

THE BELL CURVE: WHAT HAS RADICAL BEHAVIORISM TO SAY ABOUT IT?

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ABSTRACT: Based on radical behaviorism's perspectives in relation to operationism, scientific procedures, science, man, and environment, this paper analyzes the conceptions and proposals contained in *The Bell Curve* (Herrnstein & Murray, 1994). The authors argue and conclude in favor of an opposition between the ideas underlying *The Bell Curve* and the assumptions of radical behaviorism.

In October of 1994, one of the largest newspapers in Brazil published an article entitled "Race, Genes and IQ," by Richard Herrnstein and Charles Murray. In this same edition and during the three following months about 10 other articles were published in this same newspaper *about The Bell Curve*. These articles were mainly written by Brazilian intellectuals-social scientists, writers and journalists and one biologist. Some of them openly attacked the book for being racist, some analyzed the ideological role of the arguments presented in the book and its function as a conservative political tool nowadays, and some tried to discuss what apparently were interpretations based on "good scientific data." The book was never translated into Portuguese and, as far as we know, it was not systematically debated at universities. Behavior analysts in Brazil debated it only informally during the following months and the coherence between the positions argued for in the book and a radical behaviorist perspective was at the core of such debates.

The goal of this article is to discuss the conceptions underlying *The Bell Curve* (Herrnstein & Murray, 1994) from a philosophical perspective-radical behaviorism. The evaluation of the conceptions and proposals contained in *The Bell Curve* are directed by six topics that will be dealt with: (1) operationism in psychology; (2) scientific procedures; (3) conception of science; (4) ideological role of science; (5) conception of human being; and (6) conception of environment. The topics to be analyzed and their assessment are guided by Skinner's writings. It is hoped that such an analysis will show the reader that from Skinner's work it is possible to derive parameters for analysis of problems such as the ones presented in *The Bell Curve* as well as criteria for assessment of analysis already made.

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Operationism in Psychology

The authors of *The Bell Curve* affirm that in spite of all the problems they might face when talking about intelligence, they assume that "... intelligence is a reasonably well-understood construct measured with accuracy and fairness by any number of standardized mental tests" (Herrnstein & Murray, 1994, p.1).

Such a claim is not peculiar to the authors of *The Bell Curve*: Other psychologists would also assert it. To such a group intelligence tests as a measure of a trait or ability are traditionally presented as a scientific instrument because of high correlations and sophisticated statistical techniques invented to promote such measures. And even though it is not known exactly what is being measured by the tests, because the measures are accurate and fair, there seems to be no need to discuss what precisely is being measured by them.

Nevertheless, to discuss the existence or not of intelligence as a phenomenon described by a construct and to argue about the fairness and accuracy of its measurement through tests of cognitive ability is a trap: It leads to dualism and to all the implications it brought to psychology. One of such implications is operationism. And it is an operationist position forwarded by the authors of *The Bell Curve*, as is the position of those who deal with tests of cognitive ability.

Any operationist practice must define its subject matter through the operations used to measure it; by doing so, the operationist ends up not being able to describe the relationships between the measurement operations and the phenomenon to which the definitions refer (Skinner, 1945). The impossibility of establishing relationships between the measurement operations and the phenomenon being measured almost necessarily leads to the evaluation of the operations through other measurement operations.¹ The discussion of such relationships would necessarily lead to the assumption of a dualistic standpoint: in this case, presuming the existence of a mental structure such as intelligence, measured by an instrument such as an

¹ As Rogers (1989) in a very interesting article contends, the use of intelligence tests in the USA began and expanded under a double pressure: the need to demonstrate the social relevance of Psychology as a profession, and to do it, the need to affirm its scientific character. The first motivation set the roots and expanded the use of tests in all kinds of social situations. The second started a long series of research and of work that brought about the concepts of validity and reliability of the tests. It was here that an operationist practice becomes concrete in Psychology and is maintained to this day. To assert that a test measures intelligence-taken as some intangible internal structure-the only possibility is to correlate it with another intelligence test (or any other indirect measure of such structure). High correlations, new and apparently more sophisticated statistical techniques invented to promote such measures, become signs of accuracy. Accuracy is translated into scientific. Thus, tests are presented as scientific instruments. And, eventually, with tests labeled as scientific it is as if all problems vanished. Even though it is not known exactly what is being measured by the tests, because the measures are accurate, are fair, there is no need to discuss what precisely is being measured by them. As Rogers says, "intelligence is what is measured by intelligence tests."

