Behaviorism in Christian Education

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A Biblical description of the nature of man
Made in the image of God
The image lost
The image regained Philosophical origins of Behaviorism
Rene' Descartes
John Locke
David Hume Herbert Spencer Development of psychology as a science
William Wundt
Schools of psychology Clark Hull Development of Behaviorism
John B. Watson
Edward L. Thorndike
Ivan Pavlov Behaviorism as Skinnerian Reinforcement
Search for lawfulness
Classical versus operant conditioning
Shaping and successive approximations
Reinforcement and extinction
Operant educational programming Behaviorism applied
B-Mod as programmed instruction
B-Mod as contingency management
B-Mod as behavioral engineering
The Keller Plan Theological and philosophical evaluation
Determinism and monism
Scientific versus Scriptural truth Evaluation of behaviorism and education practice
The necessity of training
Animal versus human studies
The law of effect
An "empty organism" theory Behavioral objectives
Performance-based approach
Behavior modification per se The place of punishment Conclusion

DISCUSSION QUESTIONS FOR PAPER ON BEHAVIORISM

The concept of reward or reinforcement is a critical feature of Behaviorism. What place does reward have in the Christian concept of sanctification? Is there any vantage point from which reward can be seen as critically important as the behaviorist claims?

In the everyday world of classroom teaching are there features that are rewards for academic performance or behavior? Are these features perceived in the same way by both instructor and students?

The essayist states, "Christians will probably continue to be troubled by the failure of Behaviorists to use punishment more . . ." What purposes do punishments or sanctions serve on a college campus? Are these purposes perceived in the same way by the students?

Behaviorists have little hesitation in using the term training as a synonym for teaching. The essayist notes that we also speak of training students in our classrooms. When we speak of training students to be skillful football players, good essay writers, capable in using science apparatus, competent in managing a classroom, or mature, responsible Christians, are we using training in the same sense?

The Keller plan was described as a specific example of the application of behavioristic principles to classroom instruction. How would you evaluate this plan and its usefulness in our situation?

What applications can you see for the use of behaviorally stated objectives in your instruction? Which aspects of your course could be stated in terms of observable outcomes? Would the use of behavioral objectives tend to narrow or broaden the scope of your course objectives?

Consider the following:

a. Behavior modification is currently the most prominent application of behaviorism.

b. There are aspects of behavior modification, which have been used by teachers since there were first teachers.

c. Teachers in our elementary schools are aware of this technique for changing behavior and some probably have attempted to put it into practice in some form or other.

d. The essayist sees an application for behavior modification in special education classes.

In the light of this, a simple, categorical rejection seems unrealistic. What, then, must we give our students that they may be able to understand and evaluate behavior modification?

BEHAVIORISM IN CHRISTIAN EDUCATION

It is my assignment today to lead you through a consideration of Behaviorism in light of Christian principles and in application to contemporary Christian education. This journey will lead us through a consideration of the Scriptural description of the nature of man, the philosophical foundations for Behaviorism, a description of current Behavioristic psychology, practical applications of Behaviorism, and the place of Behaviorism in Christian education. Although I am unclear as to the purpose of this topic for our orientation, I am assuming that there are persons present who are unfamiliar with this current psychological theory or persons who may be suspicious of some of its modern-day applications. These reasons are obviously legitimate and laudable. This presentation should also be prefaced with the remark that Behaviorism as a secular science of behavior is man-made and thus in opposition to Scripture and Christian theology; the result is that criticism arising from this apparent conflict may be found throughout the presentation rather than entirely reserved for the end.

NATURE OF MAN

Allow this presentation then to begin with the facts; facts about the true nature of man. It is a fact that man is a part of God's divine creation although no coherent system of concepts will reasonably explain it nor will speculate inquiry ever yield a rational explanation of this most mysterious activity of the Holy Trinity. "And God said, let us make man in our image, after our likeness (Gen. 1:26). But this image or likeness is not the "spark of divinity" suggested by philosophers nor is it Shakespeare's enthusiasm as expressed in a passage from Hamlet—What a piece of work is man! How noble is reason! How infinite in faculty! In form and moving how express and admirable! In action how like an angel! In admiration how like a god!" No indeed, man's resemblance to God was not physical, for God is a spirit (John 4:24). In his original state man resembled God in that man's intellect was perfect, though finite, and his will in every way agreed with the holy will of God. One implication of this fact was that man was made to have dominion over the rest of the visible creation on earth as opposed to being merely the equal of beast—" a rational animal. Man's dominion was derived from, and patterned after the image and likeness of God in 'knowledge" (Col. 3:10) and "righteousness and true holiness (Eph. 4:24).

Disobedience to God reasonably suggests the prospect of an independent or autonomous moral equality with God. Men have even heralded man's original fall as a break for freedom for on that day man became "Man." This logic was proposed by Satan in Gen. 3:5, "For God doth know that in the day ye eat thereof, then your eyes shall be opened, and ye shall be as gods, knowing good and evil." Nor is sin a mere social offense or error. Luther tells us, "We are not sinners because we commit this or that sin, but we commit them because we are sinners first. (Selected Psalm I) No indeed, Scripture tells us that sin is lawlessness (I John 3:4) and

rebellion (Deut. 9:23,24). The consequences are not only the obvious deprivation but the fact that man missed the very mark of his human existence (Rom. 1:18,32).

Man's arrogant desire for autonomy and independence from God has had far-reaching consequences for man and his environment. When Adam and Eve noticed their nakedness they were revealing their preoccupation with themselves. Such preoccupation with oneself may be described under the label of egocentricism or anthropocentricism. Luther described it as the ego curving back upon itself.

Another fact needs to be made clear at this point. Man is an indivisible unity. He cannot be split into several parts. He is a living soul" and each bodily function is merely an aspect of the entire functioning person. Biblical psychology speaks of the breath of man, of his heart," his "bowels,' his mind, but only as aspects of the unity of personality (e.g., Deut. 6:5, Is. 1:4,5;
Rom. 8:7; 2 Cor. 6:12). Sin is not to be confined to his body or his physical condition, but includes the total person. There is no dualistic conception of man, which assumes that there is in man a separate entity (mind or soul as apart from the body) which continues to function without being involved in the process of body change, growth, and corruption.

