

## COMMENTARIES ON “THE DESIGN OF CULTURES”

### ON THE DESIGN OF CULTURES: 1961 AND 2001

In *The Design of Cultures*, Skinner suggested that “there is considerable advantage in considering ...governmental, religious, economic, educational, and therapeutic institutions...simply as behavioral technologies” (Skinner, 1999, p. 47). In this article, Skinner called for bringing scientific principles of behavior to bear on the design of cultural practices that are likely to enhance the survival of a culture.

In the wake of the horrifying events of September 11, it is evident that Skinner’s society has neglected at its own peril the opportunity to systematically design and maintain cultural practices that enhance its own survival. And as Skinner has said elsewhere “If your culture has not convinced you [to work on its behalf], so much the worse for that culture” (Skinner, 1969, p. 40).

It is also evident, however, that knowledge of behavioral principles is not enough to insure good design or adequate maintenance of cultural practices with survival-enhancing outcomes. One reason this is true is that behavioral principles are content-free. Although derived from empirically observed events such as tone presentations, lever presses and food deliveries, the principles are not “about” those particulars. In fact they are not “about” any particulars. Like all scientific principles or process laws, their terms specify classes that are “spatiotemporally unrestricted” (Hull, 1989, p. 92). Specifically, behavioral principles entail terms that specify functional relations between the classes called “operants” or “respondents” and the classes of environmental events designated as “consequences (reinforcing or punishing)”, “discriminative stimuli”, “establishing operations”, conditioned stimuli”, etc. – whatever the formal properties of those events (cf. Glenn & Field, 1994; Michael, 1983). To solve real-world problems, the principles must be used to guide observation and measurement of behavioral and environmental particulars and, conversely, these particulars must be analyzed and manipulated in terms of the principles to produce particular outcomes.

A second reason that knowledge of behavioral principles is insufficient to accomplish the task of cultural design is that cultural-level principles must also be considered in designing the behavioral technologies that constitute cultural practices. To ignore the principle of “infrastructural determinism” (Harris, 1979, p. 58) is to invite failure of cultural design. In addition, cultural units may enter into cultural level contingencies that subsume the behavioral contingencies described by behavioral principles (Glenn, 1988). This is true even though cultural entities may be viewed as composed of behavioral contingencies and the products of behavior *and nothing more* (Glenn, in press).

Scientific solutions to the complex human problems facing the world at the dawn of the 21<sup>st</sup> century require the integration of knowledge from many different areas. Historians, ethnographers, and journalists as well as some sociologists, political scientists, and psychologists can provide information about the particulars

of behavior and environment to which behavior analysts often do not have direct access. Behavior analysts can provide the conceptual framework that allows interpretation of those events in terms of behavioral, and possibly cultural, contingencies.

Although solutions based on such integration of knowledge seem feasible in principle, they are hard to develop in practice, partly because the behavioral and cultural principles that could provide a conceptual framework for integrating much of the cumulative knowledge of the content specialists are not understood by those specialists. Although behavioral principles have been demonstrated repeatedly as highly useful in bringing about socially desired behavior change, behavior analysts are rarely represented in think tanks or other organizations seeking to understand and suggest solutions to serious social problems. This may be in equal measure due to the failure of behavior analysts actively to seek knowledge available from other disciplines and to the failure of those other specialists to make use of behavior analysts' knowledge of behavioral processes. Never before has the need been greater for an interdisciplinary approach to the design of cultures and cultural practices.

Sigrid S. Glenn

*Department of Behavior Analysis  
University of North Texas*

## REFERENCES

- Glenn, S. S. (1988). Contingencies and metacontingencies. Toward a synthesis of behavior analysis and cultural materialism. *The Behavior Analyst*, 11, 161-179.
- Glenn, S. S. (in press). Operant contingencies and the origin of cultures. In P. N. Chase and K. A. Lattal (Eds). *Theory and philosophy in behavior analysis*. Norwell, MA: Kluwer Academic Publishers.
- Glenn, S. S. & Field, D. P. (1994). Functions of the environment in behavioral evolution. *The Behavior Analyst*, 17, 241-259.
- Harris, M. (1979). *Cultural materialism: The struggle for a science of culture*. New York: Random House.
- Hull, D. L. (1989). Individuality and selection. In D. L. Hull, *The metaphysics of evolution*. Albany, NY: State University of New York Press. Originally published in *Annual Review of Ecology and Systematics*, 1980, 11, 311-32.
- Michael, J. L. (1983). Evocative and repertoire-altering effects of an environmental event. *The Analysis of Verbal Behavior*, 2, 19-21.
- Skinner, B. F. (1999). The design of cultures. In *Cumulative Record* (definitive edition) (pp. 39-50). Acton, MA: Copley Publishing Group. Originally published in *Daedalus*, 1961, Summer.
- Skinner, B. F. (1969). *Contingencies of reinforcement: A theoretical analysis*. New York: Appleton-Century-Crofts.

