Behaviorism Is Also a Humanism

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L'auteur soutient que les caractéristiques propres à l'espèce humaine et à la personne ne peuvent se définir qu'en fonction d'un environnement particulier et de l'histoire personnelle d'une mise en place de structures utilisant la loi du renforcement. La notion très complexe d'un "organisme qui réagit en fonction d'un milieu", notion que nous devons tout d'abord à Pavlov, Skinner et Sechenov, nous fournit la seule théorie acceptable d'humanisme psychologique. Loin de dévaloriser la liberté et la dignité humaines, le behaviorisme radical nous fournit un *humanisme qui a de la substance* aussi bien qu'une méthodologie qui peut intégrer l'origine et l'évolution de ces caractéristiques. Il y a déjà longtemps que les philosophes de l'éducation auraient dû se libérer de leurs fantasmes de Skinner qu'on représente "déguisé en bonhomme sept heures" et se mettre sérieusement à l'étude du behaviorisme radical; ils refusent, au risque de devenir inutiles, d'admettre ce qui est connu de tous. Cette étude tente de faire la synthèse de cette connaissance.

INTRODUCTION

Man does not live by bread alone: but he lives primarily by bread. Educational systems survive, not because they have impeccable ideals, but because they are efficient in the training, indoctrination, and teaching of the young. Each new generation must laboriously learn the survival techniques appropriate to the social system. Every society is based on a certain optimum level of specific manual and cognitive skills which enable it to meet and overcome the hazards of human life. It is the primary function of the educational system to pass on the necessary repertory of behaviors — the values, skills, and information which are necessary for those who will later "take over" the social complex as a going concern.

In precisely the same way as parents are largely unaware of the differentiated part they play in "shaping" children, moment-by-moment, for their social function, so teachers remain in blissful ignorance of the laws and forces that work to facilitate or inhibit their specialized contribution to the socialization of the young. Like gravitation before Newton, the great "universal, ubiquitous and exceptionless" law of reinforcement operates to produce its effects. At the present time, the "flat-earthers" continue to deny the manifest evidence of their senses as well as the reasoned consensus of those who have devoted themselves to the study of the relevant phenomena. In the same way, professors of educational philosophy continue to masticate the stale cud of Platonic and other absolutisms, uttering awful warnings of the dangers of the "new learning." The prime

target is B. F. Skinner, but the attack is not so much on his specific contributions to learning theory (these being largely unknown to the protagonists in question), but on psychological method in general. A straw figure is set up, representing the devil and all his works and pomps: various absurd notions are attributed to this caricature and readily disposed of – everyone, especially the young and naive, is properly edified and cautioned against the heady Utopianisms of "effective teaching" and a non-punitive alternative to traditional educational method. The attack is, however, essentially an irrational ritual: the theoretical statement of certain principles is savaged, but the critic goes on to commend the pragmatic use of these principles in the classroom.

Dr. Kazepides' (1976) article on "Operant Conditioning in Education" is a civilized and urbane contribution to the war of opinions that centres around B. F. Skinner, the most controversial, as he is the most eminent, psychologist of the present time. However, the article repeats a number of arguments which indicate a lack of clarity about Skinner's actual contribution to psychology and consequently about the correct interpretation of his ideas on education. In the interests of clarification this article will seek first to disentangle the historical record, to establish the nature of Skinner's credentials to speak about education. The fact that his critics misperceive their target, attributing to him discoveries he did not make whilst failing to recognize the actual theoretical principles from which he is arguing, will become clear.

Thus, instead of a point-by-point discussion of Dr. Kazepides' paper, a positive statement of the common ground between us will be given – behaviorism is also a humanism – as it emerges from the historical analysis.

THE EXPERIMENTAL SCHOOL

One of the first attempts to study behavior in America in terms of an experimental program was made by E. L. Thorndike, at the turn of the century. Thorndike found that a cat placed in a cage, or "puzzle-box," from which it can escape only by unlatching a door, exhibits many different kinds of behavior. Some of these are effective in opening the door. When the cat is placed in the cage again and again, the behavior which leads to escape tends to occur earlier and earlier until, eventually, escape is achieved without delay, and without "error."

