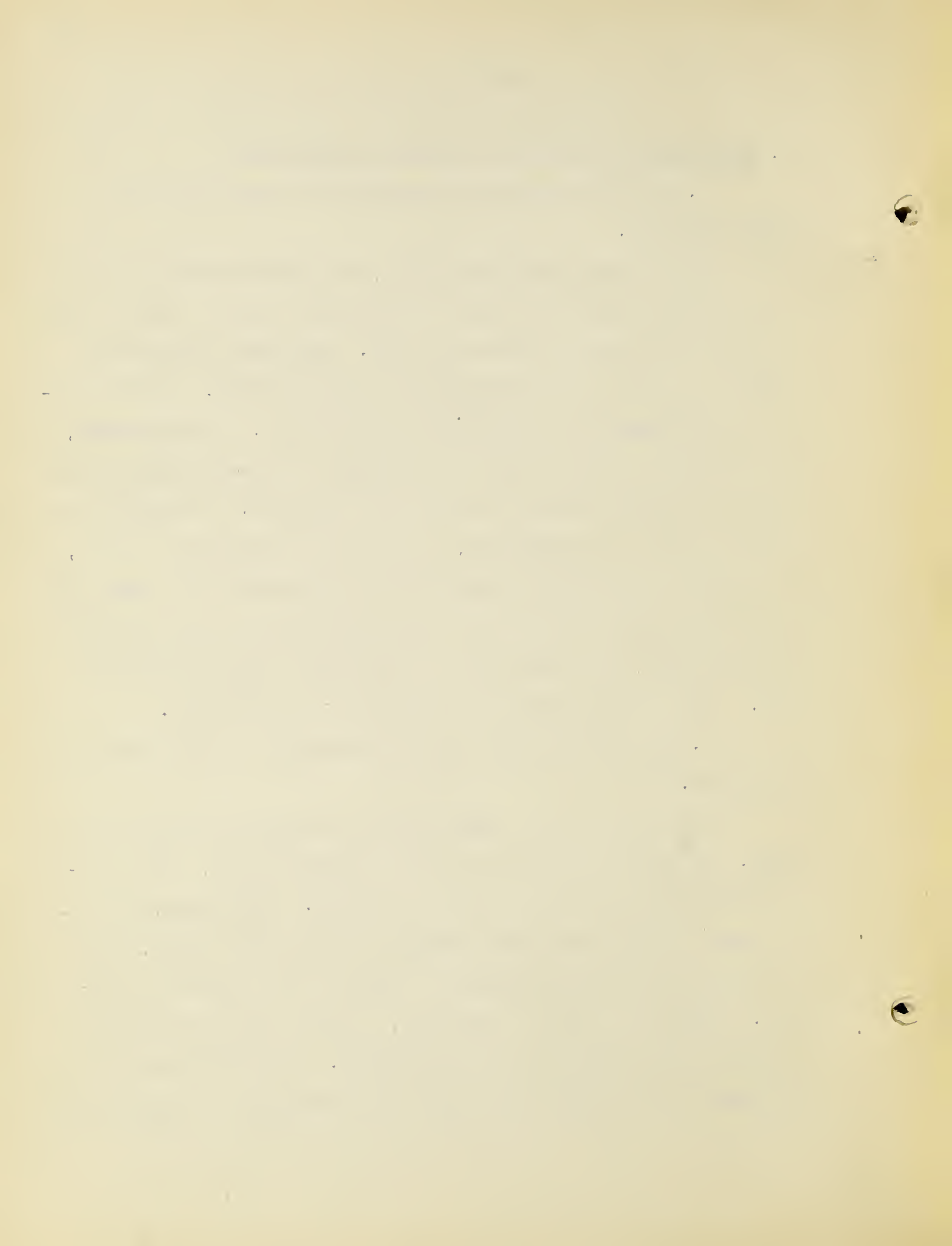
A. The Use Of The Objective Method In Psychology

1. Psychology Employs The Scientific Method Used By Other Sciences.

Observation, experimentation, and statistical formulation and interpretation are marks of scientific method. Observation is also a practice of every-day life. Scientific observation differs in that it is controlled and systematized. Instrumentation is necessary in scientific investigation. A chronoscope, not an ordinary watch, may be necessary in making observations which are exact enough to be of use to science. To repeat the conditions of the experiment, to isolate and vary the factors, to control environmental elements is experimentation. When the data secured from observation and experimentation are treated statistically, the conditions of scientific method have been met. Such is the method of behavioristic psychology.

2. The "Verbal Report" Method Peculiar to Psychology Is Objective. ⁽⁴⁾

Variations in the application of scientific method are many. Psychology uses the "verbal report" method, which cannot be employed in other natural sciences. Psychology, however, is none the less scientific because it uses this method, nor is the method any less objective because the response is verbal. Speech is a form of behavior, a habit system integrated with the total activity of the organism. If the subject responds with the word cold when a cold cylinder is applied to



an area of the skin the behaviorist does not interpret the response "cold" as the result of introspection on the part of the subject. He did not look within somewhere to discover a sensation; The word "cold" was not the end result of introspection. Practically every reaction at this level is an integration of three habit systems; the verbal, the visceral, and the manual. In this instance the predominating system functioning in the response is the verbal. The response is as objective as is the withdrawing of the hand from fire. The situation is to be analyzed not in terms of consciousness and its contents, but in terms of behavior and its fundamental units, the stimulus and response.

B. The Complexity Of the Units Of Behavior

1. A Stimulus Or Situation Is Always Complex.

Stimulus is a physiological term. Before it is of use in psychology it must be amplified. The human body is stimulated in numberless ways through the various sense organs at any one moment. As examples of single stimuli Watson mentions sound waves, gaseous particles, or particles of matter which may stimulate the end organs in the taste buds of the tongue. To stimulate the human organism with such a single stimulus would be possible, if at all, only under unusual experimental conditions. A more complex stimulus is a light bulb. A still more complex stimulus is the promise of a trip abroad. As a matter of fact, the stimulus of psychology is never single, but is a complex and integrated situation. ⁽⁵⁾ A "situation" is a complex group of stimuli. In anticipation of a later paragraph, it may be added here that the complexity of the situation is

increased again by the conditioning of stimuli. Unconditioned stimuli are numerous, but conditioned situations are beyond number.

2. One Situation May Arouse A Variety of Responses

A specific situation does not call forth an invariable response. A stimulus can scarcely be said to be "given". As Watson says, it is not an entity about somewhere waiting to serve to produce an action. We appear to do a number of different things in the presence of any given stimulus. Water may be the given stimulus. We do not always drink water when we see it. We may put it in a test tube, use it to extinguish a fire, or to flood a pond for skating. In this instance, the water is the stimulus which calls for a response. The response is not predetermined by the stimulus, but varies. As a matter of fact, the stimulus itself varies with the response, since the stimulus is never just water and nothing more. It is rather the whole situation in which water is a factor related to the other factors. When the situation of which water is a part is in any respect altered, the stimulus called water is also changed. It is in effect another stimulus. "Man is prepared to meet any slight change in the situation or object with an appropriate change in the response." (6) A slightly changed situation is in reality a new situation. Watson means the same thing when he speaks of a change in the situation and the conditioning of a stimulus. The change in the response is due to the fact that the stimulus has been conditioned. The candle for which the baby reaches is conditioned after the infant has experienced burning. The candle as a stimulus is only one factor in the complex situation. The burning is another factor of the total situation and as such conditions the situation in

which the candle next appears. The adjustment is a response to the entire situation of which the candle is only a part. A more accurate statement, then, than that a situation may arouse a variety of response is that although a number of different situations may be related by the possession of one identical factor, the reaction any one situation will call out is determined by all the stimuli in the situation and not by the specific stimulus which is common to the various situations. (7) This fact of multiple response to a so called given stimulus adds to the difficulty of prediction of action. Prediction with a view to control is what the psychologist aims for. But the difficulty is not to be taken as making understanding an impossibility. There are "definite factors.....present which rationalize behavior and give it a causal basis." (8)

3. The Important Determinants of Behavior Are Within The Organism.

Before it is possible to predict the response to an object one must consider the "general setting of the whole situation. The "situation as a whole" includes not only the obvious objects to which the subject is said to respond, but the relation of those objects to other environmental features, and the condition of the experiencing subject. His emotional condition, his immediately past experiences, and his whole history are of significance. In a list of the determining factors in a situation these are given as the more important. (9) If the response made to the flag today differs from that made last week, we may conclude that something in the immediate situation or in the experience of the subject during the week is the essential cause of the change in the behavior. The flag does not call out an invariable response.

4. A Response Is The Integrated Activity Of The Entire Organism.

The behavior or response produced by a complex stimulus or situation is also highly integrated. A familiar example of a simple response is the patellar reflex or the turning toward a light. But just as psychology expanded the physiological significance of stimulus to mean the total situation, so the response in which the psychologist is interested psychology has transformed into a complex. Responses might be graded according to their increasing complexity. The more highly organized responses are such things as building houses, writing books, or conducting a Red Cross Campaign. The response is not an entity. Life is not a series of one response following another single response. Behavior is rather integrated systems of action. The organism behaves when it functions as a whole. Such is the behavior which psychology studies. The separate systems of reaction are themselves integrations of reflexes, and in turn are organized in larger, more inclusive responses which we name. We say that the individual plays ball or mails a letter to a friend. These units of action are responses. Their complexity makes them not something other than what the psychologist means by "response". A response is not a single twitch of a muscle nor a series of such. It is the total activity of a reacting organism.

5. The Conditioning of Response Is "Meaning".

The complexity of the units of behavior, of the stimulus and response, make it difficult to say in the total situation just what is the stimulus and what is the response. The highly

important determining factors in the situation are in the conditions of the organism. These conditions are products of past or present responses. The situation seems to be nothing other than the sum total of past responses plus the immediate organic and environmental conditions, and the response nothing other than a nascent situation or factor in a subsequent situation. It is obvious, then, that the principle of multiple response to a single stimulus, and the basic principle of behaviorism, that of conditioning of reactions and situations, are one and the same. Furthermore, this is what meaning is. (10) Meaning is that which determines the response which is made to the stimulus. "Meaning is just a way of saying that out of all the ways the individual has of reacting to this object, at any one time he reacts in only one of these ways..." (11) The important determining factors are within the organism. Meaning is constituted in the condition of the organism, and in its past history as active at the moment. "Meaning is just one way of telling what the individual is doing." (12)

C. The Problem Of Psychology As The Study Of The "Whole Man"

1. Stimulus And Response Are Observed As Revealing The Total Behavior.

That the behaviorist studies the entire acting human organism it seems difficult for any except a behaviorist to understand. He is accused on the one hand of being a "muscle physiologist" and on the other, of neglecting the nervous system. (13) His own contention is that he studies both muscles and nerves as a part of a whole organism. The nervous system serves to integrate the complex activity of the organism

and thus becomes an important factor in the whole development. It is because the behaviorist puts the emphasis on the whole reaction rather than the part that he appears to neglect the nervous system. The behaviorist prefers not to use the brain as a "mystery box",⁽¹⁴⁾ an obliging contrivance which accounts for all we cannot explain. We can study explicit habits more profitably, because more accurately, that chemical changes in the nervous system. The former we can observe. Implicit habits are important. They include neural, muscular, and glandular activities, bodily sets, and thinking or subvocal talking. These implicit activities eventuate in overt behavior and as such become observable and socially significant. Consequently the behaviorist concentrates on a study of the stimulus and response, the ends of the total process as the best expression of the total action. He neglects what intervenes only in so far as he is compelled to do so by the conditions of experimentation. To watch behavior is his only method of acquiring information beyond what a study of the physiology of the nervous system gives.

2. The Study of Emotions Is Necessary To An Understanding Of the Activity of The Whole Organism

In a behavioristic study of emotions, such as sadness, fear, or love, the questions asked are what does the organism do when in these states. What is the effect of emotion on the total activity? Why does the individual act emotionally in the situation? How did the emotion arise? The more general problems are of emotional stability and control, of the integration

of the emotional and habit systems, of how "emotional life as a whole hangs together". (15)

The complete answer to such questions is not found by an analysis of the chemical changes in isolated muscle or gland. To say what the subject does under controlled stimulation is to give a fuller and more useful account of emotion.

3. The Study Of Habit Is Necessary To An Understanding Of The Activity Of The Whole Organism.

In a study of habit the significant question is, what is the organism doing and what can it be trained to do. What is the possibility of forming certain habits and retaining them? The question is solved by observing the activity of the individual, by giving performance tests, and by a study of the past record of the subject rather than by analysis of secretions and measurements of muscular movements. Neither will a study of sensation, or image tell us anything of habit. The behaviorist studies that action which he can observe. He may watch a brick-layer at work. He records the number of bricks he can lay in an hour, in an eight-hour day. He takes account of the influence of fatigue. He also may inquire whether the worker is an apprentice or a man of long experience at his trade. To learn of such behavior the psychologist must study not part activities, but the whole organization of the personality. In such a case there is present the highly integrated activity of the manual, visceral, and laryngeal habit systems. It is only when the entire integrated activity of these simultaneous habit systems is studied that an answer can be given to the question, "What is he doing and why is he doing it?".

The reports of Watson's experiments bear out his statement that his first interest is not in the secretion of glands and the twitching of muscles. If he were ^{so interested} he would fill his books with descriptions of the instruments for taking measurements, such as the galvanometer, which measures the varying resistance of the body to faint electrical currents. The records of experiments he would give in statistical or tabular form instead of in the everyday language used in reporting any observation of behavior.

To the insistence of the enthusiastic opponent of behaviorism that Watson reduces life to a "series of jerking muscles and spewing glands", ⁽¹⁶⁾ the behaviorist can only reply that the integrated activity of the whole organism is what he observes and describes.

4. Thought Is A Part Of A Whole Bodily Response.

This belief that bodily activity is an integration of all the habit systems and that it is artificial to single out any part reaction of the total organization, explains the behavioristic position on the problem of thought. For the behaviorist "thought is the action of language mechanisms" ⁽¹⁷⁾. The organs, muscles, and neurones involved in speech are a part of the total action. Thought is in such a setting. The fact that thinking is internal speech and therefore hidden from ordinary observation has led to the practice of abstracting it from its place in the integrated bodily activity. Thinking is implicit activity and therefore not easy to explain. For others than the behaviorist the hidden is mysterious. So thought becomes for the introspectionist something more than bodily activity. Watson believes that could these thought

processes be made as evident as the overt reactions in the familiar activities such as walking or building a house, thought would no longer be a mystery, accountable for only by the concepts of spirit, mind, or self.

5. Personality Is The Sum of Habit Reactions.

From the standpoint of the behaviorist a person is a highly integrated biological organism or "organic machine", the sum total of all the habit systems. Personality is nothing over and above these separate reaction systems functioning together in one organism. There is no "something more" which unifies, organizes, or directs activity; neither a soul nor the more refined self or consciousness. Whatever the name given to this principle, it is only "another name for the soul of ancient times"⁽¹⁸⁾. To continue to use such a concept is evidence of an "unwillingness to admit that the individual has within himself all of the determining factors for action"⁽¹⁹⁾. All soul theories Watson believes are influenced by a "subtle religious philosophy". The concept of consciousness is not needed in science, nor psychology. There is no evidence that consciousness exists.

When personality is treated as the totality of an individual habit system, it is possible to formulate laws by which one can not only understand what a personality is, but can also direct the development and organization of the habit and emotional systems of an individual. Personality thus becomes a useful concept in the problem of control of growth.



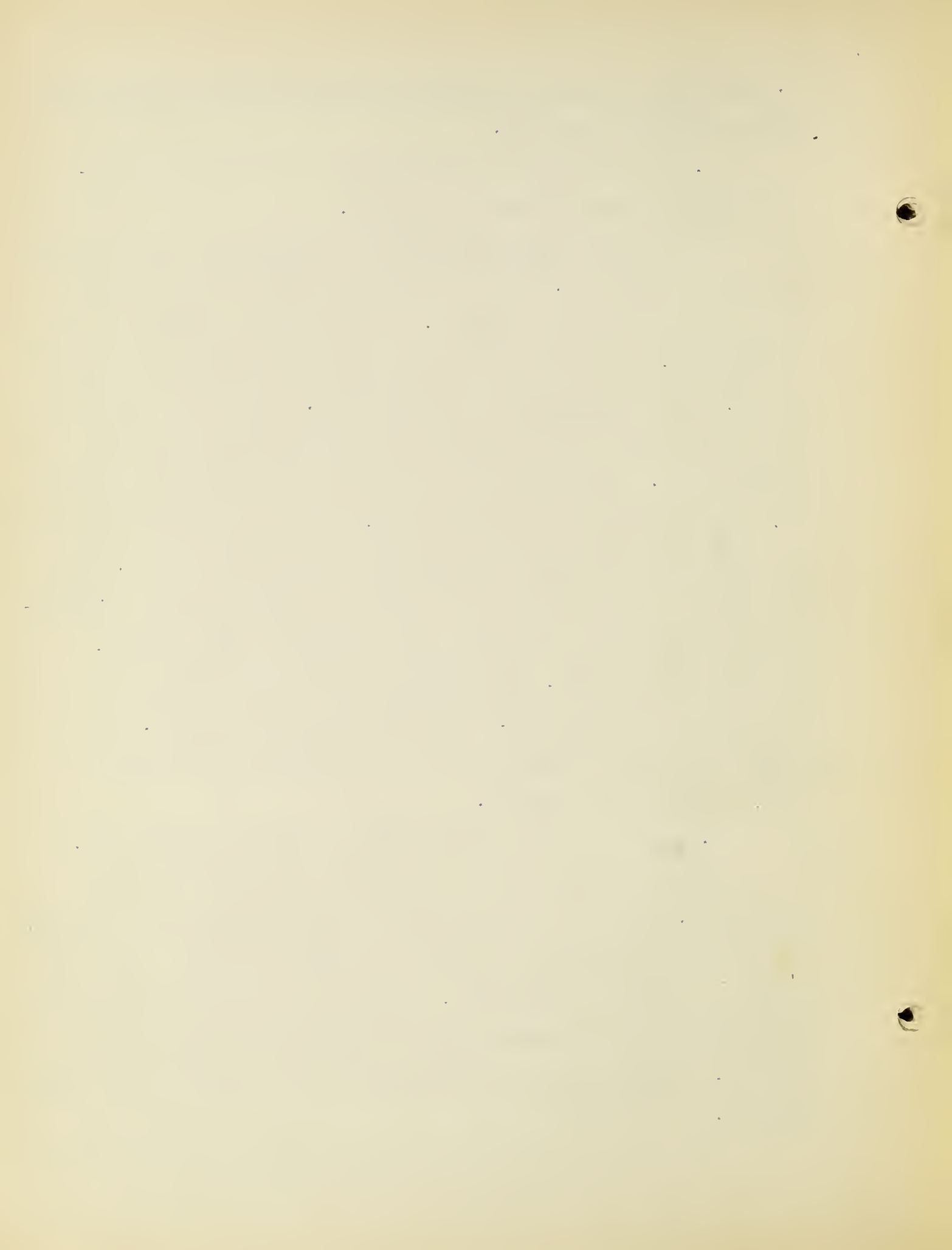
D. Personality Is Built Up Through The Organization Of Unlearned And Conditioned Responses.