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intelligence test. This is the trap avoided by radical behaviorism when it refused operationism. As Skinner (1972) contends: "An operational definition is possible in every case, but it does not necessarily lead to a satisfactory theoretical construct. Whatever its success, it spoils the explanatory fun" (p. 304).

Long ago (in 1945, in a Symposium on Operationism) Skinner argued against operationism, when he criticized proposals made by several psychologists, some of them behaviorists, naming such positions as "merely that of methodological behaviorism" (Skinner, 1945, p.292). His critique could also be seen as a warning against the attractiveness of operationism because it seems to be an easy option. According to Skinner such a position was:

. . . an attempt to acknowledge some of the more powerful claims of behaviorism (which could no longer be denied) but at the same time to preserve the old explanatory fictions unharmed ... according to this doctrine the world is divided into public and private events, and psychology, in order to meet the requirements of a science, must confine itself to the former. This was never good behaviorism, but it was an easy position to expound and defend and was often resorted to by the behaviorists themselves. (Skinner, 1945, pp. 292-293)

Still in 1945, answering to other authors that had discussed operationism, Skinner asserted an intimate relationship between the distinction between public and private events, and all the "confusion which seems to have arisen from a principle which is supposed to eliminate confusion" (p. 294)-that is, operationism-making explicit what is the radical behaviorist position about the distinction between public and private events: (a) the distinction private and public is not synonymous to mental and physical-the radical behaviorist critique of mentalism does not mean the exclusion of private events from the realm of a science of behavior; (b) the radical behaviorist must deal with private events, and the analysis of private events involves the field of verbal behavior; and (c) the radical behaviorist replaces the concept of truth with agreement by the possibility of acting successfully upon the world: "the ultimate criterion for the goodness of a concept is not whether two people are brought into agreement but whether the scientist who uses the concept can operate successfully upon the material-all by himself if need be" (p.293).

In other words, and this is the core of Skinner's argument against operationism, an operationist practice is a way of maintaining mentalist explanations in psychology:

The practice of explaining one statement in terms of the other is dangerous because it suggests that we have found the cause and therefore need search no further. Moreover, such terms as "hunger," "habit," and "intelligence," convert what are essentially the properties of a process or relation into what appear to be things. Thus we are unprepared for the properties eventually to be discovered in the behavior itself and continue to look for something which may not exist. (Skinner, 1953, p. 31)

Scientific Procedures

Besides all the problems of an operationist perspective, in the case of *The Bell Curve* there is an additional one: the complete reliance on statistical data. From the beginning of the book it is made clear to the reader that the whole field of intelligence tests is based-methodologically and conceptually-on statistical analysis and, more precisely, on correlational data.

Correlations are used to assert two sets of principles: (a) relationships exist between a mental structure or internal trait-intelligence-and the performance on tests; (b) relationships exist among tests of cognitive ability and "patterns of social behavior," such as poverty, schooling, unemployment, idleness, injury, family matters, welfare dependence, parenting, crime, and citizenship.

Radical behaviorism is distinguished, among other aspects, by a research practice that eschews the use of statistical methods as a sole procedure of control. It became apparent to behaviorists, especially with the advance of the single subject model, that the use of controlled research procedures should be chosen, no matter what the problem under investigation.

One interesting consequence of defining experimental psychology as a branch of the science in which we control the variables which govern behavior is that we thus exclude most investigations using correlational methods. . . . The experimental control or elimination of a variable is the heart of a laboratory science, and, in general, it is to be preferred to manipulation through statistical treatment. It is not a question of a choice of methods, however. The two approaches represent different scientific plans and lead to different results. (Skinner, 1972, p. 298)

What were the reasons for the criticism of statistical practices? First, statistical procedures that yield correlations do not require a direct and detailed contact with the subject matter and thus lead the researcher to gather data and information that are crude and superficial and yet to be satisfied with them.

The psychologist who adopts the commoner statistical methods has at best an indirect acquaintance with the "facts" he discovers-with the vectors, factors, and hypothetical processes secreted by the statistical machine. He is inclined to rest content with rough measures of behavior because statistics shows him how to "do something about them." He is likely to continue with fundamentally unproductive methods, because squeezing something of significance out of questionable data discourages the possibly more profitable steps of scrapping the experiment and starting again. (Skinner, 1972, p. 320)

Second, statistical procedures neglect the individual and do not account for individual action. What could be a problem for any science is a central one for Psychology. Is knowledge which has nothing to say about the single individual meaningful in Psychology?

