

BEHAVIORISM UNMASKED

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FOR the last twenty or thirty years we have been gradually drifting towards some form of determinism in human conduct. I say some *form of determinism* because there is a wide difference, yes, a gulf between *mind determinism* such as held by Adler and others that all human thinking and behavior is fundamentally purposive and directed by some underlying force to a goal, and that chance mechanistic and atomistic determinism into which many modern thinkers are drifting. We have, it is true, been forced to recognize that every variation in structure and chemical composition of the body modifies our thoughts and feelings. However, no one has as yet pointed out the exact causes of all these minute changes. We also see the curve of mental life rise and decline with the growth, development, and decay of the body. We also note that certain brain processes seem to be the condition of consciousness.

Heredity gives us certain dominant instinctive tendencies which map out the chief line of human action, feeling, and thinking. Such conduct is soon converted into habits most of which operate without the interference of consciousness. These habits drift most of us to our eternal destiny. Again, many forms of human behavior seem to be under the guidance of some unconscious mental force.

Either line of facts naturally leads to the question as to how far the individual and society can consciously direct their destiny. Out of these perplexing problems the bastard child Behaviorism has been born, and now seems to be dominated by the idea that nothing but *mechanism shall remain in the universe*.

Why do I say "dominated by the idea?" According to the behavioristic doctrine neither purpose nor consciousness is ever a

cause. It is only an accompanying phenomenon. I should have said that certain neurones in the brains of these behaviorists were set in motion by the adequate stimulus and formed a *neural pattern*. But how did this original *adequate stimulus* happen to set up a motion in the neurones of these behaviorists that has been going on for years? And how have these neurones compelled *them* to a definite line of activity all this time? What is the state of these neurones and synaptic connections that forced them to perform delicate experiments? If any behaviorist will explain his own *behavior* in writing a book, in hunting persistently for things to support his doctrine, in trying to explain wit and humor as having their origin in the sensitive zones of the body—I say if he will explain his own conduct in these things without any reference to *purpose* and show that he really believes what he says about his own behavior—we might understand him. We have had no such personal application of the doctrine. This same consciousness which he would ignore tells him that his *conscious purpose* is a force in writing his book. If he does succeed in transferring all these intellectual forces to the neurones, he will simply endow them with the mysticism which he wishes to escape.

A short time ago, in talking with a defender of behaviorism who at least prides himself on his ability to direct his own thoughts, I said, "Wait a minute. Come squarely to the question. Do you mean to say that your present thoughts have absolutely nothing to do with the thoughts that shall follow?" Of course he hesitated and would not give an answer to the question.

Thus we have the heart of the behavioristic difficulty and the one that directs most of the disguised arguments in the treatment of instinct, of inherited traits, of talents or capacities, of imitation, of suggestion, of emotions as glandular and visceral action, of wit and humor as originating from the sensitive zones of the body.

Behaviorism has forced psychology to become more accurate and scientific. Secondly, it has demonstrated a much larger field of mechanistic behavior than psychology once recognized or admitted. Thirdly, it has forced a desirable modification of our ideas of instinct. Fourthly, it has extended, to great advantage, the place of habit and of the "conditioned reflex" in the formation of habit. Finally, behaviorism has helped to clarify the learning process.

With such an array of achievement, what could be said against the behavioristic doctrine? It is the same fault which Aristotle said we everywhere find in adolescents—the *fault of carrying everything to extremes*. Let us examine these views as represented by the extremes I have already mentioned.

I. *Instinct must go, we have no use for the word*, says the behavioristic theory. Some years ago when the behaviorists made gogues became frightened and said if we continue to use the word *instinct* we shall be classified with the *mystics*. Those who did these bold statements several psychologists and especially pedant even surmise the pure materialism into which they were being led looked for some compromise term. So we find today such terms as *human urges, drives, organized impulses, original nature, prepotent tendencies, dominant tendencies*, and *innate dominate* adjustments. Will anyone be deluded into thinking he has avoided mysticism by the use of any of these terms? Or will he abolish any implication of *purpose* which is the chief concern of the behavioristic doctrine? Several of these educational writers set forth what they think is the behavioristic doctrine and proclaim their change of heart, and avow their *purpose* to use some of these terms instead of *instinct*. So we have two well known authors saying, "We follow strictly the line of argument used by the extreme physiological psychologists." Yet the whole book is built on the assumption that mind is a real cause of conduct. We are told that we "must recognize the child's interest," that "social impulses motivate adaptation." Dominant *drives* are often mentioned. We have a section on "our organism seeking its own end." In general, behaviorism avoids the use of such terms as above mentioned and uses instead *neural patterns, stimulus—response—mechanisms, chain reflexes, neuro-muscular units*. All of this brings to mind forcibly what Schwarz says about the semi- or pseudo-original man. "The appearance of originality is more to him than the reality of it." Many words become popular not because of their meaning or usefulness, but because of their noble origin.