Because of man's egocentricism, his hand, because of his sinful nature, is raised against the welfare of every-other man. And man knows it, just as Adam knew it when after renouncing God he expressed his anxiety in Gen. 3:10 by the words "I was afraid. Adams fear is a ground of man's universal sense of anxiety and Adam's guilt is the source of all human guilt. Anxiety is the fear of impending disaster, a pervasive terror, and a dread with undertones of self-rejection and hostility. Job describes anxiety well, "For the thing that I fear comes upon me, and what I dread befalls me. I am not at ease, nor am I quiet; I have no rest; but trouble comes. (Job 3:25,26). And, again he says, "I loathe my life; I would not live forever. Let me alone, for my days are a breath." (Job 7:16). The source of such anxiety is clearly an uneasy conscience (Rom. 2:15). Man is anxious because he is afraid of his God and knows there is to be a day of reckoning. Obviously man must appeal to God for a clear conscience and relief from his anxiety.

Such a task is not so easy, however, for man, under sin, is unable to apprehend spiritual truths nor is he disposed willingly to accept them (I Cor. 2:14). When natural man is confronted with spiritual truth, he will judge it both rashly and falsely (Acts 2:3; 17:18, 32) and will harden himself in opposition to it (Acts 7:51).

But, except for the grace of God, man's manifest destiny would be the eternal horrors of hell. However, Gods grace is mysteriously revealed in the Redeemer as sung by St. Paul: "And without controversy great is the mystery of godliness: God was manifest in the flesh, justified in the Spirit, seen of angels, preached unto the Gentiles, believed on in the world, received up into glory." (1 Tim. 3:16) St. Paul further describes the new creature of man through the reconciliation of God and man: For the love of God constraineth us; because we thus judge, that if one died for all, then were all dead: And that he died for all, that they which live should not henceforth live unto themselves; but unto him which died for them, and rose again. Wherefore henceforth know we no man after the flesh: yea, though we have known Christ after the flesh, yet now henceforth know we him no more.

Therefore if any man be in Christ, he is a new creature: old things are passed away; behold, all things are become new. And all things are of God who hath reconciled us to himself by Jesus Christ, and hath given to us the ministry of reconciliation; to wit, that God was in Christ, reconciling the world unto himself, not imputing their trespasses unto them; and hath committed unto us the word of reconciliation. Now then we are ambassadors for Christ, as though God did beseech you by us: we pray you in Christ's stead, be ye reconciled to God. For he hath made him to be sin for us who knew no sin; that we might be made the righteousness of God in him."

PHILOSOPHICAL ORIGINS

Having considered the facts of the nature of man and his destiny we turn to the philosophical origins of psychology and Behaviorism. The roots of any science, such as Behaviorism, can be traced back into philosophy, in most cases at least as far back as the Greeks. In the writings of such men as Aristotle, Plato, and other Greek philosophers it is often possible to find the beginnings of ideas, which, in the hands of later

generations of thinkers, were to become the central ideas of Western philosophy and science. However, not only can such searching for philosophical roots take on the nature of a rather pointless academic game but such procedures are often used to legitimize rather poorly thought-out ideas; or, having pinpointed a current idea as to its philosophical source the idea is often simply labeled and entirely negated because the source is rejected. Nevertheless, it is true that it is very difficult to understand why a particular scientific theory was formulated without understanding its philosophical origins.

Modern philosophy was ushered in by the work of the seventeenth-century French mathematician, Rene' Descartes. Descartes was *equally* enthusiastic about the Augustinian notion of a self and a soul and the *new* materialistic model which Galileo had used for his science of physics Not only did this marriage result in a revolt in both physics and psychology against the well established, dogmatic Aristotelian view but the Augustinian concept of inner light and individual freedom in psychology combined with a pure mechanistic determinism in physics led to a drastic mind-body, or spirit-matter dualism. You will recognize this division as the Cartesian split or simply as Dualism. At any rate, theory-making has agonized over this split and found it impossible to bridge the two, which has led to taking one side and ignoring the other. (Please plug in here what was said in the initial part of this presentation regarding the Biblical description of the totality of the human creature.)

From the new mathematical physics, Descartes drew the idea of *objective* reality as embodied in matter; and, from the older Augustinian psychology, with its idea of the privacy of an inward, nonmaterial self, Descartes derived his idea of *subjective* reality The objective world is most simply described as composed of *bodies* (i.e., water, land, plants, animals, and men). The subjective world is the *mind* i.e., thought, will, desire, memory) and it is unextended and neither visible nor tangible. Having devised this dualistic method for analyzing the nature of man, Descartes also showed how to synthesize two seemingly distinct mathematical fields (which will not be examined here).

Descartes' *Discourse on Method* attempted to explain the right philosophic method for attaining human certainty. The four rules to the method included the following: 1) to accept nothing as true that I do not clearly know to be such (i.e., properly deduced conclusions yield mathematical proofs); 2) to divide each idea and problem into as many distinct parts as it is capable of (i.e., this analytical method breaks the idea of matter into small units and the idea of mind into memory, intellect, and will); 3) to introduce an order even into those sequences that have no natural order (i.e., ordering is a natural outgrowth of rule two; 4) to conduct reviews and enumerations to be sure nothing is omitted (e.g., Mendelejeff's periodic chart of elements). By the theorizing of Descartes a revolution was set off that is still reverberating today in Western thought. This revolution is summarized under the following themes: 1) the study of facts as distinct from and more objective than values; 2) the possibility of intellectual certainty without the intervention of authority, available to any man who will persist in his search for truth 3) the intense devotion to mathematics as the very language of nature; 4) the separation in kind of mind and body, leading us to think of
two patterns of human nature rather than one; and 5) the search for a way to unify the insights and models of experimental physics and introspective psychology.

John Locke, the English philosopher, has been selected as the next person whose ideas were most influential in the development of psychology as a science. Like Hippias the Sophist, Locke shared the conviction that thinking is reducible to storage, retrieval, and synthesis or analysis of a set of elementary items. Locke called these elementary items or bits "simple ideas." He shared also with Aristotle the belief that all knowledge originates in experience, conceived as either sense experience or awareness of our emotions and mental acts. Where the Platonic tradition, including St. Augustine, regarded thought as moving from particular to universal as a gain in insight, Aristotlean, including John Locke, tradition regarded thought as a process of literal " rawing out," or using only parts of full experience to form a composite picture which will include characteristic elements.

The basic change which Locke introduced into philosophy and psychology was his redefinition of the term "idea." An idea becomes a concrete item of mental content; it is like a photographic snapshot filed in memory. The items in the file are images of simple or complex sense experiences, feelings, and compounds.

