Human Behavior, Instinct, and Aggression

In his article "The human nature of human nature" (14 Apr. 1972, p. 123), Leon Eisenberg presents a misleading and fallacious argument with regard to behavior technology. He incorrectly associates behavior technology with ethology and proceeds to damn them both. He criticizes ethologists, most notably Konrad Lorenz, for unjustified extrapolations from nonhuman to human behavior; however, he then cites a political opinion favorable to Nazi racial theory expressed by Lorenz in 1940 and implies that Lorenz provided a pseudoscientific justification for Nazi marriage law and possibly for anti-Jewish atrocities (as though the Nazis might have desisted for lack of a scientific justification). Eisenberg thus associates Lorenz's scientific work with his political writing, a form of guilt by association. The further grouping together of behavioral technology with ethology and Lorenz seems to me an attack upon behavioral technology at something less than the highest level.

The charge that ". . . the false 'optimism' of the unsubstantiated claims made for behavioral engineering, claims that ignore biological variation and individual creativity, foreclose man's humanity" reflects a lack of information. Behavioral technology is the one approach in psychiatry, for example, that demands substantiating data derived from sound scientific methodology. That behavioral technology ignores variance among individuals is less than the whole truth. Admittedly, the shaping of similar basic behaviors, such as personal hygiene, among a group of regressed and chronically psychotic patients, may involve little individual tailoring of the treatment program. On the other hand, the treatment of nonpsychotic disorders in the out-patient setting demands a great deal of individual tailoring, more even than occurs in psychoanalytic treatment (*1*).

Because the basic principles of behavioral technology were described initially through animal experimentation, Eisenberg erroneously implies that behavioral engineering treats people as animals. The study of animal behavior in the laboratory, which he damns with faint praise, can be viewed more appropriately as affording clinicians a laboratory base for behavioral inquiry. Would Eisenberg have us study the effects of intense aversive control with human rather than animal subjects?

Eisenberg adopts an increasingly fashionable antiscientific position in his demand that scientific investigation be "in the service of man." Who is to decide what research is in the service of man? The inference is that research should receive some sort of prior, independent approval, undoubtedly through some government-controlled authority. Eisenberg advocates the abandonment of the principle "knowledge for its own sake" in favor of a politicization of scientific research. Paradoxically, in his warning us about the poison of tyranny, he provides as the antidote tyranny itself.

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Two of Leon Eisenberg's conclusions are clearly not arguable. Konrad Lorenz's justification of fascism *is* abominable, and what people believe *is* terribly important in the shaping of society.

Beyond that, Eisenberg seems to want it both ways. He inveighs against the extrapolation of data from one species to another, and then cites the song-learning patterns of birds as promising to ". . . provide important clues to the understanding of sound imitation in man." He rightly castigates Lorenz for the latter's analogy of domestication and civilization. But almost in the same breath he makes the unwarranted leap that recognition of aggressive tendencies as inherent in man of necessity leads to a "pessimism about men [which] serves to maintain the status quo. It is a luxury for the affluent, a sop to the guilt of the politically inactive . . . ," and so on.

The mass of evidence from history, archeology, religion, ethology, and, more personally, child rearing, indicates that both what we consider good (love) and bad (aggression) have deep evolutionary roots and homologies in other species. A primary function and responsibility of civilization is to recognize and use these drives to the general good. Therein lies the *human* nature of human nature, and I believe that *any* social system that does not take into account the dual nature of man is doomed.

Rousseau's noble savage was not murdered by civilized man—he never existed.

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Eisenberg's article illustrates a major weakness currently afflicting the social sciences—the mixture of personal convictions about how things ought to be with selected scientific "facts." He suggests that ethological views of human nature be suppressed because they are dangerous and makes the curious statement that "men and women must believe that mankind can become fully human in order for our species to attain its humanity." His portrayal of Lorenz as a Nazi racist by using discontinuous quotes falls short of acceptable standards of scientific objectivity. Critics of ethology recapitulate critics of Charles Darwin when they make emotional appeals. The spirit of Bishop Wilberforce lingers on; there is an antievolutionary, antigenetic bias in our culture and in the social sciences. Appeals to this bias are appeals to ignorance, dogma, and rejected theories.

Few scientists knowledgeable in biology would today argue that man's morphological characters are the result of natural selection but that his behaviors are not. The pathways from genes to behaviors may be frustratingly complicated, but they are not absent. It begs the question to shift interest in the evolution and genetics of behavior to development during the ontogeny of individuals, as Eisenberg and his principal referents have done, for it constrains knowledge to but half of what is interesting. The other half is in questions such as "How did it evolve? What was it derived from? What was or is its adaptive significance? If the character has some developmental flexibility, within what limits, and along what channels? And under what conditions does natural selection favor developmentally flexible, and inflexible, characters?" Emphasis upon developmental processes is a medical-technological approach, for rearing conditions are what the aspiring social reformer has potentially available for canalizing phenotypic characters along planned routes. A broader biological approach to understanding behavior would seem closer to science, and would presumably be of ultimately greater utility in ameliorating human problems insofar

as the wisdom of action increases with depth of knowledge.

