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THE SOCIAL CONTROL OF BEHAVIOR CONTROL: BEHAVIOR MODIFICATION, *INDIVIDUAL RIGHTS*, AND RESEARCH ETHICS IN AMERICA, 1971–1979

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In 1971, the U.S. Senate Subcommittee on Constitutional Rights began a three-year study to investigate the federal funding of all research involving behavior modification. During this period, operant programs of behavior change, particularly those implemented in closed institutions, were subjected to specific scrutiny. In this article, I outline a number of scientific and social factors that led to this investigation and discuss the study itself. I show how behavioral scientists, both individually and through their professional organizations, responded to this public scrutiny by (1) self-consciously altering their terminology and techniques; (2) considering the need to more effectively police their professional turf; and (3) confronting issues of ethics and values in their work. Finally, I link this episode to the formation of the National Commission for the Protection of Human Subjects of Biomedical and Behavioral Research, whose recommendations resulted in changes to the ethical regulation of federally funded human subjects research that persist to the present day. © 2006 Wiley Periodicals, Inc.

> Whether or not behavior scientists really can control much behavior, they have recently convinced the public that they can. Many are sorry now that they have done so. For instead of getting Nobel prizes and gratitude, they have been viewed with increasing suspicion, if not revulsion, and threatened with restriction—of funds, of sponsorship, even of access to subjects. . . . And the prospects are for more, not less, restriction. . . . *The social control of behavior control is underway*. (London, 1974, p. 2, emphasis added)

> We now are confronted by a public, by governing agencies, and by other colleagues whose concern is not whether our methods and principles are scientifically valid, but rather what we intend to do with them. It is our values, not our science, that are being questioned. (Wood, 1975b, p. 27)

Although efforts to control behavior have existed since the beginning of human history, in the recent past, science and technology have come to play an increasing—and increasingly contentious—role in this endeavor. For example, over the last century, developments in physics have spawned some of the most powerful methods of behavior control that have ever existed. Nuclear weaponry, or the threat of its development and use, has controlled the behavior of governments and nations. But what of the human sciences? Has psychology ever produced the behavioral equivalent of the atomic bomb?[1]

1. In the words of behavior analyst Roger McIntyre, referring to Skinnerian techniques of behavior modification: "You just can't stop something that works. The history of science has always been that way, no matter whether it's the Salk vaccine or the atomic bomb" (cited in Hilts, 1974a, pp. 67–68). One of the aims of this article is to demonstrate that, in fact, scientific and technological discoveries *are* regulated, modified, and sometimes even suppressed, in response to political and social factors and that scientists themselves play a key role in this process.

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In terms of its potential for behavior control, the work of twentieth-century psychologist B. F. Skinner (1904–1990) has certainly conjured the specter of such a technology, at least in the popular imagination (see Rutherford, 2000, 2003). Throughout his scientific and popular writing, Skinner maintained that behavior is controlled by specifiable factors in each organism's phylogenic and ontogenic learning history (Skinner, 1966). He argued that since many of these factors can be manipulated in the individual's immediate environment to produce changes in behavior, the widespread use of behavior change technology could, potentially, help solve many individual and social problems (see Skinner, 1948, 1953). Skinner was motivated both by his faith in science and by a sense of social responsibility no doubt instilled in him by his Protestant upbringing (Bjork, 1993; Skinner, 1976, 1979). Accordingly, early students and followers often report that they became attracted to his work because it offered a thoroughly natural science approach to psychology and/or they were inspired by the possibility of applying Skinnerian science to solve practical problems and create a better world.

These reformist impulses, coupled with a set of clear scientific principles and a closely derived behavioral technology, impelled many Skinnerian psychologists to apply operant methods to a broad range of behavior problems across a wide range of settings starting in the late 1950s. Their efforts expanded rapidly through the 1960s and 1970s and continue to the present day. Early settings for operant programs included psychiatric wards, classrooms, prisons, and institutions for the mentally retarded, among others. As behavior modifiers[2] moved into these settings armed with their finely honed techniques of observation, recording, analysis, and intervention, they achieved remarkable success in changing the behavior of some of society's most hopeless and marginalized cases. Backward psychotics, autistic children, and some of the most violent inmates in the federal prison system all responded to systematic positive reinforcement and made seemingly "miraculous" gains.[3] By the early 1970s, Skinnerian behavior modification seemed to have come of age; exciting scientific and technical developments, a burgeoning professional presence, and remarkable, socially relevant applications all buoyed the enthusiasm and confidence of Skinner's followers and practitioners.

These remarkable successes, however, came with a price. As behavior modifiers ventured outside the laboratory in increasing numbers, they exposed themselves to the scrutiny of a wider, and often hostile, public; this public included granting agencies, school boards, patients' rights groups, ACLU lawyers, parents, teachers, and journalists. The height of this public scrutiny, on a national level, arguably occurred in the early to mid-1970s, and was ignited by a number of factors, including the publication of Skinner's most widely debated book, *Beyond Freedom and Dignity*, in 1971.

In this article, I first outline some of the factors that led to a national investigation of the funding of behavior modification by the federal government. I then examine the investigation itself and the specific concerns that arose over the funding of behavior modification programs in prisons. In response to these developments, psychology and psychiatry, as the professions most

2. In the time period under discussion, both practitioners themselves and the lay public commonly characterized applied Skinnerian psychologists as behavior modifiers. These Skinnerian psychologists typically used systematic positive reinforcement of adaptive behavior as the cornerstone of their approach. Notably, Skinnerian psychologists now refer to themselves as behavior analysts; those engaged in applied work are applied behavior analysts. In this article, I will generally use the contemporaneous term *behavior modifiers* to refer to the group of psychologists who applied operant principles to human behavior. When referring to specific psychologists who identify themselves closely with the Skinnerian tradition, both then and now, I may use the designation *behavior analyst*.