I have just finished an examination of 150 books on psychology, all written in the last fifteen years. Fully eighty percent of them remain unmodified by the behavioristic movement so far as the use of the word *instinct* is concerned. It should be added that the behaviorists have compelled all psychologists to a more careful

use of the term *instinct*, and have shown us the excessive tendency to expand instinct into the field of habit. But Morgan as early as 1898 inaugurated this scientific inquiry as to the relation between habit and instinct in his book *Habit and Instinct*.

One behavioristic book tries to make an ingenious substitution for all instincts: *six prepotent tendencies*. Is not this all we have ever meant by *instinct*—a tendency to fight, to get angry, to manifest fear, love, and jealousy? No, he would save his behavioristic ideas by putting this prepotency in the nervous mechanism and reducing them to six physical manifestations. These are *starting and withdrawing, rejecting, struggling, hunger reaction* (not hunger), *sensitive zone reactions*, and *sex reactions*. These constitute the physical mechanism out of which all other activities develop. So our author talks of prepotent needs, prepotent urges, and prepotent habits. However, he has found that these did not supply *his need*, so he uses over thirty terms implying the essential idea as found in the most careful writers on instinct.

Here is the question we wish to put to any writer following these lines: If everything in this universe should be wiped out and nothing left but the physical conditions as we have known them since historic times, and the human race should start its development anew with just these *six prepotent tendencies*, would such a race not in the run of ages develop habits, customs and institutions similar to ours? I say *similar*, and that is all any believer in instincts expects. Would not men develop warring and strife, marriage and family life of some kind, crime and religion, poverty and wealth, jealousy and love? Have we not this proof in the history of mankind? The explanation that this generation was taught these things by the previous generation is only a delusion and a make-believe explanation. Where did the first generations get these things? Where did these patterns come from if acquired characteristics and habits are not transmissible?

If I were a strict behaviorist I would turn heaven and earth to prove that acquired characteristics are inherited. Then I could have some kind of argument as a substitute for purposive, dynamic action.

Professor Watson says there are thousands of variations laid down in the germ plasm. Here to deny both the inheritance of acquired characteristics and all kinds of purposive behavior takes us

clear back to Democritus with electrons and protons falling together by haphazard chance through an *eternity of time* until they *happened* to fall together and so produce what *only appears* to be purposive action. According to their doctrine even Professor Watson and his followers are not guided by any desire or purpose to make the world better or to teach us anything. By some chance variation in the protons and electrons, the brain processes have just chanced to develop in them this line of behavior.

Smith and Guthrie in their *General Psychology* say that "conviction and belief may be described as the attachment of response tendencies to verbal statements." Moral conviction consists in saying the thing is wrong. "A volitional act," they say, "is the outcome of a delayed reaction." If you should appeal to me for one hundred dollars to save a group of flood-stricken refugees from starving, and if I should think it over for an hour or even all night, and then say, "Yes, I will give it," such would be a delayed neural action. I might *think* that my *thinking* had something to do with the final outcome, but it did not. As soon as the brain reaction was completed the answer was inevitable. If you ask what delays the brain reaction a day, a month, or year, the only answer is other brain reactions.

II. There is no such thing as *inherited traits, talents, or temperaments* says the leader of this school. In all of these cases Professor Watson and others are careful to take the cases of moderate differences: hypothetical cases such as two boys, where one is the favorite of the mother and the other of the father. The one becomes a painter and the other a warrior. But why do they not account for our idiots and imbeciles, for Socrates, Mozart, Napoleon, Gauss, Leonardo, and Lincoln? If you want to see a psychological law, take your outstanding cases first. If any one admits that there are born into this world idiots and imbeciles, will he assume that there is a definite limit where imbecility ceases and from that point all individuals are alike? For example, if we admit any variation in natural mathematical ability at all, does it not stand to reason that there are all degrees of variation, even though we cannot detect it in all cases? If there are no degrees of inheritance, then the whole fabric of intelligence tests is a delusion and a snare.