### GENETIC TRANSMISSION IN EVOLUTIONARY BIOLOGY AND THE THREE-TERM CONTINGENCY IN SOCIAL PSYCHOLOGY

In his book *Institutional Behavior*, Floyd Allport was to my knowledge the first to point out that all social movements and institutions are aggregates of the concrete behaviors of their constituent units, individual human beings. I think it was in part this book's emphasis on the individual organism as an analytic unit that led me to become a psychologist.

Allport's insight is also important to keep in mind at the applied level in these times of terror and counter-terror, when so many of us seem to be thinking in terms of broad categories like Christian, Moslem, American, Arab, Jew, Afghan, Pakistani, etc., as if these were homogeneous blocks of people, all acting in unison. A good rule is never to treat an individual solely, or even primarily, on the basis of his or her categorization within a particular group (unless the category is itself specified by a relatively narrow behavioral definition.)

Skinner carried this thinking a step further. Long before the publication of such popular accounts as Dawkins' *The Selfish Gene* and *River Out of Eden*, he had recognized the parallel between genetic transmission in evolutionary biology and the three-term contingency of stimulus, response, and consequence in social psychology.

In more recent times, the integrative power of the gene in accounting for the evolution of both form and function in a myriad - presumably all - of living creatures, from microbes to human beings, has become commonplace knowledge among the scientifically informed. Just as the rules of inheritance adapt the organism—without “Intelligent Design”—to the slowly changing physical environment, so the rules of behavior adapt the human organism, among others, to its more rapidly fluctuating social environment. The result is functional, up to a point, and has led to the evolution of a variety of cultures that have survived to the present time. But in biology “We are...plagued with dysfunctional design features from head to toe, some resulting from evolutionary changes that may have been quite adaptive when they first occurred, often in the early stages of vertebrate or mammalian evolution” (Williams, p. 134). Mammalian examples are the intertwining of the alimentary and digestive systems or the reproductive and excretory systems, which often require medical intervention. Similarly, in the evolution of human society from the equivalent of the primordial ooze, many mistakes have been made, and these mistakes must be corrected to yield an intelligent design.

James A. Dinsmoor  
*Indiana University*

### REFERENCES

- Allport, Floyd. (1933). *Institutional behavior*. Chapel Hill: University of North Carolina Press.

Dawkins, Richard (1976). *The selfish gene*. New York: Oxford University Press.  
Dawkins, Richard (1995). *River out of Eden*. New York: Basic Books.  
Williams, George C. (1997). *The pony fish's glow*. New York: Basic Books.

### THE ROLE OF THE BEHAVIOR SCIENTIST IN THE DESIGN OF COUNTER CULTURE

Skinner's analysis of the contingencies of reinforcement that lead to the establishment of cultural practices, provides a good opportunity to consider power relations between dominant and dominated groups in society. He points out how the social variables that compose a given culture, shape its members' behavior into conformity with many norms and definitions of what are acceptable and unacceptable behaviors, which in turn perpetuates the dominant culture. In fact, Skinner recognizes the important role that governmental, religious, economic, educational and even therapeutic institutions play in controlling group members' behaviors. This does not mean that the culture cannot change, on the contrary. He recognizes that the system may not only be changed by outsiders—either by force or by persuasion, but also by insiders through counter-controlling actions. The issue of counter-control is very relevant when considering the relationships between various groups in society and between a dominant culture and the cultures of those who are dominated.

Skinner's view on counter-control highlights the role of the behavior scientist in facilitating or promoting social and/or cultural change. This point defines the essence of our identity as behaviorists for social action. At the time Skinner wrote this manuscript, our nation was racially segregated—especially in the south--and the civil rights movement striving for the equal rights of blacks in this country was under attack. In September, 1967, Martin Luther King Jr., spoke at the APA's Annual Convention in Washington D. C. His address was a call to psychologists, as "friends of good will," for action in support of the civil rights movement. King recognized that psychologists had an important supporting role as "members of the academic community, who are constantly writing about and dealing with the problems we face" (p. 1). In his address, King formulates three specific ways in which social scientists could help the civil rights movement. First, *searching for some answers to address the problems of Black leadership*. Specifically, he worries about the profound class division among poor and middle class blacks. He hopes that "social science should be able to suggest effective mechanisms to create a wholesome black unity and a sense of peoplehood, while the process of integration proceeds" (p. 7). Second, *he asks for a scientific study of political action*. He acknowledges that the movement has placed all its effort over the last 20 years on getting Blacks their right to vote. However, some social scientists (e.g., Wilson, 1965, cited by King) were warning, "the vote in itself might not be able to unlock the key to racial inequality because of the structure of American politics and the nature of the Black community" (p. 7). The third area of study concerns *psychological and ideological changes in Black people*. With their increased

## COMMENTATORS

awareness and critical consciousness, Blacks need science to understand the direction they are going. He wonders if “Blacks are moving away, not from integration, but from the society which made it a problem in the first place” (p. 8).

I believe Martin Luther King Jr.’s address is a great call for involvement in counter-control efforts. His premise was that we could indeed help oppressed or dominated groups and cultures in their struggle for liberation. Did we hear his call?