1. The Development Of Personality Is a Problem Of Conditioning and Reconditioning Responses.

The behavioristic psychologist is interested "in synthesis as well as analysis". (20) His problems gravitate toward conditions and processes of growth. Growth is not a straight line development. It involves reorganization of reaction complexes as well as the organization of new habits. What can a person do and what can be trained to do are questions put by the behaviorist. The individual can be trained because his actions may be conditioned and unconditioned. They are not determined by tendencies, disposition, inherited talent, or instinct. Since all complex activity is built of units of simpler bodily coördinations, the building up process can be brought under control. Education is possible. The three types of habit systems all originate in the same way. They also develop similarly. To guide the growth of personality is to condition and organize these various habit systems.

2. Habits, As Units Of Personality, May Be Conditioned.

Personality is the total habit reaction system of an individual. This is an integration of numerous organized systems. Each system is composed of lower organized units and in turn is a unit in a higher integration. The key to the formation of a personality is the conditioning of these units or organized systems. Reactions can be controlled by the conditioning of the stimuli.



3. Emotions As Conditioned Habit Patterns May Be Built Into The Organization of Personality.

"Emotions are conditioned habit patterns" (21) They are developed and conditioned as any other habit. The educational problem in respect to emotion is that of eliminating an emotion when it is productive of useless or detrimental activity, and to build into the habit patterns emotions which facilitate satisfactory adjustments. Education which neglects the control of emotional development ignores one of the most potent forces in education. Emotion may serve as a "drive" to action. Emotion either as a habit of reaction or as a drive is of equal importance with habit in personality.

Through the organization of manual, emotional, and thought habits rather than through an attempted control by "ideals" will the control of human behavior be effected. Such is Watson's theory.

E. The Effect Of The Disuse Of The Concept Of Consciousness

That psychological concepts are basic in the social sciences is unquestioned. Watson's assumption that psychology will affect education, ethics, philosophy, and religion seems to be reflected in the objections to his system. Watson makes the following predictions for the "mental sciences".

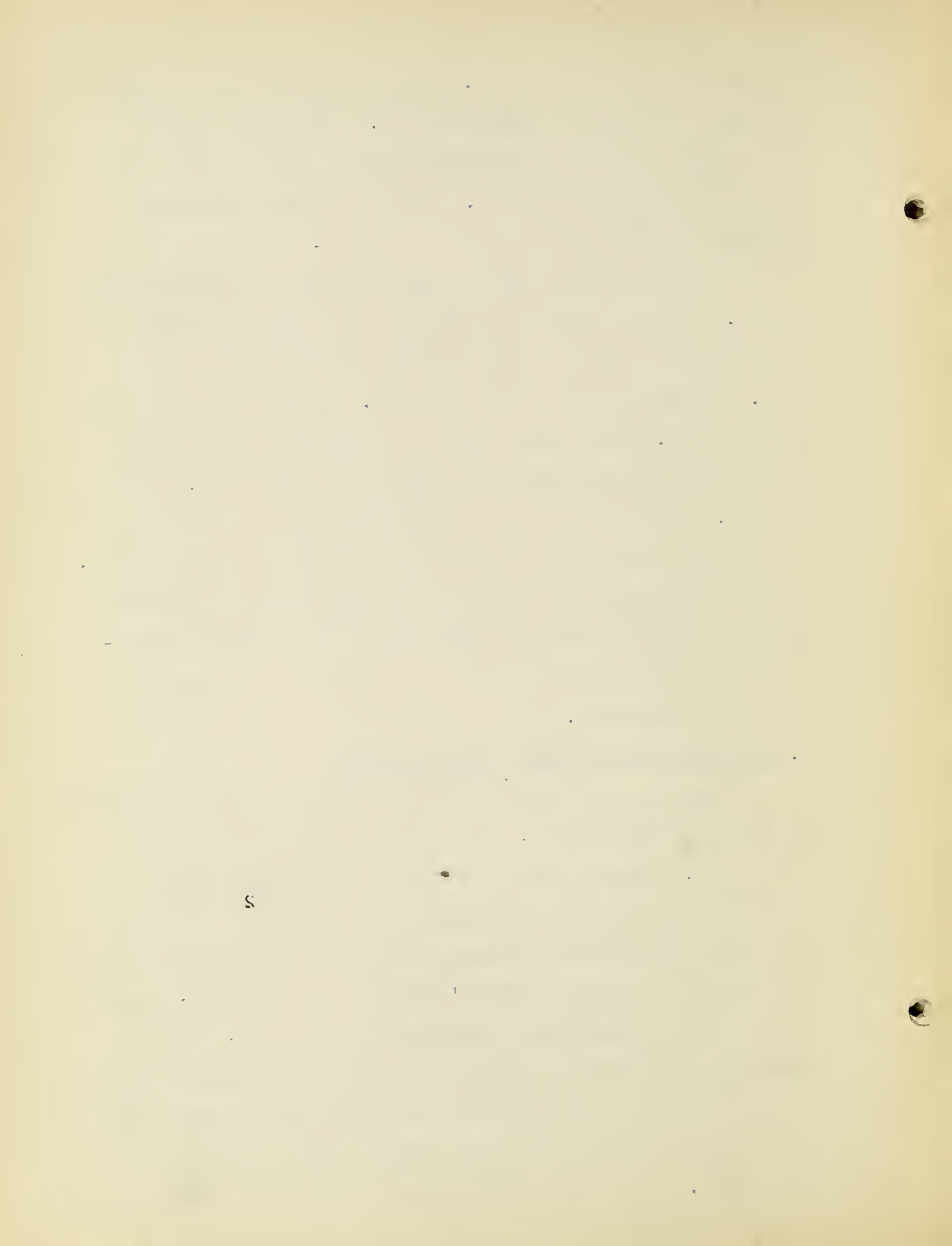
Sociology will merge with economics and behavioristic social psychology, which is a study of how the social groups form and control the habits of the individual member. Ethics will become a laboratory science. An ethic based on the concept of "soul" has not shown us what is the best in life nor how

that best may be made a fact. Prejudice rather than science has been in control of human welfare. The social sciences have failed to control behavior behavior because they have not made ethics experimental. They have worked under the patronage of religion rather than science.

The behaviorist would replace religion by experimental ethics. Watson thinks that religion may have originated in the discovery that one could control his lesser brother by fear. Religion still thrives in fear. On any other basis it would vanish. Religious habits are conditioned responses which often do not lead to the most satisfactory adjustments in life. Reacting to meat as unclean is not as beneficial as reacting to it as something having certain nutritive value. Under the compulsion of behavioristic psychology the social sciences will in time give up the use of the concept of consciousness for the formulation of new fundamental concepts which are scientific.

F. Behavioristic Freedom, A Social Ideal

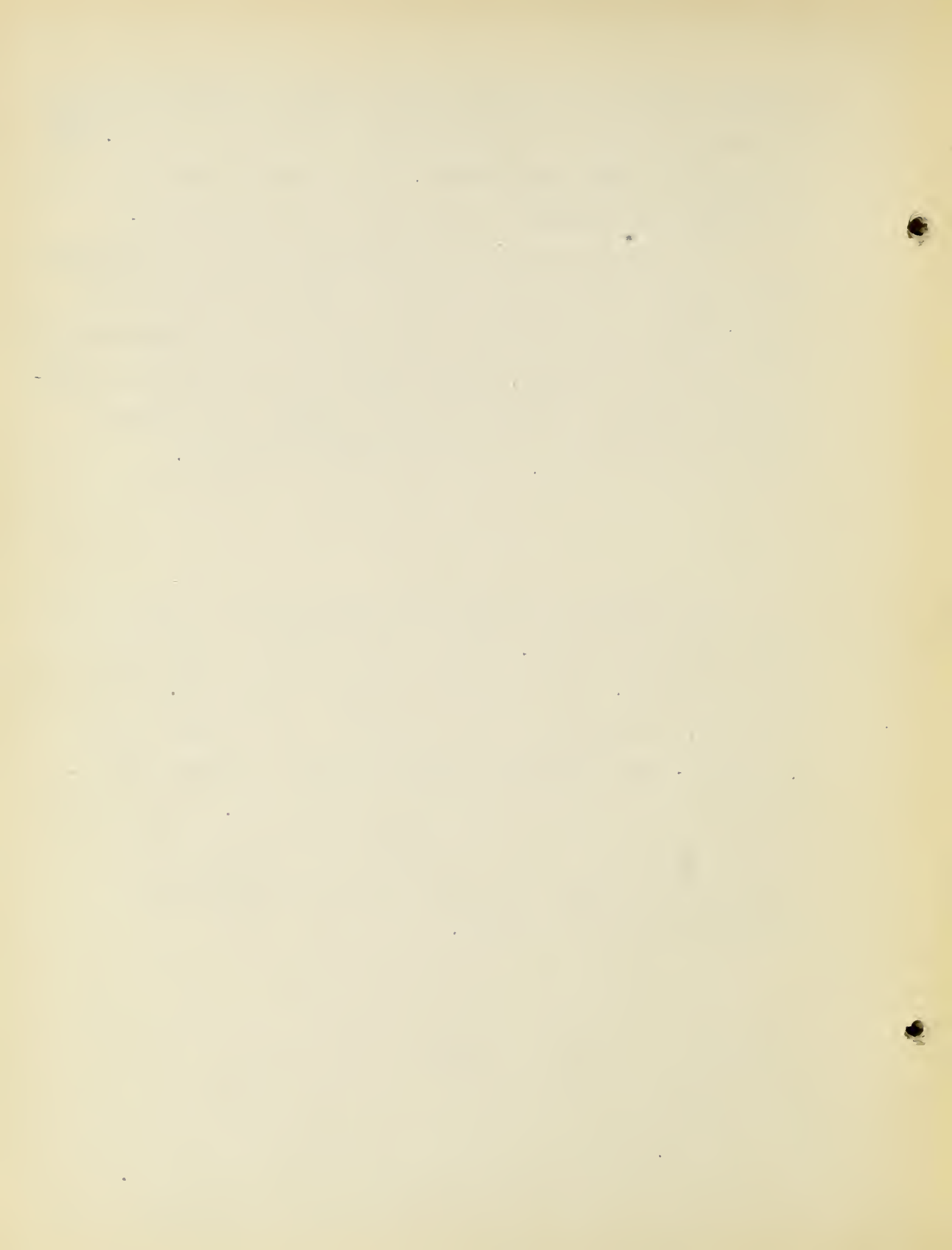
"You have already grasped the notion that the behaviorist is a strict determinist....the child or adult has to do what he does do. The only way he can be made to act differently is first to untrain him and then to retrain him"⁽²²⁾ If we would know what Watson means by "determinism", we must interpret this statement as a part of Watson's system of psychology. A habit system may be temporarily or permanently dominant. Certain habits or responses are entirely impossible, sometimes because of the structure of the organism, but more often simply because they do not harmonize with the dominant habit system of the individual. To accept consciousness or soul as a psychological



concept indicates an "unwillingness to admit that the individual has within himself all the determining factors for action". ⁽²³⁾ This statement has been quoted before. It is repeated here that it may be seen in relation to a statement about determinism.

Is such behavioristic determinism freedom or is "behavioristic freedom" determinism? Whatever implication others may think behaviorism carries for the question of the free development of personality or habits, Watson believes that his system of psychology affords the method for social control, when the old shackles of mythology and custom have been destroyed.

The relation of religion and behaviorism as Watson states it is direct and simple. Watson finds religion a detriment to social progress. The scientific viewpoint should replace the religious, behavioristic ethics supplant the religious values and ideals. But different interpretations of Watsonian Behaviorism and of religion introduce other relations. A discussion of the wider implications of behaviorism for religion will follow after Chapters III and IV, which are an appraisal of Watson's system of psychology.



CHAPTER III
CRITICISM OF WATSONIAN
BEHAVIORISM

A. Introduction

1. Content of The Chapter.

This chapter deals with the criticisms of behaviorism which center around the problem of method, mechanical explanation of behavior, and the nature of consciousness. They refer to Watson's theories stated in the preceding chapter, that the objective method should be used in psychology, that behavior is the complex response of an organism to a situation, and that the explanation of personality is to be found in the habit systems of man rather than in the assumption of a unique organizing principle such as consciousness. There follows in Chapter IV a criticism of these principles as applied to the problems of religion involved in a psychology of religion and religious education.

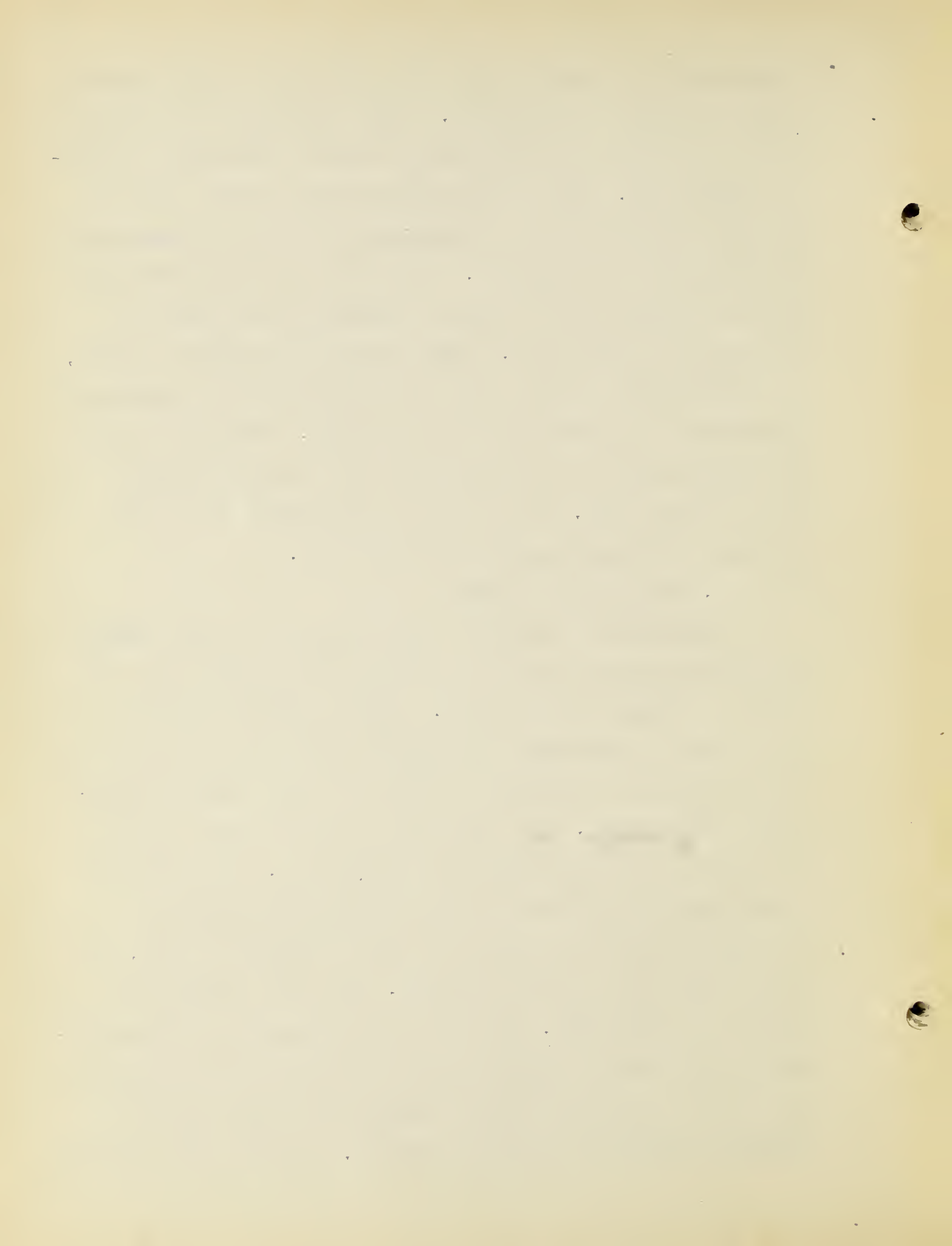
2. The Points of View From Which Behaviorism Is Criticized.

The fact that behavioristic psychology is not limited to the strict behaviorist and the near behaviorist, but in certain of its aspects is characteristic of almost all psychologies, accounts in part for the confusion in the countless discussions concerning behaviorism. The writers often fail to distinguish just which behaviorism they intend to inveigh against. A criticism may begin with an objection to Watsonian behaviorism and very soon turn about, let us say, some phase

of the problem of instinct in such a way that it cannot possibly apply to Watsonian behaviorism. Such indiscriminate discussions make it difficult to single out the current criticism of Watsonian behaviorism. The task is further complicated in that the viewpoints from which the criticisms are made are as numerous as those who make the judgments. The dualist and the exponent of emergent evolution may in certain respects offer identical criticisms of behaviorism. These apparent agreements, however, are fundamentally unlike, since each has evaluated behaviorism according to the demands of his own theory. A review of these discussions should take into account the presuppositions on which they are made. Yet to do so in any detail would lead away from the central problem of the thesis.