Locke's combination of a generally humane view, a recognition that minds inhabit bodies, and a belief that firsthand encounters are more vivid than names provides considerable insight but also caused him to shift his models or seek compromise. Ultimately, Locke opted for a kind of external association of ideas in the mechanistic or analytical model as opposed to the organismic model of human nature. Innate ideas in man proved, upon analysis by Locke, to be nothing more than compound combinations of ideas that are acquired. The mind is a "blank tablet" at birth, until experience has written on it. This extreme position of human understanding underlies much modern associationism of which Behaviorism is a part. However, Locke believed that ideas come partly from experience and partly from inner awareness of one's own feeling and thought. The tension which Locke created for himself between the mind as active and the mind as passive is partly resolved by stating that he held primarily to the latter view. Locke was tempted by the precision of natural science to try for an equally precise analytic psychology. The mind is like a kind of Newtonian "empty space" within which ideas combine or separate by some standard laws of association and attraction. Therefore, the content of a well-informed mind can be selected and fed into this mind item by item and tested in the same way. Simple types of connections can be used as input to build simple ideas into complex ones, separate ideas into judgments, concrete experiences into highly abstract sciences.

Locke's philosophic treatment of human understanding has resulted in four main attitudes or notions: 1) Distrust of general ideas if detached from specific individual cases; 2) Reduction of complex and general ideas to sets of simple ones; 3) Insistence on a range of firsthand experiences; 4) Thinking is reducible even in its most complex forms to many repeated simple combinatorial
operations involving associations of ideas.

The analytical side of Locke's work was sharpened and carried to its logical conclusion by David Hume, a British diplomat, essayist, and historian. In his philosophy Hume took over the project of constructing a "science of the mind" by observing and describing our ideas and the laws governing their patterns of associations. Knowledge, according to Hume, consists of the ideas in our minds which are memories of firsthand impressions (either through our senses or of
our inner feelings). Like Locke, however, he concentrated on sense impressions rather than impressions from inside. Hume's model of the mind, and of reasoning as an association of ideas by rules (cf. Aristotle) reflecting the order of elements in our experience, has a beautiful, but oversimplistic, precision.

The philosophical thread has attempted to show the origin and development of Associationism. Following the Aristotlean explanation of memory as an association of mental elements, the British associationists (some of which have been discussed above) proposed the premise that the workings of the mind follow rules and laws which are similar in nature to the mechanistic laws that underlie physical phenomena. Following this philosophical underpinning for Associationism, Will James, a philosopher and psychologist, established through his writings, association as a major philosophical force for the new psychology.

Although Associationism as a line of philosophical thought has been traced back through history, at least partially so, the second line of philosophical thought that bears on our topic has not. Hedonism, i.e., that behavior is directed toward the goal of increasing pleasure and avoiding pain, is rooted in Plato's contrasts between the behavior of men and the behavior of animals. For Plato, animals must always pursue the sensual aspects of life while men possessing the faculty of reason and free will, could overcome the sensual aspects of existence. But, how was man to deal with the obvious discrepancy between the two aspects of man (the sensual and the rational) which the Greek philosophers raised? Descartes attempted to deal with it with a type of dualism of mind and matter with the two interacting in a specified manner as we have previously heard in this presentation. Herbert Spencer theorized within the hedonistic realm by means of an extension of Darwin's theory of evolution. Darwin contended, as you well know, that those things that foster the ability of a species to adapt and to change, those behaviors that help the species to survive, will in the long run persist and be carried on from generation to generation. To this contention of Darwin's, Spencer added the dimension of pleasure and pain. Not only is it pleasurable to eat but eating is necessary for survival; sweet foods are not only more pleasurable to eat than bitter foods but the former are more nutritional, at least for mammals. In this way

survival is fostered. In this way the Hedonistic principle has been incorporated into most modern psychological theories.

THE SCIENCE OF PSYCHOLOGY

Although the natural sciences had a long history as experimental sciences, psychology as an experimental science is usually said to have begun in 1879 when William Wundt founded at Leipzig the first laboratory explicitly designated for psychological experimentation. Although this may be seen as an important benchmark, not all trends and issues in psychology can be traced to Wundt. Nevertheless, Wundt represents the several intersecting lines of thought we have established. With this understanding in mind, we can say that for Wundt the essence of psychology was to be experimentation, an experimentation that would solve the problems of the mind that philosophers had been unable to solve. It was to be the "science of experience" and was to have as its subject matter the following three problems: 1) the analysis of conscious processes into the most fundamental, irreducible elements; 2) the determination of the manner of connections among these elements; and 3) the determination of the laws of these connections. By means of introspection (i.e., observation of ones own mental experiences) Wundt and his colleagues concerned themselves with such diverse topics as sensation, perception, emotion, reaction time, and general relationships between the physical world and our conscious experiences of them—all of which were attempts to analyze the workings of the mind.

It soon became evident, however, that as psychology emerged and developed as a science there were to be several new sciences of psychology rather than one. The hope of the new scientists of psychology is expressed by Heidbreder: Ideally and in its finished form a system of psychology is an envisagement of the total field of psychology as a consistent and unified whole. It assumes

that the apparently chaotic particulars which lie within its domain can, if properly understood, be brought into order and clarity: that the subject-matter can be defined, a central problem stated, the methods of investigation agreed upon, the relations to other bodies of knowledge determined, the elements or basic processes identified, the distinctive features brought into relief, the general outline or characteristic movement indicated. To know a system is to know how it stands on all these matters, and especially to know the point of view from which it regards them. For the essential fact about a system of psychology is the position from which it surveys its field, the vantage-point from which it examines the concrete data of the science and from which it discerns a coherent pattern running through them and giving them unity." Indeed the hope was idealistic for there developed a "systems" or 'schools of psychology just as there had developed schools of philosophy.

During the first two decades of this century, five schools of psychology developed. For the sake of time, only their names will be mentioned here and now: 1) the German Gestalt school of psychology; 2) Freudian Psychoanalysis; 3) Edward Titchener's American Structuralism; 4) John Dewey's Functionalism; and 5) John B. Watson's Behaviorism. Obviously, our interest follows the

latter school.

As a result of developments during the schools of psychology era several patterns were established for the future of psychology. I) Universal agreement that psychology should be based on experimentation; 2) Emphasis on objective experimentation and observations of behavior rather than introspection and the mind; 3) Learning processes as the central role of psychology; 4) Behavior can be understood by stimulus-response analysis; and 5) learning should be studied as a basic science rather than as an applied science.

Following the establishment of psychological theories of learning during the first couple of decades of this century, there was renewed interest in the development of a *total* system or school of psychology. Clark L. Hull recognized that psychology was in the midst of moving from the wider, more comprehensive theories to somewhat narrower learning theories. He proposed that psychology must embark on a more systematic approach to data collection and theory construction if the then current debates about competing psychologies were to be resolved. His approach, which you know as the "hypothetical-deduction approach to theory-making, consisted mainly of developing postulates and assumptions about the general framework of the theory and the further logical development of more specific aspects of the theory followed by critical experiments to determine

whether the resulting deduced principles fit with empirical data. Hull had two main influences on subsequent theorizing about learning processes during the 1930 to 1950 era.
First, psychologists felt that they should first develop theory-oriented hypotheses and then test them empirically. Secondly, Hull's favoritism toward stimulus-response or conditioning theories influenced future psychological studies.