3. For internal, scientific accounts of these early successes, see inaugural issues of the *Journal of Applied Behavior Analysis*, which began publication in 1968. For a popular "who's who" of behavior modification in the early 1970s, see Goodall (1972). For popular accounts of their applied work by behavior modifiers themselves, see, for example, Bijou (1968), Ferster (1968), Kazdin (1976), and Risley (1968).

closely associated with the use of behavior modification, formed committees to examine and formulate positions on its development and use. I outline the arguments and conclusions from these committees and then turn to the response of the Skinnerian community itself. As an increasingly distinct professional subgroup, Skinnerian behavior modifiers found themselves in the difficult position of defending their work to their professional colleagues and the public, while also taking seriously the need for internal review and self-assessment. Finally, I link this episode to the formation of the National Commission for the Protection of Human Subjects of Biomedical and Behavioral Research (NCPHSBBR), whose recommendations directly affected research practices in prisons and elsewhere. The intense public and professional scrutiny of behavior modification, and the processes that unfolded as a result, help illustrate the close interdependence of science, its practice, and its publics—an interdependence often assumed in historical studies of science, but which nonetheless often remains insufficiently demonstrated or explored.

Behavior Mod, Peace Pills, and Protest

The early 1970s was a period of ferment within organized psychology and within society as a whole. The American public was faced with a number of pressing domestic and international concerns, including the war in Vietnam, the ratification of the Equal Rights Amendment, the frequently violent adjustment of American society to the implications of the Civil Rights Act, and, eventually, the Watergate hearings. Fueled by this ferment, many psychologists demanded institutional change within psychology's national organization, the American Psychological Association (APA), both to make it more responsive to the diversity of its membership (see Astin et al., 1972; Pickren & Tomes, 2002) and to create a greater role for psychology in promoting social justice.

In 1971, the same year Skinner published his intensely controversial social commentary *Beyond Freedom and Dignity*,[4] the newly elected president of the APA, Kenneth B. Clark, delivered a highly unusual presidential address in which he advocated research on the chemical control of power abuse and made a plea to behavioral scientists to become involved in addressing moral issues. One reporter described Clark's surprising speech this way:

> With the abuse of power placing the world on the brink of destruction as his premise, Dr. Kenneth B. Clark, president of the APA, dropped a bombshell at APA's 79th Annual Convention, by calling for research into the development of biochemical means which could be used to prevent people with power from abusing it. (Warren, 1971a, p. 1)

In response to Clark's "peace pill" speech, New Jersey Congressman Cornelius Gallagher requested that the General Accounting Office of the U.S. government investigate all federal contracts and grants given to the APA, to ensure that no federal money was being spent on projects involving chemical mind control, like the one Clark had proposed (see also "Researchers Rebut Clark's Call," 1971; Warren, 1973). A few months later, after the appearance of Skinner's *Beyond Freedom and Dignity*, Gallagher also called for a similar investigation into the sources of Skinner's funding (see "B. F. Skinner Subject of Congressional Attack," 1972).

Gallagher was not alone in his swift reaction to Clark's speech and Skinner's book. Vice President Spiro Agnew, in a 1971 address to the Farm Bureau in Chicago, painted Clark and Skinner with the same highly pejorative brush. His speech, which was reprinted in the popular

4. One of the most controversial of Skinner's arguments in *Beyond Freedom and Dignity* was that free will is an illusion. Further, he argued that the widespread, culturally instantiated belief in free will obfuscates efforts to use a science and technology of behavior to solve social problems. For a review of popular responses to the book, see Rutherford (2000, pp. 383–386) and Rutherford (2003, pp. 12–17).

magazine *Psychology Today* in January 1972, referred to both Clark's and Skinner's ideas, and indeed all behavioral technologies, as "drivel," but also warned that, if left unchecked, they could become extremely harmful, constituting a "new kind of despotism" that might result in "radical surgery on the national psyche" ("Agnew's Blast at Behaviorism," 1972, p. 84).

Clark's speech, Skinner's book, and the responses to them highlighted not only psychologists' increasingly political orientation, but also the growing attention paid by both behavioral scientists and the public to a class of techniques captured under the umbrella term *behavior modification*. Commonly subsumed under this term was a diverse host of what came to be known collectively as *methods of behavior control*, including chemical therapies, psychosurgery, electronic monitoring, operant and classical conditioning techniques—including aversive conditioning and the use of electric shock and emetic drugs—as well as other psychotherapies and psychotechnologies. Nonprofessionals frequently failed to differentiate among these techniques, and indeed much of the public outcry over behavior modification was aimed at the most Draconian of these approaches, such as psychosurgery and aversive conditioning. Nonetheless, a considerable amount of scrutiny focused specifically on the use of operant conditioning techniques—that is, Skinnerian behavior modification approaches.

A number of popular books on behavior modification, both narrowly and broadly defined, appeared in the late 1960s and 1970s, reflecting both the market for information on these new technologies and the growing sensationalism surrounding their use. As early as 1969, psychologist Perry London published a popular review of the methods of behavior control, including psychotherapy, hypnosis, conditioning, electronic devices, drugs, and surgery (London, 1969). In 1974, journalist Philip Hilts offered a colloquial account of the new generation of Skinnerian behavior modifiers based on numerous interviews with its scientists and practitioners (Hilts, 1974a). Although generally neutral or positive in his estimations of their work, Hilts did highlight some of the zealotry that had taken hold of the field.[5] In 1977, popular author Vance Packard tackled behavior mod in his book *The People Shapers*, in which he discussed a variety of behavior control techniques, including operant ones (Packard, 1977).

Popular magazines and newspapers also featured numerous articles on behavior mod and psychotechnology that frequently expressed high levels of apprehension (see, for example, Chorover, 1973; Hilts, 1973, 1974b; Yafa, 1973). As many of these accounts showed, despite the acknowledged efficacy of some of these techniques in improving behavior (i.e., "rehabilitating"), the perception that the use of these methods represented a violation of civil liberties often overshadowed their positive potential. As a result, even parties who were, traditionally, favorably disposed toward positive institutional and social reform (e.g., rehabilitation of prisoners) attacked behavior modification. At issue was not only whether the techniques should be used at all, but if they were to be used, who should use them, to what ends, and with what kind of safeguards. The ethics of human behavior control, and indeed all human subjects research, was coming under increasingly intense scrutiny.[6]

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5. The promotional materials written for the book prompted some behavior modifiers to call for a letter of protest to the publisher. Behavior analyst James Holland was appointed to write the letter but found that in considering the materials more closely, he couldn't carry through with the task. He wrote:

> I'm sorry, but the promotional material, in my opinion, reflects the points Hilts is making. His critique is good precisely because his descriptions are accurate. We recognize ourselves and our friends [in the book]. We like the good we can do and that potential is seen in the book. But we are dangerously naïve in the broader political and social implications of our work. (Holland, 1975)

6. The APA published its first ethics code for psychologists in 1953 after five years of development (see Canter, Bennett, Jones, & Nagy, 1994), but in the early 1970s, an ad hoc committee, headed by Stuart Cook, was appointed to develop a specific set of principles to guide human subjects research (see "Ethical Principles in the Conduct of Research with Human Participants," 1972; "Research Ethics Being Revised," 1971).