3. The Method Of Review

One method of reviewing these discussions is to study each contribution or evaluation separately, relating it to the system of thought of its author. Another possible method is to attempt to disentangle from numerous writers those arguments which occur most frequently and have at least a seeming fundamental relationship. The danger of this last method is that the review may become general and inaccurate. Since the aim of the thesis is to discover those more general aspects of behaviorism which have implications for religious thought, the first method has not been followed. The second approach is in part that used here. So much of the refutation of Watsonianism is contained in assertions and elaboration of the opposite view that it takes much piecing together of diverse parts to formulate a unitary and logical protest. To make these chapters



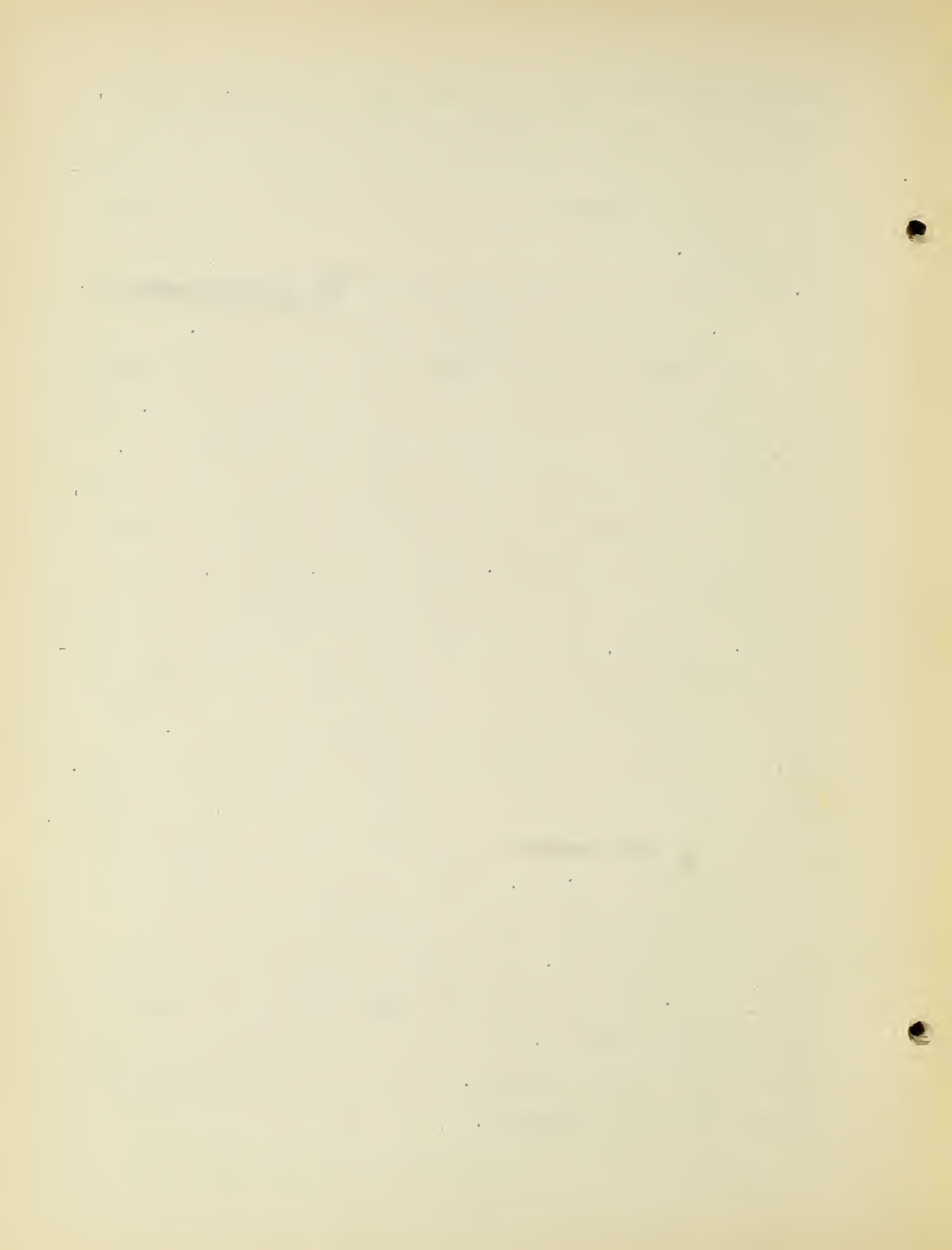
representative of current thinking about behaviorism, however, the following sections do represent a selection of the best evaluations of behaviorism from various sources, and a combination into a consistent whole in so far as this was permissible or possible.

B. The Metaphysical Assumptions of The "Verbal Report" Method.

1. The Objective Method Is Generally Accepted.

The objective and introspective methods in psychology are not the basis of any strict division among psychologists. Some few, with Watson, reject without reservation introspection. More often the psychologist will admit the use of both methods, attributing to each more or less efficacy in certain phases of psychological investigation. Miss Calkins, perhaps, finds a wider use for and value in the purely introspective method than others. However, she uses the method of observation and experimentation in so far as they are applicable. She believes that we can observe the self, but cannot experiment with it. (24)

Subjective method must supplement where objective method fails. Koffka studies psychology as a science of behavior, but he believes it is not possible to understand behavior completely by a study of overt activity. The inner experience which is a correlate of observable behavior necessitates the use of "descriptive concepts". He renames introspection "experiential observation". The "functional concepts" (25) are used in accounting for observable behavior. The two sets of concepts give a full description of total behavior. He would use the descriptive concepts only when necessary.



These two uses of the introspective method are representative of the evaluation psychology puts upon it. In one way or another the psychologists find use for introspection. Watson's complete repudiation of introspection is consistent with his belief that consciousness under any name is a surreptitious introduction of the "soul". But "mind", "consciousness", and "self" are not necessarily so regarded. Psychologists retain these concepts together with the objective method. That introspection has come to be a minor method is inevitable since the behavioristic viewpoint has been widely accepted. Here I use "behavioristic" to mean not Watsonianism, but that emphasis on mind as activity. Methodological behaviorism, or behaviorism "as only a method" is widely accepted. The criticism of Watson's method, then, comes from those who see it satisfactory so far as it goes. Too often the criticism of method as a failure to include all the facts overlooks the meaning of "verbal report".

2. Watson's Interpretation of "Verbal Report" as Objective Data Is Significant.

Watson does not, as those who accuse him of excluding facts fail to see, attempt to get a psychological explanation which takes no account of the reported response of the subject. The "verbal report" as stated on page 11 is itself a reaction, to be treated as any other response. Another psychologist gets the same information from an introspective report that Watson obtains from a "verbal report". Yet repeatedly the opponents of Watson assume that he can get no information from the words of his subject, if he is to be consistent. The important point is

in the interpretation of the language response. Here there is disagreement. His interpretation of the verbal report as objective data, identifies speech with behavior. The "excluded facts" are actually included. They are reinterpreted under metaphysical assumptions which the opponents of behaviorism deny.

3. The Criticism of Behavioristic Method Resolves Into A Denial Of The Assumptions On Which It is Based.

That behavior can be explained in terms of physics and chemistry is for the behaviorist no longer a hypothesis. It is a part of his philosophy. Method relates to content. This is recognized by those who say behaviorism is "only a method". They mean that it is only one method, the one which can report on explicit behavior. They reserve the "inner experiences" for treatment by another method. Watson agrees that his method cannot reach the "inner experiences", which are fictions of the introspectionist. The facts of the introspectionist Watson includes by reinterpreting them as implicit behavior. (26) The controversy over method is converted into assertions about assumptions. Watson's assertion is that consciousness is behavior. The opposite assumption is that consciousness is something unique, not to be explained under the categories of physical science.

C. Watson's Account Of Behavior As Mechanical Does Not Explain Psychological Behavior Nor Account for Meaning And Value.

1. The Differential of Psychological Behavior Is That It Is Purposive.

Psychologists are now asking a question to parallel the query "what is consciousness". That question is, "what is behavior?". More exactly, they ask, what differentiates the

behavior which the psychologist studies from that of molecules or inorganic objects. Man behaves, but so does an avalanche. If psychology is defined as a study of behavior, behavior itself must be defined. Hunter has seen that behavior is too general a term. His remedy is to use another word "Anthronomy". (27)

Another answer is that of Bode. (28) He believes that if psychology is to be more than or different from a section of biology and physiology it must take as its field the study of conscious behavior. Watson takes stimulus and response as the units of behavior. With this Bode agrees. However, he believes that action is "behavior" only when the response can be related to its stimulus in such a way that the stimulus is not antecedent to the response, but both are functioning at the same time by virtue of the fact that the future consequence of the stimulus is an essential feature of it which is operative from the beginning. Conscious behavior is differentiated from other behavior in that it involves a "certain process of organization" (29) or progressive change in the stimulus, which process eventuates in motor response. This future reference is one of the most significant marks of psychological behavior. "To be in experience at all is to have the future operative in the present" (30)

Behavior is not a fixed, rigid, determined sequence. The character of stimulus and response as not complete, but progressive, and contingent make possible activity in the present which has reference to the future. "Conscious" behavior then may be identified with purposive behavior.

2. Purposive Behavior Requires "Consciousness" As
A Causal Factor.

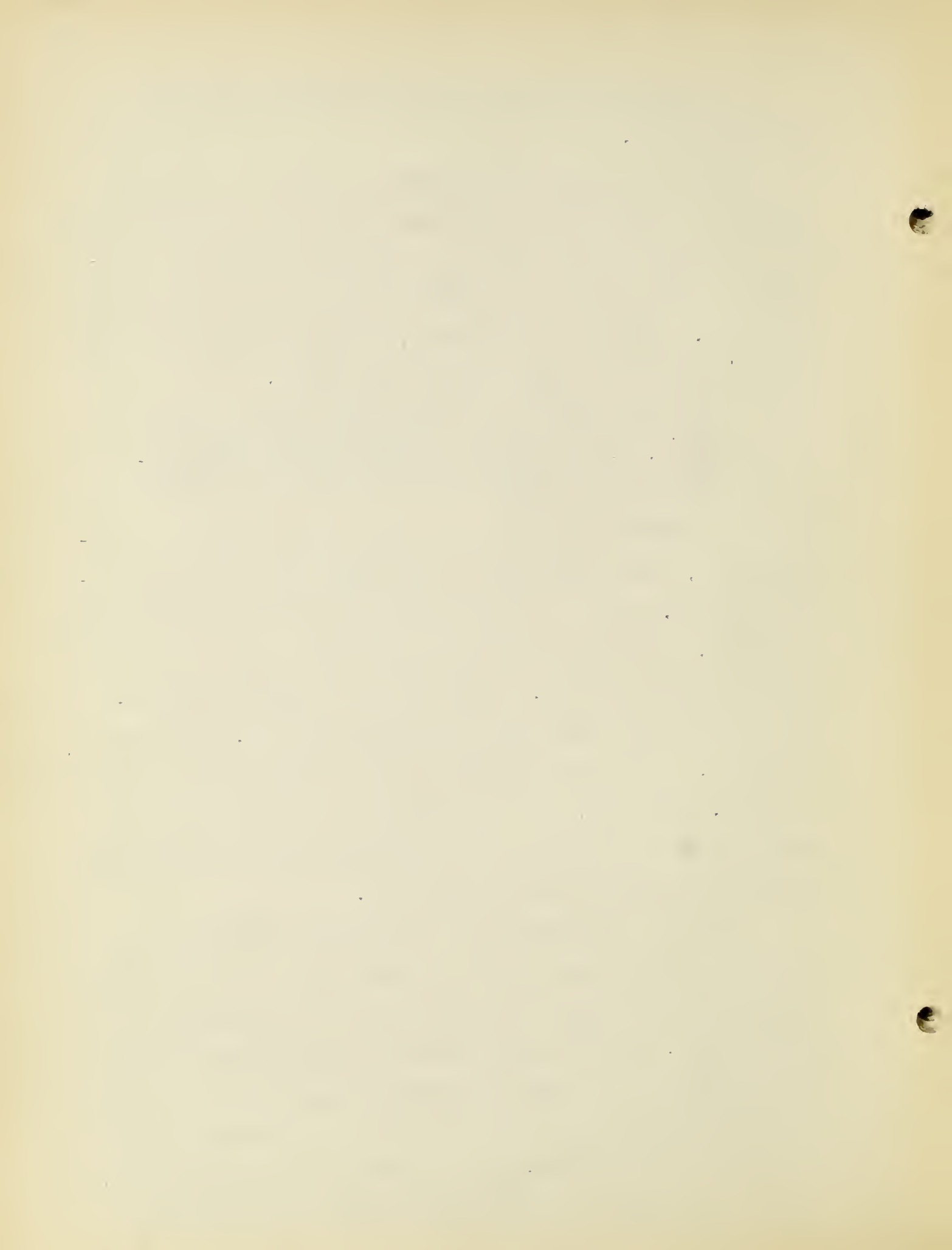
It is the supposedly necessary relation of purposive behavior to consciousness that calls out much of the insistence that consciousness be recognized. Those who criticise behaviorism as mechanistic are those who hold that consciousness is causative. Walter Albion Squires, who is as clear in his way as Watson is in his, makes certain this point.

"If consciousness can affect human conduct, man is not a mechanism and the mechanistic psychology is untrue. If consciousness cannot affect human conduct, man is a mechanism and the purposive psychology is untrue" (31)

A general criticism of behaviorism is certain to include this, that behaviorism cannot adequately explain purposive behavior, since it does not admit consciousness as a causal principle. Functional psychology defined mind as a function of the biological organism. Mind aided the adaptive process. Functionalism has left this idea with psychology. Mind does something. It is not something which is a structure to be analyzed. The criticism that behaviorism is mechanistic is allied with the supposition that consciousness is a selective agency or principle which directs life.

However, the assumption that purposive behavior is a result of consciousness is not an essential part of all those psychological theories which find room for consciousness or mind or self. Koffka believes that full experience includes consciousness, yet he does not relate consciousness to behavior as causal. (32)

Miss Calkins objects to the identification of the self with the "non-physical cause of the metaphysician, for one may assert on introspective ground, the existence of



self without believing that the self is directly experienced as cause of anything".⁽³³⁾ In Miss Calkins psychology the self, not consciousness, is fundamental.

The person who conceives of consciousness as causally related to behavior will ever see behaviorism as mechanistic. Purpose, for him, requires mind as something more than bodily mechanism, as something which makes possible the unitary forward looking experience. The assumptions of the anti-behaviorist and behaviorist have crossed.

3. Comparison Of The Principle of Closure and Configuration With That of Determination By The "Whole Situation" as Allowing For Purpose and Value.

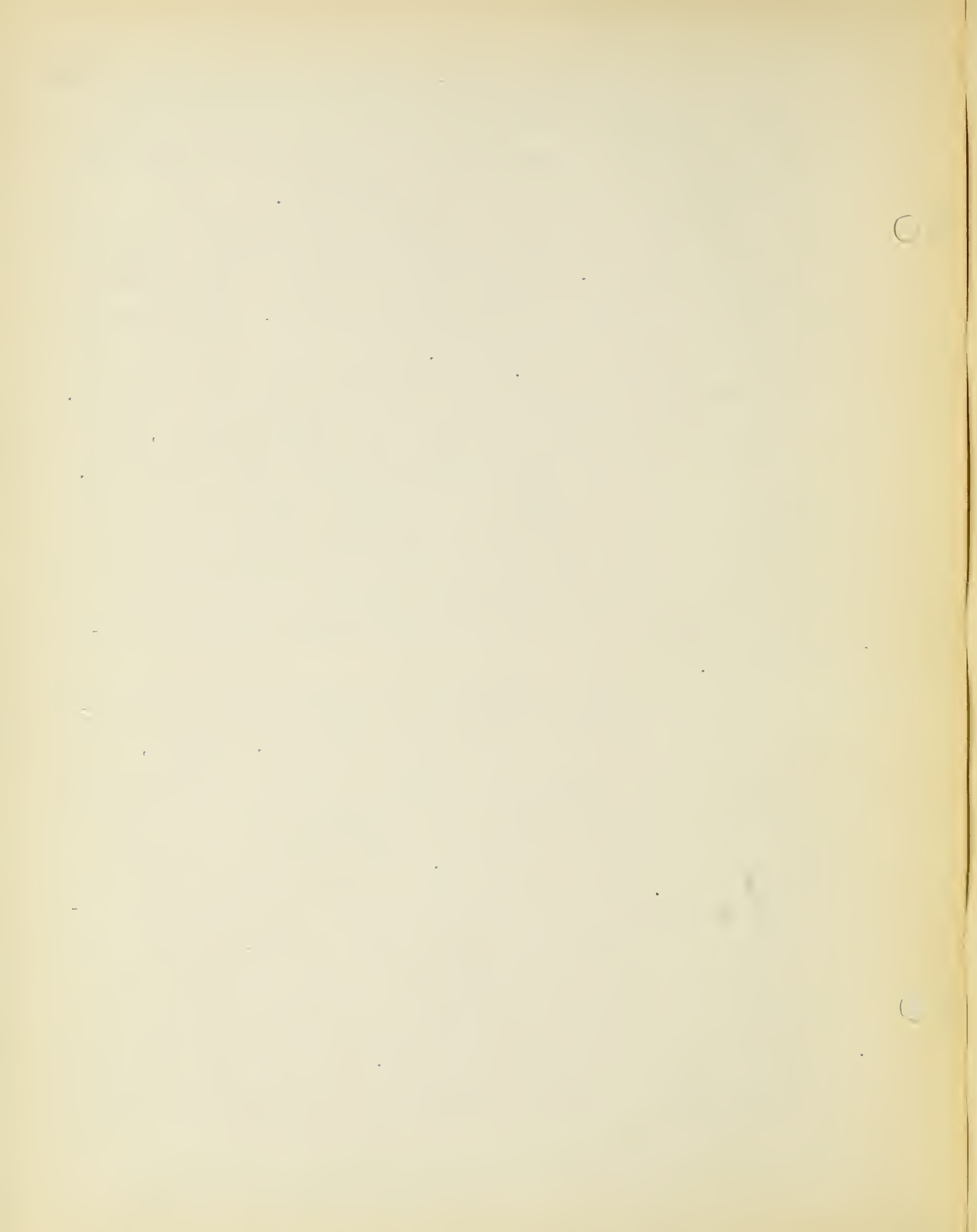
The fact that Watson denies consciousness as causal would not necessarily imply that his system might not include purposive activity. Consciousness is not necessarily of such a nature as to be a causal and selective principle. Furthermore, the reinterpretation of mechanism as not exclusive of teleology will render invalid the charge that behaviorism cannot account for purposive activity because it is mechanistic. The concern, in the problem of purpose is not to show that action must be free, non-predictable, persistent, spontaneous, the work of a mind or "hormic" principle, but that behavior has meaning and is of value. Desire and value are the end factors in purposive behavior. Purposive behavior attains value. This constitutes its essential meaning. Can Watsonian behaviorism provide a system which is not exclusive of value?