Nevertheless, it was evident by the 1950's that the comprehensive learning theories, as proposed and promoted by Clark Hull, were having no influence on learning research or theorizing. An antitheoretical or atheoretical attitude had set in. Skinner proposed in 1950 that psychology was not ready for hypothetici-deductive theories because there was an insufficiency of facts.
Joseph Royce suggested that "theoretical psychology will be most fruitful at this time if it is inductive rather than deductive, qualitative rather than quantitative, relatively loose rather than rigorous, closely anchored to empiricism rather than sophisticated from the point of view of philosophy of science, and both circumscribed and all-inclusive in the direction of its
effort.."

Comprehensive learning theories following the hypothetico-deductive model continue to some extent during this third quarter of the century and there have been new learning theories proposed and explored (i.e., informational-processing theories and mathematical learning theories); but, the most dominant characteristic of learning research can be depicted as fact-gathering with an inductive approach used to develop miniature models.

B. F. Skinner's theoretical positions and applications seem to have gained strength during the last few years. It is difficult to determine whether this strength is due to his visibility and personal leadership or to the merit of his theory and its applications.

Now that some history of the science of psychology has been presented and we find ourselves pretty well up to the present, I would like to turn to Behaviorism as a school of psychology that developed during the early decades of this century.

DEVELOPMENT OF BEHAVIORISM

As stated previously, Behaviorism is one of the five schools or systems of psychology that developed during the early decades of this century. The school was largely under the initial influence of John B. Watson. Watson reacted against the basics of other schools of psychology. He contended that behavior, not consciousness or mind, should be the subject matter of the new psychology. Moreover, the introspective method was denounced as being so subjective that it could have no place in the objective science of psychology. Relying heavily on the reflex concept from neurology, Watson advocated development of a science of psychology which studied the organism's responses to stimuli. Hence the "S-R (stimulus-response) formula came to be used as the cornerstone and main building block for the new science of psychology. Watson agreed with the proponents of other schools of psychology that organism learn to cope with the changing characteristics of its environment; but, he went farther and argued that, though some of the basis for our behavior might be inherited, most animal and human behavior could be accounted for as a result of learning. One of Watson's boasts with which many persons are familiar is his contention that learning is so important that he could take virtually any infant and provide the kind of experiences which would enable that child to grow into whatever kind of adult was desired—lawyer, mechanic, criminal, etc. (Presumably pastor or teacher, too) Behaviorism influenced he new science of psychology in several important ways: 1) learning became a new central issue and soon dominated experimental psychology as an area of study; 2) greater rigor and objectivity was demanded in psychological experimentation as the direct result of this new interest in objective studies of behavior; 3) drawing heavily from the then acceptable reflex concept in neurology, the stimulus response S-R) unit was adopted as the basic unit to study both simple and complex behavior; and 4) joining the other sciences in maintaining careful observation under
highly controlled laboratory conditions.

During the era of comprehensive learning theories (i.e., 1930-1950) numerous theories were developed following the hypothetico-deductive paradigm. Most of these theories can be classified as either S-R conditioning theories or cognitive theories. This presentation is in no way touching on the cognitive theories. However, the early stimulus-respoonse or conditioning theorist influenced greatly present-day behaviorists, such as B. F. Skinner.

Edward L. Thorndike's Connectionism is not really a theory but a set of principles of learning. The keystone principle of his theorizing was the Law of Effect, which held that behavior is primarily influenced by its effects, so that those acts which are followed by satisfaction are increased. He theorized that satisfying effects strengthen connections between a situation and how one will act in that situation again.

A second theorist who influenced later behaviorists was Ivan Pavlov, a Russian physiologist. His research focused around the theme of stimulus substitution. This principle holds that if one stimulus can elicit a given response, the mere pairing of it with a neutral stimulus results in the neutral stimulus also becoming capable of eliciting that response. A reflex consists of a stimulus applied to an organism which evokes or elicits, involuntarily, a specific response (like a tap to the forepart of the knee). He distinguished between two types of reflexes—unconditioned and conditioned. By an unconditioned reflex, Pavlov referred to a definite inborn capacity of the organism to respond in a specific way to an internal or external stimulus. In contrast, the conditioned reflex comes about during life as a result of some kind of experience of the organism. For example, Pavlov proposed that his dogs were "learning' to respond to the presence of the experimenter in the room because of the association which was established between "sight of the experimenter" and "food on the tongue."

A third theorist that influenced the current behaviorists was Clark Hull. One of Hull's major contributions was his attempt to show how Thorndike's law of effect operates. He theorized that the effects of responses influence subsequent behavior when attainment of the goal objects cause gratification and the subsequent reduction in the motivating drives of that organism. These motivating drives toward goal attainment were depicted as stemming from unmet tissue needs (i.e., need for food, water, air, etc.). from need to avoid or escape uncomfortable conditions (i.e. pain, excessive pressure, etc.), or from effects of stimuli somehow associated with these deprivation or aversive conditions. His theory is frequently identified as a "drive-stimulus-reduction" theory. Others refer to his theory as "S-O-R" rather than merely "S-R" theory. The "O" refers to organism and indicates that an individual's behavior cannot be predicted simply on the basis of the prevailing stimulus conditions but must consider the internal states of the organism.

SKINNERIAN BEHAVIORISM

For a summary account of Behaviorism as presently theorized we turn to B. F. Skinner, who is presently 70 years of age and still active on the Harvard faculty. Although he majored in English literature, he showed an early interest in animals and scientific literature. After failing as a writer, he enrolled in the Harvard graduate school to study psychology. He showed an early interest in Watson's work as opposed to the work of Harvard professors who were active in the schools of psychology movement of the late 20's and early 30's. Nevertheless, he began to develop his ideas that a true science of behavior should be based on solid empirical facts and that these facts would be most readily obtained by primary or even sole reliance on empirical methods. Rather than "theories" and "laws," he was content to search for lawfulness in behavior.

In his own words he states, "Behaviorism is a formulation which makes possible an effective experimental approach to human behavior. It is a working hypothesis about the nature of a subject matter. It may need to be clarified, but it does not need to be argued. I have no doubt of the eventual triumph of the position—not that it will eventually be proved right, but that it will provide the most direct route to a successful science of man."