Fabricio E. Balcazar, Ph. D.  
*University of Illinois at Chicago*

## REFERENCE

King, Jr., M. L. (1999). The Role of the Behavioral Scientist in the Civil Rights Movement. *APA Monitor Online*, 30(1), 1-11 ([www.apa.org/monitor/jan99/king.html](http://www.apa.org/monitor/jan99/king.html))

### **A TOTAL SAFETY CULTURE: FROM A CORPORATE ACHIEVEMENT TO A GLOBAL VISION**

For two decades I have been talking and writing about a Total Safety Culture (TSC) as an ideal for organizations to work toward. Years ago I defined a TSC as an environmental setting where “everyone feels responsible for safety and pursues it on a daily basis, going beyond ‘the call of duty’ to identify unsafe conditions and behaviors, and intervene to correct them...(in a TSC) people ‘actively care’ on a continuous basis for safety...(which) is not a priority that can be shifted depending on situational demands, rather safety is a value linked with all other situational priorities” (Geller, 1994, p. 18).

For more than a decade, my colleagues at Safety Performance Solutions have been teaching and coaching corporate managers and line workers principles and procedures derived from applied behavior analysis that can facilitate the achievement of a TSC. In doing so, we have seen several corporations reach and sustain the enviable TSC status. Today, this approach to preventing occupational injuries is termed behavior-based or behavioral safety and is being disseminated worldwide as a proven, cost-effective way to significantly improve an organization’s safety performance. The techniques of behavioral safety are detailed in textbooks (e.g., Geller, 2001; Krause, Hidley, & Hodson, 1996; McSween, 1995; Sulzer-Azaroff, 1998), a video program (Geller & Glaser, 1996), facilitator guides (Geller, 1998), and an audiotape series (Geller & Glaser, 1997). All of these include specific strategies for observing and analyzing ongoing behavior and environmental conditions, and for intervening to support safe behavior and correct or eliminate at-risk behavior.

The heartrending and frightening aftermath of the heinous attacks on the World Trade Center and the Pentagon gives the TSC concept global relevance. Indeed, the behavioral safety strategies applied in organizations worldwide to develop an interdependent approach to injury prevention are applicable for

preventing negative consequences from terrorism. Those thousands of safety leaders who have applied principles of behavior analysis to achieve a TSC in their corporations need to teach and direct adaptations for their neighborhoods and communities.

Ironically, safety consultants have been using the concept of “culture” to demean behavior-based safety (e.g., Simon, 2001; Smith, 1995; Topf, 1997, 2001). Their message is essentially that behavioral safety is narrow, and changing an organizational culture requires much more than behavior change. This premise is consistent with the various non-behavioral terms used in the literature to define culture, including shared beliefs, attitudes, norms, values, and expectancies (e.g., Cooke & Rousseau, 1988; Cooper, 2000; Schein, 1990).

Skinner’s classic discussion of “The Design of Cultures” brings us back to an operational definition of culture that is amenable to direct and systematic influence. Internal person states like beliefs, attitudes, and expectancies, certainly affect and reflect a culture, but the scientific study of culture requires the systematic observation of behavior as a function of manipulated variables. And, as Skinner elegantly explains, the three-term contingency is the model of choice for understanding why various cultural practices exist, and for deriving intervention techniques to change such practices, whether the context is an organization, a community, or an entire nation. Skinner also delineates problems with using punishment to control cultural practices, a special concern at the time of this writing as the U.S. initiates retaliatory strikes against the Taliban in Afghanistan. But of course this tragic “war” was motivated “by picturing a future in which the world is made safe for democracy” (Skinner, 1961, p. 45).

Skinner naturally includes verbal behavior as a cultural practice which determines the design and redesign of a culture. In fact, interpersonal conversation defines culture and is key to changing a culture (Krisco, 1997). So if we want to influence culture, whether at the family, neighborhood, organizational, or global level, we need to transfer the basic principles and implications of Skinner’s scholarship into our daily interpersonal conversations. The right kind of communication reduces interpersonal conflict, builds trust, enables breakthroughs in problem solving, and demonstrates actively caring. There’s never been a more urgent need in all cultures worldwide to engage in the right kind of interpersonal verbal behavior.

E. Scott Geller  
*Center for Applied Behavior Systems*  
*Department of Psychology*  
*Virginia Polytechnic Institute and State University*

## REFERENCES

- Cooke, R. A., & Rousseau, D. M. (1988). Behavioral norms and expectations: A quantitative approach to the assessment of organizational culture. *Group and Organization Studies*, 13, 245-273.
- Cooper, M. D. (2000). Towards a model of safety culture. *Safety Science*, 36, 111-136.