Still other [concepts], like abilities and traits, have been made respectable through correlational analysis, which give them the status of "individual differences." Although most psychologists think of an ability as something which has meaning in the behavior of a single individual, current techniques of measurement find it necessary to make use

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of the position of the individual in a population. Magnitudes are assigned to the abilities and traits of the individual in terms of his relation to the group, rather than direct measurement. A proper theory at this stage would characterize the behavior of an individual in such a way that measurement would be feasible if he were the only individual on earth. . . . From all of this should emerge a new conception of the individual as the locus of a system of variables. (Skinner, 1972, p. 308)

Losing the individual does not seem to be a problem to the authors of *The Bell Curve*. They recognize, and even boast about, their constraints in terms of their possibility for analyzing and dealing with individual behavior. However, this leads to the third reason why radical behaviorism criticizes statistical procedures. Because it doesn't make sense for a scientist to say his knowledge is futile, the knowledge produced by statistical methods is said to refer to an "average" individual.

The complex system we call an organism has an elaborate and largely unknown history which endows it with a certain individuality. No two organisms embark upon an experiment in precisely the same condition, nor are they affected in the same way by the contingencies in the experimental space. (It is characteristic of most contingencies that they are not precisely controlled, and in any case they are effective only in combination with the behavior which the organism brings to the experiment.) Statistical techniques can not eliminate this kind of individuality; they can only obscure and falsify it. An averaged curve seldom correctly represents any of the cases contributing to it. (Skinner, 1969, pp. 112)

The rejection of rehabilitation programs and environmental manipulations by the authors of *The Bell Curve*, based on statistical measures of success, represents almost perfectly these three characteristics of the statistical approach. In opposition to a behavioristic approach, they do not ask what a mean gain of 10% in a certain program truly represents. They do not question who gained and who lost with the program, nor do they analyze what were the individual and special gains and losses. All that is necessary to reject a program is the mean rate of failure or success, as if there were a mean child. By abandoning the individual and the individual data, one ends up with an abstraction. And that abstraction may be quite misleading.

The Conception of Science

It must be emphasized that, as Skinner said, the reliance on procedures of statistical control is more than a simple choice of method-it represents a specific conception of science.

For Skinner (1974), science is knowledge that necessarily is related to the world and that is intended to promote changes. To talk about science is to talk about acting upon the world. But the action involved in science does not start when scientific result are applied, knowledge itself is action.

We do not act by putting knowledge to use; our knowledge is action, or at least rules for action. As such it is power, as Francis Bacon pointed out in rejecting scholasticism and its emphasis on knowing for the sake of knowing. (Skinner, 1974, p. 139)

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Knowing is operant behavior, and thus it is meaningful only through its consequences. Knowing, then, as any other operant behavior, changes the world; that is why Skinner (1974) says, "Operant behavior is essentially the exercise of power: it has an effect on the environment" (pp. 139-140). Scientific knowledge has an effect upon the physical world--the very process of knowledge involves the manipulation of variables, the production of phenomena, and leads to prediction and control. But, perhaps more important, knowledge has an effect upon the social environment--Other people. The main source of knowledge's power possibly arises here.

The central question of scientific knowledge is not What is known by scientists, but What does knowing mean? The facts and the laws of science are descriptions of the world, that is, the prevailing contingencies of reinforcement. They make it possible for a person to act more successfully than he could learn to do in one short lifetime or ever through direct exposure to many kinds of contingencies. . . . the corpus of science--the tables of constants, the graphs, the equations, the laws--have no power of their own. They exist only because of their effect on people. (Skinner, 1974, p.144)

If knowledge is action that changes the world, it is not possible to suppose that knowledge is neutral. When a radical behaviorist says that knowledge is not neutral, he or she is not simply referring to a better or worse application, but to the very production of knowledge since its beginnings. Even the supposition of contemplative knowledge--knowledge for the sake of knowledge--would necessarily involve a supposition of non-neutrality, because even the perception of an object involves interaction: "A person is not an indifferent spectator soaking up the world like a sponge" (Skinner, 1974, p.74).

What radical behaviorism has to say about this is that particular histories of reinforcement will produce distinct relations with the object, which means different responses to a given object.