One of Skinners first tasks was to decide how many types of learning there are and to delineate the appropriate paradigm(s) for studying the types. In his first major work, The Behavior of Organisms, completed in 1938 while still on the faculty at the U. of Minnesota, he outlined two types of learning. He defined these two types in terms of the environmental stimuli which influence or change behavior. Pavlov's classical conditioning was accepted as one of Skinner's types of learning. Skinner agreed that there is an identifiable eliciting stimulus

for Type-S behavior (S for stimulus); the S-Type or classical conditioning process is distinguished by what is done to the organism to induce the change; in other words, it is defined by the operation of the simultaneous presentation of the reinforcing stimulus and another stimulus. Type-R (R for response) conditioning is primarily characterized by the fact that there are no eliciting stimuli and that the behavior is controlled by its effects or its influences on the environment. Where S-type conditioning is an involuntary response under the control of the autonomic nervous system; R-type or operant conditioning is described in terms of a response for which there is no identifiable eliciting stimulus but whose probability of occurrence is controlled by stimuli which follow or are produced by it. Classical (Pavlov's Type-S)conditioning may be illustrated the following way: a child is presented with a bunny rabbit; with such a stimulus the child feels secure and pleasant; if a loud noise were to be presented simultaneously with the appearance of the bunny rabbit the child would be frightened and cry; henceforth, the child would cry when coming in contact with a bunny rabbit or a similar stimulus. Operant (Skinner's Type-R) conditioning may be illustrated in the following way: an infant is engaging in random activity on the living room floor; when the infant attempts to stand or appears to be attempting to stand he is lavishly praised and given attention, the child's action or response to stand will probably recur (to get further attention and praise).

The public is knowledgeable of the psychological research procedure called discrete-trial, that is, a situation is presented to a subject, the subject responds, and the experimenter records the subjects response, etc. Skinner devised the free-operant procedure which is typically used by operant researchers. The subject is free in this case to make or not make an operant response and is free to respond rapidly or slowly.

Of course, an organism may not possess the ability to perform a certain complex behavior. In this case operant conditioning employs shaping and a method of successive approximations. The researcher first identifies behaviors which the organism now displays which are at least grossly similar to the desired behaviors. Then drawing from his information about which reinforcers are effective with that organism, he differentially reinforces those behaviors which most closely approximate the desired behaviors. He gradually sets more stringent criteria so that the organism must more closely approximate the desired behaviors before reinforcement is provided. Gradually the behaviors more and more closely resemble the desired behaviors, with the changes being shaped by the differential reinforcement.

Operant terminology uses the term reinforcer in place of reward. A reinforcer is a stimulus which follows a response and which strengthens or increases the probability of that response. Reinforcers can consist of food and liquids which increase behavior frequency without prior training (primary reinforcers), or such items as money and praise or pictures of primary reinforcers which are capable of increasing behaviors because they have frequently been associated with primary reinforcers in the past (secondary reinforcers). Reinforcers can, of course, be classified as positive or negative. Positive reinforcers are those stimuli which strengthen the responses which produce them; negative reinforcers strengthen responses which remove them. A negative reinforcer is the cessation of something unpleasant when the organism is behaving in a desirable fashion (stop hitting him).

In some cases the researcher wants to diminish or to eliminate certain behaviors; in such cases the operant concepts of extinction and punishment are employed. Extinction is the withholding of reinforcement for previously reinforced responses until they no longer occur (i.e., completely extinguished). Punishment is a consequence of behavior that reduces the future probability of that behavior. This definition is thought to be more precise and not dependent on the administrator's perception of the reinforcer. Operant researchers would much prefer, however, to use positive reinforcers in all instances. If a behavior is to be diminished or extinguished, then positive reinforcers are employed with competing stimuli or opposed to the undesirable behavior.

Perhaps it would be well to summarize at this point the strategies of operant conditioning to modify behavior. One first identifies both appropriate and inappropriate behaviors in measurable terms and delineates the reinforcers which naturally are operating in the observed situation. Questions are resolved as to whether new forms of behavior are to be shaped, whether some extrinsic reinforcers are needed in addition to the natural reinforcers, and what alternative sequences of action might be taken. Actual and potentially useful

discriminative stimuli are identified. Modifications in the behavior (learning) are attempted through a combination of changing environmental contingencies so that only the appropriate behaviors are now being reinforced and making maximum use of discriminative stimuli to cue the learner to make the appropriate responses so that reinforcement will follow.

It is an understatement to note that Skinner is optimistic about and interested in practical applications of his theory. One might agree or disagree with his views, be optimistic or pessimistic about the results of their application; but it is unlikely that many well-read persons in these times are unaware of the existence of Skinner's ideas. Skinner has contended that the experimental analysis of behavior and operant theory may be on the verge of providing society with a set of workable procedures for dealing with our most pressing problems and for improving our general quality of life.

Bijou has provided an outline of educational programming which is based on operant research and theory. The outline is as follows:

1. state in objective terms the desired terminal or goal behavior,
2. assess the child's behavioral repertory relevant to the task3. arrange in sequence the stimulus material or behavioral criteria for reinforcement
4. start the learner on that unit in the sequence to which he can respond correctly about 90% of the time,
5. manage the contingencies of reinforcement with the aid of teaching machines and other devices to strengthen successive approximations to the terminal behavior and to build conditioned reinforcers that are intrinsic to the task, and
6. keep records of the learner's responses as a basis for modifying the materials and teaching procedures.

The operant group, both basic and applied, has constituted a small but highly visible group of psychologists. Critics have commonly dismissed the enthusiasm of operant scientists as- being unscientific or merely as evangelistic fervor. Skinner has a different explanation for the visibility and enthusiasm of the group: "There is a more obvious explanation; the analysis works." We consider now some of the working or applications of operant conditioning.

APPLICATIONS OF BEHAVIORISM

In recent years operant conditioning (Skinner style) has taken on the new term of behavior modification or B-Mod. It will be better understood by you, however, if you will recognize that those persons called behavior modifiers emphasize the utilization of operant reinforcement principles.

The first B-Mod application was probably the teaching machine revolution and programmed instruction. Although initially the application was known as teaching machines, it was recognized by the early 60's that it was the program rather than the teaching machine which was the more important aspect. Skinner's programmed learning was partly a reaction against the many undesirable consequences which may occur for the student in conventional classrooms if he does not learn satisfactorily (e.g., teacher displeasure, peer ridicule, low grades, and parental punishment). He contended that the real focus in education should be on consistent, immediate, positive reinforcement for appropriate behaviors and for the attainment of delineated educational objectives. Moreover, he concluded that experimental evidence indicates that the novice learner will be more likely to respond correctly if he is provided with a gradual progression of learning experiences which start with tasks which are relatively easy and familiar and which advance quite gradually through new material and more demanding tasks. You are all familiar with the concepts and theory of programmed instruction so I won't burden you with further description. You are also probably familiar with its contributions and limitations and hold certain opinions regarding its value in education. Whatever your thoughts may be, programmed instruction has diversified into a broad spectrum of application from computer assisted instruction (CAI) to specially designed workbooks. In short, it has expanded within and beyond printed materials.