Thorndike could describe these results quite simply in terms of associationist psychology. The cat's "escaping behavior" is the result of trial and error. The escaping behavior is "stamped in" ("reinforced") because it is followed by the opening of the door. A "connection" is established between the pattern of successful behavior and the food which the pattern of behavior makes available.

The fact that a connection is "stamped in" when followed by certain consequences Thorndike called the "law of effect." This law he described

as "universal, ubiquitous and exceptionless." What he had observed was that certain behavior, when reinforced, occurred more and more readily in comparison with other behavior. By noting the time of the cat's delay in getting out of the box on each occasion, and plotting these times on a graph, he constructed a "learning curve."

Thorndike had made a discovery which can be compared with Newton's discovery of the law of gravitation. His learning curve revealed the existence of a lawful process. This is, of course, the learning process. It takes place over a period of time: the basic principle involved is not obvious to casual inspection. Equally important was his discovery of the method of studying overt behavior without reference to inner thought processes.

However, behaviorism did not originate with E. L. Thorndike.

Philosophical behaviorism began to be transformed into a program of experimental studies by Helmholtz and his school, as well as by Ebbinghaus. These are the real pioneers of scientific method in psychology. Helmholtz, Brücke, Du Bois Reymond, and Ludwig entered into a famous pact (1845) to combat vitalism in biological science. Their teacher, Johannes Müller, had argued that living matter was such because it was permeated with some kind of "vital force" which "animated" it. Helmholtz, and his fellow-students, argued that the so-called living force was a scientific myth.

It was, in fact, the Russian physiologist Ivan Sechenov, who spent some time in these European laboratories, who extended their thought in a novel way to psychology, to include the "so-called psychical activity." The novelty of his approach consisted in the fact that he did *not* try to reduce psychic events to the laws of physics. Sechenov's greatest contribution to behavioral science was his careful delineation of a systematic plan for the investigation of the psychic development of man based on study of the higher nervous activities. Half a century later, Ivan Pavlov invented the methodology necessary for carrying out Sechenov's experimental program. In doing so, he demonstrated that behavior is a proper area for scientific inquiry. The successful work of Pavlov was based on a sophisticated brand of behaviorism. Like that of Thorndike, it was a behaviorism broad enough and flexible enough to encompass the complexity of human behavior. Whereas Russian behaviorism was broad in its scope, the dominant school of American behaviorism of the 1920s and 1930s, with a few notable exceptions, was narrowly conceived.

In the early part of the twentieth century, the mainstream of American behaviorism was diverted by a bandwagon sponsored by John B. Watson. Rejecting the anti-scientific view that psychology was a unique kind of inquiry aimed at discovering the functioning of consciousness by introspection (Wundt), he proposed to study *behavior* by means of objective techniques. This represented a great advance in thought: however, it was not an original one. Democritus, Aquinas, Bacon, Locke, Thorndike, Pavlov had, each in his day, formulated the same concept.

Unfortunately, Watson seized on Pavlov's principle of conditioning, and placed it in a narrow context which ignored the complexity of the intact organism in a multi-dimensioned environment. This holistic conception was, of course, absolutely basic to Pavlov's work. Watson presented a full-blown philosophical position to the world which he termed "behaviorism." It has to be said that Watson's presentation of Pavlov's work was centered around a schematic, mechanistic, and misconceived interpretation of a few Pavlovian conditioning experiments. With no understanding of the theoretical framework within which these experiments were conducted, Watson assumed, as did those psychologists who followed his line, that the reflex (natural or acquired) was sufficient by itself to explain every aspect of behavior, animal or human. On the other hand, Pavlov developed an extremely complex explanation of behavior in a naturalistic environment: he emphasized the unique quality of man in terms of the development of language (the second signalling system). American behavioral psychology continued to deal almost exclusively with animals behaving under rigidly controlled experimental conditions, in laboratory environments.