A comparison of Koffka's system with that of Watson will make clear both this less restricted interpretation of purposive

behavior as contained in a self-directing system, and may suggest why Watson's account of personality as integration of habit systems has not been accepted as providing for value nor his definition of meaning as being meaningful.

Two important words in Koffka's psychology are "closure" and "configuration". Koffka rejects vitalism. The principle of "closure" accounts for instinctive activity. The end action is itself a part of the stimulus. The principle of closure may be illustrated by the experiment with the string on a soap-film. A piece of string thrown in a loop upon a soap-film will, when the film within the loop is pricked, take the form of a circle. The quality of circularity or the position taken by the loop of string was as much a part of the stimulus as the pin prick, in the sense that the "end situation" operates to determine the "transitional situation" or the movement from stimulus to end-situation.
(34)

This principle of "closure" is operative in all intelligent actions, which are end-reaching activities. However, "closure", which accounts for purposive activity in instinctive action or mechanical events, is not sufficient to account completely for intelligent activity. It is in the difference in Koffka's and Watson's accounts of learning or of intelligent behavior that that provision for value may be made. It seems to me possible to say that Watson employs in its essentials the principle of "configuration" in his account of the nature of a complex situation and of conditioning. The important difference is that Watson accounts for learning by trial and error, while



Koffka says learning involves "insight". "Insight" into the situation involves an understanding of the meaning of the whole complex. Without "meaning" there cannot be value. Watson's definition of meaning given on page appears to his critics to be meaningless. It does not include value. That it is on the question of meaning or value that religion and behaviorism disagree is the conclusion reached at the close of chapter VI.

CHAPTER IV

CRITICISM OF THE PSYCHOLOGICAL INTERPRETATION
 OF RELIGION AND THE BEHAVIORISTIC METHOD OF
 CONTROLLING BEHAVIOR

A. The Trend In The Development of Psychology As It Influences
 The Psychology of Religion.

1. Change in Psychological Method and Soul Theories Have Made Psychological Explanation of Religion Increasingly Difficult.

Religion claims to arise out of inner experience and to relate to reality. That psychology which recognizes such spiritual reals as religion knows can best provide an explanation of religion which is not contradictory to what religion has always judged itself to be. Aristotle's doctrine of the soul as the moving principle manifesting itself in life functions at different levels, interactionism, or parallelism at least make possible a home for things religious. The faculty psychology with its pluralistic notion of mind could supply a spiritual faculty to cover religious experience. A compromise with a more naturalistic psychology results in the explanation of religion by attributing to man an instinctive tendency toward religion⁽³⁵⁾ or a special religious capacity.⁽³⁶⁾

The introspective method, while not making necessary the positing of a spiritual soul, does make easy an explanation of the inner experiences of religion. As psychology has



become more empirical and the introspective method has yielded more and more of the field of psychology to the objective method, an explanation of the religious experience in psychological terms has become more difficult.

The trend in psychology has been from the study of the soul to a study of behavior and from the introspective to the objective method. This is a part of the making of psychology one of the natural sciences. As psychology has been naturalized more and more it has come to interpret religion as a natural phenomenon. To save religion from the illusoriness to which it has been reduced by psychological analysis, the effort to explain religion as "natural", yet not illusory, has resulted in a distorted religion or an impossible psychology. Hauser gives us both: "Man is so constructed that unless he is tied up closely with his Maker, to receive on the receptive organs of his personality the stimuli which go out from his supreme and holy personality, he can not live up to the best that is in him..." (37) The Holy Spirit becomes a "stimulus acting on the nervous system of man". (38) In explaining certain educational processes in religion he writes, "...we would say that through some biological quality in the sensory motor nerve which we may call religious sensibility, and which we have learned to consider a divine endowment, these educational stimuli pass over into the motor nerve and religious conduct results..." (39)

Religion may be more beautifully explained as an illusion.



2. The Historical Method In the Psychology of Religion Has Resulted In Denial of Objective Reference Of Religious Experience.

a. The Data: The data for the studies in the psychology of religion have been taken from sociology, anthropology, the studies of primitive religions, and the lives of mystics. The psychological studies have been based on historical fact rather than immediately observed activities. The psychology of religion has never been an experimental study. The complexity of the forms of developed religion has forced the investigator back to the study of primitive groups. Origins were sought. The general result has been the interpretation of religion in terms of origin or its primitive form. Religion, found to be closely related to other values, has been entirely explained in terms of social, ethical, and psychological principles. Religion as a unique value or experience has been denied.

b. The Principles of Explanation: The more important principles of explanation under which religion has been humanized and naturalized are projection and subjectivism.

Progress in the sciences has been made through an objective and disinterested study of nature. The social scientist has envied the natural scientist his success. He has come to fear lest his own method is less productive because less disinterested, less objective, less influenced by the prejudices and desires of the investigator. Consequently the fear of anthropomorphism haunts the psychologist. He must escape it



in his own investigations and recognize it in his explanations of human experience. Projection is a result of this inclination of man to interpret the world in terms of himself. Under such a principle, God is explained as a projection of the group spirit or of man's desires. Man personifies his own spirit projects it into the universe, and calls it God. (40)

Subjectivism is another principle for bringing the supernatural under psychological explanation. The religious man believes he has relations with a God whose reality is as certain as his own. The psychologist admits man is seeking a God, and in that seeking has by projection posited a God. The answer the God makes is but the echo of man's voice. But the echo has a salutary effect on man. Religious exercises are psychological purgatives of mental ills.

3. Answers Are Made Which Attempt To Save Religion As A Real Experience.

Such a psychology of religion has eliminated God from the religious experience such as the development in psychology has eliminated the soul as a psychological concept. At least both God and the soul must be redefined to fit the facts. Such a psychology may be a satisfactory basis for a humanistic religion, but the doubt it casts on the validity of the religious experience makes it unsatisfactory to the theistic view in religion. Different answers are made to such an interpretation. One way is to deny the right of psychology to interpret religion, another to show a fallacy in ^{the} evaluation of principles of projection and subjectivism, another to point out the limits of the field of any natural science, and the inherent inadequacy



of science to deal with the ultimate reals.

The first answer comes from those who have a particular interest in practical religion. Horton, writing in the Journal of Religion,⁽⁴¹⁾ sees the result of such a psychology in the prevalent religious doubt. Many people have actually, as he sees it, ceased to be religious when they have come to believe that in their religious practices they are their own doctors. The remedy he recommends is that theology be no longer made a branch of psychology.

A more direct criticism turns upon an analysis of subjectivism and projection. Such a psychology seems to imply that because there is possibility of error, there is error. The possibility of error does not make all reasoning invalid. Our knowledge of truth comes through "subjective conditions". The validity of that knowledge or experience is tested by the truth of the specific reference to reality. To quote Valentine:

"Projection, then, is the only instrument we have for knowledge of reality; but when rightly referred and relevantly tested, it becomes the key to the interpretation of the meaning and nature of the world of objectivity. ...What is false in projection turns upon the test and verification..." (42)

Coe answers the question of the validity of projection by stating another problem. "The value of projection awaits or depends upon the value of "selves" (43)

Another solution is offered in the limitation of science. The scientific method involves abstraction. Science can speak with authority only on those aspects of experience which it has abstracted from the total situation. Physics deals with weights and velocities, with what can be read as a measurement on a scale. But the quality of the substance whose pattern

physics has described escapes scientific explanation.

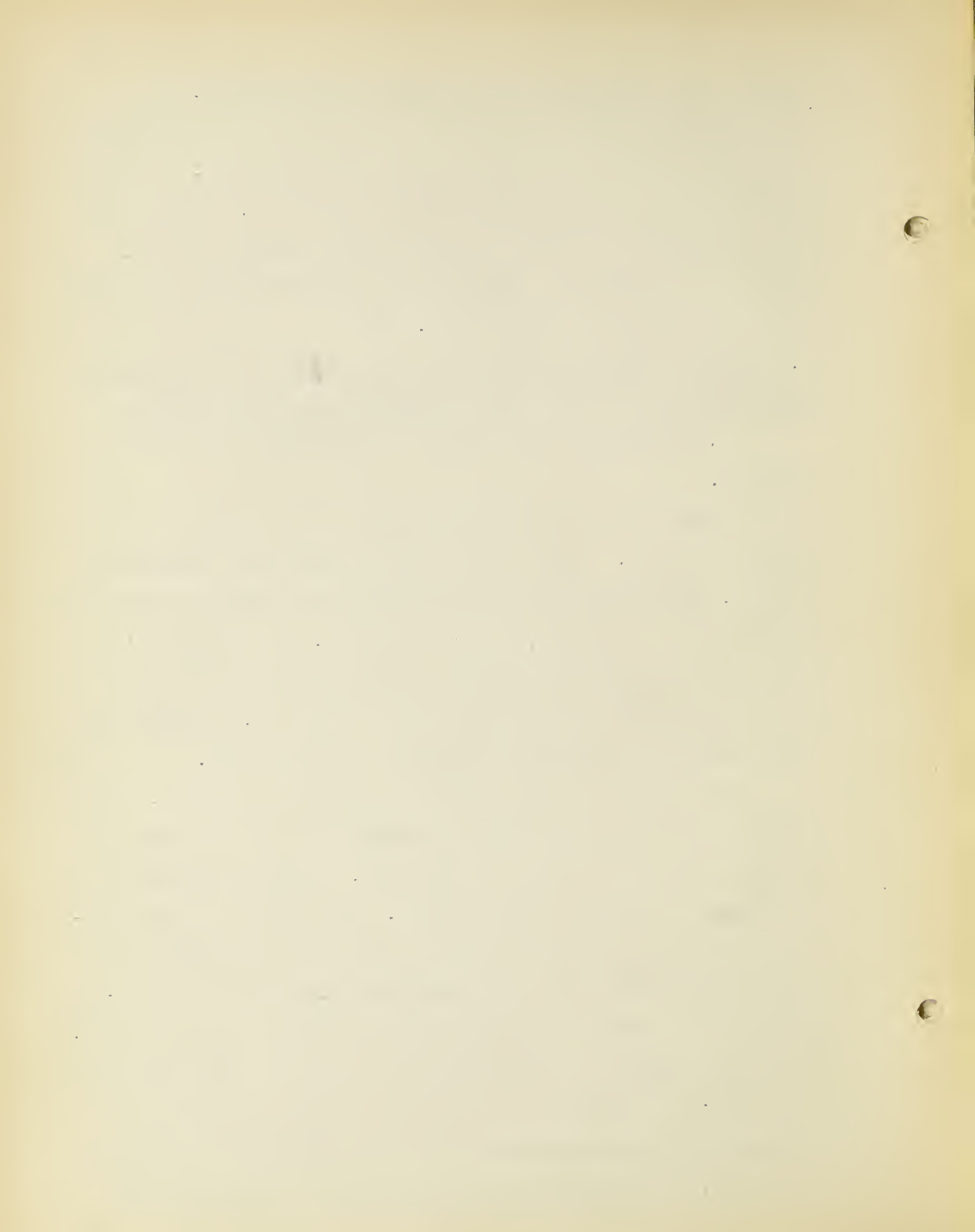
The qualitative aspect of nature or of mind which science fails to account for need not remain forever misunderstood, since the scientific way of knowing is not the only means. Applied to the psychology of religion, this principle implies that the nature of the religious experience may have escaped the method of the psychological investigator.

B. Divergent Assumptions Underlying the Agreement of Religion And Behaviorism In Their Aim To Control And Reform Behavior

1. Behaviorism and Religion Aim To Control And Direct Behavior.

Behaviorism is a natural science, aims to predict and control behavior. Such an aim relates psychology immediately to life. Psychological principles have been applied extensively in medicine, in business, and in education. It is Watson's belief that a universal application of scientific principles and methods would give us a new world to live in. Behaviorism aims primarily to understand behavior and control it.

Religion has always been an instrument of control. That religion still seeks to control is evidenced by the present renewed interest in religious education. Religious education is an attempt to control through ideals. The general aim of religious education as stated by numerous writers is represented by Dean Athearn's statement that "Christian education is the introduction of control into experience in terms of Jesus Christ"⁽⁴⁴⁾. That right conduct is not made equal to religion, that religious values are not identified with ethical values, and that the development of "God-consciousness" is not omitted in religious education, if such education is to continue to be religious is



included in the definition of aim given by Lane and Stevick:

"...to foster a consciousness of God and a loyalty to His will, for its untold value as a motive in the right control of conduct". (45)

2. The Importance of Training The Emotions Is Generally Recognized.

The importance of the emotional development as it affects conduct is now recognized. The public school has been negligent of the emotional growth of its children. It has produced no technique for establishing certain emotional responses. But what has been need not always be. The psychological study of educational problems has lead to an interests in emotion as the motive power for conduct. Adolph Meyer makes the highest aim of education to include training of the emotions as well as the intellect. (46) The report "On The Educability Of The Emotions" submitted by a council of Boston teachers is evidence that public schools are aware of the importance of the emotional factor in conduct. The degree of importance Watson attaches to emotional development may be judged from the number of experiments he has made in this field, and his contribution to the psychology of emotions.

Religion is and always has been a thing of the emotions as well as the mind. Religious leaders have sought to train the emotional nature of man. At the present time religious educators almost invariably take as their special educational problem the development of a technique for guiding growth of the emotions. Ellwood, from the point of view of a sociologist, makes the statement that when the need of emotional guidance is recognized

"we shall turn to religion as the great educator of the social emotions. We shall see that while science and democracy can help, yet the final work of educating the emotions so that they shall support social idealism must be the work of religion". (41)

This general recognition is now a fact. But not all are turning to religion as the great teacher. Assumptions as to the nature of man and his relation to the cosmos will determine whether method recognized as scientific will be positivistically or metaphysically grounded. The exponents of religion claim their methods to be scientific. Behaviorism asserts that its way alone is scientific. It is in this respect that behaviorism and religion, agreeing in aim to control and recognizing the importance of emotion, differ.

3. Assumptions of Behaviorism and Religion Underlying The Method of Control Make Fundamental Agreement impossible.

a. Habit versus Ideal. Watson makes the problem of growth central in psychology. Religion has come to recognize salvation not as a price paid, but as a process of development, an attainment of personality. Behaviorism would direct this growth by the conditioning of habit responses, religion by the inculcation of religious ideals.

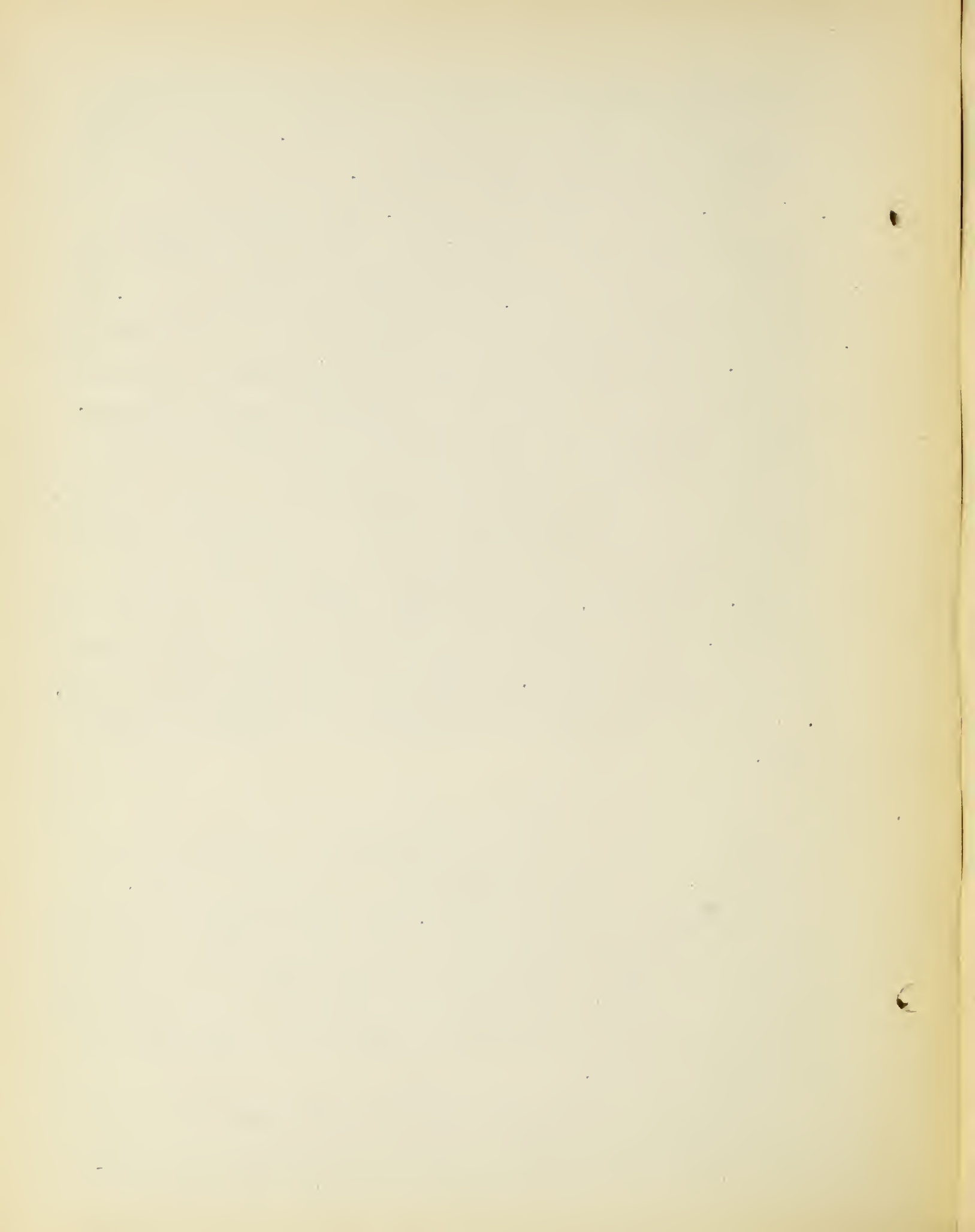
The religious educator is not likely to accept habit formation as the central principle in character formation, unless he can make ideals the central value in habit. He sees habit rather as an instrument. It is descriptive of the mechanics of life, rather than of the rich content. Motivation of conduct lies deeper where life shows spontaneity. Freedom necessitates self control under the direction of an ideal. If habits can assist

in character building through the establishing of the ideal as the goal of endeavor, the habit is useful. But ideals have references which habits do not possess.

