

B. F. SKINNER: On behalf of the future

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It was characteristic of Fred Skinner that even as he faced his own death, he was concerned about the problems to be faced by others in the future. During my last visit, just before Christmas in 1989, he talked about his progress on his essay, "To Know the Future" (1990), which he was preparing for a volume of reflections by eminent men and women. Our conversation ranged over a number of social issues, and -- like his essay -- ended on a note of cautious optimism. As such, it was quite unlike the pessimistic tone of his talk on "Why we do not act to save our world" (1987).

He had, of course, been concerned for many years about the problem of knowing and acting on behalf of the future. In *Beyond Freedom and Dignity* (1971), he discussed the global problems of overpopulation, resource depletion, environmental pollution, and the possibility of a nuclear holocaust, and considered ways in which the cultures of the world could bring these terrifying aspects of the future to bear on the present behavior of their members.

In his final article, 20 years later, he related these concerns to the limits of scientific knowledge: "We may suffer overcrowding, shortages, and pollution, but they are the present; they are bits of the future that are we have already reached. Only through science do we know how serious they will eventually become, and only through science are we aware of current dangers such as those of solar and nuclear radiation. But science is almost wholly known by description -- indeed, the less reliable kind called prediction." (1990, p. 105). Science can also tell us what to do to alter the trends that are leading toward this frightening future, he said, but physics and biology and their associated technologies cannot tell us how to induce people to do these things. To return to *Beyond Freedom and Dignity*: "What we need is a technology of behavior. We could solve our problems quickly enough if we could adjust the growth of the world's population as precisely as we adjust the course of a spaceship, or improve agriculture and industry with some of the confidence with which we accelerate high-energy particles, or move toward a peaceful world with something like the steady progress with which physics has approached absolute zero (even though both presumably remain out of reach). But a behavioral technology comparable in power and precision to physical and biological technology is lacking" (1971, p. 5).

AUTHOR'S NOTE:

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In fact, twenty years after Skinner wrote this well-known passage, we do have a behavioral technology that can affect the future. In *The Behavior of Organisms* (1938), Skinner laid its foundations by emphasizing behavior as a subject matter in its own right, distinguishing operant from respondent behavior, and developing an experimental preparation -- the rat, the lever, the chamber -- for the quantitative analysis of operant behavior in relation to the contingencies of reinforcement. In *Verbal Behavior* (1957) he showed how the distinctively human use of language could be analyzed within the same conceptual framework as the behavior of nonverbal organisms. He noted the importance of verbal behavior as a way to transmit cultural contingencies via rules, and distinguished between contingency-shaped and rule-governed behavior in a way that is analogous to the philosophical distinction between "knowledge by acquaintance" and "knowledge by description" (Skinner, 1969). His greatest intellectual achievement, in my view, was to set forth a consistent selectionist perspective that treated individual behavior and cultural practices in relation to reinforcement contingencies in the same way as evolutionary selection (Skinner, 1981). And finally, of course, he applied these ideas to everything from educational reform and the design of cultures to the enjoyment of old age. The influence of these applications on Western culture is now widespread, and it may be that this accounts for the optimism of his last months.

For Skinner, the development and application of the science of behavior required the abolition of "autonomous man" -- but abolishing this pervasive (if fictional) character, as he attempted in *Beyond Freedom and Dignity*, put him into conflict with the intellectual tradition of the West, and led many otherwise thoughtful people to dismiss his work. It is ironic that such a skillful shaper of rats' lever-pressing in the chamber and humans' conceptual mastery in programmed instruction did not attempt to produce understanding and endorsement of the science of behavior through selective reinforcement of successive approximations in the culture. If anything, his writing had the opposite effect. For example, in *Beyond Freedom and Dignity*, he repeatedly disparaged the values of personal initiation and worth that accompany the "literatures of freedom and dignity." Specifically, he argued that although the literature of freedom has been important in changing human practices "by emphasizing the aversive conditions under which people live, perhaps by contrasting them with conditions in a freer world. ... and identifying those from whom one is to escape or those whose power is to be weakened through attack" (1971, p. 30), it has traditionally defined its task in terms of states of mind and feelings, and cannot be effective in the long run because "Freedom is a matter of contingencies of reinforcement, not of the feelings the contingencies generate." (1971, pp. 37-38).