To compensate for the narrowness of Watsonian explanations many American psychologists began to merge the results of animal studies with the greatly more sophisticated Gestalt explanations. The ensuing brand of eclecticism is well represented by Edward Chace Tolman. Tolman put forward the view that learning involves the development of organized cognitions about sets of sensory, or stimulus, events. The net result of Tolman's approach was that the explanation of the behavior of rats, cats, and dogs in laboratory environments became more and more divorced from the actual behaviors themselves. Cognitive "maps," "hypotheses," "expectancies" were posited of rats. It was claimed explicity that there is no problem in human psychology which cannot be dealt with on the level of the rat in a laboratory maze. Explanations for behavior became progressively more esoteric and less rigorous. Eclecticism provided the same kind of easy "escape-route" from a principled confrontation with the crucial difficulties of Watson's behaviorism as had the "conceptual nervous system."

Hull differed from Watson in sharing Pavlov's acceptance of consciousness as part of the subject matter of behavioral psychology. But he lacked the experimental techniques, and the theoretical rigor based on empirical involvement, necessary to provide objective scientific explanations. Nevertheless his equations and concepts stimulated many American psychologists who desired a behaviorism less inflexible and doctrinaire than that proposed by Watson. Watson and Hull represented the extreme positions in psychological behaviorism in America in the 1930s and the 1940s. Others who worked extensively during this period included Lashley, Guthrie, Hovland, Spence, Dollard, Miller, and Mowrer. They are best

described as "methodological behaviorists." Their basic philosophy was a mechanical materialism which sought to reduce psychology to physiology. They equated human and animal behavior, and denied any unique quality to human beings. Unfortunately, behaviorism at this time was quite unable to bridge the gap between animal and human behavior without unwarranted concessions to spiritistic and quasi-theological conceptions which would have led inevitably to a loss of scientific credibility.

Slightly removed from what had now become the mainstream of American behaviorism, a more healthy form of behaviorism known as "learning theory" had been gradually emerging in the United States. Since the work of E. L. Thorndike in the early part of the twentieth century, some psychologists had followed his lead and carried out studies on human children and adults, using objective techniques to study behavior. Thorndike's formulation of the "law of effect," and his discussion of the importance of reward and punishment in the learning process, opened up new vistas of behavioral experimentation which promised an easier extrapolation of conclusions from the laboratory to the workaday human situation.

In many ways, Thorndike's theoretical orientation was quite similar to Pavlov's and different from that of Watson or Hull. The behaviorism of Hull and Watson originated from French and German anticlericalism. Thorndike is much more firmly rooted in nineteenth-century English utilitarianism mediated through American pragmatism. As Pavlov transported Sechenov to the laboratory, so Thorndike provided Bentham with immigrant status in the same environment.

The importance of Thorndike's work in influencing B. F. Skinner towards a science of behavior cannot be overemphasized. It was, in fact, Thorndike who discovered the principle of reinforcement, not Skinner. However, it was through Skinner's careful experimental methodology and objective interpretation of results that American behaviorism began to deal realistically and scientifically with the problem of understanding human behavior from the standpoint of scientific law. Skinner's discussion of human communication behavior (1957) illustrates this concern for such an understanding based on principles and techniques developed in the animal laboratory but preserving the complexity of the behavioral data. As Pavlov extended the model of the conditioned reflex (within an elaborate systematic position) to explain human performance, so Skinner extended the theory of reinforcement for similar purposes. Neither extension can be described as "simplistic" nor as a "wild extrapolation" (Chomsky, 1959) except by the most superficial readers of their work.

SKINNER'S CONTRIBUTION

B. F. Skinner provides us with a fruitful synthesis of operational definition and laboratory procedure. The product of this union can be described as the "experimental analysis" of behavior. Skinner's adoption of the basic

assumptions of scientific method as a guide to thinking about human behavior resulted in the development of "radical behaviorism." The fundamental principles of this view are:

1. Behavior must be assumed to be lawful, and determined by the law of causality. The object of scientific study is to enable us to understand the connections of cause and effect so that behavior can be predicted and changed, if change is necessary.
2. Behavior does not have any peculiar properties such that it requires unique methods, or special kinds of knowledge different from accepted scientific procedures, to understand it. We must assume that the kinds of relationships discovered in other sciences apply to the study of man, unless there is evidence to the contrary.
3. The variables studied in the science of behavior have to be chosen so that they are capable of being observed. They must have a physical status so that the usual techniques of science are adapted to their investigation. Those variables which are *immediately* available for scientific analysis lie outside the organism. They exist in the immediate environment, or in the environmental history of the organism.
4. Internal states must be assumed to be under control of the same forces as overt behavior until we require a more complex explanation. "Internal states" are not explanatory, and must be considered to be irrelevant until they can be brought under the control of scientific method. The use of "internal states" as explanatory concepts involves us in tautology and circular arguments.

As an undergraduate, Skinner studied biology. As a consequence he had become familiar with Loeb's *Physiology of the Brain* and Pavlov's *Conditioned Reflexes.* At Harvard, in graduate school, Skinner came in contact with W. J. Crozier, who had studied under Loeb. The thing that impressed Skinner about Crozier and Loeb was that they talked about animal behavior without mentioning the nervous system, in fact they seemed "to resent" the nervous system. In Skinner's mind, Loeb and Crozier cancelled out Pavlov and Sherrington in the sense that it became possible to talk about the possibility of "an independent science of behavior." The "central nervous system," *as a concept used to explain mammalian behavior,* took on the status of a scientific myth.

Skinner's doctoral thesis was, in part, an operational analysis of the alleged processes which went on at the junction of nervous fibre, Sherrington's so-called "synapse." Behavioral laws were substituted for supposed states of the central nervous system. The other part of the thesis was experimental. It was an attempt to look for lawful processes in the behavior of the intact organism. In this attempt, Skinner adhered closely to the dictum of Pavlov: control your conditions and you will see order.

Skinner began by recognizing that Thorndike's "learning curves" need

not be interpreted as a picture of the basic process of "stamping in." Thorndike's measure – the time taken by the animal to escape – was dependent on the elimination of other behaviors in favor of escape. Thorndike was illicitly focussing on a specific pattern in behavior, chosen by him as having some special significance. More importantly, he assumed a certain "inner state" – a motivation on the part of the cat to escape from the cage. These preconceptions of Thorndike tended to reduce the objectivity of his interpretations, according to Skinner.

Many expressions associated with Thorndike's explanation of the experiment (such as "trial-and-error learning") were found to be superfluous. For example, something is read into the experiment by calling a piece of behavior a "trial." Further, there is no good reason to call an unrewarded piece of a behavior an "error." To assert that an organism learns or develops a "habit" is misleading because this word has all kinds of implications which go far beyond the observable facts.

According to Thorndike's way of explaining the experiment, learning curves show that various kinds of behavior evoked in complex situations are sorted out, emphasized, and reordered. It is the basic process of "stamping in" which brings this change about. In Skinner's view the barest possible statement of the experimental result is this: the experimenter makes a particular consequence (reward) *contingent upon* certain physical properties of behavior. The behavior is then observed to increase in frequency. This is the simplest, and therefore the best explanation – that Thorndike was setting up a "contingency of reinforcement"! Skinner decided that the subject matter to be studied was the association between the reward ("reinforcement") and the increase in frequency of the associated action (or "operant"). In other words, it was necessary to isolate a particular, easily observed, elemental form of behavior for reward in such a way that other kinds of behavior (the "trial and error" operants) should be eliminated from the start. All that had to be recorded was "success" – that is, the emission of the operant which was followed by reward.

With the discovery of *rate of responding* as the basic datum to be studied, the main problem confronting Skinner was to design an experiment to provide for reinforcement through feeding, with the built-in capability of observation and recording of the frequency of emission of a selected operant. Behavior which competes with the behavior being studied (such as we have in the maze, or puzzle-box) must be eliminated.

A series of experiments followed. This is where Skinner's basic methodological contribution was made. The end-product was a very simple experiment with a hungry animal placed in a quiet box, set up so as to deliver food from a small food-tray, the mechanism of delivery being operated electrically. A relatively simple pattern of behavior was selected for study – one that can be repeated freely and rapidly, easily observed,

and recorded. On pressing a bar, easily accessible in the box, the rat receives a food pellet. The process which Thorndike termed "stamping in" could now be studied directly in a controlled situation.