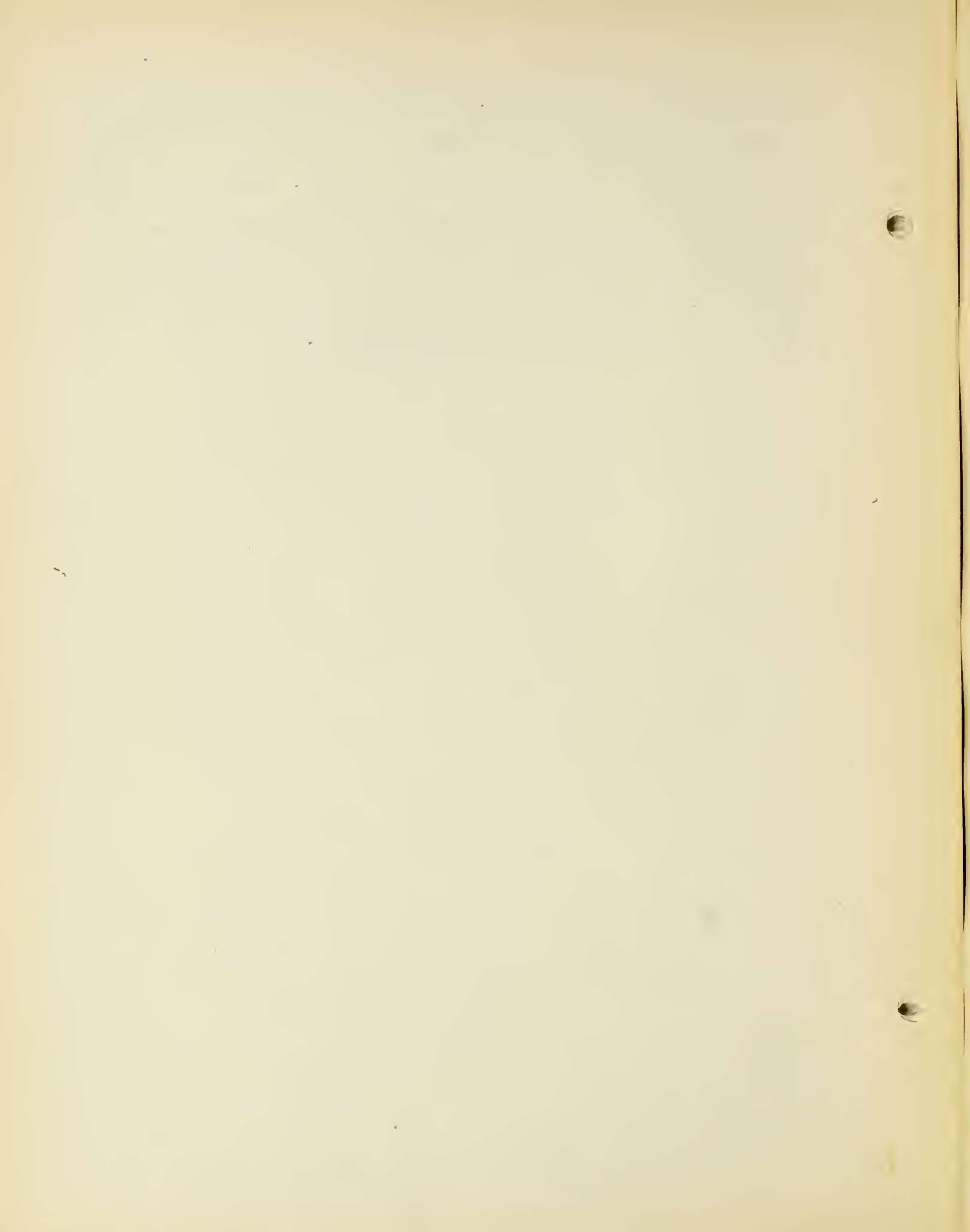
b. An Ideal Points To Values. The psychologist may recognize the ideal as effective as a drive or as a center for the formation of a habit system. There it begins and ends. For the religionist ideals point to values as a part of the order of things. Another difference is that the psychologist identifies religious and moral values, the religionist believes religious values are unique (48) It may be said that Watson recognizes no value in religion and therefore no religious values. However, the fact that he would substitute ethics for religion indicates that he identifies what is valuable in religion with ethical values. Here again, the behaviorist viewpoint might satisfy the humanist. Such an identification of their thought will be made in the following chapter. But when value is considered as a real, "... the value judgment is pre-eminently the religious judgment" (49).

The belief that ethical values point to religious values, that the fact of value necessitates the postulation of God, is the philosophy of Kant and Sorley.(50) The philosophy of Rudolph Otto that religious values are as original as ethical or aesthetic values has served a timely purpose in counteracting the influence of the explanation of religion in terms of its origin and that a "natural " origin.

It is this fundamental difference in belief as to the nature of moral and religious values that separates the behav-



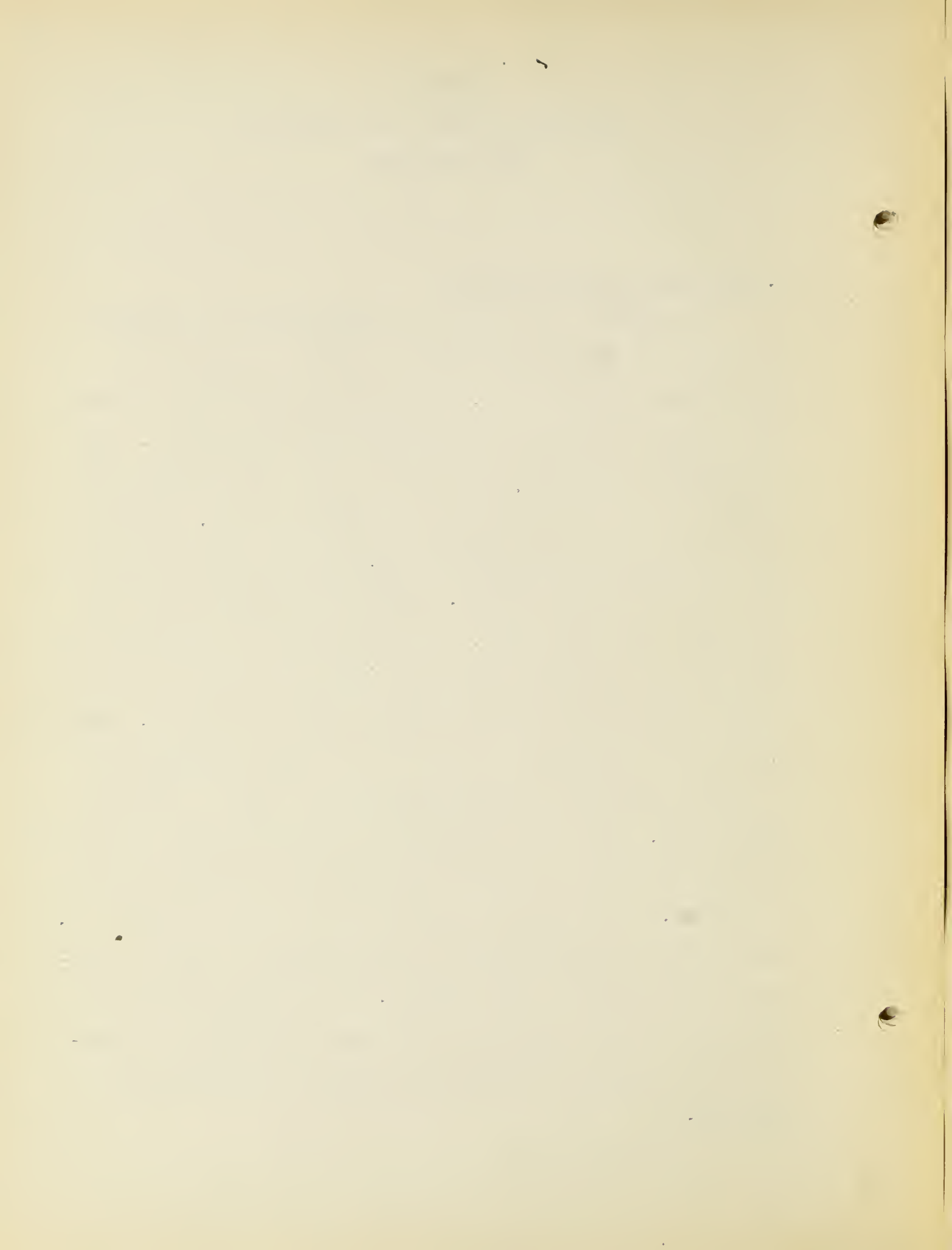
iorist and the religionist. A fuller expression of the implications of these two viewpoints as expressed in humanism and theism will follow in the next chapter. The positions of the behaviorist and the religionist are irreconcilable, for ultimately one finds purpose and value to be metaphysically known and grounded in the cosmos, the other to be empirically known, and created in human relationships.



CHAPTER V
THE IDENTIFICATION OF BEHAVIORISM
WITH HUMANISM

A. The Problem Of The Chapter

To discover the relation of behavioristic principles to religion we must relate them to religion through their philosophical implications. Religion may be defined as man's relationship to God, or to the extra-human environment. The evaluations in Chapter III have to do with those assumptions of behaviorism which pertain to the nature of man. Chapter IV introduces the behavioristic implications which relate to the nature of cosmic reality. Behaviorism speaks of God and the cosmos only indirectly. The implication of behaviorism for religion as it has to do with the nature of values and of God is best exemplified in the religion known as humanism. More precisely, the humanism of Ames may be taken as exemplary of a religion which has a metaphysical basis similar to that of behaviorism. This does not imply that humanism takes behaviorism as its psychology, nor that behaviorism will develop into such a religion. The Watsonian cure for religion is to abolish it. Yet there are the assumptions in behaviorism on which a religion such as humanism might develop. It is the purpose of the first part of this chapter to show that behavioristic assumptions are identical with the more important foundations of humanism.



The objections brought against behaviorism in Chapter III are those urged against a naturalistic conception of the nature of mind and personality. The behavioristic implications for religion as it is conditioned by the nature of man derive from the the presuppositions of naturalism. This is the thesis of the second part of this chapter.

B. The Assumptions of Behaviorism As Identical With The Presuppositions of Humanism.

1. The Scientific Explanation of Phenomena is Correct And Complete.

Ames describes the religion of his book The New Orthodoxy as "consistent with the mental habits of those trained in sciences..". (51) Humanism is positivistic. The welfare of man is its goal. Science is the guide to a knowledge of that better life. Moreover, science in the form of history, anthropology, psychology accounts for the origin of religion without the concept of the supernatural. For humanism the psychological description of religion is the ultimate description. Watson carelessly dismisses the problem of the origin of religion in a few sentences, to the effect that some person who did not like to work with his hands discovered he could control others through fear. Leuba, Ames, or Durkheim take more care in accounting for the origin of religion, but their approach to the problem is the same as Watson's. All seek explanation of religion in terms of its origin or primitive form and assume religious values are not unique, and that the true account of the religious experience the scientific report gives.

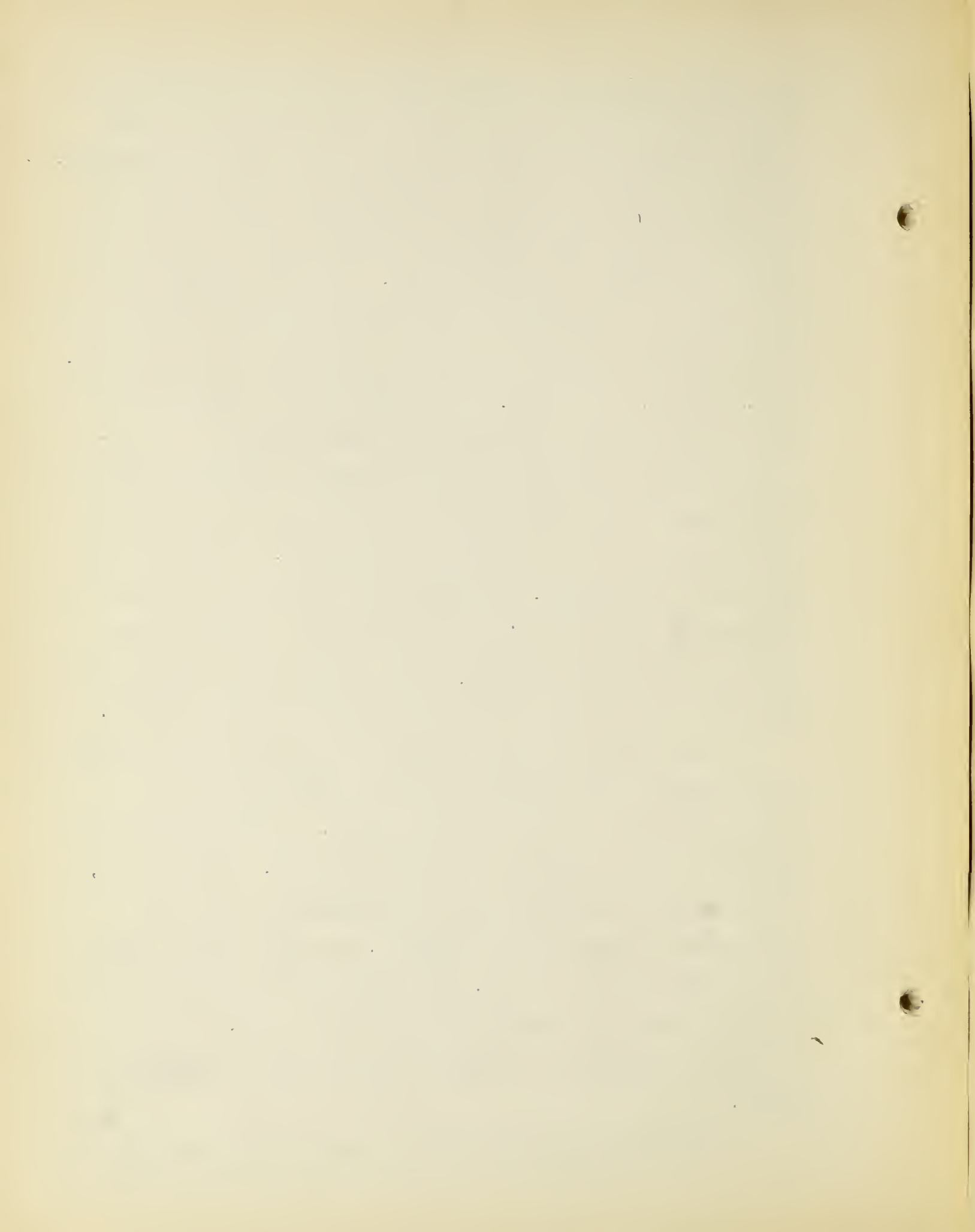
2. Man's Highest Quest Is For "Natural Good"

With Ames' statement that "religion has come to reckon

with the fact that its highest quest is not for a supernatural order, but just for natural goodness in largest and fullest measure",⁽⁵²⁾ a behaviorist might in part agree. Watson's substitution of experimental ethic for religion, his desire that scientific method be universally applied so as to bring in the social good, might indicate as much. Such an enthusiasm for his cause, for the attainment of "natural good" or "highest social value" constitutes religion, according to the humanist. Ames, however, as a guarantee of continuance of enthusiasm would retain the old concepts of theistic religion. To conserve the power attending the old religious concepts for the advancement of the social good, he would not give up the use of word symbols which have religious meaning. The symbol may be given a new meaning. God would then become a word which "represents to our minds and wills the moral values and the spiritual realities of life".⁽⁵³⁾ This personalization of abstract values makes them effective in the control of life.

This program for the increase of the better life Watson would support, but he would not mistake Ames' method of getting emotional support as scientific. A behaviorist would not play with the question of God's existence. Furthermore, he is certain that emotion can be successfully controlled through the conditioning of response. He would have no need for an empty concept of God. The behaviorist knows nothing of a "group mind" which might be projected as a god. He would complete the process of eliminating God, which the humanist began.

Despite these differences, the fundamental assumption of



behaviorism and humanism is the denial of the objective reality of God.

3. The Source Of Value Is in The Natural Order Rather Than In A Moral Order.

As a correlate of the positivistic method and the acceptance of the highest good as social values is the identification of the moral order with the natural order. Values are discoverable through science. They originate and are contained in man's endeavor. Values increase as man's knowledge of what is the valuable becomes more certain. Humanism and behaviorism give us a melioristic and a naturalistic ethics. The cosmic support for the values of theism is in God. This was discussed in the preceding chapter. Behaviorism and humanism are both limited by their theory of knowledge and their interpretation of present in terms of past, of higher in terms of lower, to a restricted naturalism which places all values, ethical, and religious, and cognitive, in one realm of experience. The moral order is nothing other than the natural order. Behavioristic and humanistic ethical values need no extra-human cosmic support. Ames is somewhat afraid to take the consequences of this implication of his theory of value, since for practical purposes he invests an extra-human cosmic support in the God projected into the universe. Watson's position is entirely consistent. The criticism of G. B. Smith (54) that a humanistic religion has no cosmic support for its values would not apply to humanism did it not try to make a religion out of natural values.