To argue that layman and scientist are simply looking at two aspects of the same thing is to miss the point, because aspect is what causes trouble: people see different things when they have been exposed to different contingencies of reinforcement. . . . Both layman and scientist respond--in similar or different ways, depending upon the contingencies--to the features of a given set. . . . The important differences are among behaviors, and these in turn are explained by differences in past contingencies. (Skinner, 1974, p. 79-80)

It is obvious that, from such a perspective, there is no possibility of taking the scientist as a mere gatherer of facts. Facts do not impose themselves on the scientist. The scientist always selects, choosing a given set of facts over another set. He or she actively behaves in relation to facts in order to build knowledge.

But the cataloguing of functional relationships is not enough. These are the basic facts of a science, but the accumulation of facts is not science itself. . . . There is no more pathetic figure in psychology today than the mere collector of facts, who operates, or thinks he operates, with no basis for selecting one fact as against another. In the end he is usually to be found doing something else, or perhaps nothing at all.

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Behavior can only be satisfactorily understood by going beyond the facts themselves. (Skinner, 1972, p. 301)

Going beyond the facts themselves is to do more than to reflect or to copy something given in nature. It is to assume a certain way of approaching the facts, it is to interpret the world, it is to build theories. That is, to build an orientation towards the world, towards action in relation to the world. As Holland (1976) points out, this process of building knowledge starts with the choice of a problem for investigation. To affirm science as a non-neutral endeavor means to assume that the problems under investigation are a central and primary aspect of the scientific work: They not only reflect the scientist's interaction with the world, they somehow direct the results.

The authors of *The Bell Curve*, whatever their reasons, present their results in an exact opposite perspective. They assume that, unhappy as it may seem, the problem they investigate cannot be avoided, and the results they get cannot be argued: Reality imposes itself over the humble scientist, who's only the narrator of such reality. On the other hand, and this is most interesting, the authors are very careful: They always present alternatives-as, for example, the various positions about intelligence (e.g., pp. 11-19). Also, they constantly warn the reader about their choices-as when they "divide the world in five cognitive classes because this is what sociologists have been doing" (e.g., pp. 120-121)-and the arbitrariness involved in their decisions. They even warn the reader about the difficulties of concluding-as when they affirm that correlational data do not allow for conclusions about causes and effects (e.g., pp. 117-118). And yet, immediately after such warnings they proceed to present all "the technical and irrefutable" data on which they base their conclusions, conclusions that are as "technical and irrefutable" as their data (e.g., pp. 21-22, 108, 120-121, 551). Many times during the book the authors perform a strange trick: They twist the argument so that the main contribution of their work, according to them, is to rescue the technical and neutral data that the layman, the press, and the politically oriented observer intentionally made to appear ideological.

The Ideological Role of Science

If scientific knowledge is never neutral, whenever it is presented as natural, unquestionable, an accurate reflection of reality, or beyond any doubt, it plays an ideological role: That is, it is used to hide the roots and basis of such knowledge, concealing reality and contributing to its maintenance as it is.

Mentalism, as an approach to the explanation of human behavior, has played such role in psychology. The expressions so commonly used by the authors of *The*

Bell Curve, such as intelligence and cognitive ability, indicate their commitment to one of the contemporary versions of **mentalism**.²

The mind that has made its comeback is, therefore, not the mind of Locke or Berkeley or of Wundt or of William James. We do not observe it; we infer it. We do not see ourselves processing information, for example. We see the materials that we process and the product, but not the producing. We now treat mental processes like intelligence, personality, or character traits-as things no one ever claims to see through introspection. (Skinner, 1989, p. 24)

The long-standing existence of mentalist explanations and the resistance to alternative explanations are consequences of the ideological role of such explanations.

The traditional conception of man is an example of an explanatory strategy which was once common in other sciences. It has survived in psychology, possibly because of the extraordinary complexity of the subject matter. As plausible connections with external variables are demonstrated in spite of that complexity, however, the need for inner explanations is reduced. An effective scientific analysis would presumably dispense with them altogether.