In the fall of 1971, an international symposium on human rights, retardation, and research was sponsored by the Joseph P. Kennedy Foundation. It was attended by Senator Edward Kennedy and Ethel Kennedy and featured a panel presentation entitled "The Modification of Human Behavior: The Ethics of Human Control." Featured speakers included B. F. Skinner, who presented on how operant conditioning could be used to help the mentally retarded; well-known Harvard University psychologist Jerome Kagan; and neurophysiologist José Delgado. Although the symposium was thematically oriented around issues in mental retardation, the panel discussion quickly turned to the issue of the ethics of behavior control technology. Panelists and discussants generally agreed that behavior control—through psychosurgery, drugs, electrical stimulation, operant conditioning, and the like—was inevitable, but also expressed concern over the ways this control would be used, monitored, and regulated (see Warren, 1971b).

As a result of these factors, among others, and combined with the direct interest of several key politicians, the federal government responded to the growing alarm over behavior control by appointing a committee to conduct a thorough investigation of these techniques. As part of its charge, the committee undertook to survey and review all federal monies used to fund behavior modification programs. The committee defined behavior modification broadly, but Skinnerian approaches were clearly under particular scrutiny.[7]

Behavior Modification and *Individual Rights*

In 1971, the Senate appointed members of the Subcommittee on Constitutional Rights of the Committee on the Judiciary to begin a three-year study entitled *Individual Rights and the Federal Role in Behavior Modification* (hereafter referred to as *Individual Rights*). The Subcommittee was chaired by Senator Sam Ervin (D–North Carolina). In the words of Senator Ervin, "As disturbing as behavior modification may be on a theoretical level, the unchecked growth of the practical technology of behavior control is cause for even greater concern" (Individual Rights, 1974, pp. iii–iv). He then explained that the Subcommittee's investigation was motivated by two primary issues: (a) "the concern that the rights of human subjects of behavioral research are significantly protected by adequate guidelines and review structures" and (b) "the larger question of whether the federal government has any business participating in programs that may alter the substance of individual freedom" (*Individual Rights*, 1974, p. iv).

To address these concerns, the Subcommittee conducted a survey of federally funded research programs involving behavior modification. Senator Ervin compiled written requests for information on the nature and number of projects funded by the major federal granting agencies. In his requests, he asked for information about what ethical review processes these programs had undergone, what rights were being accorded the program participants, and how the administration of the programs was being monitored by the granting agencies.

The results of the survey were startling. First, it was clear that, as the Subcommittee defined it, behavior modification encompassed an extremely large and diverse set of techniques. As a result, some agencies were unable to determine whether they were funding programs involving behavior modification or not, and the programs that were receiving funding differed radically in their approaches. The Subcommittee ultimately concluded that "a wide variety of behavior modification techniques ranging from simple positive reinforcement to psychosurgery are presently employed in the United States under the auspices of the federal government"

7. In the words of the report, "A major segment of the emerging behavior control technology is concerned with conditioning. . . . The two major categories of conditioning, in general terms, are positive reinforcement and negative reinforcement" (*Individual Rights*, 1974, pp. 13, 14).

(*Individual Rights*, 1974, p. 21). Included in the report were descriptions of such controversial programs as "The Seed," described as "a Florida-based drug treatment program that uses intensive peer-group pressure to reform both known and suspected drug abusers" (p. 28); a program using the "chemical castration drug" cyproterone acetate, proposed by the California-based Center for the Study and Reduction of Violence; programs involving psychosurgery funded by and conducted within the Veteran's Administration; and contingency management programs such as the Special Treatment and Rehabilitative Training program, among others.

The Subcommittee also found that the Department of Health, Education, and Welfare (DHEW; which served as a major clearinghouse through which grant money was distributed to other agencies), the Department of Justice (through the Federal Bureau of Prisons [FBP] and the Law Enforcement Assistance Administration [LEAA]), the Veteran's Administration, the Defense Department, the Labor Department, and the National Science Foundation, all supported programs involving behavior modification. Of these agencies, the Subcommittee concluded that only the DHEW had developed substantial written ethical review procedures, and even these did not necessarily adequately address all of the complex ethical issues involved in the types of human experimentation being conducted. Particularly alarming to the Subcommittee was the finding that the FBP and the LEAA, under the jurisdiction of the Department of Justice, had made "virtually no effort either to provide the necessary monitoring of research projects or to resolve important questions relating to individual liberties" (p. 31). In sum, the report concluded that the federal government had failed to protect the rights of human subjects of their funded research projects, and that "these considerations point to the need for an intensive legislative inquiry into behavior modification throughout the government" (p. 43).

During the course of the Subcommittee's study, one of the projects involving behavior modification that was coming under intense scrutiny, both in the courts and in the media, was a project funded by the FBP called the Special Treatment and Rehabilitative Training (START) program at the Medical Center for Federal Prisoners in Springfield, Missouri. Lawyers from the American Civil Liberties Union had taken up the case of several prisoners involved in the program who claimed that it involved unlawful force and humiliation. Thus, a detailed study of this program was undertaken by the Subcommittee and featured prominently in its final report.

This program, and others like it, focused public attention and catalyzed governmental debate on the use of behavior modification in prisons. Of particular concern was the use of a specific form of behavioral intervention: the contingency management program. In fact, the START program was only one of many prison programs utilizing contingency management, and was certainly not the most extensive, or the sole object of controversy. However, because it was the main focus of an oversight hearing that preceded the publication of *Individual Rights*, and because it featured so prominently in the Subcommittee's report, I concentrate here on this particular program.[8] Details of the START case provide a context for understanding the complex issues involved in the regulation of human subjects research generally, and behavior modification specifically, in prisons and other closed institutions.