## COMMENTATORS

- Geller, E. S. (1994). Ten principles for achieving a Total Safety Culture. *Professional Safety*, 39(9), 18-24.
- Geller, E. S. (1998). *Understanding behavior-based safety: Step-by-step methods to improve your workplace* (Revised Edition). Neenah, WI: J. J. Keller & Associates, Inc.
- Geller, E. S. (1991). *The psychology of safety handbook*. Boca Raton, FL: CRC Press.
- Geller, E. S., & Glaser, H. (1996). *Actively caring for safety*. Dallas, TX: Wescott Communications.
- Geller, E. S., & Glaser, H. (1997). *Actively caring for safety: The psychology of injury prevention*. Blacksburg, VA: Make-A-Difference, Inc. and Safety Performance Solutions.
- Krause, T. R., Hidley, J. H., & Hodson, S. J. (1996). *The behavior-based safety process: Managing improvement for an injury-free culture* (Second Edition). New York: Van Nostrand Reinhold.
- Krisco, K. H. (1997). *Leadership and the art of conversation*. Rocklin, CA: Prima Publishing.
- McSweeney, T. E. (1995). *The values-based safety process: Improving your safety culture with a behavioral approach*. New York: Van Nostrand Reinhold.
- Schein, E. (1990). Organizational culture. *American Psychologist*, 45, 109-119.
- Simon, S. (2001). Implementing culture change – Three strategies. *Proceedings of the ASSE Behavioral Safety Symposium: The Next Step* (pp. 135-140). Orlando, FL.
- Skinner, B. F. (1961). The design of cultures. *Daedalus*, Summer, 39-50.
- Smith, T. A. (1995). Viewpoint: Rebutting behaviorism. *Industrial Safety & Hygiene News*, 40(3), p. 40.
- Sulzer-Azaroff, B. (1998). *Who killed my daddy? A behavioral safety fable*. Cambridge, MA: Cambridge Center for Behavioral Studies.
- Topf, M. (1997). Take the holistic approach. *Industrial Safety & Hygiene News*, 31(10), p. 38.
- Topf, M. D. (2001). Behavioral? Holistic? Forget what you call it. Here's what works! *Proceedings of the ASSE Behavioral Safety Symposium: The Next Step* (pp. 85-94). Orlando, FL.

## B. F. SKINNER'S CONTRIBUTIONS TO CULTURAL DESIGN AND SOCIAL POLICY

Thirty years ago, behaviorism made psychology essentially irrelevant to the study of culture. (DiMaggio, 1997, p. 265).

One of the strengths of the behavior analytic position is that it possesses one of the characteristics of a genuinely useful theory—it provides for comprehensive accounts for a very wide range of phenomena. It is not specifically a theory about individual comportment, the activities of social groupings, of organizational behavior, of community action, or of social change. Rather it is capable, with varying degrees of specificity and empirical support, of developing conceptual explanations for *all* human phenomena, micro through macro. Few theories possess this near universal applicability. Although we most commonly associate

(pun intended) Skinner with accounts of individual actions, he was indeed a most prolific writer in terms of extending behavior analysis to cultural growth and development, and to the design of societies. His utopian community *Walden II* (1948) is perhaps the earliest example of such an extrapolation. Midcareer, right around the time DiMaggio (in the prefatory quote) dismisses the relevance of behaviorism to the development of a science of culture, Skinner produced thought provoking essays titled *The Design of Cultures* (1961), *Contingencies of Reinforcement in the Design of a Culture* (1966), *Utopia Through the Control of Human Behavior* (1967), *Vision of Utopia* (1967), and *The Design of Experimental Communities* (1968). Late in life he edited a collection of related essays into a book titled *Reflections on Behaviorism and Society* (1978).

Others have accepted the behavior analytic baton of cultural analysis and design (e.g., see Lamal's *Behavioral Analysis of Societies and Cultural Practices*, 1991; *Cultural Contingencies: Behavior Analytic Perspectives on Cultural Practices*, 1997). Quite apart from its major and continuing role in psychology, the applications of behavior analysis within related disciplines such as public administration (Presthus, 1965), sociology (Burgess & Bushnell, 1969), economics (Hursh, 1984), political science (Kariel, 1967; 1979), anthropology (Malott, 1988), and social work (Thyer, 1999) have been profound.

To be sure, the majority of behavior analytic writings on the topic of cultural design have been conceptual rather than experimental. The reasons are obvious. However, the research methodology pioneered by Skinner, called the experimental analysis of behavior, has assumed an important role in empirical quasi- and experimental research into the outcomes of social and public policy. In this approach, a single unit of analysis is chosen (a given behavior performed by an individual, or a larger scale dependent variable such as rates of particular crimes, number of premature births, accidents, etc.) and repeatedly measured over time, before and after the introduction of some new policy or law. These data are displayed in the form of line graphs, with the pre-policy data constituting a *baseline* phase of a single-system research (a.k.a. time series) design, and the post-policy data constituting the *intervention* phase (see DiNitto, 1983; Marsh, 1981). Changes observed post-policy implementation *may be* attributable to the policy. If similar data can concurrently be obtained from adjacent communities which *do not* implement the new policy, stronger inferences can perhaps be made. And if the new policy can be systematically implemented and removed, analogous concomitant variation in the outcome measure(s) associated with these policy changes may permit very robust causal conclusions indeed. An example of the latter is an exemplary series of studies on raising the state-wide minimum age for drinking, and its effects in terms of reducing highway crashes among young drivers (Wagenaar, 1982).