C. The Postulates of Behaviorism and The Metaphysical Principles of Naturalism.

1. Behaviorism is related to Naturalism In That It Is Positivistic.

Watsonian Behaviorism claims to be more than a method. Methodological Behaviorism, admitting the existence of consciousness as something science cannot know, gives up the premise of strict behaviorism that consciousness properly identified, can be described by the principles of natural science. (55) Consciousness is implicit behavior. Those critics of Watson who identify behavior with matter and motion may conclude that the behaviorist has become a metaphysician. He goes to naturalism for his philosophical assumptions.

The assumptions of naturalism may be reviewed under the divisions of positivism, mechanism, and materialism.

Lange makes the statement that materialism (or naturalism) has been at times practically identified with the scientific viewpoint. (56) With new scientific discoveries have come new revivals of materialism. This scientific method and viewpoint is that of positivism. Science has appeared to be an ally of naturalism. Proof by experimentation has, like behaviorism, itself become more than a method. It carries implications concerning the nature of reality. These implications of positivism are those charged against behaviorism in Chapter III.

Positivism has as its ideal a unified theory of nature and the use of the same categories in all the sciences, with the number of concepts reduced to a minimum. Such uniformity demands that the world be reduced to quantitative aspects, since this it

is that scientific method may abstract and catalogue. Science abstracts the measurable aspect of life. (57) Science is likely to assume, then, that what cannot ultimately be measured is not real. The criticism of Watson is that he has taken the unity of science not as an ideal, but as a fact, and has set his problems accordingly. All must be answered in the language of physics. The positivistic assumption that the methods of science are final is related to the denial of mind or spirit. Behaviorism in so far as it is positivistic is allied to naturalism.

2. Behaviorism and Naturalism Agree That The Real Is Qualitatively One.

The doctrine of naturalism is that matter is real, and the only reality. Mind is a form of matter. Behavior may be defined as matter in motion, and by this definition Watson is a materialist. His refusal to recognize consciousness as unique, as something different from matter is a second point of identification between behaviorism and naturalism. The denial of spirit as operative in the universe, on the part of naturalism, corresponds to Watson's denial of consciousness as an organizing principle in personality.

3. Mechanism is Evidence of Cosmic Indifference to Values.

Mechanism interprets the order and growth in the world as merely a reshifting of parts, a new arrangement of old substances, each new arrangement following directly and necessarily from the one preceding. This reordering of parts does not produce anything new. Water is simply two parts of hydrogen to one of oxygen, is made of the old materials. Their relationship, the togetherness of them in water is not productive of a new quality. Nothing

unique emerges with the new configuration.

Such a view of the structure of things, leaves no place for creative activity, for spontaneity of development, for choice of ends. This has struck at the root of morality and personality. The mind, or self, or soul, which materialism reduces to matter, mechanism eliminates as the motivation of action, and a selective principle. Such a principle as denies the lack of need of an organizing force in personality is that of the associational psychologist. Modern behaviorism, following functionalism only in so far as it studies mind or thought as continual adaptation, or as a biological function, is akin to the associational psychology in denying the need of an associative principle.

It has always been assumed that mechanism was exclusive of teleology and incompatible with purposive activity and that it eliminated all values. Mechanism has not sought for values in the cosmic process, nor in human behavior. Watson through the identification of thinking with behavior has followed mechanism in eliminating the possibility of the category of value.

The question of the validity of and the change in the problems created by the opposition of naturalism and idealism (58) will be discussed in Chapter VI.

CHAPTER VI
THE RESTATEMENT OF
PHILOSOPHICAL PROBLEMS

A. Implications Of The Identification Of Behaviorism With
Naturalism

Chapter IV includes a discussion of the psychological explanation of religion and a criticism of the behavioristic ethic. The assumptions underlying such a psychology of religion and a practical program of social control are in the first section of Chapter V shown to be identical with humanistic metaphysics. The second section identifies the assumptions of behaviorism with the presuppositions of naturalism.

It follows from Chapter V that behaviorism is related to religion as humanistic religion to theistic, or as naturalistic philosophy to a religious interpretation of life. Since the principles of humanism are discussed as those phases of naturalism which pertain to the super-human phase of religion, the assumptions of behaviorism may be summarized in the problems of naturalism. In fact, behaviorism is denounced as being "merely a philosophical attitude as applied to subject matter in psychology".⁽⁵⁹⁾ Prast also calls behaviorism a metaphysics, a resolution of methodological difficulties by metaphysical assumptions, which assumptions are those of naturalism.⁽⁶⁰⁾

If behaviorism is to be identified with naturalism, whatever befalls naturalism will affect behaviorism and its relation to religious problems. Naturalism is being reinterpreted, and the old arguments modified. These changes and

their significance are the subject of this chapter.

B. The Possibility Of A Restatement Of Problems Dividing Philosophy.

1. The present tendency in philosophy to synthesize apparently contradictory ideas points to a possible reconciliation.

The present tendency in philosophy is toward the elimination of some of the old problems through a new definition of terms. Perry concludes his study of recent philosophy with the statement that the divisions between the schools of modern philosophy are breaking down. ⁽⁶¹⁾ A reading of philosophy verifies the statement. Mind and matter, mechanism and teleology, freedom and determinism, are in one way or another included within each other. Metaphysics itself is reinterpreted: "...there are ...two ways of being metaphysical". The old way is to make the ultimates non-perceptible forces, entelechies, or spirit. In the newer metaphysics "life and mind are empirically recognizable where they occur, though not perceptible in the sense of consisting merely of patterns of sense-data with their relations of coexistence and succession...". ⁽⁶²⁾

A reconciliation in these problems which have divided philosophy will affect the relation of science and religion and of behaviorism and religion, since religion is through philosophy related to science. A "new materialism" might not be opposed to religion. On the other hand, in the new statement of problems other divisions might arise.

2. A final reconciliation of philosophical controversies is unlikely.

Both Pillsbury and Russell believe that any final adjustment of conflicting problems is impossible. The conflict originates

in the psychological difference in minds. There are two types of minds in the world which create these different philosophies. The wrangle about freedom and determinism Russell accounts for as coming from men who have had a "passion for power and a passion for safety".⁽⁶³⁾ Pillsbury sees value in the division, for it adds zest to psychological meetings⁽⁶⁴⁾ and keeps the world from being dull.

There are perhaps less subjective reasons for the doubt that reconciliation can be made. Mechanism and teleology may be shown to be complementary aspects of one process, matter and spirit to be related as substance and function, determinism to be involved in freedom. This would create a new world in which to begin philosophy again. Against such a background, however, new problems as divisive as those that create the present differences might arise. Eddington reduces all differences to that between the measurable and non-measurable.⁽⁶⁵⁾ This difference centers in the problem of knowing the world. Measure is a means to scientific knowledge and explanation. Science abstracts from reality the measurable. The interest of science and that of religion are therefore different.

Another account of the likelihood of a lasting division in philosophy is that given by G. P. Conger. He sees all philosophies as divided into system and meaning. The field of philosophy may always show this same duality.⁽⁶⁶⁾ Such a division is accounted for by the "implicit duality of thinking".

If a new alignment of philosophical problems were to follow such a division, science would explain in terms of system and religion in terms of meaning. System and meaning are essentially the special interests of science and religion. Ed- dington's reduction of reality to the measurable and non-measurable aspects might be stated in terms of system and meaning. Also the charge of religion that science cannot report on ultimate reality might be interpreted in terms of system and meaning. Science describes the system. Religion seeks the meaning. This division into system and meaning appears in the form of the problem of knowledge.

3. Elimination of conflicts through synthesis makes for the concentration of the problem into fewer forms.

- a. The mind-body problem may be stated in terms of mechanism and teleology

The newer definitions of matter and spirit, teleology and mechanism, determinism and freedom, leading to a system in which both are included, serve to reduce the multiple arguments against naturalism into fewer problems, if not into one single, complex one. The mind-body problem relates closely with the question of mechanism and teleology, and may be stated in those terms. As long as matter was conceived as a heavy, solid stuff out of which things were made it seemed necessary to posit another essence called spirit to account for mental activity. Matter and spirit were taken to be opposite entities in the world system. But since physics has discovered the unit of matter to be centers of electrons and protons, this assumed difference between matter and spiritual forces has been less easy to define. The conception

of what spirit may be has also changed. Spirit has been related to matter as a function, or as a resultant of a new configuration of matter. The desire to save spirit or mind means that people want an account of causality. Only a few are content to save consciousness as a non-causal principle. The mechanistic theory of life has been opposed because it provided for no spiritual cause, and made no provision for value.

- b. A reinterpretation of mechanism and teleology under the principle of causation provides for purposive activity within mechanism

Mechanism has usually been allied with matter, teleology and vitalism with spirit. The first step in the reevaluation of mechanism was to deny that vitalism is necessarily related to either acceptance of mind or self, or to purposive activity. Miss Calkins emphatically states that her self psychology is opposed to mechanism, but only in so far as this is it in agreement with vitalism. The self is not the non-physical cause the vitalist posits. (67) Koffka rejects vitalism as necessary to an explanation of purposive activity.

The next step is to reconcile teleology and mechanism. Hoernlé agrees to state the contradiction as "not mechanism or vitalism, but mechanism and teleology" (68) His rejection of vitalism carries with it the rejection of any essential opposition between mechanism and teleology. Teleological concepts are necessary to explain the "dominant" character of life, which has its foundations in the mechanical, physico-chemical processes. Teleology is not the old concept of design, but of "value, which permits us to read relations of cause and effect as also relations of means to ends". (69) Cause and effect is a mechanical concept; means and end, a teleological concept. The mechanical interpre-

tation involves cause and effect; the teleological interpretation value. This is one means of disputing the disjunction, and uniting mechanism and teleology. There are other methods.

The most inclusive reconciliation is attained by a redefinition of cause. So long as cause and effect are in a time sequence of antecedent and consequent, the mechanical interpretation may be exclusive of means and end. But if cause and effect are not something separated from each other by an unknown nexus and linked serially, but are both parts of a whole situation in which it is difficult to say which is "cause" and which "effect", purpose may be accounted for, and made possible under a concept of mechanism. This total complexity holds the condition of the future event and the future event as itself a part of the cause.

Coe, in a discussion of cause ⁽⁷⁰⁾ gives as example of the explanation of the cause of disease the germ, which is in relation to its environment, is a factor in causation, but of itself it is not the cause of disease. In psychology this same idea is expressed in the theory of "configuration". Watson also provides for the determining factor in the total situation.

The question remains, however, whether these self determining systems provide for value. This appears to me to be the important point in the mechanism-teleology problem; or even in the matter-spirit controversy, which leads into that of mechanism-teleology. Whether life is spiritual and teleological or material and mechanistic is of no great importance so long as the system allows for value. A recent speculation

as to the nature of that something which philosophy and religion have sought to save in the concepts of spirit and teleology is that it is characterized not by consciousness, but by goodness. (71)
Goodness is a value concept.

c. The mechanism-teleology problem may be answered in terms of the limitation of scientific method.

The systems just discussed would account for value as a part of the "natural order". Science has no other place for value. Religion has put its values in a supernatural or other than natural order. So long as values are in a supernatural order, science cannot account for them, nor deny them. It can only do nothing. Value is expressed in the natural order. And value also is the irreducible division between science and religion, between religion and Watsonian behaviorism. Behaviorism has failed to give an account of mind which is inclusive of value. Science generally has failed to recognize religious values because its categories are not such as to include value. The essential nature of life escapes the scientific explanation.

That such a division between what is known by science and otherwise, or between value and not-value, goodness and not-goodness, should remain as the wall or partition between science and religion or naturalism and not-naturalism may imply no contradiction in the world system, nor antagonism in the two viewpoints. Both methods of knowledge may be valid and "natural", and the disjunction between them signify only that they are ways of knowing and reporting on the "measurable" and "non-measurable", or on "system" and "meaning". The difference may denote the difference between thinking and living.

C. A New Materialism Resulting From Restatement Of Philosophical Problems Has Conditioned The Arguments Against Naturalism and Behaviorism

Regardless of the extent to which the problems of philosophy may be reduced, the fact remains that changing concepts compel a revision of the old arguments against materialism and naturalism. This new statement is in the making. The relation of the interests of religion to the theories of science are uncertain. The old ways of answering the arguments of naturalism by vitalism or by a theory of knowledge which amounted to questioning the possibility of knowledge are no longer acceptable.

Chapter V showed behavioristic assumptions to be those of naturalism. The newer ways of replying to naturalism carry with them a different attitude toward the problem than that shown in much of current discussion of behaviorism as it influences religious problems. The answer given to naturalism by the theories of emergent evolution is to provide for the spiritual as unique by dividing the world not cross-section-wise, to find there two diverse elements, matter and spirit; but time-wise, to find a new quality arising in the new emerging situation or configuration.

The "configurative" character of the habit systems of behavioristic psychology may not be such as to provide for purposive activity, nor the definition of thought as behavior to provide for meaning. If such is the case religion and behaviorism may never be friends. However, religion should restate its arguments against behaviorism, in consideration of these

changing philosophical and scientific concepts.

CHAPTER VII
CONCLUSION AND SUMMARY

A. Objections To Behaviorism are Biased By The Identification
Of Behaviorism With Naturalism.

Some of the objections to behaviorism appear to follow from the fact that behaviorism was taken to be materialistic and mechanistic, rather than from an understanding of behaviorism. This has precluded a disinterested discussion and a recognition of certain features of behaviorism which, if admitted, might have modified the objections. It is impossible to criticise fairly without understanding the meaning of the words the opponent uses. It does not follow that a just criticism of behaviorism would have found it correct, nor allied with a philosophy other than naturalism. But the evaluation of behaviorism might have been different.

Such misinterpretations are general and touch every part of Watson's system. It is ^{too often} supposed that he gives no value to the verbal report in psychological investigation. He does, however, recognize the words of the subject as data reliable for scientific use. He differs from the introspectionist rather in his interpretation of what verbal report is. Likewise, the general criticism that behaviorism omits facts is questionable. It is only if misinterpretation means denial, that Watson can be said to omit facts.

The critics of behaviorism have for most part failed to recognize Watson's statement that stimulus and response are con-



plex and are to be studied as a part of the total integrated human organism. The "configurative" element in behaviorism is overlooked.

B. The Effect of Watsonian Behaviorism On Other Schools Of Psychology Is Reflected In Philosophy And Religion.

The strict Watsonian behaviorism has undoubtedly in part effected the wide acceptance of some type of behaviorism. Nearly every psychology is in some respect behavioristic. The psychology of Watson, in relating psychology more closely to physiology and zoology and thereby to mechanical interpretations, has been a factor in the development of the more general use of mechanistic concepts, ⁽⁷²⁾ and in the reinterpretation of them. Since psychological problems are central in philosophical theories, strict behaviorism has through its general influence on psychology, helped to create a new psychological outlook of which philosophy takes account. Strict behaviorism has then indirectly effected modifications in the philosophical interpretation of life and in the religious demand as to what life may give.

C. A Synthesis Of Two Important Ideas

The idea of configuration in scientific and philosophical interpretation of life and Rudolph Otto's answer to those who by a historical-psychological study of religion make it illusory are both influencing present thinking in philosophy and religion. Rudolph Otto's belief that religious values are as unique and original as ethical or aesthetic values and the idea of configuration are combined in Morgan's idea, which makes religious values dependent upon a "newly emergent attitude of mind" ⁽⁷³⁾ This



attitude of mind does not create the values. Mind has reached in that new emergence a state in which the mind can distinguish between "spiritual value" and "spiritual unvalue". (74) This recognizes the configurative character of mind and the unique original character of religious values. Value is not here made dependent on unity. The configuration is of value because it has new powers. It may be that behaviorism cannot be harmonized with such an explanation, since for Watson the new is merely a new arrangement or pattern or integration of old parts. (75)

D. Religion As Creative Experience Is Prior To Psychological Interpretation.

Thought is less than life. Thought does not produce the fact. It merely seeks to interpret what life creates. Religion is an aspect of the creative experience. Thought may clarify or reinterpret or evaluate that experience but it does not precede it nor ever entirely eliminate it. The arguments for religion may be founded in reason, but religion originates in living experience, not in thought. Psychology, behavioristic or otherwise, is related to religion somewhat as thought to life. Psychology can only interpret and evaluate the religious experience. It may be inevitable that scientific thought cannot represent the rich fullness of life. If psychology can deal only in the mechanical, deterministic, and measurable aspects of life, religion will ever deny that it gives a full and true account. Ultimately the argument of religion against behaviorism, as against any other psychology or natural science, may be that the method of science does not give all the truth.

SUMMARY

The thesis may be briefly summarized as follows: It is Watson's use of the "verbal report" as objective data which differentiates his method from that of other psychologists. This is of importance only as it necessitates the assumption that consciousness is behavior.

The personality, Watson believes, is a complex of habit systems; emotional, manual, and laryngeal, which are built up by the conditioning of responses and stimuli. Both stimuli and responses are highly complex. Responses are variable. The factors of the stimulus or situation which are most potent in determining the exact response the organism will make are the immediately past experiences of the individual, the intra organic conditions, and the total past history.

By the understanding and control of habit formation Watson believes it will be possible to train any individual in any way one may desire. Ability is determined by physical structure and training. When the social sciences discard the use of the term "soul" as their fundamental concept, and when scientific principles are universally employed in control of conduct, then Watson says the way will be open to an adequate control of social development. Both religion and ethics will become experimental and religion will become ethics.

Behaviorism aims, as does religion, to control behavior. Both agree that the training of the emotions is highly important if conduct control is to be at all possible. But the agree-

ment goes only thus far. Behaviorism would control through the building of habits by the conditioning of responses. Religion would control through the power of a religious ideal as prior to habit formation. The behaviorist finds moral values to be empirically discovered and contained entirely within the social group. The religionist believes that the moral ideal points beyond to a universe which sanctions, and even creates, those ideals.