8. For an overview of behavior modification in prisons, see Milan and McKee (1974). Drs. Milan and McKee designed and implemented an extensive token economy system at the Draper Correctional Center in Alabama (Milan & McKee, 1976). For a description of an ambitious program in the Virginia correctional system initiated and designed by a behavior analyst, see Geller, Johnson, Hamlin, and Kennedy (1977). This LEAA-funded program was terminated 18 months into its implementation. As Geller remarked retrospectively, "We developed a leading-edge approach to motivating inmates to do better for themselves and to improve their circumstances, and even their potential beyond prison. However, the prison system was not ready, and perhaps is less ready today, to support the system we developed" (E. S. Geller, personal communication, June 10, 2003). For the controversy surrounding the program, see Trotter (1974). Finally, for the controversy surrounding the treatment programs and use of indeterminate sentences at Patuxent Institution in Jessup, Maryland, interested readers are directed to Trotter (1975) and Meister (1975).

The Problems with START

The START program was a contingency management program designed specifically for the most disruptive and aggressive prisoners in the federal correctional system. It was implemented at the Medical Center for Federal Prisoners in Springfield, Missouri, one of the first facilities designed specifically for the care and treatment of the mental and physical conditions of prisoners. Inmates from all over the country were transported in and out of the prison on a regular basis, making it a particularly convenient site for a program such as START.

The overseers of the START program were Norman Carlson, director of the Federal Bureau of Prisons, and Roy Gerard, assistant director and head of the Correctional Programs Division of the FBP. Gerard was a former warden of the Robert F. Kennedy Youth Center in Morgantown, West Virginia, an institution that had used token economies as an integral part of its rehabilitation program. The principles underlying the START program were derived from and closely related to the token economy approach that psychologists Teodoro Ayllon and Nate Azrin had pioneered in the late 1960s (see Ayllon & Azrin, 1968), and on Harold Cohen and James Filipczak's "Contingencies Applicable to Special Education," or CASE, programs in Washington, D.C., also funded by the FBP (see Behavior Modification Programs, 1974, p. 4; Cohen & Filipczak, 1971).

The specific objective of the START program, which was conceptualized as a demonstration project, was to work with the most violent inmates so that they could "better control their behavior and become participants in institutional, vocational, academic, and other programs designed to help them make a successful community adjustment when released from custody" (Behavior Modification Programs, 1974, p. 5). The goal was *not* to prepare the inmates for life outside prison; it was to prepare inmates to take part in those aspects of prison life, such as vocational programs, that might eventually benefit them "on the outside."

Although the program went through several stages of development, in its initial stage all prisoners entered the program at Level I and progressed through Levels II and III as they demonstrated desired behaviors. At the beginning of Level I, prisoners were allowed to bathe, change clothes, and shave twice weekly; given two one-hour periods of outdoor recreation per week; required to eat meals alone in their cells after serving themselves from a food cart; and had standard visitation rights, daily meetings with a program counselor, and were supplied with reading material consisting of a Bible and a hometown newspaper. Upon demonstration of desired behaviors, they would be granted extra privileges, such as eating communally, the right to bathe and change clothes more frequently (at Level III, daily), and additional periods of outdoor recreation (at Level III, daily outdoor recreation) (from *Individual Rights*, 1974, pp. 242–243, 250). It should be noted that the program underwent substantial revision as it was implemented. At a later stage of development, it involved up to eight levels and a token reinforcement system.

Implementation began in October 1972 and ran for 16 months. Initially, 99 prisoners were considered for the program. Twenty-six prisoners were deemed suitable according to the selection criteria, and for various reasons, 19 actually participated in and completed the program. The prisoners who took part in the program had been spending an average of 50 percent of their time in segregation status in their regular institutions before they were transferred to the program. Of the 19 who completed the program, ten were deemed by the director of the FBP to have benefited from it. The program had been designed to accommodate about 30–35 prisoners at any given time. At the oversight hearing before the Subcommittee on Courts, Civil Liberties, and the Administration of Justice just a few days before the termination of START, Norman Carlson, director of the FBP, noted, "[T]he START program assisted 10 of

the 19 individuals who participated. When considering the criminal backgrounds and institutional behavior of the individuals involved, we believe that the program significantly increased our understanding in developing approaches to work with such offenders" (Behavior Modification Programs, 1974, p. 6).

So why was the START program terminated? Amidst considerable controversy, the program was voluntarily discontinued by the FBP on March 1, 1974, ostensibly for economic reasons. The FBP claimed that too few prisoners had participated and too much manpower had been required to run the program. Nonetheless, when grilled at the oversight hearing, Carlson remained steadfast in his estimation of the value of the program: "While mistakes were undoubtedly made in developing the START program, we believe that the Bureau of Prisons profited from the experience. The effective use of programs using positive rewards for acceptable behavior can assist in developing new techniques of motivating offenders who are incarcerated" (Behavior Modification Programs, 1974, p. 7).

Although Carlson may have felt that the FBP benefited from the experience, his opinion was not shared by the prisoners who had taken part in the program. As the program unfolded, several prisoners characterized it as "unlawful" and "humiliating," and several court cases were brought forward on their behalf by lawyers from the American Civil Liberties Union. Three of the main problems cited by the prisoners and their lawyers were that (a) participation in the program was involuntary, (b) basic privileges were used as incentives and were thus denied to participants at the earliest stages of the program, and (c) prison guards often made subjective judgments about whether prisoners had fulfilled the requirements to move to higher levels of the program, resulting in abuses.

More general criticisms of contingency management soon arose. Critics charged that the kinds of behaviors chosen for reinforcement were those that indicated compliance with the institution's rules and regulations, thus promoting institutionalization, not rehabilitation. In addition, contingency management programs were commonly employed with vulnerable populations such as prisoners or other institutionalized individuals, over whose environments the programmers were able to exert particularly high levels of control. And for many critics, contingency management was particularly problematic because it was often predicated on initial deprivation as a condition for creating reinforcement, and thus for controlling the expression of the desired behavior.