That such an analysis will be simpler, more expedient, and more useful will not necessarily mean its adoption, because the older view served other than scientific functions. A behavioristic reinterpretation of mental life is not a fundamental issue for many people, but everyone has a stake in human behavior, and there are other reasons why the scientific picture may not seem to be a picture of man at all. Certain long admired characteristics of human behavior seem to be neglected, and their absence is more threatening than any implications about the nature of consciousness or the existence of free will. (Skinner, 1972, p. 52)

2 Our emphasis on the mentalist character of the positions forwarded in *The Bell Curve* is based on two aspects. First, on the use of concepts such as intelligence, cognitive ability, and others-taken as cause of behavior-which by itself would characterize the authors' position as a mentalist one. Second, on the innatist character that the concepts of intelligence and cognitive ability assume in the book. Richelle (1981), discussing the paradoxes of innatism and, more specifically, innatism as it appears in Chomsky's position, says:

. . . let's postulate that their [the innatists'] determinism goes back to the past evolution of the species, and we shall have the "explanatory fictions," as Skinner calls them, . . . will be available to avoid the need to search for its origins in the construction of the individual in contact with his/her physical and social environment. Thus, based on the almost immutability of the genetic inheritance of the species, the internal entities by which human behavior will continue to be explained, will not need to be explained. Therefore, the internal origin of behavior will be saved, and the autonomous man will be saved. . . . The assumption of innatism, here, is nothing but an alibi, the last trench imagined by mentalism for its defense. Here the object of discussion is mentalism and not the old debate between innate and acquired, already surpassed in all fields of biology, and also in the sciences of behavior. (p. 63)

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Radical behaviorism is characterized by its refusal of mentalism and has a threatening character to any mentalist explanation, because it reveals mentalism's ideological commitment.

Basically, this ideological commitment is revealed in the maintenance of the status quo: A mentalist explanation does not allow for action upon-control over the phenomena which it purports to explain; it contributes to the maintenance of affairs as they are. This removal from action, which characterizes mentalism, is an outcome of the method used in the construction of the explanation and of the assumed nature of the events that are taken as causes.

A mentalist explanation is constructed by inferring "the cause" from the presence of its "effect"; therefore, the action it allows for is the prediction of a simultaneous occurrence of "two events":

Attitudes, opinions, or intelligence as states inferred from behavior are also useless in control, but they permit us to predict one kind of behavior from another kind known to be associated with it, presumably because of a common cause. (Skinner, 1974, p. 209)

This sort of explanation is possible because behavior, for the mentalist, is only secondary data, at best, a reflection of an internal world. The two alternative approaches-mentalism and radical behaviorism-are related to incompatible theories about human behavior. As opposed views, the dispute between them is a dispute of ideas, of conceptions of man, nature and knowledge. That is why, probably, Skinner never ceased to combat mentalism: Any manifestation of mentalism must be systematically and competently criticized, for it is through such challenges that a theory gains in credibility and strength, and not through the mere collection of facts. A consistent combat with mentalism necessarily implies the construction of an alternative approach.

The survival of the traditional conception of man as a free and responsible agent is an excellent example of the general principle that a theory is never overthrown by facts, but only by another theory. (Skinner, 1972, p. 312)

But it is necessary to consider that this is important because what is at stake is much more than ideas or conceptions; what is at stake is the future of real persons, of concrete behaviors.

I am equally concerned with practical consequences. The appeal to cognitive states and processes is a diversion which could well be responsible for much of our failure to solve our problems. We need to change our behavior and we can do so only by changing our physical and social environments. We choose the wrong path at the very start when we suppose that our goal is to change the "minds and hearts of men and women" rather than the world in which they live. (Skinner, 1978, p. 112)

If the mentalist is not interested in changing the social environments, and because it is impossible--even for the mentalist--to change "hearts and minds," what ends up being done by every mentalist is only an appeal to ethical and moral resources.

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One of the most tragic consequences of mentalism is dramatically illustrated by those who are earnestly concerned about the plight of the world today and who see no help except in a return to morality, ethics, or a sense of decency, as personal possessions. . . . But what is needed is a restoration of social environments in which people behave in ways called moral. (Skinner, 1974, p. 196)

Appealing to ethical or moral resources is worse than doing nothing because it looks like something new and humanitarian is being done, when, truly, all that is being done is to justify and maintain situations exactly as they are. It shapes a practice that is most harmful to any tentative change, because it presents itself as a description, as a set of prescriptions and technologies that could solve problems, when in reality it only prevents other options or alternatives