A second application of B-Mod is best described as "contingency management" or "token economies." The focus here is on a wider range of activities than is true for programmed instruction. If we assume that attention and praise are positive reinforcers then such reinforcers can be made contingent on the patient's or student's appropriate response. Special privileges, etc. can be made the payment or token which the person

could earn by acting or behaving appropriately. The first educational applications of the contingency management approach occurred in special education situations. For example, the characteristics of children with learning disabilities are undoubtedly due to physiological conditions, but other inappropriate behavior may be occurring by the child's contact with other people. It was proposed that one reason that the children displayed inappropriate behavior might be due in part to the "rewards" which were being provided for such behavior—although not intentionally so—by the teachers and peers. Projects were set up in which teachers ignored inappropriate responses but gave attention when students were acting in a socially appropriate way and/or were demonstrating educational progress. Subsequent applications of contingency management principles have been made with general educational populations on academic content areas as well as with management of classroom behavior problems. There is a great deal of literature espousing the merits of contingency management techniques. An August 1974 report out the U. of Kansas describes the success in raising the reading skills of 8000 culturally deprived children to a level higher than that of normal middle-class children using contingency management techniques.

A third application of B-Mod may be labeled as Behavioral Engineering, which is much more eclectic than simple operant conditioning. Ogden Lindsley, the originator of precision teaching (a behavioral engineering position), defines it as an approach to education in which instructional procedures are planned, implemented, and modified in light of the student's progress toward selected educational goals. Precision teaching is centered around a "Standard Daily Behavior Chart," One of the novel features is that the child or student is the person who is responsible for maintaining the chart, rather than the teacher or some other adult. In brief, the procedures include identifying a particular educational goal, setting up a chart which will enable either the student or the teacher to compare the frequency at which the desired behaviors occur over a period of time, and proceeding to count and record the actual frequency of those behaviors on each of the days. Duncan said in evaluating precision teaching that it simply "adds a more precise measurement instrument to present teaching, making teaching more economical, more effective, more enjoyable, and more loving."

Three applications of behavior modification have been touched on here and, although they are quite different, certain features are common to almost all behavior modifiers. First, there is considerable reliance on observable behaviors or objectively measurable characteristics, with comparatively minimal concern with internal experiences of the student. Second, in addition to drawing extensively from basic experimental learning research there is a universal rule that the behavior modifier must include evaluative procedures for the initial development and the subsequent improvement of his instructional procedures. Third, closely linked to this all-persuasive emphasis on evaluation is the requirement that one provide explicit descriptions of one's objectives and procedures. Fourth, there is a distinct preference for basing initial plans for instruction on operant reinforcement principles.

Behavior modification instructional principles have been used with preschool children, in elementary schools and high schools, in universities and professional schools, and in military and industrial training programs. They have been used with children's emotional problems in the classroom and in the management of problem students as well as in numerous academic subject areas. On the college level the Keller Plan has become a rather popular application of behavioral engineering. Lutheran college teachers at an institute I attended this summer were quite familiar with it and some were using the plan. The program of Fred Keller emphasizes individualization in pacing, delineating of educational objectives, frequent assessments to determine each student's progress toward the objectives, modification of instructional procedures based on these assessments, and systematic use of positive reinforcement to stimulate and maintain favorable progress. In addition, instructors can use small-group discussions and large-group presentations at selected points throughout the course.

All students are given detailed information about the course at their first meeting. They are told that they will work at their own pace throughout the course. It is possible for some to complete the course in less than a semester, while others may require more than a semester. Grades for the course are based on the number of units they complete (about 60 to 75% of their course grade) and their performance on a comprehensive final examination (25 to 40% of their course grade). There is z combination of independent reading assignments and

laboratory projects, regular sessions with the student's proctor (who is a specially trained student who has previously successfully completed the course and demonstrated skills in helping fellow students), contact with graduate student laboratory assistants, small group discussions, and selected special lectures and demonstrations.

Keller's course for one semester is broken down into units of content consisting of homework assignments and laboratory exercises. Students are required to pass a mastery test on each unit before they are permitted to start the next unit. Failure to pass the test is not held against them, even if several attempts are required; instead, they are given advice in taking remedial work on that unit. The special lectures and demonstrations are made available when a number of the students have passed the unit which prepares them to understand the particular lecture or demonstration. They are not compulsory, but rather are used to motivate students and to permit exploration of areas previously found to be of interest to students.

It was noted above that tests are used quite frequently, with one mastery test taken whenever the student feels that he has adequately covered a given unit. It should also be emphasized that immediate feedback is given for test results, and that this information is used for diagnosing any difficulties or for otherwise advising the student. But perhaps the most important point is that the tests at the end of each of the thirty units are used to determine whether the student has mastered the contents of that unit. Keller describes one example in which students either would be expected to have a near-perfect score on a ten-item mastery test or would have to defend their answers in conference with the proctor. Typically, if the student has missed only a few questions, he is directed to specific remedial work. But if four or more items are missed, he is advised to repeat the whole unit. Under these circumstances, the proctor also makes certain that the student now has a better understanding of the educational objectives for that particular unit.

Keller points out that the role of the teacher in his program is quite different from that found in traditional classrooms. He characterizes conventional teachers as frequently serving as "classroom entertainer expositor, critic, and debator." In contrast Keller contends that his teachers primarily serve as educational engineers and as contingency managers for all of their students, rather than as successful learning facilitators for the typically small number of students who do well on proficiency tests in conventional classrooms.

The results obtained by Keller and others using his approach have been quite striking. In several instances where the procedures have been used, students have been given the same examination as that administered to a group of students in a traditional college lecture course. Unlike the traditional lecture course, where a normal distribution of scores was obtained, the Keller procedures have resulted in a very high proportion of A and B grades. But, more importantly, Keller's students also have been consistently successful in attaining the delineated educational objectives. Moreover, he contends that students like their educational experiences and that they feel they have gained a more thorough understanding of the content than is characteristic of other classroom experiences.

This rather elaborate description of the Keller Plan has been presented to show one adaptation of operant principles to an eclectic instructional college program.

THEOLOGICAL AND PHILOSOPHICAL EVALUATIONS

There remain the tasks of evaluating Behaviorism as to its philosophical and theological soundness and the role, if any, for Behaviorism in Christian education. I shall treat the philosophical and theological evaluation first. However, this section will not engage in a litany of apologetics between psychology and Scripture nor will it be an exhaustive logical analysis of the case. The theologians and various academic scholars present are far more expert than I to reveal for us the complexities between and within psychology, philosophy, and theology. Nevertheless, there are clear and convincing statements which can be posited to evaluate Behaviorism.