As part of the pretrial procedures for a number of cases filed by prisoners in START, the court appointed a committee of expert witnesses to investigate the program. The three-person committee consisted of Harold Cohen, of the Institute for Behavioral Research in Silver Spring, Maryland and codeveloper of the CASE programs mentioned earlier; Dr. William De Risi, of the Camarillo-Neuropsychiatric Research Program in Camarillo, California; and Nathan Azrin, of Anna State Hospital in Anna, Illinois, codeveloper with Teodoro Ayllon of the first token economy for hospitalized schizophrenics. Upon investigating the program and responding to the court's request for their expert opinions, the committee delivered a divided assessment. Cohen was the most critical,stating of the program in an April 1974 article in the American Psychological Association's newsletter, the *APA Monitor*, "As a behavioral project, it is a failure. It has not produced either the full participation or the expected changes set forth in the original premise" (Warren, 1974). Nathan Azrin, however, was more considered in his evaluation, stating in his testimony to the court that START did embody, to a substantial degree, virtually all of the major relevant principles of behavior modification as outlined by behavior analysts (as reported in Levison, 1974). At least two of the three committee members expressed serious concern over the involuntary nature of prisoners' participation in the program.

Some of the legal action concerning START was short-circuited when the FBP "voluntarily" decided to discontinue the program. As a result of its cancellation, the court decided that several of the questions raised by the program were, at least from a legal perspective, moot. Despite this, the court did rule that programs such as START violated a prisoner's right to due process because the transfer of prisoners to the program was forcible and involuntary and represented a significant change in their living conditions. The START case added considerable momentum to a period of intense debate over the ethical use of human subjects in behavioral research, and specifically over the use of prisoners as research subjects. In addition to these issues, the very nature and purpose of incarceration, the role of rehabilitation in prisons, prisoners' rights to rehabilitation, and the very nature of deviance all reemerged as topics of popular debate, a debate in which behavior modification figured prominently (see McCrea, 1975; Rothman, 1975).

At almost the same time the START program was discontinued, Senator Ervin called upon the director of the LEAA, Donald Santarelli, to stop funding all research programs involving behavior modification. He had determined from Santarelli's response to his request for information on programs funded by the LEAA that the agency was funding a large amount of research that could be considered behavior modification, and that it was doing so with practically no ethical review or monitoring of the research proposals. In a press release following Ervin's request, Santarelli explained that the decision had been made to discontinue funding to these programs because "there are no technical and professional skills on the LEAA staff to screen, evaluate, or monitor such projects" (Trotter & Warren, 1974, p. 1).

Correspondence between Ervin and Santarelli indicated, however, that the practical implications of this announcement may have been few. The LEAA did not withdraw funding for already funded projects, and the agency revised the definition of behavior modification so that only a circumscribed set of programs became ineligible for funding. In fact, at the oversight hearing on behavior modification in the Federal Bureau of Prisons in February 1974, Norman Carlson stated in response to direct questioning, "We have no plans to discontinue the use of behavioral modification techniques as I have mentioned. As a matter of fact, we will continue to use them as indicated where we feel it appropriate to motivate offenders to get out of segregated units and take advantage of opportunities prior to their release" (Behavior Modification Programs, 1974, p. 56).

For their part, researchers using contingency management and other operant approaches avoided the use of the phrase *behavior modification* and many continued to receive funding (see "Behavior Mod in Federal Prisons," 1975).

Psychology and Psychiatry Respond

In part as a result of the media attention generated by the work of the Senate Subcommittee, and directly as a result of the increasingly negative public perception of behavior modification, both the American Psychiatric Association (ApA) and the American Psychological Association set up their own investigations of behavioral technologies. The ApA struck a task force to write a report on behavior therapy in psychiatry that was published by the association in July 1973. Despite public controversy, the favorable conclusion of the task force's assessment of behavior therapy techniques was that "behavior therapy and behavioral principles . . . have reached a stage of development where they now unquestionably have much to offer informed clinicians in the service of modern clinical and social psychiatry" (American Psychiatric Association, 1973, p. 64). The report recommended the creation of training programs in behavioral psychiatry and revisions to the medical school curriculum to include

coursework in the experimental analysis of behavior. With respect to the ethical issues arising from the use of behavior modification in prisons, schools, and mental hospitals, the report, perhaps in a somewhat idealistic tone, concluded that informed consent and adherence to professional ethics codes by trained practitioners should minimize the potential for the abuse of the techniques (see also "Psychiatry Gives Behaviorism Clean Bill of Health," 1973).

The board of directors of the American Psychological Association, led by then-president Albert Bandura, struck a Commission in May 1974 to investigate ethical issues in behavior modification. At the board of directors' meeting, the issue was outlined as follows:

> In view of recent decisions by the LEAA as well as other attempts in proposed legislation to classify as one biomedical techniques and behavior modification procedures, President Bandura felt it desirable to establish a blue ribbon committee to formulate guidelines and policies for Association consideration. (APA Board of Directors, 1974)

The members of what became the APA Commission on Behavior Modification included psychologists Sidney Bijou, James Holland, Leonard Krasner, Stephanie Stolz, Nicholas Hobbs, Jerome Frank, Terence Wilson, and Serena Stier; philosopher Hugh Lacey of Swarthmore College; and two legal experts, Paul Friedman and David Wexler.

The Commission's report examined the use of behavior modification in outpatient settings, mental institutions, schools, prisons, and society (see Stolz & Associates, 1978; Stolz, Wienckowski, & Brown, 1975). Behavior analyst James Holland considered ethical issues in prisons. He devoted a special chapter to a critique of behavioral methods as they were then being used, arguing that "as presently conceived, behavior modification programs in prisons, although they may ameliorate current practices, are either defective in their protection of the prisoners' rights or participate in the oppression of prisoners" (Holland, 1978, p. 86). Holland pointed out that although psychologists typically design interventions aimed at changing the individual, the more appropriate level of intervention for changing criminal behavior is societal—changing the environments in which criminal behavior occurs so that such behavior is neither necessary nor reinforcing for the individual. He noted that as used in prisons, behavior modification succeeded mainly in enforcing compliance with rules and regulations, and was not employed in the service of the individual or his future functioning in society.