Skinner's analysis of freedom may have been right in a scientific sense, but it does not make an effective rallying cry. A literature that appeals to fundamental values of liberty, equality, justice, inalienable rights, the dignity of the individual, and the community of humankind is far likelier to generate broad-based action than

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an analysis of contingencies. The work of Vaclav Havel, Andrei Sakharov, and countless others shows that the literature of freedom can lead to astonishing and irreversible changes of the sort now unfolding in eastern Europe and the (former) Soviet Union. Behavior analysts who are concerned about social justice should celebrate this literature rather than disparage its traditional view of humanity.

The last two decades have seen the rise of a new literature -- I will call it the literature of survival and wellbeing -- that addresses the global problems of the future. Jonathan Schell and *The Fate of the Earth* (1982), E. F. Schumacher and *Small is Beautiful* (1973), Bill McKibben and *The End of Nature* (1989), the peace movement, the green movement, the deep ecology movement -- all point to what science and technology tell us about the future, and appeal to "autonomous man" to change his values to prevent calamity. In my opinion, this literature can do exactly what the literature of freedom and dignity has done: Emphasize the increasingly aversive conditions under which humankind lives, and target the culprits -- industries that seek short-term profits at the cost of long-term general wellbeing, religions that encourage overpopulation, governments that build weapons of mass destruction in pursuit of "national security," and ultimately ourselves as avid consumers and complacent citizens. Behavior analysts should not criticize or stand aloof from this literature -- rather, we should seek areas of agreement, offer the technology of behavior, and reinforce steps in the direction of survival and wellbeing.

Skinner's own work can help us in this. Consider *Walden Two*, his thought experiment in cultural design, and probably his most widely known book. Here, he offered a communal society based on positive reinforcement in which people could live happy, productive, and creative lives without excessive consumption. The ideal of *Walden Two* can be promoted for its solutions to problems of productive labor, the allocation of resources, education, and social life that are valid *whether or not* one subscribes to the behavioral perspective that informs the community. And note that it was not necessary for its members to abandon their traditional notions of personal freedom and dignity in order to join and participate happily and productively in the life of the community. One could even argue the converse -- that the notions of personal freedom and dignity may wither away as a result, rather than as a prerequisite, of membership in *Walden Two*.

The same sort of approach can be taken in relation to global problems. For example, Skinner was familiar with Schumacher's *Small is Beautiful*, and cited its treatment of the problems of bigness and an alternative technology of intermediate scale in his preface to the reissue of *Walden Two* (1976) despite such statements as "Wisdom can be found only inside oneself ... after liberating oneself from such masters as greed and envy" (1973, p. 35). Schumacher also discusses "Buddhist economics," according to which the essence of civilization is not the multiplication of wants but the purification of the spirit, and living simply, nonviolently, and harmoniously with the natural world. These are hardly behavioral prescriptions.

But at the same time Schumacher discusses the contingencies that operate within small-scale as opposed to large-scale economic organizations, with concrete examples of how a small-scale organization can make its immediate self-interest coincide with the long-term interests of all, both within the organization and in its impact on global resources. There are messages here for a future-oriented performance management.