Eisenberg's argument that cultural diversity proves man's developmental plasticity is an oft-repeated, offhand generalization which deserves more careful treatment. It loses its validity when we recognize that cultural differences are confounded with differences in genotypes and breeding systems. If male reproductive success in a tribe were correlated for long enough with aggressiveness in warfare, it is inconceivable that differential reproduction would not also result in an increase in the frequency of genes promoting the trait.

The Scopes trial, perhaps, is not really over. Biology is bound to come forth with views which offend our polite sensibilities. Do we suppress, distort, or assimilate them? The future should see some lively contests.

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Leon Eisenberg demolishes the idea of an aggressive instinct as an independent force with an insistence that the behavior involved can be explained only by an analysis of its "ontogenesis." He then tells us that "Man's intelligence permits him the conscious choice of goals and so differentiates him from the rest of animate existence." If the idea of an "aggressive instinct" won't stand up under criticism, will "intelligence" or "conscious choice of goals" fare any better under the same kind of analysis? What a man does, or says, or writes, or thinks, or chooses is all part of his behavior, the "ontogenesis" of which have to be looked for (an admittedly tough job) in the "neuromechanisms," which were determined by the genetic and environmental influences. When Eisenberg says "the behavior of men is not independent of the theories of human behavior that men adopt," he seems to forget that the adoption of these theories is a part of human behavior, and that his sentence tells us only that human behavior is not independent of human behavior. So while it is harmless and human to talk of "conscious choice," "involvement in the struggle for human betterment," "optimism about man's potential," and such, it would be better to eschew rigorous criticism while discussing these matters.

Eisenberg accepts the current myth that human behavior is changing rapidly and radically. Human behavior is so variable from place to place that to speak of radical change in time is meaningless. Man's behavior in eating, sleeping, reproducing, playing, dancing, singing, and above all talking has been variable over the millennia, but always within limits. Most people do the same old things in much the same old way. The age-old, universal game of conversation, which, as Eisenberg points out, is a very human thing, goes on and on, almost always dwelling on the repeated day-to-day concerns of the conversers. Whoever could find great differences between the topics of Rebecca and her friend at the well and those of suburban housewives over morning coffee, would indeed have a great eye for detail. On the more formal level, how many thousands of moral discourses of the kind Eisenberg has given us have seen the light of day since the ancients created the form?

The changes that have happened have not been in people but in the things they have made. A man can talk as long and aimlessly over a telephone as he can over a fence, can dance to tape recordings as well as to drums, and can throw atomic warheads as well as rocks. The things are changed. They are bigger and more powerful, and there is a chance that they may destroy us all, but they haven't changed us much.

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Eisenberg states that the President's intervention in the Calley case and the Attorney General's failure to prosecute the Kent State shootings sanction violence in our society. I agree that these were bad decisions, and I would like to make a few additions to this list: street gangs with proven records of murder, robbery, and extortion receiving generous grants from the government and from private foundations; the courts releasing convicted murderers because of trivial technicalities; and assorted muggers, rapists, and robbers remaining free on bail for months, if not years, only to be eventually released or placed on probation, because the victims had died, moved, or were too disgusted to play the game of endless continuances. It is clear that our terrible Establishment condones violence in more ways than one.

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Moss accuses me of invoking "guilt by association," Lockhard of distorting "by using discontinuous quotes." There is no evidence that either so much as troubled to read the cited publication before leveling serious charges. Moss states that I cite "a political opinion favorable to Nazi racial theory expressed by Lorenz in 1940" and that I imply that "Lorenz provided a pseudoscientific justification for Nazi marriage law and possibly for anti-Jewish atrocities (as though the Nazis might have desisted for lack of a scientific justification)." My very point was that those statements appeared in what purported to be a scientific article published in a professional journal, not in a speech in a Munich beer hall. Nor do I believe for a moment that the Nazis waited upon scientific justification. But does that warrant having provided it, in this case gratuitously, in the context of the paper on animal behavior? No single act of any individual citizen made Nazism possible; collectively, failure to oppose, willingness to acquiesce, as well as acts of support, all contributed to the holocaust. Lockhard's comment implies that I have misrepresented the 1940 Lorenz, but he offers no textual evidence to support the inference. Let him but consult the original. If anything, my translation failed to convey the connotations of a German text replete with party jargon, as pointed out to me by a West German colleague.

As for behavioral technology, critics within and without the field have raised serious questions about the consequences of its use, as well as its theoretical stance (*1*). The claims of behaviorism's prophets soar far beyond "substantiating data derived from sound scientific methodology." We are urged to consider designs for a culture when transfer from laboratory to an unrestrained environment has yet to be established; tautology is substituted for theory. I do not minimize the power of a methodology that can effectively shape the behavior of pigeons and people so long as they are, by entrapment *or* by agreement, in an experimental or a therapeutic laboratory. The ethical question remains—Who is to guard the guardians?