The time taken to perform a complex act, used by Thorndike as the basic datum of analysis, was replaced by Skinner's *rate of responding.* Finally, the method of averaging a number of learning curves to produce smoothness was replaced by the method of rigidly controlling variables in the individual case. All of these advances add up to a new conceptualization of the task, assumptions, and method of psychology. They were the result of Skinner's basic concern for lawfulness and observability.

Faced with the practical problem of controlling and predicting frequencies of behavior, Skinner took up the position that the correct procedure is to refine the experimental variables. Conventional statistical procedures are eliminated in favor of clarifying the causal relation. This is a matter of discovering, elaborating, and fully exploiting the *relevant* variables. In this way, we eliminate in advance those individual differences which obscure the behavior under analysis.

Two major points suggest themselves from this brief sketch of the early development of Skinner's laboratory methods. First of all, in choosing reinforcement as a basic principle and the rate of responding as a basic datum, important relations between behavior and the external conditions become visible. Secondly, when practical control of the organism is achieved through operant techniques, a particular kind of theory of behavior loses its point. Through the representation of relevant variables in overt, physical terms, and by changing them according to a plan, we can come to grips with the origins of behavior itself. We can actually *see* the organism learning: the pigeon in the laboratory, the child at the teaching machine. When behavior shows order and consistency, we need no longer concern ourselves with theoretical explanations in terms of alleged "inner states," physiological processes, or mentalistic causes. Direct relations are discovered which render such theoretical fantasies ("hypothetical constructs") unnecessary.

Skinner's innovations consist in (a) the distinction he makes between what is called operant and classical conditioning, (b) the identification of "shaping" as a learning process, and (c) the investigation of schedules of reinforcement.

One of the problems posed by Pavlovian conditioning, as this was understood by American behaviorists, is: how do we ever arrive at *new* responses when the conditioning process consists, apparently, of connecting old responses to new stimuli? On the other hand, Skinner describes the behavioral repertoire in terms of "operants," that is, classes of behavior which are *emitted.* He is not interested particularly in what *elicits* these operants but is concerned with what causes them to increase in rate, to decrease, or to remain the same.

The principle of "shaping" is the natural outcome of this distinction between respondent (classical) and operant (Skinnerian) conditioning. If we reinforce a particular piece of behavior when it occurs, the behavior will be repeated. If we fail to reinforce it on the next occasion, but wait until the animal takes the behavior a stage further before rewarding, we can direct or "shape" the behavior of the animal towards any desired end or conclusion. For example, using this principle, pigeons have been trained to play games, to work co-operatively at a task, to refrain from retaliation when attacked by another pigeon, and so on. It is easy to see that it is through the shaping process that we learn complex skills such as riding a bicycle, learning to speak, choosing a vocation, or conducting a scientific controversy.

Skinner discovered that reinforcements can be given to the animal according to different *schedules,* and that these have important effects on the animal's behavior.

For example, intermittent reinforcement, where some performances go unrewarded, is much more effective than continuous reinforcement, especially if those which are to be reinforced are selected at random.

The different schedules have regular, orderly, and profound effects on the behavior of the animal. Thus, the rate of responding can be exactly controlled by manipulating the schedule of reinforcement.

In addition, the various types of schedules can be combined in a great number of ways. Thus we can generate very complex contingencies of reinforcement and study them in the laboratory. These complex contingencies are normal in the uncontrolled situations of everyday life. This means that the Skinner system cannot be applied in a simplistic manner to account for particular kinds of behavior patterns. The system provides the analytical model and the conceptual tools necessary to obtain the insights into the details of behavior with special reference to its conformity to scientific law.