Behaviorism rests upon the fundamental postulate that the study of overt behavior is monistic, atomistic, and mechanistic. Most behaviorists not only subscribe to Determinism and practice methodological and empirical determinism but are, in fact, metaphysical determinists totally and completely. That is, they believe with a burning faith that all human behavior occurs in accordance with psychological laws. Most behaviorists are also materialist monists in that they believe no substances, forces, or events in human thought or behavior are of an irreducible mental, psychic, or spiritual nature. Therefore, everything can be formulated in physico-

chemical terms. Scripture teaches contrary to these postulates and therefore they must be rejected, especially so because of their absolutism, positivism, and exclusiveness.

Modern natural scientists have abandoned strict determinism in the light of quantum theory. Newtonian physics is obsolete, having been displaced by the newer quantum physics. Quantum theory proposes that nature functions only in terms of possibilities and tendencies (not laws) which means science can predict only average behavior and not individual behavior. Psychologists are not keeping up the pace with their counterparts in the natural science field. Perhaps this explains Skinner's remarks to his laboratory subjects—"Damn it, behave," or the proliferation of adverse evidence in psychological studies, or the disagreement over conclusions and truths, or the breakdown of scientific faith in reality.

As Christians, we must not be optimistic that somehow the new third-force psychology will remove the philosophical and theological contradictions between the science of psychology and Scripture. With the abandonment of determinism we find in its place the absolute of the free will of man. If there is no strict causality for human behavior then we are left with the opposite extreme of a personalistic psychology explained only by the phenomena of the psychodynamic nature of the person. This psychological theory is outside the scope of this paper but should be recognized as potentially more dangerous to the Christian than is Behaviorism.

In our evaluation of Behaviorism, we must be fair and we must accept the fact that science contributes to human welfare and man's domination of his earthly home. Our beliefs cannot be preserved by the simple expedient of remaining systematically uninformed. One's religion should not be used in the service of resistance. But, I will hasten to add that I don't believe we are guilty of this error as partly evidenced by the assignment of this paper. I sincerely doubt that much that has been said in this paper has raised or will raise much doctrinal anxiety.

However, let me test this conclusion by raising another issue. Christian faith by its very nature is nonrational just as scientific investigation by its very nature is rational. Are we, therefore, in many cases, considering two distinct sources of truth and two bodies of knowledge? The conflict is not so much *substantive* as it is methodological and philosophical which has been made perfectly clear throughout this paper. Actual substantive contradictions are elusive. Frictions between the content of scientific knowledge and theology are frequently hard to exhibit. At the same time I would offer this thought—psychology is a complex science (and primitively developed). Theology is also complex and quite often obscure and mysterious, at least for me. Conceptual relations that arise between psychology and theology are fantastically complex. Although science cannot contribute one bit to the Christian doctrine of man in his spiritual and religious needs, it should not alarm us that science yields secular truth and knowledge in spite of its methodological theories.

Certainly you and I know that the Biblical doctrine of man goes beyond the corpus of scientific statements and does not contradict scientific statements to any great extent. We only wish that unbelieving psychologists would accept this. And, there is some evidence that some psychologists and scientists *are* accepting this fact. One quote here will have to suffice: the mathematician Banesh Hoffmann states, "the universe is more than a collection of objective experimental data; more than the complexus of theories, abstractions, and special assumptions devised to hold the data together; more, indeed, than any construct modeled on this cold objectivity. For there is a deeper, more subjective world, a world of sensation and emotion, of aesthetic, moral, and religious values as yet beyond the grasp of objective science. And towering majestically over all, inscrutable and inescapable, is the awful mystery of existence itself, to confound the mind with an eternal enigma."

A final point to be made in this evaluation of Behaviorism is the feeling among us that we don't really know much about psychology. I don't think we need to feel defensive about a certain reeling of parochialism in this matter. There are more professors and teachers who know a little scientific psychology than there are psychologists who know, or show any willingness to learn, an
iota of theology.

BEHAVIORISM IN PRACTICE

Furthermore, behaviorism, operant conditioning, behavioral modification, and all similar techniques need to be evaluated relative to educational practice. Let it be said initially that we offer no objection to the

training of children because it *is* Scripturally approved and commanded. Nor are we opposed to training adults in certain skills and competencies. Certainly each of us could compose an extensive list of *skills* necessary in our courses in which our students must be trained and *are* so trained. The question arises if we are consciously or unconsciously using behavioral principles in our own training, and, if so, should we? Let us in this final section examine some of the criticisms of behavioral techniques.

An oft-heard criticism is that operant laboratory studies have been done with animals with few behavioral principles resulting from human studies. It is usually argued that basic scientific studies are performed on animals because it is more moral and animals are simpler organisms with which to work. The arguments are logical and convincing. Behaviorists, like most scientists, however, see man simply as holding a higher position on the evolutionary ladder. They would hasten to add that there is always a time lag between basic animal research and human application and study. They report that the first phase of conducting research with infrahuman subjects is now well along and the time is ripe for investigating human applications.

Some contemporary psychologists are arguing that operant conditioning is only Thorndike's law of effect and nothing more. The law of effect, it is further argued, has become obsolete in the light of current information processing research. This may be a valid criticism, although we must bear in mind that Behavioral, Cognitive, and Psychodynamic theories may be focusing only on different facets of human development and behavior, similar to the distinctions between psychology and Scripture as touching on different domains of personality and knowledge.

It has probably become quite clear to you that Behaviorism is an "empty organism" approach of understanding human behavior and learning because it ignores feelings, emotions, and internal experiences. But, Behaviorists contend that they *are* interested but feeling and thought can only be observed by the subject's verbal and functioning behavior. Like psychoanalysis, every human action has a cause; Freudian slips have causes and reveal something of the inner man. This is all quite understandable if one recalls that Behaviorists hold to the positivist-realist world view which is mechanistic and always in keeping with the principle of cause and effect. Because of rigid stance by Behaviorists they tend to alienate Christians and others who hold a broader, more flexible view of man.

Programmed instruction and the behavioral objective movement of the 1960's were some of the first applications of operant conditioning. In the ensuing years there has been growing criticism of behavioral objectives in spite of their universality in education and popularization made possible by respected persons such as Ralph Tyler, Ben Bloom, and Robert Mager. It should be recognized that the stating of objectives behaviorally is an essential part of behaviorist methodology. Behavioral objectives are said to be more measurable but because of this emphasis they tend only to measure rote information and psychomotor skills to the exclusion of cognitive and affective objectives. It has been further argued that the primary purpose of human existence is not to devise ways of piling up ever greater heaps of knowledge, but to discover ways to live from day to day and the like. In this same context, the charge has been leveled at behavioral objectives, that they allow little, if any, student input in selecting educational goals and educational experiences. All these charges are quite valid but I think we should bear in mind that when behavioral objectives are charged with emphasizing voluminous factual learning we may find ourselves alongside the Behaviorists whether we like it or not.