Suppose the germ plasm should from some unknown cause vary so as to produce some physical modification in the endocrine glands,

and this in turn should be accompanied by some unusual neural activity which resulted in a *prepotent tendency* to music or to murder. Why not say the individual inherited a tendency for music or for murder? There is only one reason—this might imply that something intellectual or emotional was inherited—some *purposive behavior*.

Professor Watson rests his claim that there are no intellectual and emotional race differences largely on the assumption that *pride of race* has kept us from admitting that there are no differences. But how did this pride of race get started? Is there nothing in original nature that *inevitably* leads to *pride of race*? When he asserts that right-handedness is due to social usage, can he offer the slightest suggestion why it is so universal? Did it accidentally start with Adam and Eve and has it been scattered all over the world by social custom? It is easy to explain existing things by social custom as long as one does not attempt to explain the origin and development of social custom.

I thoroughly agree that many of the individual differences and a large percent of what is generally attributed to inheritance of traits and talents are due to early happenings in life. This is true whether you look at the facts from the point of view of the Freudians or the Behaviorists. I will even go beyond this and emphasize the place of chance happenings in life and their power to determine destiny. But, as already stated, the chief sin of behaviorism is to carry everything to extremes. Their fear lest they leave any indication of mind as a cause of purposive behavior sometimes drives them headlong into pure nonsense, such as the admission of instincts in animals but the denial of them in man, the development of all human behavior out of "squirmings," the denial of degrees of intellectual ability and thereby the discrediting of all intelligence tests, the futile effort to trace wit and humor to the sensitive zones of the body.

III. For obvious reasons, *imitation* has been one of the main lines of attack. No one denies that many of the early social psychologists and popular lecturers on human conduct unduly expanded and exaggerated the place of imitation. But the behaviorist sees in any kind of imitation the implication of purposive action. So they have worked hard and long with animals to show that they do not imitate. But why carry these results over to human conduct when Professor Watson says that because animals have in-

stincts in no wise proves that man has them also. If a positive result cannot be carried over with *some basis of scientific inference, why carry over a negative one?*

Professor Allport finds it very necessary to dispose of imitation in connection with the development of speech. He says, "The child does not imitate or duplicate the speech of his elders. There is evoked simply the nearest similar ear-vocal reflex, which, with his present limitation of pronouncing, he has been able to fixate." Again, the whole attempt is to rule out any implication of purposive behavior. He says, "Imitation would simply be voluntarily copying them." He seems unable to conceive of purposive behavior that is not voluntarily conscious.

As over and against this, Koehler states in his *Mentality of Apes* that "even animal psychologists have not always paid sufficient attention to this fundamental difference between "simple" human imitation and the imitation we so lightly expect from animals, and so people were to a certain extent astonished when it was first shown experimentally that animals do not as easily imitate as expected. Less astonishment would perhaps have been felt if it had been realized that, after all, man has first to understand in some degree before it even occurs to him to imitate." He finally shows that the chimpanzee does exhibit four kinds of imitation and that there is no *mere imitation* without a trace of insight.

IV. Suggestion is so closely related to imitation as to arouse the same fears. For this reason you **do not find the behaviorist** dealing with the striking difficulties that are presented in psychiatry and abnormal psychology in general. Suggestion is reduced to the power of the spoken word over the bodily mechanism. The strictly objective method precludes any consideration of dreams, delusions, subjective pains and symptoms.

V. "Emotion," we are told by Professor Watson, "is an hereditary pattern reaction, involving profound changes of the bodily mechanism as a whole, but particularly of the visceral and glandular systems. In *Psychologies of 1925* the same writer tells us that there are only three original pattern reactions which correspond to what we call fear, rage, and love. All others are developed out of conditioned responses. Professor Allport, following this line of conditioned responses, stretches it to the limit in explaining away sympathy. We all believe in conditioned responses, and thousands

of activities that once had no satisfactory explanation belong to this group. This is especially true in the field of sex peculiarities and abnormalities. But here is the point I want to emphasize. *Generally speaking the more securely grounded a conditioned response is, the closer related it is to some original prepotent tendency, and in many cases the relation is so close that it is only quibbling to say that one is an original pattern and the other acquired.* It seems that one carries with it the other. Herein lies the fundamental problem as to the number of inherited tendencies and instincts. It cannot be solved with our present state of knowledge. Jealousy, says behaviorism, is not inherent or instinctive, but is a result of human society. But would not any peoples, given the prepotent tendencies our behaviorists grant, develop jealousy? Are we not then quibbling as to whether it is a part of our native equipment?