APPLICATION TO HUMANS

In *Verbal Behavior* (1957) Skinner extrapolates the principles of operant conditioning and reinforcement from the laboratory to the naturalistic social environment of man. In this book he makes an attempt to explain human speech behavior on a functional basis. The use of *Verbal Behavior* as a title is somewhat misleading. In contrast to the linguist, who concentrates solely on spoken or written statements, Skinner includes gesture and other non-vocal behaviors under the rubric of what is better called "communicative behavior." Skinner's functional analysis focusses on the social interaction between speaker and listener, or writer and reader.

For Skinner, language is behavior. Therefore, it must be studied by the same methods and conceptualized in the same way as other forms of behavior. It differs from other behaviors by virtue of the fact that it subserves

the function of communication. Perhaps it obeys other laws: if so, we must *discover* them, not hypothesise about them.

Verbal Behavior is not an account of laboratory experiments. It is an analysis and interpretation of social behavior informed by a knowledge of the laws of reinforcement and contingencies discovered by exact laboratory research in other areas of behavior. As Skinner himself states:

> The emphasis is upon an orderly arrangement of well-known facts, in accordance with a formulation of behavior derived from an experimental analysis of a more rigorous sort. The present extension to verbal behavior is thus an exercise in interpretation rather than a quantitative extrapolation of rigorous experimental results.

Chomsky (1959), in the role of linguistic *prima donna*, wrote a notorious review of *Verbal Behavior* which provided aid and comfort to all those who feel threatened by the advances in the scientific study of behavior. "Skinner as bogey-man" became the theme of philosophical articles, linguistic texts, lectures to aspiring teachers anxious to find some kind of lead towards effective teaching.

Chomsky's misunderstandings of Skinner have been adequately analysed elsewhere (McCorquodale, 1970) and no more need be said on that theme. Of greater importance is the fact that his remarks about the total irrelevance of learning theory outside of the laboratory (or perhaps contrived situations, such as managed classrooms or teaching machines) led the present author to set up a crucial test of the validity of the Skinnerian model in a number of ordinary learning situations of a relatively spontaneous character (discussion groups). Skinner's view was empirically validated (McLeish and Martin, 1975). This represents the present state of the psychological issues involved.

THE ARGUMENT ABOUT AUTONOMY, DIGNITY, FREEDOM

Kazepides (1976) makes eight generous admissions about behaviorism, as follows: (1) he does not dispute the effectiveness of behavioral technology; (2) autonomy is not some all-or-none condition but rather an educational achievement; (3) reinforcement (in terms that behavioral consequences influence future behavior) provides an intelligible and purposive explanation of behavior; (4) that many who croak about human freedom and dignity are uninterested in studying the realities of behavior; (5) behavioral theory in education acts as an antidote to the current abandonment of rational education planning by the teacher and others; (6) the emphasis on positive reinforcement operates against both the violent coercion and empty moralizings which are characteristic of our society; (7) the training of infants and of animals is to a large extent based on Skinnerian principles; (8) the development of methods of programmed instruction, teaching machines, behavioral objectives, and other current innovations have had a serious impact on education.

Likewise, most of the argument in Kazepides' paper could be accepted by a Skinnerian except insofar as semantic distinctions are made illicitly due to (i) a misunderstanding of the nature of a "reinforcer," (ii) the failure to grasp the tremendous power of the concept of "shaping" in the explanation of the evolution of behavior, and (iii) the nature of Skinner's intervention in the field of education and social theory.

Elsewhere (McLeish, 1975), I have indicated that the concepts of stimulus, response, reinforcer must be understood as including dynamic, ever-changing, abstract cues which operate most often below the threshold of awareness of the reacting subject. We cannot assume that the teacher can "lay on" reinforcement without regard to individual experience and preference. The individual student and teacher are unique products of their specific environment. They will respond in diverse fashion to the same stimulus pattern and/or the same reinforcer. But they *cannot* respond in an arbitrary, autonomous fashion — if this means independently of causal processes and the principles of reinforcement theory. Conditioning is something which happens to you *regardless* of your knowledge or "intention." As a process it is neither good nor bad; only behavior can be so judged and this on the basis of outcome, not "intention."