If Moss believes that science has ever been independent of its social context, his reading of the history of science differs markedly from mine. We are now engaged in vigorous debate on national science policy, on the ethics of scientific investigation, and on the consequences of the technological impera-

tive. As I see it, the only guarantee of relative freedom for scientific research is an enlightened public in a democratic society. My article was intended as a contribution to open discussion; nowhere in it is there the merest hint of the desirability of "some government-controlled authority," a proposal that is an anathema to my beliefs.

Lockhard compounds confusion by alleging that I suggest "that ethological views of human nature be suppressed because they are dangerous . . . ." Perhaps he confuses me with someone else; I wrote no such thing. Some extrapolations from ethological theories are in my opinion a hazard to public health (were my examples not persuasive?), but I am firmly convinced that the suppression of opinions, including Lockhard's distortions of my views, is even more hazardous to the body politic. As a convinced evolutionist, the California Board of Education notwithstanding, and as a physician engaged in clinical genetic research, I am wryly amused to find the spirit of Bishop Wilberforce and the ghost of William Jennings Bryan foisted upon me. Lockhard and I agree on one point: differential reproduction is a central concept in evolutionary theory. But note what Darwin said on this matter: "I use this term [struggle for existence] in a large and metaphorical sense, including dependence of one being on another and including (which is more important) not only the life of the individual but success in leaving progeny" (*2*). Lockhard's hypothesis that male reproductive success is correlated with aggressiveness in warfare raises empirical as well as theoretical issues beyond brief reply. Some mammals, like elephant seals, exhibit mating patterns such that 85 percent of the cows may be inseminated by the most aggressive 4 percent of the bulls, leaving their more timorous brethren unable to pass on their genes (*3*); but in many primates subdominant males have access to females almost equal to that of the alpha male; strict hierarchical structures are as often absent as they are present in primate social groups (*4*). More to the point, theoretical models for the transmission of genes for "altruistic" as well as "selfish" behaviors can be constructed (*5*). The key question remains—What factors have in fact contributed most to "success in leaving progeny" in the long evolutionary trail from hominids to contemporary *Homo sapiens*? We need detailed studies in genetics, comparative behavior, and anthropology before informed hypotheses can be put forward.

Clifton is kinder to me but burdens me with the defense of Rousseau's noble savage. I demur. I thought that I had made it clear that ". . . the argument for the pacific character of natural man, uncorrupted by the social order, is inadmissible . . . men are by nature neither aggressive nor peaceful, but rather are fashioned into one or another as the result of a complex interaction between . . . biological givens and the shaping influences of . . . environment. . . ." (*6*).

Buckbee finds yet another way of misreading what I have written. He has me accepting the myth "that human behavior is changing rapidly and radically" whereas he adheres to the nonmyth that "changes that have happened have not been in people but in the things they have made." Well, I am worried about the things we have made and what these things do to us. I stressed the "task of developing adaptive attributes . . . when radically changed behaviors are required within an *individual's* lifetime rather than over the history of a people." We both have eyes but one of us sees not. Man may still be the "same" animal he ever was, but he seems to me to be having a hell of a time coping with a world that he changes faster than his imagination can anticipate.

I can only guess what Bezkorovainy's remarks have to do with my article; I did not and do not advocate the crimes he deplores. He is outraged by the "trivial technicalities" that allow murderers, robbers, muggers, and rapists to roam free. The "technicalities" which have led to judicial reversals include such constitutional "trivia" as the right to a speedy and public trial by an impartial jury, to be informed of the nature and cause of the accusation, to be confronted by witnesses and to have compulsary process for obtaining them, to have assistance of counsel for defense, and to be protected against excessive bail, excessive fines, and cruel and unusual punishment (Amendments VI and VII to the Constitution of the United States). The Soviet government reports much less difficulty in coping with the enumerated crimes. Shall we import their expeditious system for dealing with deviants of all sorts, a system unhampered by legal trivia? Allegiance to the Bill of Rights is not the advocacy of criminality.

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Population Density

The study by Galle, Gove, and McPherson, "Population density and pathology: What are the relations for man?" (7 Apr. 1972, p. 23), needs a good dose of humanism. While humans might become convinced that they are living in impacted areas, and that it is bad to be in that predicament, it remains to be proved that such is necessarily the case. There are many cities of the world where the population is more dense than it is in American cities.

Having lived in such places, I can vouch that the negative results of high density as reported by Galle and his colleagues are often lacking. In this connection, I know of three languages (Spanish, French, and Italian) which do not even have words or expressions for the English notion of "privacy," the deprivation of which is supposed to lead to "irritability, weariness, and withdrawal." In fact, in many cultures, excessive wish to be alone can be interpreted as a sign of alienation and antisocialism.

It appears that, while density of population can be quantified, its relationship to social pathologies must be established on other grounds. My own suspicions are that this relationship, where it exists, is culture-bound and dependent on the value system of a given population. I am reminded of the words of one ghetto-dweller who said, "Dispair is when you hear on the radio that where you live is a slum—and you always thought it was home."

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