If our course objectives can be divided into understandings, appreciations, and skills, and I think they certainly can, we should attempt to state them behaviorally. If we cannot in some cases do so, then so be it. Our present techniques for evaluating student progress is nothing more or less than this right now. In the sills subjects of the elementary school there is even greater justification for using behavioral objectives.

There are valid criticisms against the narrowness of behavioral objectives; nevertheless, they have certainly made a contribution to the science of education. Too often have teachers stated objectives, if they state them at all, in vague generalities only to find no clear-cut means for achieving them or how to measure progress at the end. If the term behavioral bothers the teacher then call it desired learning outcome and try to state them specifically so that means and measurement are clearly suggested. A sound instructional program calls for clear statements of purpose followed by breaking the whole into parts, arranging the parts into a suitable order, and informing learners of their progress. Such planning may be employed in writing a syllabus, a unit of study, or a

daily lesson. The product may be a programmed unit for student self-instruction or a well-formulated lecture or anything in between.

Many psychologists and teachers being troubled over the term behavioral in stating objectives have adopted the more recent term performance or other such synonyms as competency, precision, or criteria. The present emphasis on merit systems in society, competency-based education, accountability, pre-determined criteria, precision teaching, are all applications of behavioristic principles. These words are the jargon of the 70's.

The charge has been leveled that the performance-based approach in education borders on "brain-washing" or at least on indoctrination. Others have said that it would probably be more applicable and effective in a totalitarian setting than a democratic society. These same critics are telling us that there is *little serious challenge* of the American thesis that human accountability in terms of measurable results and a publicly verifiable profit-and-loss statement is necessary, an even that such human accountability is possible. If the performance-based approach and its subsidiaries are kept in their proper perspective *as means and techniques* the criticism is too severe. It is surprising how easily meals can become end, however, or how easily the process can become the product. Behavioral objectives and the performance-based approach can easily come to shape and control ends. Teachers can be seduced into a particular philosophical orientation. lost of that orientation has been previously described in this paper.

The most serious behavioral principles are those classed under behavior modification and its reinforcement principles. B-Mod calls for identifying rewards and then applying them in a structured manner to shape desired behavior toward specific goals. If a certain reward reinforces a desired behavior it is repeated so that the behavior recurs. If it is reinforcing a certain undesirable behavior it must be stopped so that the undesirable behavior extinguishes itself. For example, if the infant is "paid-off" each time he cries by having his mother come to his aid he will continue this behavior. It is the failure of B-Mod to use punishment or aversion control that troubles Christians and some others. It should be said that most behaviorists today recognize a proper place for punishment—namely, to teach a child that the behavior or response is wrong and punishment will help him to remember it is wrong. Negative reinforcement, however, does not communicate appropriate or desirable behavior. It is all quite similar to the proper use and effects of the Law and the Gospel in the context of Christian growth. Christians will probably continue to be troubled by the failure of Behaviorists to use punishment more although the troubled feeling is not well grounded, in my estimation. Christians are even more bothered by the use of rewards, often extrinsic, which are used in behavior modification. The technique does frequently use M & M's, Cheerios, nuts, flavored cereal, etc. or tokens which can be exchanged for tangible goods such as colored paper, rulers, toys, or for certain social rewards or privileges. Granted, it all sounds quite bizarre and out of line with Christian principles. We should not reward a child for doing well what is simply his Christian duty. And yet, as parents and teachers, we use reinforcement. Some of you I understand have even distributed cookies and other treats to your students and found justification for it I assume. More of us use rewards contingently such as words (spoken or written), expressions, and grades of some sort. You can analyze yourselves to discover your own comprehensive and complex reinforcement systems. Behaviorists and primary grade teachers tell us that the young child responds more positively to tangible rewards and less abstract reinforcers. However, ironically, the child will simply have to wait until he is an adult before he is paid off in real money (tokens) which can be exchanged for things he needs or desires.

Behavior modification techniques appear to be especially appropriate and effective in special education programs, with children with behavior problems, where social skills and graces arc inappropriate or lacking, in habituating personal hygiene and grooming, physical skills development, some academic skill development, and factual knowledge acquisition. It has worked best with *individuals*, in the past, although the techniques are now being used in-group settings, too. Of course, B-Mod has its limitations. It does not teach independence, creativity, problem solving, how to learn, sensitivity, etc. B-Mod does offer a set of principles for certain types of educational purposes and as an alternative to more traditional instructional practices.

CONCLUSION

In conclusion it should be said that the fundamental task of Behaviorism is a laudable one; namely, to confirm, correct, and extend our existing knowledge of human nature by carefully constructing and testing hypotheses and by using those methods of exact observation that are the hallmarks of scientific inquiry. Certainly, we in education would *wish* that we could influence our students in certain desirable ways by proven means; and in most cases, our teaching reflects this principle of Behaviorism that a person's behavior is a valid expression of what he knows, feels and wills. But, wishing this principle doesn't make it true and at all times applicable—the human organism, possessed of a soul, mind, conscience, and will, simply does not behave lawfully at all times and in all places. Nevertheless, Behaviorists, and many teachers, will continue to oppose and exact themselves above all that is called God. Although Behaviorism may not be an open revolt against God and the Gospel—I am unsure about this; it is a menace by its philosophical premises and simplistic, scientific applications. Like every product of the hand of man we must examine Behaviorism analytically and then do the same with what we are doing and *how* we are doing it in **our** classrooms and our homes. Are *we* emphasizing mere outward behavior? Are we more concerned, or possibly only concerned about observable actions and unconcerned about the secretiveness and unpredictability of the heart and the mind? If the answers to these questions are yes, and who of us as a parent or teacher can say no in every case, then we are thinking as do Behaviorists. Remember, the Behaviorist's ultimate value is to control human behavior for the good of the person and his society. As Christians we reject the means of Behaviorism to accomplish this goal because it rejects the cleansing and integrating power of the Gospel. Only the Gospel can change men totally and completely—their minds, their hearts, and their actions, and in that order. Our task is to equip prospective teachers in all things compatible with His Word and to encourage them to live the new life now and in their ministries. If we do that we will not be caught up in the alluring but simplistic results and products of Behaviorism and Behavior Modification techniques. We have a greater mission than men's actions and functions in this world—our mission is to teach the manifold gifts of God's amazing grace that all men may serve Him now and in eternity in their thoughts, their word, and their deeds.

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