In 1928 Robert Kelso noted that "The present lack of a science of public welfare follows naturally upon the fact that 'human society' embraces well nigh the totality of man's experience; therefore a science of social relationship must rest upon knowledge the most general and far-reaching and upon deductions most profound" (p. 3). A science of cultural design will not spring forth fully formed,



like Athena from the forehead of Zeus. Rather it will slowly evolve as conceptual developments and research methods converge. Skinner has provided us with both—behavior analysis as a comprehensive theoretical framework grounded in natural science, and intensive time series investigations of single or of a very small number of units of analysis, also known as a functional analysis. The distinguished cultural anthropologist Ralph Linton (1959) defined culture as “the way in which man behaves” (cited in Zifferblatt & Hendricks, 1974, p. 756). Does behavior analysis have much to offer the design of cultures? As my seven year old son John would say, “Duh!”

Bruce A. Thyer  
University of Georgia

### REFERENCES

- Burgess, R. & Bushness, D. (Eds.). (1969). *Behavioral sociology: Towards the experimental analysis of social process*. New York: Columbia University Press.
- DiMaggio, P. (1997). Culture and cognition. *Annual Review of Sociology*, 23, 263-287.
- DiNitto, D. (1983). Time series analysis: An application to social welfare policy. *Journal of Applied Behavioral Science*, 19, 507-518.
- Hursh, S. R. (1984). Behavioral economics. *Journal of the Experimental Analysis of Behavior*, 42, 435-453.
- Kariel, H. S. (1967). The political relevance of behavioral and existential psychology. *American Political Science Review*, 61, 334-342.
- Kelso, R. W. (1928). *The science of public welfare*. New York: Holt.
- Lamal, P. (Ed.) (1991). *Behavioral analysis of societies and cultural practices*. New York: Hemisphere.
- Lamal, P. (Ed.) (1997). *Cultural contingencies: Behavior analytic perspectives on cultural practices*. Westgate, CT: Praeger.
- Malott, R. W. (1988). Rule-governed behavior and behavioral anthropology. *The Behavior Analyst*, 11, 181-203.
- Marsh, J. (1981). Combining time series with interviews: Evaluating the effectiveness of a sexual assault law. In R. F. Conner (Ed.). *Methodological advances in evaluation research* (pp. 93-108). Beverly Hills, CA: Sage.
- Preshus, R. (1965). *Behavioral approaches to public administration*. University, AL: University of Alabama Press.
- Thyer, B. A. (1999). Clinical behavior analysis and clinical social work: A mutually reinforcing relationship. *The Behavior Analyst*, 22, 17-29.
- Wagenaar, A. C. (1981). Preventing highway crashes by raising the legal minimum age for drinking: An empirical confirmation. *Journal of Safety Research*, 13, 57-71.
- Wahlke, J. C. (1979). Pre-behavioralism in political science. *American Political Science Review*, 73, 9-31.
- Zifferblatt, S. M. & Hendricks, C. G. (1974). Applied behavioral analysis of societal problems: Population change, a case in point. *American Psychologist*, 29, 750-761.

**STILL RELEVANT, BUT ...**

What B. F. Skinner wrote in this article is still clearly relevant today and will be tomorrow. It is still true, for instance, that: (a) scientists often accept the contention that applying a scientific analysis of human behavior to the improvement of cultural practices is unwarranted, (b) the mechanisms responsible phylogenetic and ontogenetic change need to be explained without recourse to circularity, (c) the long-term consequences of cultural practices are usually not obvious, and there is little inducement to pay attention to them, and (d) we cannot predict the success or failure of a cultural invention with the same accuracy as we do that of a physical invention.

Also still relevant, in the context of the current interest in evolutionary psychology (née sociobiology) is Skinner's attention to the relative importance of genetically-controlled versus environmentally-controlled behavior. Whereas Skinner emphasizes the importance of the latter, evolutionary psychologists emphasize the former. But evolutionary psychologists have been correctly criticized for their extensive use of the "just-so story" approach in their attempt to explain human behavior.

I was interested to read Skinner's discussion of imitation. I have long believed that most behavior analysts have failed to appreciate the importance of imitation (outside of the work in developmental disabilities) even though it is ubiquitous. But, there are problems with this article. One is Skinner's cryptic style. Behavior analysts have remarked over the years that Skinner's writing style has probably contributed to others' misunderstanding and rejection of his views. And the intended audience for his article was not primarily behavior analytic.

Although understandable as a reaction to the unfruitful practices of other research programs, Skinner's dictum that cultural analysis "confines itself to individual organisms" (p. 41) is unnecessarily restrictive. And, indeed, later behavior analytic research moved beyond this constraint.

Skinner does not persuade me that, as he asserts, transmission of social behavior is more important than social invention. He seems to assume that the origins, as opposed to the transmission, of cultural practices are always "a matter for speculation" (p. 44) because the origins cannot be observed. But surely this is false. Were not, for example, the origins of such cultural practices as mass advertising and mass public education observed and described by contemporaries.