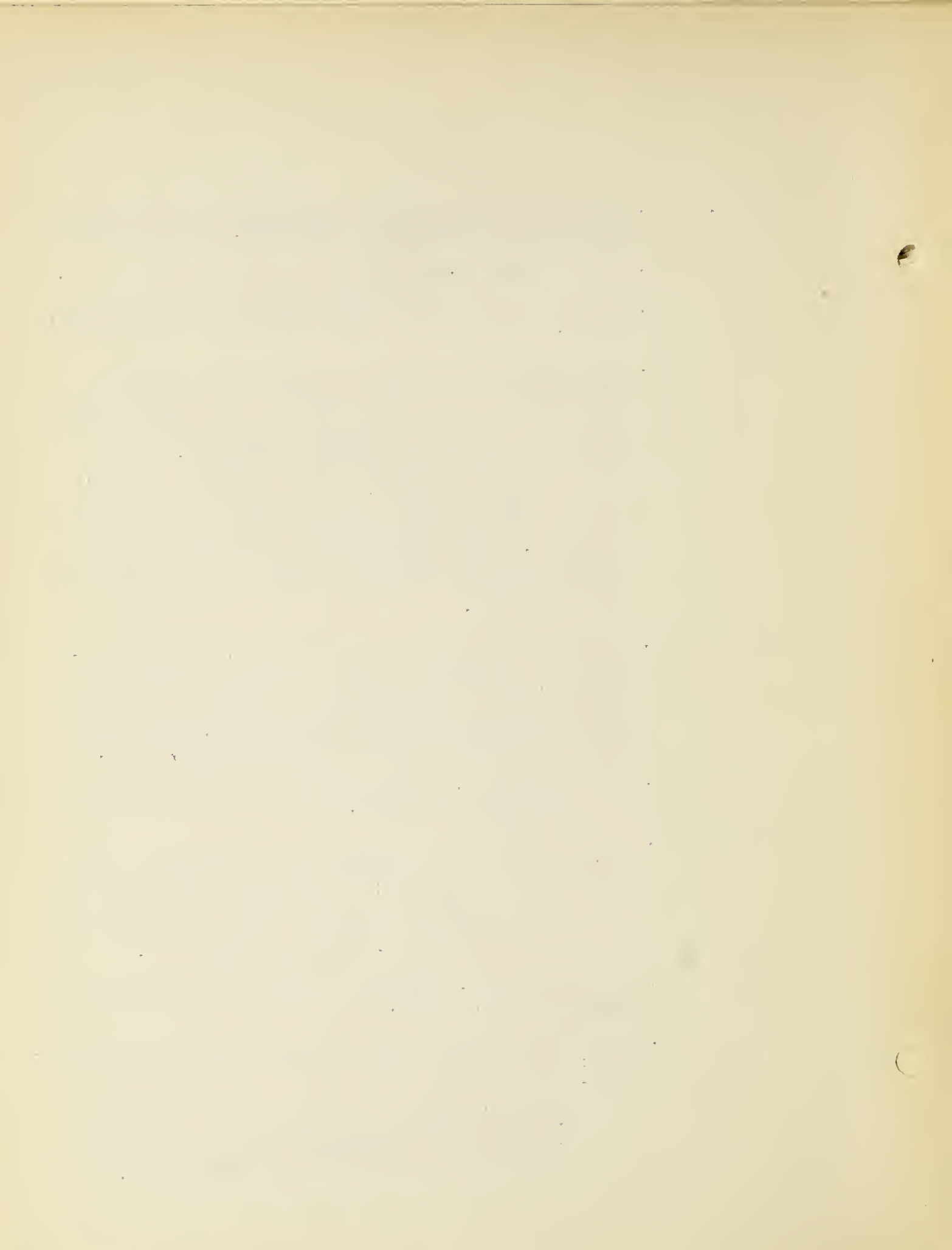
The metaphysical assumptions of behaviorism are found to be identical with those of humanism and naturalism; with humanism in that both reject the objective reality of God, with naturalism in that both reduce all to matter, deny a causal force other than the mechanics of the world or the body, and reject knowledge not empirically acquired.

Since behaviorism has been identified with naturalism and the criticism of it is in large part that directed against naturalism, a restatement of the philosophical problems involving distinctions between matter and spirit, mechanism and teleology, and freedom and determinism, will be reflected in any satisfactory evaluation of behaviorism. There is a tendency in philosophy to find these concepts less contradictory. They are seen to be complementary. For all except the positivist, however, the world remains divided on the basis of how it can be known. Science may abstract and know the measurable aspects of reality. But there remains undescribed in scientific terms that non-measurable aspect of life of which the religious experience is a part.

[The text on this page is extremely faint and illegible. It appears to be a standard page of prose with several paragraphs. Two hole-punch marks are visible on the right side of the page.]

NOTES

- Page 8. 1. Squires, walter Albion, psychological Foundations of Religious Education, pp 29-31.
- " 8 2. pratt, James B., Matter and Spirit, pp 197, 198.
- " 9 3. Buckham, John Wright, personality and Psychology, p vii.
- " 10 4. watson's justification for using the verbal response of a subject in a psychological investigation is in the fact that he considers speech as a motor habit, a complex coordination of activity which may be called behavior. He is not confined to watching the movements of man, as some seem to think. He may also listen to the subject's words, without giving up his contention that he studies not consciousness, but behavior. His interpretation and use of the "verbal report" and his conception of the nature of thinking are interdependent, and stand or fall together.
- " 11 5. Watson's definition of a stimulus: "It is convenient to speak of a total mass of stimulating factors, which lead man to react as a whole, as a situation. Situations can be of the simplest kind or of the greatest complexity". Psychology From the Standpoint of The Behaviorist, p 11.
- " 12 6. Watson, John B., Psychology From The Standpoint Of A Behaviorist, p 299.
- " 13 7. The impossibility of separating completely the stimulus from the response is reflected in this statement from watson: "Please remember, though, that when we speak both of conditioned stimuli and of conditioned responses, what is conditioned is the whole organism" Behaviorism, p 19.
- " 13 8. Watson, John B., psychology From the Standpoint of A Behaviorist, p 300.
- " 13 9. The list of factors determining behavior is as follows: The response most likely to appear is the one--
1. Most recently called out by the object
 2. Most frequently connected with the object
 3. Most closely connected with the general setting of the situation as a whole.



Page 13.

The next more important determiners are:

4. Situations responded to during hours preceding incidence of stimulus, and the amount of emotional tension they aroused.
5. Temporary intra-organic factors.

The most important factor is--

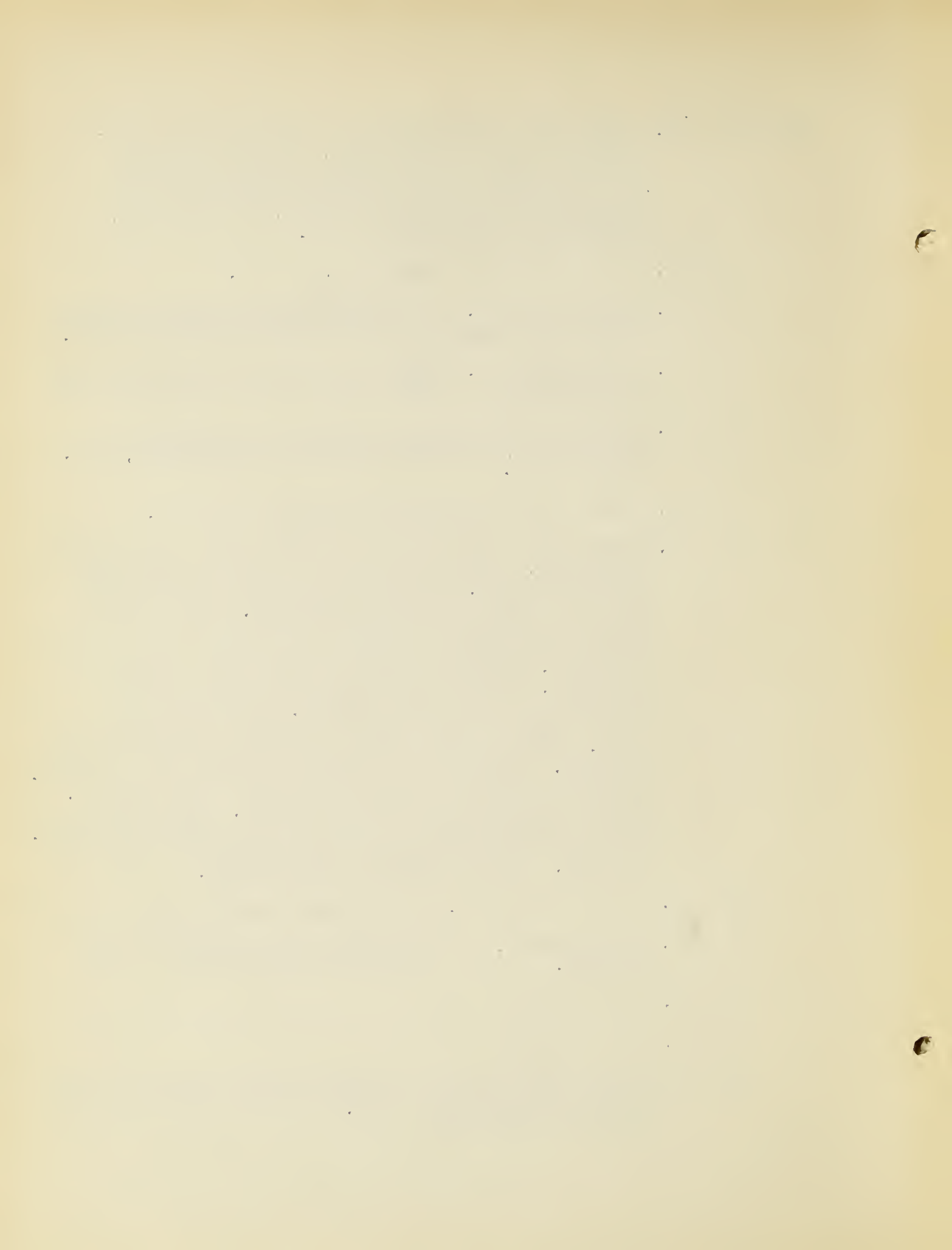
6. The life history of the individual, the experiences which have developed "attitudes, trends, or slants".

Psychology From the Standpoint of A Behaviorist,
p 299.

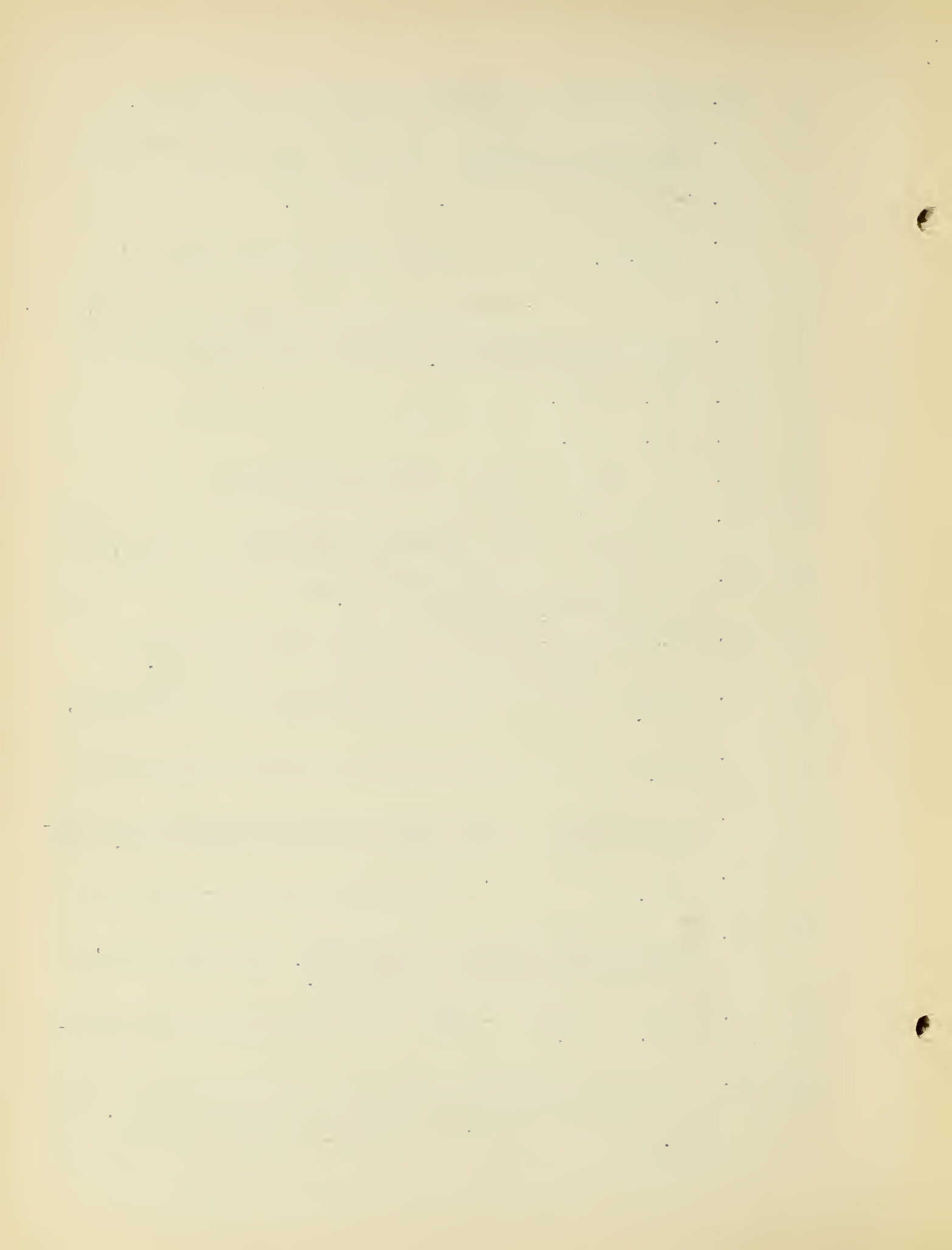
This last is also important for the consideration of Behaviorism in reference to its application in life.

- " 15. 10. Watson says concerning meaning: "...when we understand the genesis of all forms of an individual's behavior, know the variaties of his organization, can arrange or manipulate the various situations that will call out one or another form of this organization, then we no longer need such a term as meaning.", p 191, Behaviorism.
- " 15. 11. Watson, John B. , Behaviorism, p 191.
- " 15. 12. Ibid., p 191.
- " 15. 13. Characteristic of many comments on behaviorism is Berman's: "In the series of jerking muscles or spewing glands there can be no room for the human will.", p 137, The Religion Called Behaviorism.
- " 16. 14. Watson, John B., Behaviorism, p 137
- " 17. 15. Watson, John B., Psychology From the Standpoint of A Behaviorist, p 40.
- " 18. 16. Berman, Louis, op. cit., p 137.
- " 18. 17. Watson, John B., Psychology From the Standpoint of A Behaviorist, p 316.
- " 19. 18. Watson, John B., Behaviorism, p 1.
- " 19. 19. Watson, John B., Psychology From the Standpoint of A Behaviorist, p 396.

- Page 20 20. "Furthermore, behaviorism is interested in synthesis as well as analysis. The building up of habits from simple reflexes for practical and theoretical (and ethical) purposes is as important as tearing them down.", J.B.Watson, Comparative Psychology, p 54.
- " 21 21. Watson, John B., Behaviorism, p 22.
- " 22 22. Watson, John B., in Suggestions of Modern Science Concerning Education, by H.S.Jennings and others.
- " 23 23. Watson, John B., Psychology From the Standpoint of A Behaviorist, p 396
- " 26 24. Calkins, Mary Whiton, "The Self in Scientific Psychology", American Journal of Psychology, Oct. 1915, p 499.
- " 26 25. Koffka, Kurt, The Growth of Mind, pp 7-12.
- " 28 26. Watson does not identify thinking with laryngeal movements. The larynx is only one of the organs used in speech. Any bodily movement may become a part of a total language response. Or a bodily movement may be substituted for words. (A shrugging of the shoulders is often the way the Italian answers). Certain muscular habits are learned in speaking. These same habits continue when the speaking is no longer audible. The child must learn to "talk to himself" instead of talking out loud. When speaking becomes internal it is called thought. Thinking and speaking involve like habits. Thinking then is no more mysterious than talking. Talking obviously is a motor habit. Thinking is also a verbal habit, a muscular response, --behavior. Such is Watson's theory of thinking, put simply and briefly. Cf. pp 180-185, Behaviorism.
- " 29 27. Hunter, Walter S., in Psychologies of 1925, p 83
- " 29 28. Bode, Boyd H., in Creative Intelligence, pp 270, 273-274.
- " 29 29. Ibid., p 273
- " 29 30. Ibid., p 248
- " 30 31. Walter Albion Squires, Psychological Foundations of Religious Education, p 37.