Again, if human individuals everywhere develop a response called *laughter* and some degree of wit and humor, why not say that human individuals are so constituted that when adequately stimulated they show a tendency to such behavior, and save the stretch of our imagination in trying to show their habitual origin from the *sensitive zone*? There is only one sound reason why they do not: these activities suggest purposive behavior.

VI. Finally, we owe much to the behaviorists for their diligent and *purposive* research work on learning by *trial and error*. Yerkes' and Koehler's researches do not substantiate the extreme faith of the behaviorists in *trial and error*. Koehler says, "I know that several psychologists will not easily believe that my description of intellectual behavior in apes is correct."

Even within their own ranks come many dissenting votes. Professor Tolman in *the Psychological Review* for July, 1925, shows that goal-seeking is an essential part of animal behavior. He says that prepotent tendencies are to be recognized by the *teleological patterns* of the final goals which they achieve.

All psychology attempts to explain behavior, while behaviorism is a study of mechanistic physiology. In this sense the behaviorist may apply a quantitative scientific method, but he can never explain behavior or evaluate conduct. On the other hand, I do not believe that it is possible for those of us who admit mental activity, consciousness, and purpose as causes of conduct to be scientifically accurate in the sense of the physical sciences.

By behavioristic methods we may measure physical behavior, but I for one do not believe we shall ever explain or understand human behavior without a consideration of the fundamental human impulses, motives, desires, needs, wants, and life-interests. The explanation of momentarily controlled behavior is one thing, and that of permanent life-interests quite another. Human life has its roots in life-impulses, cravings, and some kind of universal tendencies, while the environment is only secondary and a modifying force.

What a fruitless argument we have had about introspective psychology plunging us into mysticism. Did any one ever stop to contemplate the mystery of the synoptic theory? Can you think of a greater mystery than to place all that has ever been done and attributed to mind in the neurones! How misleading is the catch-word *neural pattern*! Try to conceive what these neural patterns laid away in the brain are! Neural patterns have been even more misleading than the old idea of sensation as being produced by images transmitted from the outside object. One's imagination might stake off in the cortex a neural pattern for a mountain, but how shall one imagine a persistent neural pattern to write a *Faust*, to conquer the world, to be a Lincoln or a great world leader? Are these patterns localized in definite parts of the cortex? Does consciousness involve the whole of the cortex or only parts of it, or does it shift? Brain surgery and experiments on animals bids fair to revolutionize the whole neuro-synaptic theory.

I cannot help but conceive consciousness as the most complex form of energy known to man and one that is so stabilized as to be in turn one of the causes of human conduct. Even if consciousness is the direct result of cortical action, is it not in keeping with the order of nature that consciousness also may become a cause of activity in human beings?

In conclusion, it seems evident that the gap that separates behaviorism—or mechanistic physiology—from other forms of general psychology is the question of considering any form of mind as a cause, and the attacks of behaviorism on general psychology have as a matter of fact been directed mainly against the points I have mentioned because these manifestations imply *purpose* or some vitalistic force not reducible to electrons and protons as conceived by a mechanistic philosophy. Hence introspection is to be aban-

done as absolutely unscientific and purpose is to be abhorred as leading only to mysticism. All forms of life are to be cast in quantitative measurable terms. All qualitative forms of existence and behavior must be relegated to speculative philosophy.

However, in spite of behaviorism, the value of everything and of life itself will continue to be determined by human desires, feelings, purposes, and strivings. Not only psychologists, but all men will continue to introspect their desires, feelings, ambitions, and destinies. The behaviorists, without knowing it, are on the road to the most incomprehensible mystery the mind of man has ever conceived—*the transfer of all human achievements and civilization to the neurones and synaptic connections*. Yes, even the neurones trying to explain themselves through the behaviorists. Most of us are only advocating and pleading for the legitimate use of any and all methods that will help us to better understand human behavior. That, we think, involves a proper consideration of our native equipment by heredity, the whole physical being, the whole outer conditions, stimulus-response, and all that it is possible to ascertain by legitimate and well-guided introspection. Man does not exist for science, but *science exists to give value to human life*.