Finally, I believe that Skinner was unduly optimistic. It is true that humans "have found better ways...to govern, teach, and employ" (p. 47). But I am not persuaded that "the elaboration of moral and ethical practices has reduced the importance of personal aggrandizement" (p. 48). And better ways of governing may not be widely adopted. Rather, true believers in an ideology, political or religious, are willing to use the most extreme aversive control in order to impose upon others the cultural practices they espouse.

P. A. Lamal

*University of North Carolina at Charlotte*

## COMMENT ON SKINNER'S "THE DESIGN OF CULTURES"

It is the end of September 2001, as I mull over Skinner's classic 1960 paper "The Design of Cultures." Skinner's faith in the inevitable improvement of the human condition was not rooted in some principle of "general will, universal or collective reason, or the greatest good." But his belief in the power of non-purposeful reinforcement contingencies was unwavering: "The nature of man tells us something...we must look only to the immediate consequence of behavior for modifications in a cultural pattern...it is...man who, as a disinterested scientist, will make human behavior vastly more effective through cultural invention." Unfortunately, in the wake of the September 11 tragedy, we see very clearly that socially mediated reinforcement contingencies articulate the values of the person or entity that established the contingencies. Can we deny that the Taliban culture in Afghanistan—the antithesis of the "disinterested scientist"—produced "terrorist" behavior that achieved extraordinary levels of effectiveness?

Of course, some cultural evolution does at least superficially comport with Skinner's notion of value-free effective behavior. The Euro is now the currency of most of Western Europe. The Internet has revolutionized communication and information-acquisition, not only in terms of speed and scope but also in terms of egalitarian participation; most people in developed countries, despite income and status differences, can surf the web. And the globalization of commerce, communication, and culture by economic interests reflects a shift in power from governments to corporations. But do these efficiencies of scale translate necessarily into increased effectiveness of behavior or culture? It depends on how one defines "effectiveness"—which then introduces issues of value.

Skinner suggested that physical inventions do not entail values in their construction and that value issues are only important in the use of the technology. He asserted that the same will hold true for social inventions and cultural design when those endeavors achieve the same level of technological sophistication as physical inventions. Under such circumstances, "the question of value will not be raised." Perhaps, in 1960, the Western *Weltanschauung* was naive and "effectiveness" seemed clear and uncontroversial. We were yet to confront technology's dark underside in the form of unpredicted but toxic side effects of seemingly miracle products (e.g., DDT, thalidomide, automobile). And we did not recognize the impact of economic and social contingencies on the construction and ultimate effectiveness of many products (e.g., saving a few dollars in production costs by not protecting a car's fuel tank from explosion in minor impacts, protecting civil liberties during security checks in public places resulting in non-intrusive but lax safety).

The complex cognitive capacities of humans allows us to analyze behavior-environment relationships and to introduce proactively new contingencies. Our ability to modify our environment in planned ways means that value issues are and will always be a fundamental and inseparable component of cultural design.

Similarly, our emerging technological ability to influence biological evolution now introduces values into this previously value-neutral process: Biological design is not the same as biological evolution.

Values are not contaminants of pure science; they are part of science and legitimate subjects of scientific study themselves. Values are verbal behaviors, statements of desired contingent relationships between behavior and consequences. The people in a culture learn to emit these statements—learn what they value—through the operation of reinforcement contingencies. But then those people and that culture propagate what they have learned to value through the reinforcement contingencies they subsequently enact. When we recognize this inevitable social role of values, we not only acknowledge what *is*, we also empower ourselves with a potent way to engineer cultural change. And we can ill afford to eschew any effective tool at our disposal if we are to design more humane and just cultures. As behaviorists, we all agree that control exists, whether “haphazard” or engineered by humans. If we decline to impose control, control still exists. It is the same for values: If we cede this ground to nonscientific entities, values will still remain a powerful tool in cultural design. Look at what the Taliban achieved through a meticulous understanding of values and their use.

Richard F. Rakos  
*Cleveland State University*

### **THE PROMISE OF THE DESIGN OF CULTURE**

Skinner (1978) once asked, “Are we free to have a future”? The question is not purely rhetorical and our successes in the design of cultures may determine its answer. Cultures will evolve, with or without explicit design, but the shape of a culture that evolves spontaneously may not be to the liking of those who live within it. The grim prospect of the end of civilization and humankind are easy to imagine if cultures simply evolve without explicit design.

Our current genetic endowment emerged 90,000 years ago, and though our physiology is the same as it was then, our interaction and relationship with the earth have been drastically transformed. Consider that 100,000 generations of humans have been hunters and gatherers; through 500 lifetimes we have been agriculturists. Only ten of our generations have lived in the Industrial Age with widely accessible education, and only three have been exposed to the world of computers. Indeed, whereas hundreds of thousands of years are necessary for significant genetic adaptations to occur within a species, technology and industry “upgrade” our species’ environment almost daily. Our genetic structure, however, is essentially the same as it was when our ancestors spent most of their time hunting and foraging for food.