Despite Holland's reservations about the use of behavior modification in prisons, and although the Commission was partly charged with considering the formulation of ethical guidelines to govern the practice of behavior modification, it decided to forego this charge, suggesting instead that "persons engaged in any type of psychological intervention subscribe to and follow the ethics codes and standards of their professions," and that the APA "consider adopting a brief checklist of issues that could be used in the evaluation of the ethics of any psychological intervention" (Stolz & Associates, 1978, p. 114). According to the Commission, the rationale for these recommendations, and the refusal to formulate ethical guidelines exclusively for the practice of behavior modification, was that *all* psychological interventions, including but not limited to behavior modification, involve an influence and change process involving control, and that the procedures of behavior modification "appear to be no more or less subject to abuse and no more or less in need of ethical regulation than intervention procedures derived from any other set of principles and called by other terms" (p. 104). Indeed, for once, the APA and the ApA seemed to agree in their assessment. As the ApA Task Force had concluded: "Therapy without manipulation is a mirage that disappears on close scrutiny" (see "Psychiatry Gives Behaviorism a Clean Bill of Health," 1973, p. 10).

Furthermore, in an obvious move to defend and uphold the professional territory of behavior analysts (several members of the Commission were behavior analysts themselves), the

Commission concluded that to develop special ethical guidelines that would apply exclusively to behavior modification, thus singling it out for extra regulation, would prejudice practitioners against its use and stultify both research and applied developments within the field. Thus, in making its report to the APA, the Commission called for no special rules governing the use of behavior modification. However, despite successfully making their case to the APA and their fellow psychologists, behavior modifiers were in fact intensely concerned about the rapid and unchecked growth of their field, and its public image. In the safety of their own professional home, and on their own terms, behavior modifiers began a difficult dialogue on how to regulate themselves.

Behavior Modifiers Respond: The First Drake Conference on Professional Issues in Behavior Modification

In March 1974, several dozen prominent members of the rapidly expanding field of applied behavior analysis met at Drake University for an intense series of presentations and discussions. This national conference, the first of its kind, was prompted by two factors: (a) the increasing number of behavior modifiers working with more "socially visible and controversial client populations" (Wood, 1975a, p. xv) and (b) increasing public concern about the "growth of behavioral control methods in society" (p. xvi). Finding themselves, or others who practiced in their name, under attack for their work both in prisons and, notably, in institutions for the mentally retarded (see Risley, 1975, for a review of three such incidents), behavior analysts recognized the need for some serious deliberations. Although this was certainly not the first time behavior modifiers had addressed the role of behavior modification in society (see Kanfer, 1965; Krasner, 1962; Ulrich, 1967), it was, notably, the first time they met in a professional forum, in such numbers, to discuss their concerns with one another.

During the course of the conference, a broad set of issues arose and was debated. These issues ranged from definitional ones (Wood, 1975b) to the possibility of national guidelines and even certification for the field and/or its practitioners (Michael, 1975; Sulzer-Azaroff, Thaw, & Thomas, 1975). Conference participants spoke on the problem of evaluating behavior analysis procedures and programs (that is, training issues), on the need to educate the public about behavior analysis, and on questions of ethics and accountability.

Although what emerged from the conference was a "set of unresolved issues" ("Professional Issues in Behavior Analysis," 1974, p. 10), the conference marked an important milestone in the group's history. In effect, behavior analysts acknowledged the need to assess their work and their role in society in a systematic, self-conscious, and relatively nondefensive manner. In terms of numbers and impact, the field had become a force to be reckoned with. This meant that behavior analysts had to define themselves more clearly and take seriously the job of protecting the consumers of behavior modification from unqualified practitioners and ill-conceived programs, or face such regulation from outside their ranks. As one group of conference participants wrote:

> The freedom to practice behavior modification methods is clearly being threatened. . . . [W]e can dissociate ourselves from the whole thing by calling ourselves "behavior analysts," etc. But how long will it take that label to become besmirched? And who will protect the public that consumes the services of a behavior modifier? . . . It is the thesis of this paper that some tool must be developed for sorting out the competent from the incompetent, or we shall all be thrown out with the bath water sullied by the malpractitioners. (Sulzer-Azaroff et al., 1975, p. 49)

Finally, in a provocative presentation of his review of several problematic behavior modification programs in institutions for the mentally retarded, Risley (1975) noted: "This conference and other recent activity indicates that we are finally ready (indeed required) to form a profession" (p. 176). Thus, this period of public and professional scrutiny clearly set behavior analysis firmly on the path toward professionalization.[9] However, by this time, the issue of the protection of human subjects in behavioral research had transcended guild status and become a national concern.

Protecting Human Subjects: The National Commission

Despite the APA and ApA's conviction that practitioners could be trusted to use behavior modification ethically and that psychological and social techniques should not be lumped together with more invasive biomedical procedures, and despite the extensive soul-searching of behavior analysts themselves, alarm over the treatment of human research subjects in both behavioral and biomedical research was escalating rapidly. In 1972, the abuses of the U.S. Public Health Service–funded Tuskegee Study came to light in the *New York Times*. Barbara Mishkin, a professional staff member of the National Commission, recalled the role of Tuskegee in the confluence of events leading to the formation of the Commission:

> The Commission was formed as a result of a series of hearings that Senator Kennedy had in 1973 and '74, to investigate alleged and really apparent improprieties in research involving human subjects. And it began with the Tuskegee report that had been issued shortly before then, and then his hearings took into account the Willowbrook studies with retarded children and the studies with cancer patients in New York, and a whole series of incidents that seemed wrong to many people. (Mishkin, 2004, p. 2)

Duane Alexander, another member of the professional staff of the Commission, described the political climate this way:

> Biomedical ethics had rarely received the attention from the public and from the Congress ever before that it was receiving at the time the Commission was established. This came about because of revelations of some kinds of research that had been published claiming some research had proceeded unethically—research on prisoners, research on dying patients, research on persons with mental retardation or mental disability, and then, particularly, research on the African-American men from the Tuskegee syphilis study. (Alexander, 2004, p. 3)[10]

Thus, as a clear consequence of the growing outcry over the absence of ethical guidelines governing human subjects research, the National Commission for the Protection of Human Subjects of Biomedical and Behavioral Research was established by Congress in 1974. Edward Kennedy, a member of the Subcommittee that had prepared *Individual Rights*,

9. At the state level, professionalization efforts were catalyzed by a 1972 case brought against a behavioral practitioner and superintendent in one of Florida's state institutions for retarded citizens, which came to be known as the "Sunland Incident" (see Johnston & Shook, 1987). The repercussions of this incident (among others) supplied momentum for the development of a state-sponsored certification program for behavior analysis and a state professional association. National certification efforts would culminate in the 1998 incorporation of the Behavior Analyst Certification Board (see Shook, 2005).