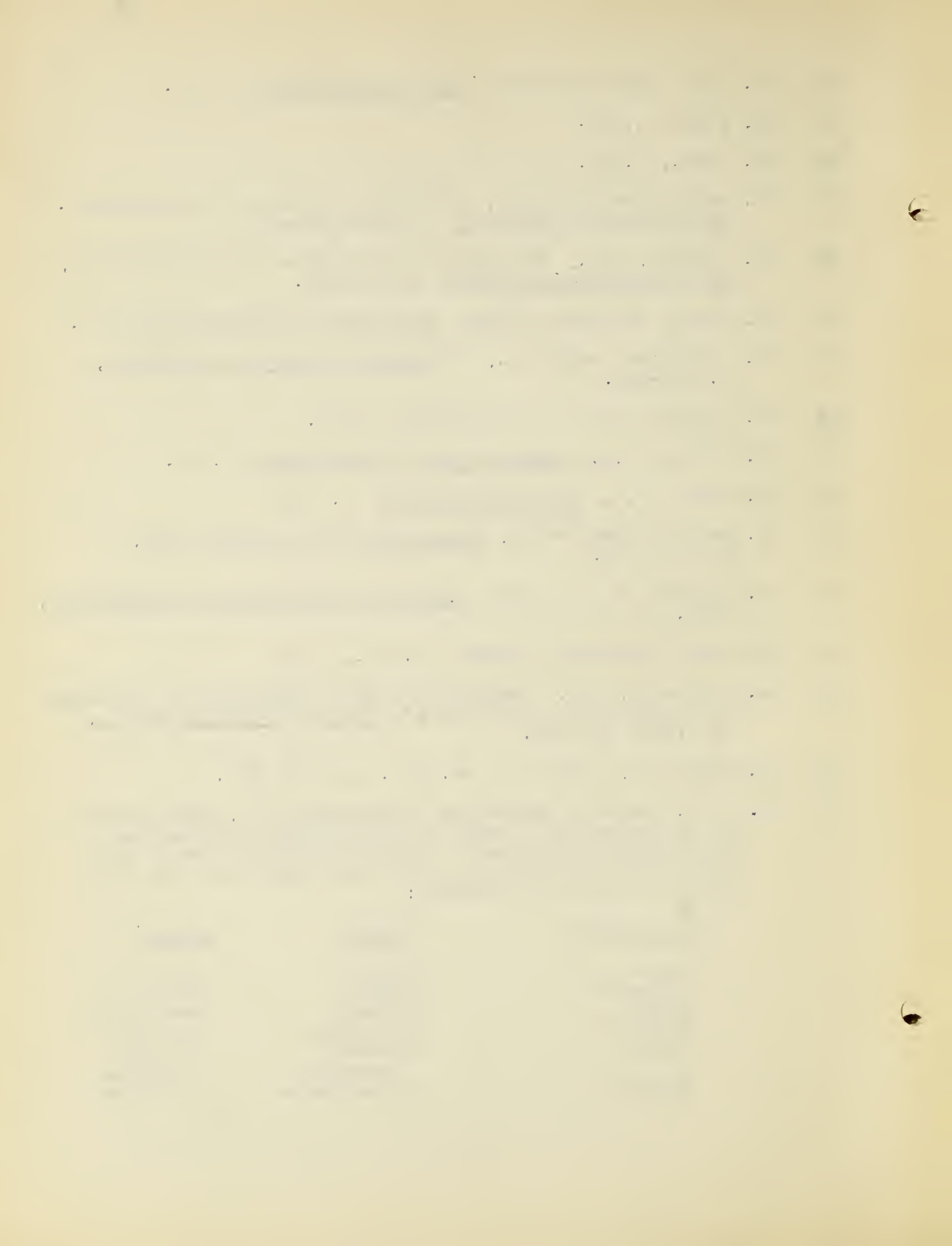


- 30 32. Koffka, Kurt, The Growth of Mind, pp 15, 18, 21.
- 31 33. Calkins, Mary Whiton, "The Affiliations of Behaviorism",
Psychological Review, 29 (1922), 491
- 32 34. Koffka, Kurt, op. cit., pp 105-106.
- 34 35. Betts and Hawthorne, Method in Teaching Religion,
pp 52-53.
- 34 36. Emme and Stevick, Principles of Religious Education, p 22.
- 35 37. Hauser, C. A., Latent Religious Resources in Public
School Education, p 53.
- 35 38. Ibid., p 42 .
- 35 39. Ibid., p 51.
- 37 40. Ames, Edward Scribner, The New Orthodoxy, p 50
- 38 41. Horton, Walter Marshall, "The Objective Element in The
Experience of God", Journal of Religion, 7 (1927), 541
- 38 42. Valentine, C. H. Modern Psychology and the Validity of
The Christian Experience, p 22.
- 38 43. Coe, George A. "Scientific Explanation and Personal
Values", The Journal of Religion, 6 (1926) 235.
- 39 44. Athearn, Walter S., Character Building in a Democracy,
p 119.
- 40 45. Emme and Stevick, Principles of Religious Education,
p 74.
- 40 46. Meyer, Adolph, in Suggestions of Modern Science Concern-
ing Education, by H.S. Jennings, and others, p 48.
- 41 47. Ellwood, Charles A., Christianity and Social Science,
p 157.
- 42 48. The most widely quoted work is that of Rudolph Otto,
(Das Heilige) The Idea of The Holy. See also pp 303-
306 Science, Religion and Reality.
- 42 49. Waterhouse, Eric S., The Philosophy of Religious Exper-
ience, p 146.
- 42 50. In Sorley's system the relation of the natural and moral
order requires God as the ground of such a reality.
Summarized on pp 512, 514, Moral Values and The Idea of
God.



- 45 51. Ames, Edward Scribner, The New Orthodoxy, p. 47.
- 46 52. Ibid., p. 93.
- 46 53. Ibid., p. 51.
- 47 54. Smith, Gerald Birney, "Is Theism Essential to Religion?".
The Journal of Religion, 5 (1925) 356-377
- 48 55. Lashley, K.S., "The Behavioristic View of Consciousness",
The Psychological Review, pp 237-245.
- 48 56. Lange, Frederick Albert, The History of Materialism, p v.
- 49 57. Eddington, Arthur S., in Science Religion and Reality,
p. 197-203.
- 50 58. Idealism used in its broadest sense.
- 51 59. Roback, A.A., Behaviorism and Psychology, p. 32.
- 51 60. Pratt, J.B., Matter and Spirit, p. 120
- 52 61. Perry, Ralph Barton, Philosophy of the Recent Past,
pp 221, 222.
- 52 62. Hoernlé, R. F. Alfred, Studies in Contemporary Metaphysics,
p 94.
- 53 63. Lange, Frederick Albert, op.cit., p xvi
- 53 64. Pillsbury, W.B., "Suggestions for a Compromise of Existing
Controversies in Psychology", The Psychological Review,
29 (1922) 259-266.
- 53 65. Eddington, Arthur S., op. cit., pp 200, 201.
- 53 65. G. P. Conger's definition of philosophy is, "Philosophy
is discussion of a world as constituting a system and
conditioning meanings". I give here only a few of the
illustrations of the fact that philosophy has seen the
world as system and meaning:

<u>Philosopher</u>	<u>System</u>	<u>Meaning</u>
Plato	Actual	Ideal
Aristotle	Actual	Potential
Locke	Primary	Secondary
Bradley	Appearance	Reality
Royce	External	Internal
	meaning	meaning
Bergson	Intelligence	Intuition



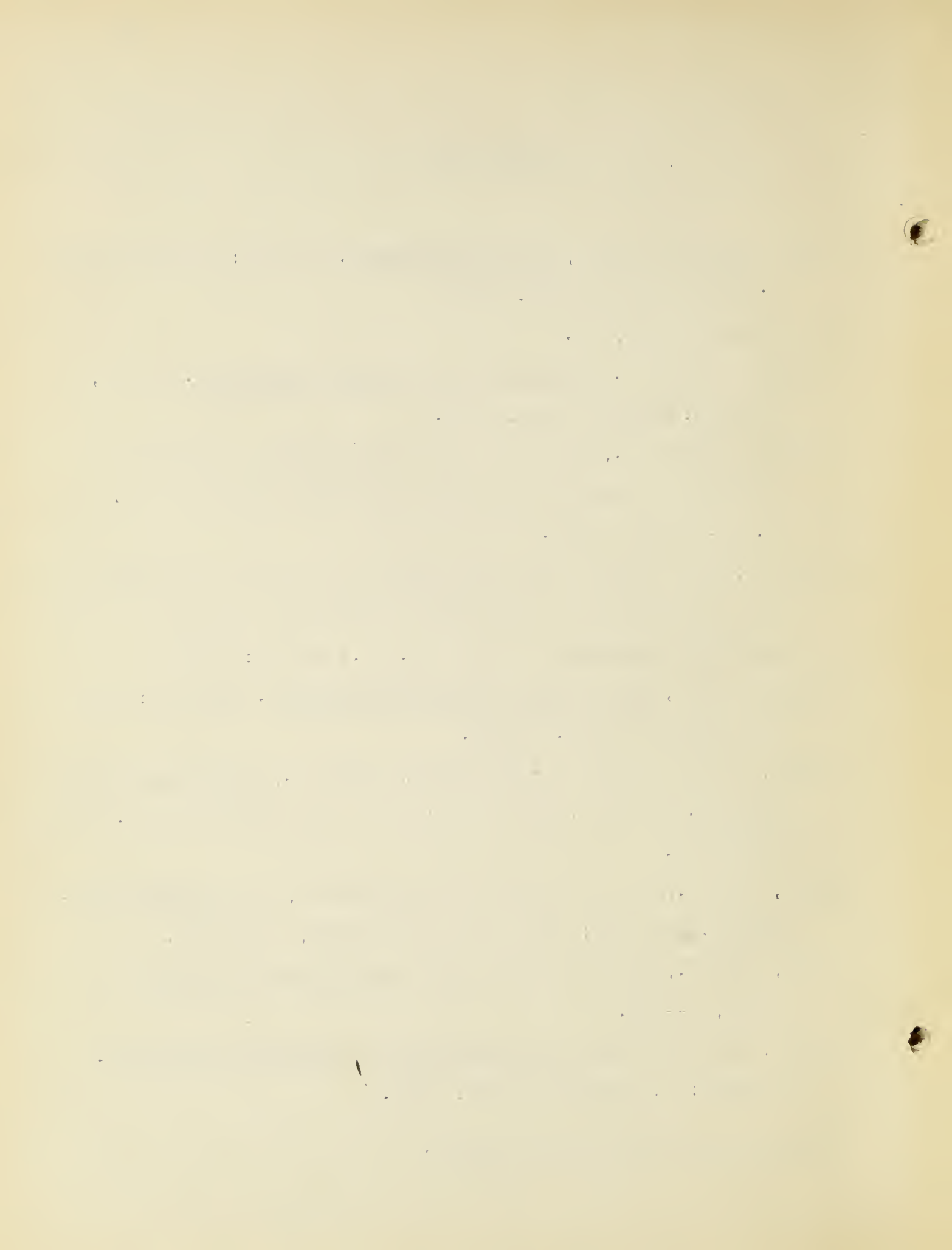
It is the problem of philosophy to unite these, but that it has not done so may be due to the "implicit duality of thought". The conditions of thinking are such that system and meaning have persisted in the different philosophies. From notes in "Introduction to Philosophy", a course in the University of Minnesota given by G. P. Conger.

- 55 67. Calkins, Mary Whiton, "Purposing Self versus Potent Soul", Journal of Philosophy, Psychology, and Scientific Method, 14 (1917) pp 197 ff.
- 55 68. Hoernlè R.F. Alfred, op. cit., p 143.
- 55 69. Ibid., p 146.
- 56 70. Coe, George A., op cit. p 230.
- 57 71. Spaulding, Edward G., in Christianity and Modern Thought, p 73. He agrees with Eddington that reality may be divided into the measurable and non-measurable.
- 61 72. Perry says so general is its use that the "term 'mechanical' has come to stand for scientific explanation in general", p 148, General Theory of Value.
- 61 73. Morgan, C. Lloyd, Emergent Evolution, pp 296-297
- 62 74. Ibid., p 290-291.
- 62 75. Watson, John B., Behaviorism, p 138.

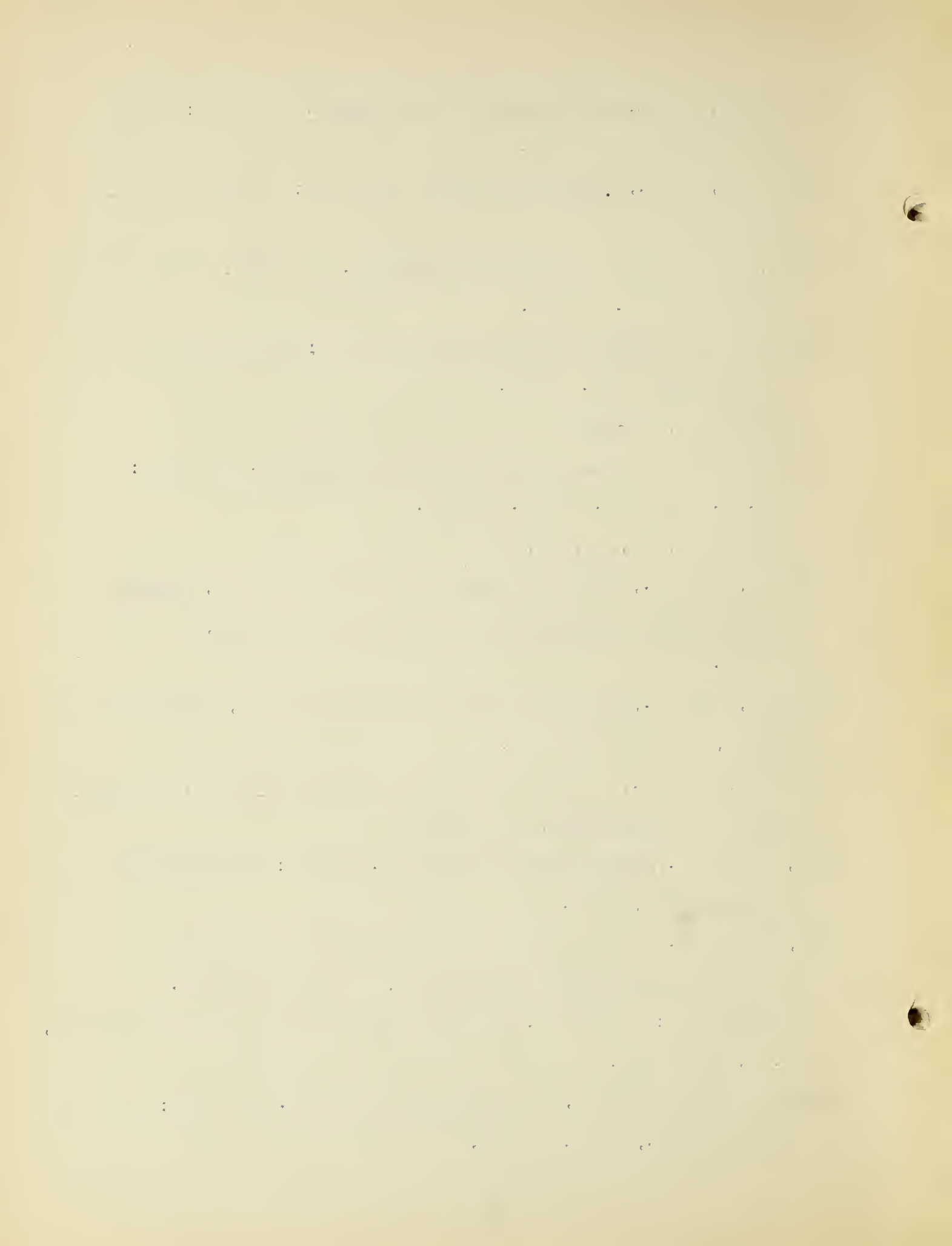
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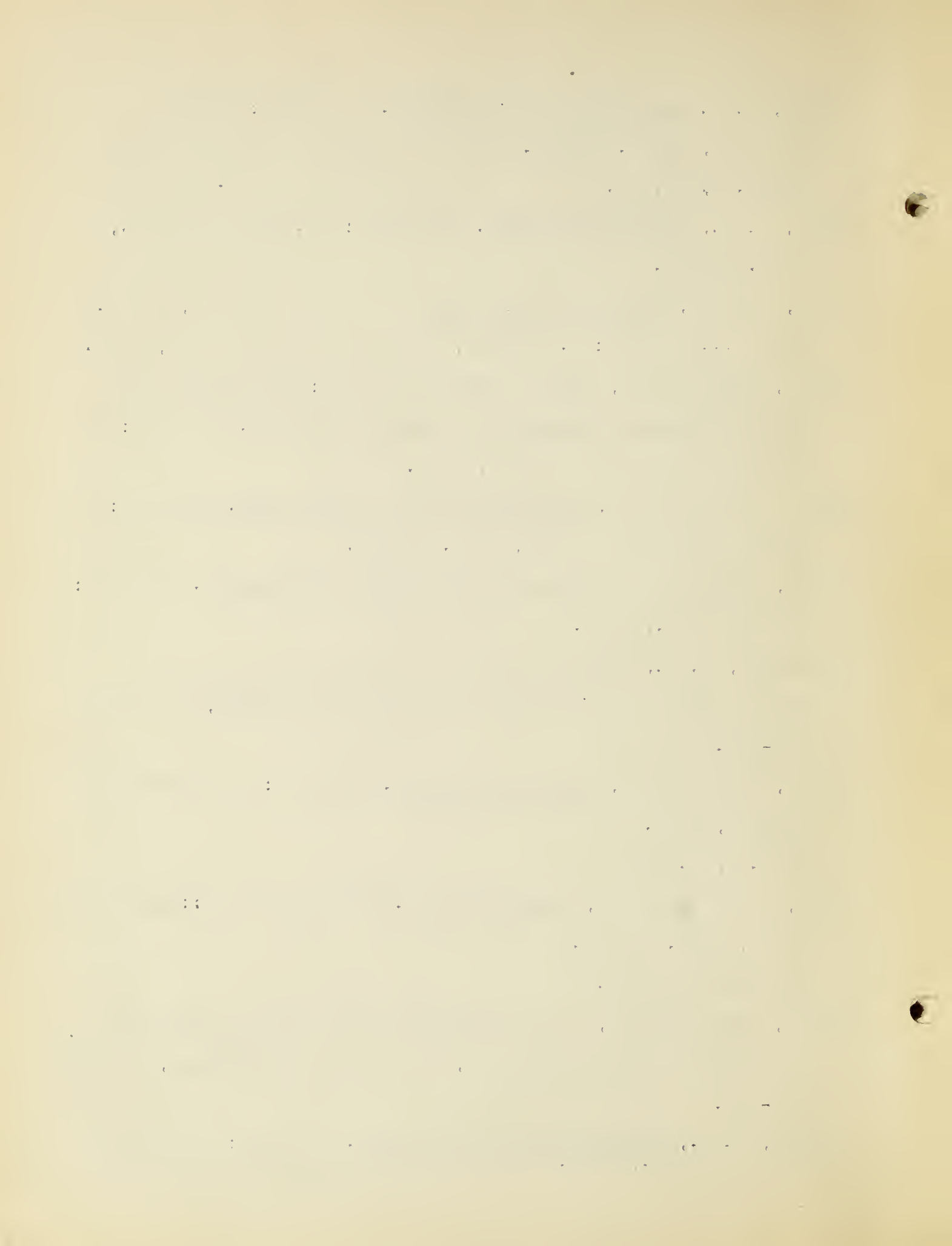
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The former has more to say about Gestalt than Behaviorism.

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