This diffidence in accepting control has had far-reaching consequences. It is doubtless to some extent responsible for the continued effort to analyze behavior into traits, abilities, factors, and so on. The end result of such program is a description of behavior in terms of aspect rather than process. It is a static rather than a dynamic description, and again it is primarily correlational rather than functional. No one doubts the value of investigating relations between ability and age, intellect and social-economic status, emotionality and body type, and so on. The results may have important engineering applications. But so far as the single individual is concerned, we do not then proceed to alter age, or body type, or social-economic status. Relations of this sort may make us more skillful in using the instruments of control already in our possession, but they do not help us to acquire new instruments. No matter how satisfactorily we may demonstrate the reality of abilities, traits, factors, and so on, we must admit that there is little we can do about them. They give an aspect description of behavior which may have a practical value in classifying or selecting the members of a group, but they do not carry us very far toward the control of the behavior of the individual. (Skinner, 1972, p. 300)

The authors of *The Bell Curve* identify correlations between the internal trait, or mental structure called intelligence and many social patterns of behavior, which can not be changed meaningfully by any environmental--cultural-action. Therefore, the only alternative proposed by the authors is that each individual should "find his valued place" in society (e.g., pp. 535-540). The authors voice little concern that such an outcome will maintain the whole structure of classes and the differences in accessibility to material and social goods. In fact, that such differences would tend to maintain themselves and would tend to repeat themselves over and over again is .only the proof of their suppositions.

The Conception of Man

Presenting a conception of science as a neutral endeavor, with a methodology based on statistical procedures that lead to correlational descriptions about an average individual, the authors of *The Bell Curve* little by little direct the reader to assume with them a given conception of man that is behind their analysis. Man is taken as having given structures, immutable (at least for a lifetime), responsible for his behavior: any changes-in social patterns of behavior, for example-are always something deceptive, caused by something else, inevitable, that has been there ever

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since--cognitive ability, for example. Any variability whatsoever is explained, not by the interactions of the individual with the environment, but by the genetic endowment (e.g., p. 117).

The authors of *The Bell Curve*, clearly state their conception of man and its implications:

Inequality of endowment, including intelligence is a reality. Trying to pretend that inequality does not really exist has led to disaster. Trying to eradicate inequality with artificially manufactured outcomes has led to disaster. It is time for America once again to try living with inequality as life is lived: understanding that each human being has strengths and weaknesses, qualities we admire and qualities we do not admire, competencies and incompetencies, assets and debts; that the success of each human life is not measured externally but internally, that of all the rewards we can confer on each other, the most precious is a place as a valued fellow citizen. (Hermstein & Murray, 1994, pp.551-552)

A radical behaviorist, on the other hand, recognizing that "the behavior of organisms is a single field in which both phylogeny and ontogeny must be taken into account" (Skinner, 1977, p. 1012), would assert that:

The expression "genetic endowment" is itself dangerous. Like reflexes and instincts it tends to acquire properties not warranted by the evidence and to begin to serve as a cause rather than as presenting the current effects of natural selection from which attention is then deflected. (Skinner, 1974, p. 36)

By comparing both assertions, an important difference is made clear: For the authors of *The Bell Curve*, the genetic endowment is the cause, for the behaviorist it is the product of a history. It is not without reason that Skinner insisted and was especially careful about the use of terms that refer to the structure of the organism, always emphasizing they refer to a product. It is also not without reason that Skinner (1989) chose the term history, instead of development or evolution.

Behavior is then often said to grow or develop. Develop originally meant to unfold, as one unfolds a letter. We assume that what we see was there from the start. Like pre-Darwinian evolution (where to evolve meant to unroll as one unrolled a scroll), developmentalism is a form of creationism. (Skinner, 1989, p. 16)

The differences do not end here, though. For the behaviorist the genetic endowment is not a simple product of nature, as if men passively were the object of nature turned into a more or less stable structure. The human genetic endowment itself, for the behaviorist, can be overcome by the social environment. In this sense, even such structures are submitted to culture, at least in some cases.

. . . civilization has supplied an unlimited number of examples of the suppression of the phylogenetic repertoire of the human species by learned behavior. In fact, it is often the very function of a culture to mask a genetic endowment. (Skinner, 1977, p. 1007)

The authors of *The Bell Curve* assume the genetic endowment as the main cause of behavior, and therefore they need to assume social interactions as the result

of structures refractory to change. Morality, ethics, and so on, are taken as natural products of natural causes: They are something a man has or has not, depending on given structures. Nothing is left to the scientist except to recognize that such traits are differently distributed on the population and to work for the maintenance of the natural order. No matter how old such conceptions may be, they are incompatible with a behaviorist assumption of the world. As Skinner says:

Meanwhile the development of the world to which a thinking person is exposed is overlooked. . . . In the absence of any adequate account of the development or growth of a person's exposure to an environment, the almost inevitable result is that important aspects of thinking are assigned to genetic endowments. (Skinner, 1974, p. 116)

And this seems to be exactly what happens to the authors of *The Bell Curve*. They assign to genetic causes many important social patterns and the very social organization of society. But they dress up the genetic cause in a new term—cognitive ability. And they give credibility to this new entity using complex statistical procedures and measures, bestowing them with apparent precision, accuracy and objectivity.