10. Both Mishkin and Alexander also noted the importance of the 1973 *Roe* v. *Wade* decision that legalized abortion. This decision stepped up pressure to develop guidelines governing the use of the human fetus in research. I am particularly indebted to Barbara Mishkin, a member of the professional staff of the National Commission, for sharing her materials and valuable insights with me.

and who had attended the aforementioned panel discussion on the ethics of behavior control at the Kennedy Symposium, was instrumental in proposing and passing the National Research Act that resulted in the formation of the National Commission. The Commission's mandate was to investigate issues involved in the ethical use of human subjects across a number of research areas, but the Commission paid special attention to behavioral research and behavior modification programs. They also paid special attention to the use of prisoners as research subjects (for the report on prisoners, see NCPHSBBR, 1976).

After a two-year examination and investigation of the nature and extent of behavioral research and behavior modification in prisons, during which Commission staff visited prisons and interviewed prisoners, they filed a report and made legislative recommendations to Congress regarding the protection of prisoners as research subjects. They recommended strictly regulating the kinds of research in which prisoners could be used as subjects and noted the unique conditions under which prisoners are asked to give voluntary consent. In considering the ethical issues involved, the Commission concluded:

> [A]lthough prisoners who participate in research affirm that they do so freely, the conditions of social and economic deprivation in which they live compromise their freedom. The Commission believes, therefore, that the appropriate expression of respect consists in protection from exploitation. Hence it calls for certain safeguards intended to reduce the elements of constraint under which prisoners give consent and suggests that certain kinds of research would not be permitted where such safeguards cannot be assured. (NCPHSBBR, pp. 6, 7)

Specifically, the Commission recommended that research involving prisoners be restricted to the conditions particularly affecting prisoners as a class, or to studies that had the intent and reasonable probability of improving the health and well-being of the prisoners themselves. Also included in its recommendations was an outline of the basic living conditions that should be guaranteed in prisons in which research would be conducted. These conditions included, among others, adequate amounts of living space, regular access to clean and working showers, adequate recreation facilities, regular access to these facilities, and the regular issue of personal care items and clean linen.

Debate in Congress over the appropriate legislative actions to take on the Commission's recommendations resulted in the stipulation that research involving prisoners as subjects must directly address or relate to the state or condition of incarceration and imprisonment, thus demonstrating some potential benefit to the research subjects themselves, or that it must have the "intent or reasonable probability of improving the health or well-being of the subject."[11] The implementation and responsibilities of institutional review boards that would oversee research involving prisoners were also set out in detail in the regulations. In 1979, the Commission published the *Belmont Report: Ethical Principles and Guidelines for the Protection of Human Subjects of Research* and recommended that the DHEW adopt the report in its entirety as official DHEW policy. Although the *Belmont Report* was not, in fact, officially endorsed by the DHEW or Congress, it nonetheless has become the standard for ethical decision making in human subjects research in the United States.[12]

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11. See the Federal Register, Vol. 43, pp. 53652–53656, *Rules and Regulations, Part 46, Protection of Human Subjects, Additional Protections Pertaining to Biomedical and Behavioral Research Involving Prisoners as Subjects*.

12. In 2004, the Belmont Report celebrated its 25th anniversary. To commemorate the event, members of the National Commission were interviewed for the Belmont Oral History Project. Transcripts of the interviews can be accessed online at http://www.hhs.gov/ohrp/belmontArchive.html#histArchive2.

The Social Control of Behavior Control

The period of federal scrutiny of behavior modification in the early to mid-1970s was brought about by a multitude of factors, including developments internal to the discipline of psychology and those related to its wider political and cultural milieu. As psychologists generally, and behavior analysts specifically, took up the call for greater social and political activism and attempted to prove their practical worth outside the academy, they were naturally subjected to increased public scrutiny. Behavior modification became a specific target of this scrutiny because it was widely perceived as more powerful, effective, and coercive than other technologies of personality or behavior change. Moreover, as behavior modifiers and others used these techniques to address an ever-widening range of problems in a wide array of settings, and were given increased authority to do so, their public visibility and accountability increased.

In this period, mounting social concern about the rights of individuals—especially institutionalized individuals—subjected to coercive treatment combined with an increased willingness on the part of the courts to intervene in the regulation of treatment. Landmark court cases such as *Wyatt* v. *Stickney* in 1972, in which the court concluded that hospitalized mental patients have a right to the least restrictive conditions necessary to achieve the purposes of commitment, highlighted and served as examples of this trend. In addition, as I have mentioned, outrage over the grossly unethical treatment of human subjects in medical research was ignited in 1972 when a front-page story in the *New York Times* broke the news of the Tuskegee Study, begun in 1932, in which hundreds of low-income African American men were recruited for research by being told that they would be treated for syphilis when in fact they were denied proper treatment so that scientists could study the course of the disease.

Other cultural and political factors also came into play in this period. In the wake of the urban riots of the late 1960s, the federal government was called upon to devote more attention (and funds) to issues of criminality, deviance, and law enforcement—areas that had previously fallen under the purview of state and local governing bodies. This resulted in the formation of agencies such as the LEAA, which began to funnel large amounts of money to many programs—including contingency management programs—without well-developed ethical review and monitoring. At the same time, deteriorating prison conditions, such as overcrowding, and the need for prison reform, became highly visible. Books such as Jessica Mitford's *Kind and Usual Punishment* (1973) drew attention to many of the dubious treatment and rehabilitative practices being carried out in the correctional system. The public had no firm handle on how to differentiate good programs from bad, and indeed many well-intentioned programs simply could not be effectively implemented in a system designed to punish rather than reward.