In our primal human context, conflict scenarios required immediate escape from, or intense combat with, fierce predators or competing clans. To survive as individuals, and as a species, it was necessary that our ancestors be instantly

prepared to eliminate the opposition. We are the progeny of 100,000 generations of continuous combat with opponents. Our biological susceptibility to aggression reinforcers may have served the human species well at one time in its biological and cultural evolution, but we are now at a point of cultural evolution that such susceptibility may prove fatal for our civilization and our species.

Transportation and communication systems have brought disparate cultures within close proximity. When cultural values clash (when the cultural practices of one are aversive for the other) these technological achievements may have unintended effects, namely aggression. The behavior of members of separated cultures cannot produce stimulation that members of the other culture find aversive.

But there are commonalities among cultures. All surviving cultural practices provide for feeding, clothing, housing and communicating with its members. These common functions may provide the basis for a larger common culture. Differences between cultures are also important to understand as they are the seeds of dispute. Religious practices and the culture that they spawn have been central to generations of unresolved indignation. We must come to better understand these differences as well as their similarities to avoid large-scale religion-based conflicts. Likewise, we must understand better the function of religion and its techniques of inducing compliance and zeal among its followers. Ultimately, it is the behavior of humans controlled by religious institutions that must be understood at a functional level.

Skinner states, "The scientific study of behavior underlines the collateral effects of controlling practices and reveals unstable features of a given interaction which may lead to long-deferred consequences." Cultural practices that lead its members to consider long-term consequences represent both the challenge and the hope of those who see promise in the explicit cultural design based on a science of behavior. A cultural system that relies on short-term victories of one side over another does not effectively take into account the future of collateral effects and long deferred consequences. If we are free to have a future, then the challenge must be met and the promise of the design of culture based on a science of behavior fulfilled.

Walden Two was a small community within a larger culture. Except as an experiment, such a community offers little hope to the grave problems presented to us by the cultural conflicts of the larger cultures. An experimental community would vanish in an all out battle between the larger cultures. Like it or not, we must deal with the problems of the larger entities. Never has humankind needed a science of behavior and its logical extension to a technology of cultural design more than at the present time.

Robin Rumph and Chris Ninness  
*Stephen F. Austin State University*

## REFERENCES

- Ninness, H. A. C., McCuller G., & Ozenne, L. (2000). *School & Behavioral Psychology: Research in Human-Computer Interactions, Functional Assessment and Data-Based Treatment*. Norwell, MA: Kluwer Academic Publishers.
- Skinner, B.F. (1978). *Reflections on Behaviorism and Society*. Englewood Cliffs, NJ: Prentice Hall.

## COMMENTS ON SKINNER'S "THE DESIGN OF CULTURE"

Proposals to improve culture by design immediately raise the thorny issue of values. Skinner's revolutionary solution to this old conundrum is to "step outside of the system" by treating value judgments as verbal behavior--thus "all objections to cultural design, like design itself, are forms of human behavior and may be studied as such." Subsequently, Skinner offers that improving culture requires a scientific analysis which "confined itself to individual organisms rather than statistical constructs or interacting groups of organisms, even in the study of social behavior." I encounter some tension in Skinner's argument at two points: (a) what he implies by confining a scientific analysis of an individual organism and (b) the nature of reciprocal effects of behavioral control whereby, for instance, the slave controls the master as completely as the master the slave. (He does acknowledge, however, that this does not mean that the notion of exploitation is meaningless.)

In my view, if improving the human condition through better cultural design is to be more than piecemeal accommodations in the existing exploitative society, much more is needed than the analysis of individual behavior. What needs be addressed is control vis-à-vis power relations and hegemony. What is required is a natural science approach to the study society per se, one based on a scientific philosophy such as suggested in Bhaskar (1989), a philosophy that I believe is compatible with the science of behavior and its particular underlying philosophy, radical behaviorism (i.e., behavioral materialism).

Bhaskar's critical realist perspective presupposes that the world is structured in a certain way which makes science possible. In the social world, we never act within a void but always through already existing social relations. An enduring pattern of social relations constitutes a social structure (e.g., language). Society is not a thing or unified whole, but a complex ensemble of social structures; albeit, ultimately decomposable into social relations, some of which may be antagonistically related to others. We can add that within this social context the issue of differing value judgments can be analyzed as verbal behavior generated by opposing ethical communities (subsets of a larger verbal community within a society) and that the differences between ethical communities are analyzable in terms of prevailing macrocontingencies.

If progress and improvement are restricted to local changes, as Skinner seems to suggest, is it realistic to suppose that "we" can proceed in this way to "prepare humanity to intelligently construct its own future?" In a class-divided society, just who is the "we"? For example, are "we" Americans, which includes both workers

and employers, or are “we” workers, some of whom happen to live in the United States and other in, say, in Pakistan? Given that no one can leave the causal stream, the significant question becomes, which ethical community exerts the most control over a particular cultural designer or behavioral engineer? That is a question for each of us to ask ourselves.