At the same time, human beings can be "autonomous": it is a prime function of education to make them so. Freedom consists in acting in accord with a full understanding of the alternatives and the consequences of so acting. The vital paradox of human psychology is that in making a "free" choice the individual, in reality, has but one course of action. It is in this sense that Jonathan Edwards, following Calvin, can be recognized as a prime mover in the development of American behaviorist psychology. Freedom is not an absolute, nor is it universal. It is developed by multiplying the number of contingencies in which the individual's behavior is "embedded," thus increasing the discriminative character of his response to a given stimulus. This is the ideal outcome of the educational process: it is partly training, partly indoctrination, and, in part, an attempt to broaden the base of response by diversification of content, method, and personnel. Education cannot take place in the absence of training and indoctrination: but it involves a *critical attitude* to these component elements and their outcome. All three are essential components.

In other words, we are talking about a developing organism (the educand) for whom our ideal and method must alter over time. An absolute control to begin with (the neonate), direction in the pre-school stage, guidance during the school years, a developing autonomy as the end result — this is the planned development recognized by our modern democratic society. Autonomy means acting in *accordance with* natural and social laws, not in opposition to them.

Nobody but (some) university professors has ever taken seriously the idea that education is pursued for its own sake. Read the Greek and Roman

classics on the education of the orator and the citizen; read the Papal encyclicals or the Greek fathers on the end of the educational process; read the educational literature on the ideal of courtly love; read the utilitarians – read *anybody* on educational objectives. Study the history of childhood, the position of woman, the status of the working man and peasant – nowhere do we find any notion that "autonomous man" is the desired end-product. Control by the environment, mediated to the individual through the system of organized instruction – this is the dominant theme of educational thought, even at its most permissive. "Self-actualization" is an anarchist's dream, a fantasy if you will. Nothing follows from such an empty declaration as that "human beings must be treated as persons" *unless* we are told about the method, the process, and the behavioral consequences of this declared ideal.

Similarly, the insistence that human beings have "dignity," which must not be sullied by controls, lacks credibility until some necessary detail has been provided. All animals have a dignity which belongs to them as a natural species: unfortunately, man forgets this even in relation to members of his own species. The behaviorist wants *to do something effective* about violence, war, crime, and other behavior patterns which reduce the dignity of man as a species. The dignity of *Homo sapiens* resides in his ability to learn an abstract means of communication, self-awareness, response to and manipulation of abstract symbols. This enables him to transcend local loyalties to his primary group and to overcome space and time in a way no other animal can. Thus man has a specific dignity which cannot be violated without all men feeling themselves to be diminished. These are extremely complex contingencies which are built up in the individual very largely as "textual behaviors" – thus they are specific to literate societies at a high level of political and cultural sophistication.

The educational system in the past has helped develop these behavior patterns very effectively. The behaviorist is making the point that the children of *Homo sapiens* deserve better schools, more adequately trained teachers, a better curriculum structure, and a rational educational system. A behaviorist is a person who loves people, in the sense of wishing them well as individuals; he is one who works for the betterment of the species as a whole. In this sense behaviorism is a humanism *with content*, and this includes a declared method and a method of evaluating the outcome of procedures.

It was Robert Owen, not Skinner, who followed through and attempted not only to design but to construct better environments which would result in better men. The struggle against Skinner's ideal of a social and educational utopia is not a recent development – on the contrary. Since the French Revolution two concepts of *Homo sapiens* have been locked in conflict. The traditional Christian philosophy that *evil is within man* is confronted by the social theory that *evil resides in the environment.* In the

first circle of thought, change can be brought about only by conversion, punishment, and coercion of deviants toward conformism. The alternative, which a long succession of thinkers has developed (Babeuf, Fourier, Saint-Simon, Owen, Bellamy, Skinner) seeks to improve human action by a revised structure of society based on a rational system of rewards and punishments.

Skinner has had the temerity to point out that the advocates of "humanistic psychology" (freedom, dignity, autonomy) have done nothing but hold back the development of the human species because their declared ideal lacks content and their methods of influencing behavior don't work. What he is saying is that there is an alternative of proven efficacy — spell out your educational objectives in behavioral terms, then stand out of the way of the effective teacher and the structured curriculum which will do the job.

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