Schumacher could be construed as a forerunner of the "deep ecology" movement, which calls on people in the industrialized West to replace the goals of consumerism and economic growth with humble living based on "elegantly simple" material needs. The deep ecology literature includes some remarkable statements that are a bit hard for a behavior analyst to take without laughing and dismissing its goals. For example, in *Deep Ecology* (1985), Devall and Sessions say that its philosophy can "satisfy our deepest yearnings: faith and trust in our most basic institutions; courage to take direct action; joyous confidence to dance with sensuous harmonies discovered through spontaneous, playful intercourse with the rhythms of our bodies, the rhythms of flowing waters..." (1985, p. 7). But the deep ecology movement also asks some tough questions, such as: How much is enough for the affluent? And: How can the poor of the earth achieve decent lives without further taxing the world's resources? On the first question, the movement's recommendations for humble living are entirely in keeping with Skinner's own statements in "What is Wrong With Daily Life in the Western World?" (1987) about the destructive consequences of affluence. Surely there can be some convergence of behavior analysis and deep ecology as the affluent nations confront the need for the redistribution of wealth in a limited world.

Finally, consider the continuing -- indeed, never-ending -- problem of nuclear weapons and their capacity for universal destruction. Jonathan Schell's *The Fate of the Earth* was probably the most important book of the last decade in arousing effective public concern about the nuclear threat, but autonomous man is alive and well in its pages. I quote from Schell: "We want to maintain the independence of each person's mind and will -- for our liberty consists in this (1982, p. 178)" -- but in doing so we must not destroy the common world of human culture in which we all live. This common world is understood through language -- and "standing behind that language is that of which language is expressive -- our reason, our psyche, our will, and our spirit" (1982, p. 120). Although he consistently upholds the traditional humanistic values of freedom and dignity, Schell argues that our very existence as individual persons who are aware of their own deaths and search for meaning in their lives depends on this common world which transcends our life-span into past and future alike. Schell's basic notions here are very close to behavioral conceptions of the "self" as a product of the verbal community, and the continuity of our human culture as the ultimate source of value. So we can easily make common cause with Schell and the movement he did so much to inspire -- and we may need to, because even though the nuclear arms race between the

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superpowers has ended, its technology is being disseminated ever more widely and its threat to human culture will not soon abate.

It appears that the literature of survival and wellbeing is now having the same sort of effect as the literature of freedom and dignity. Scarcely a day passes without a news item that deals with public reactions to problems such as habitat loss, pollution, depletion of the ozone layer, or global warming. As Skinner wrote, "Scientists are discovering more and more about the future consequences of what we are doing. We see teachers, writers, and the media making what science discovers more and more widely known ... [leading to a] change in 'culture' as distinct from government, industry, and religion. It consists of the dissemination of what is known about the future (necessarily by description) to large numbers of people and the organization of protests against governments, industries, and religions that do not adjust their practices to what is known. Giving these institutions current reasons to change their practices could be said to convert knowledge of the future by description into knowledge by acquaintance. If what can be known about the future thus becomes part of the history of enough people, the earth may last a longer time" (1990, p. 105).

This general movement is quite similar to that inspired by the literatures of freedom and dignity during the past 300 years, and it is making progress without adopting or even acknowledging the scientific view of man. In my view, we behavior analysts should join this movement and contribute our skills, even though its view of human nature may be antithetical to our own. Otherwise, we will remain isolated in our purity, the movement will be less likely to succeed, and our own futures will be endangered.

Finally, at another level, the scientific view of human nature that Skinner espoused can be set forth in a way that may actually be welcomed by the ethically and spiritually inspired movement for survival and wellbeing. According to Skinner's behavioral philosophy, individual action derives from genetics and environment, and the private life of thinking and feeling is continuous with the public life of speaking and acting. The private individual is therefore continuous with the natural world, and just as aspects of the world affect behavior, so behavior in turn affects the world (see Skinner, 1957, p. 1). This is essentially a holistic, ecological vision of interaction between organism and environment. It is basic to our science, and it can be expressed in ways that are entirely compatible with the humanistic vision of movements for peace, social justice, and humility in human affairs. If we behavior analysts can restate our scientific perspective in this way, we may be more effective in using our science and the application of its principles to build the culture of the future.

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