For a radical behaviorist there is here a double problem. First, many people, fascinated by the apparent accuracy, quantity, and complexity of the measurements, are convinced by the unsound conclusions. The second problem is that the debate focuses on the veracity of the data rather than on the discussions about the assumptions underlying such results.

What is wrong with all this is not what philosophers, psychologists, brain scientists, and computer scientists have found or will find; the error is the direction in it they are looking. No account of what is happening inside the human body, no matter how complete, will explain the origins of human behavior. What happens inside the body is not a beginning. By looking at how a clock is built we can explain why it keeps good time, but not why keeping time is important, or how the clock came to be built that way. We must ask the same questions about a person. Why do people do what they do, and why do the bodies that do it have the structures they have? We can trace a small part of human behavior, and a much larger part of the behavior of other species to natural selection and the evolution of the species, but the greater part of human behavior must be traced to contingencies of reinforcement, specially to the very complex social contingencies we call cultures. (Skinner, 1989, p. 24)

The Conception of Environment

Problems of this sort are hidden in *The Bell Curve* mainly because the authors do not make a straightforward denial of the role of the environment. On the contrary, they extensively discuss it: presenting and evaluating data about the possibility of cultural and social biases on cognitive tests, and presenting and evaluating data about various kinds of intervention programs (for example, programs with preschool children, with disadvantaged families, programs of adoption, pp. 391-410). However, all this is only to conclude that: Yes, tests are not biased by any cultural

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condition, and cognitive ability is not significantly changed by any environmental manipulation.

Nothing different could be expected, when man and environment are separated as two things completely apart. By assuming the behaving individual is determined by internal, genetic, ahistorical variables, any other determiners are considered as strange, as of little importance (if there is any), as superficial influences upon the individual. The conception of environment of the authors of *The Bell Curve* has, thus, two characteristics: The external environment becomes only the scenery where all action happens, and, at the same time, it is taken as a "complex melange of influences" (Herrnstein & Murray, 1994, p. 413), difficult to grasp and hardly of any significance.

As something static and ahistorical, the environment-as was the case with the individual-can only be statistically treated (e.g., pp. 298-299). Environmental differences are described in terms of means and standard deviations of environments-whatever these are-at which point the authors derive meaning. This perspective, of course, is so distant from a radical behaviorist one that we can make no use of it.

For a radical behaviorist "it is the environment that develops, not a mental or cognitive possession" (Skinner, 1978, p. 99), and among all the problems of a mentalist conception of man and of human behavior, "far more damaging to an affective analysis is the internalization of the environment" (Skinner, 1978, p. 104). In *The Bell Curve*, environment is transformed into "hearts and minds" that are beyond analysis.

For the radical behaviorist, as Jay Moore (1990) pointed out so properly, the definition of behavior as the interaction between organism and environment, and the election of behavior as the subject matter of interest, commits the scientist to a conception of environment that is in constant and necessary mutual dependence with the organism. This means that in radical behaviorist terms the conception of environment necessarily encompasses the traditional distinctions between internal and external, organic and environmental, phylogenic, ontogenic, and cultural; the distinction is only, to a certain extent, didactic.

In conclusion, we assert that there is a complete opposition between a radical behaviorist perspective and the one presented in *The Bell Curve*. Such opposition generates a dilemma which must be solved. We can bow to the "fetish of precision" and debate details of means and standard deviations and political proposals masked by the seeming neutrality of data, in which case there will be all the time in the world to debate and, very important, the assurance the world will continue more or less the same. Or we can stand up and undress *The Bell Curve* for what it is: a mentalist, innatist, and ideologically oriented set of proposals whose assumptions, analyses, and proposals are unsound, in which case we will be busy in the many years to come, trying to produce an alternative explanation so that we can possibly act to change the world-"if we still have time."

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