Jerome D. Ulman  
*Ball State University*

Bhaskar, R. (1998). *The possibility of naturalism: A philosophical critique of the contemporary human sciences* (3rd ed.). New York: Routledge.

### **SOME MYTHS ABOUT BEHAVIORISM THAT ARE UNDONE IN B. F. SKINNER’S “THE DESIGN OF CULTURES”**

One of my interests involves the ways in which behaviorism is consistently misrepresented in both popular and academic sources. Such misrepresentations have appeared so steadily that a Special Interest Group to study them was formed within the Association for Behavior Analysis International.

The group, Behavior Analysis League for Accuracy in News, Commentary and Education (BALANCE), has identified several frequently seen misrepresentations about behaviorism. They include the following (Wyatt, Lamal, Newman & Hobbie, 1997):

1. That behaviorism leaves us devoid of values.
2. That behaviorism ignores individual uniqueness.
3. That behaviorists are strict environmentalists who ignore genetic influences.
4. That behaviorism leaves humans without purpose or intention.
5. That behaviorism reduces mankind’s behavior to that of lower animals.
6. That behaviorists fail to acknowledge learning based on factors other than reinforcement.
7. That behaviorists have no account of language development.
8. That behaviorists mainly advocate punitive means of control.
9. That behaviorism is amoral.
10. That behaviorists either do not believe in, or fail to account for, thinking.

These are all myths. All are untrue concerning behaviorism and behaviorists. It has now been forty years since publication of “The Design of Cultures.” To the extent that Skinner’s work represents behaviorism, each of the above myths is undone in “The Design of Cultures.”

Regarding numbers one and nine above, Skinner began his article by asking, in essence, “With what special wisdom are non-scientists endowed, that they alone should be the (values-driven) designers of cultures?” Later in the paper he pointed out that moral and ethical practices *ought* to be analyzed, and that is especially true regarding the moral and ethical practices of the cultural designer.

Regarding numbers two and five above, Skinner pointed out that the social institutions of mankind are founded on, or emerge from, more than the instinctive patterns of animals. "They are the achievements of individuals..." whose coordinated activity of a family, a large company or a great city are very different from those of the anthill or beehive.

Do behaviorists discount or ignore genetic influences? Not according to Skinner. In a "scientific analysis," Skinner wrote, "...The probability of a behavior is accounted for by appeal to the genetic endowment of the organism and its past and present environments..."

Critics have asked how behaviorists are able to discuss the *intentional* design of a culture, given those critics' perception of a behavioristic disavowal of purpose and intention. Here Skinner made clear that it is the criticism that is wrong. "Our present understanding...permits us to construct new forms of behavior...The experimental study of reinforcing contingencies is nothing more than a nonteleological analysis of the directed effects of behavior, of relations which traditionally have been described as purpose."

Does learning occur through means other than reinforcement and punishment? Yes, for as Skinner put it in this paper, "The emergence of a given form of social behavior from nonsocial antecedents is exemplified by imitation."

Have behaviorists an account of language development? In this paper appears, "A mother who has shaped the vocal responses of her first baby into a primitive repertoire may bring already established contingencies to bear on a second child." Certainly that is incomplete. But the paper is about the design of cultures. There is much more said about language development elsewhere.

It is an unfortunate irony that some continue to view behaviorism, (behavior analysis, behavior modification) as advocating mainly punitive methods of control. Behavior analysis is the very area of positive reinforcement. Skinner here warned, "Control through punishment may lead to increasing viciousness...(and) to counter-controlling action."

It is sometimes said that, "Behaviorists think that we humans don't think!" That is wrong. And it usually reflects the speaker's failure to have studied behaviorism. In this paper Skinner wrote, "Men have found better ways, not only to dye a cloth or build a bridge, but to govern, teach, and employ. The conditions under which all such practices originate range from sheer accident to the extremely complex behaviors called thinking."

Skinner is not the only behaviorist. But he is easily the most visible behaviorist, based on citation frequency (Thyer, 1991) and surveys of influential behavioral scientists (Korn, Davis & Davis, 1991). My impression is that his visibility has grown since his death in 1990. To the extent that his views here represent behaviorism, in this single paper Skinner has undone ten common myths about the field. And that is an accomplishment to be appreciated.

W. Joseph Wyatt  
wyatt@marshall.edu  
Marshall University



## COMMENTATORS

## REFERENCES

- Korn, J. H., Davis, R. & Davis, S. F. (1991). Historians' and chairpersons' judgements of eminence among psychologists. *American Psychologist*, 46, 789-792.
- Thyer, B. A. (1991). The enduring legacy of B. F. Skinner: A citation count from 1966-1989. *The Behavior Analyst*, 14, 73-75.
- Wyatt, W. J., Lamal, P. A., Newman, B. & Hobbie, S. A. (1997). Treatment of behavior analysis in five leading introductory psychology textbooks. Monograph published by BALANCE: Behavior Analysis League for Accuracy in News, Commentary and Education.