Concurrent with the debates over rehabilitation practices in prisons was growing support for the deinstitutionalization and patients' rights movements, along with a strong cultural shift toward community-based care. Although primarily aimed at patients in mental institutions, these movements affected prisoners as well. As FBP Director Norman Carlson remarked in reference to objections to the amount of money being deployed for the construction of new prisons, "Basically, the criticism has been that the Federal Government is building more prisons and jails which are unneeded because of the availability of community treatment programs and other alternatives to incarceration" (Behavior Modification Programs, 1974, p. 3).

In this multifaceted social and political milieu, Skinnerian behavior modifiers found their technology under attack and were called upon to examine the use of their techniques by those both within and outside their ranks. This attention was surprising to some and caught many unprepared. As Hilts wrote in 1973, "For the moment, behavior mod is being spread

with an enthusiasm that has overcome caution. Behaviorists have not decided who is qualified to use behavior mod, what can be legitimately called behavior mod, or how the tools may be used ethically" (Hilts, 1973, p. 44).

As a professional group, behavior analysts, despite experiencing some internal dissent over the appropriate uses of their technology, presented a fairly united front in defending both their techniques and their professional territory to the public and their non-behavior-analytic colleagues. Internally, however, they began a difficult dialogue about the need to consider the ethical implications of their work and the profession's values. Holland's was an important voice in this regard (see also Winett & Winkler, 1972). Finally, this period of scrutiny also drove home to many behavior analysts the need for certification to protect themselves and the public. Indeed, the repercussions of these debates would be felt in the years to come, as behavior analysts took the necessary steps as a professional group to codify the training and expertise required to own the title "behavior analyst" and effectively police their professional turf. This initial period of self-assessment and boundary maintenance would set in motion the steps toward achieving full professionalization, including a national certification program, that would occupy the field in the 1980s and 1990s.

Was the use of Skinnerian behavior modification in prisons and other closed institutions completely curtailed as a result of these events? Certainly, at least a few promising programs suffered premature termination. In some cases, however, the result was a subtle shift in terminology and a modification of technique. For example, new regulations concerning the kinds of incentives that could be used as reinforcers, the types of work institutionalized individuals could be asked to do and the need for voluntary participation resulted in concrete changes to contingency management programs. In 1976, one behavioral psychologist wrote, optimistically:

> In the late 1960s, the courts stepped in and ruled that some programs violated prisoners' rights. Some feared that, no matter how effective token economies might be, their use would soon be prohibited. Such fears proved groundless. . . . The courts' scrutiny of patient and inmate rights may lead to an insistence on the accountability of all treatment programs. . . . [S]uch insistence could eventually benefit token economies and other behavior modification programs that can show consistent improvement in the patients they treat. (Kazdin, 1976, pp. 105, 114)

Clearly, as members of the APA and other professionals worked to differentiate operant approaches from other forms of behavior modification involving pharmacologic or surgical interventions, some pressure abated. In addition, self-conscious changes in terminology ensued. Tellingly, in response to the question "What recommendations do you have to prevent some of the problems of START from affecting your future programs and the programs you have planned?" the director of the FBP replied, "Not to use the term 'behavioral modification' but to talk about positive rewards and reinforcements for the type of behavior we are attempting to instill" (Behavior Modification Programs, 1974, p. 4). Psychologist and FBP Administrator of Inmate Program Services Robert Levinson put it this way: "We're doing what we always did before. . . . To call it behavior modification just makes things more difficult. Who needs it?" Levinson added that although behavior modification would continue couched in euphemisms, it was likely to be "much more voluntary" and might involve contracting with potential participants (see "Behavior Mod in Federal Prisons," 1975).

Finally, as the culmination of many of these concerns across both behavioral and biomedical domains, the formation of the National Commission and, subsequently, the publication of the *Belmont Report* changed the conduct of all federally funded research with human subjects, especially research with vulnerable populations. The National Research Act made

the institutional review board (IRB) a required component of ethical review, and the reports of the National Commission stipulated in detail how these IRBs should be comprised and conducted. One of the key features of the IRB was outside membership, originally envisioned as comprising up to 20% of the composition of the board.[13] Scientists, including behavioral scientists, received the clear message that they were not separate, aloof, and self-governing but part of, and accountable to, a much larger community representing diverse interests and varying agendas.

The social control of behavior control was achieved through public outcry over perceived and actual violations of human rights at the hands of scientists, in specific cases through legal action, and finally through federal regulations that changed the conduct of science itself. Scientists, either through their professional organizations or as individuals, did not remain disinterested in these developments but participated in the debates that arose and the solutions that were offered. Many acknowledged that it was not their science, but their values that were called into question, and they grappled with how to negotiate the value-science duality. As one behavior analyst wrote, "Any science that contributes a technology to society must face the issue of the purposes for which that technology is used. . . . Schools, prisons, and housing projects are not environments where behavior can be intentionally controlled by psychologists without their answering legitimate questions about the purposes of such control" (Wood, 1975b, pp. 35–36).

In the history of psychology, this episode is distinctly illustrative of the processes through which psychological science and its products, especially those regarded as particularly effective and potentially exploitable, are shaped, regulated, and modified by the society in which they are embedded. It illustrates the active role of the scientist—as a professional and as a member of society—in monitoring and evaluating these products in their value-laden social contexts. Perhaps this particular episode also indicated that, amidst the general social ferment of the 1970s, psychology had at last come of age with respect to its social relevance. As one behavioral scientist noted:

> Whenever a science is ready to apply its principles or methods to the control of man's social and physical environment, public attention demands that the consequences of such application be carefully examined. This scrutiny often results in argumentative debates and emotional alignment of the public vis-à-vis the science, its contents, and its practitioners. . . . [T]he vigor of recent public reactions to progress in the study and control of human behavior has taken our academically-minded science by surprise. . . . Perhaps the sudden widespread concern simply indicates that psychology, finally, *may have something to offer which has applicability to everyday life.* (Kanfer, 1965, pp. 187–188, emphasis added)

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13. As Mishkin (2004) noted: "One thing that one could say about the outside membership on the IRB, back in the 1970s, we were thinking of IRBs with about five members, something rather small. And so to require one outside member on a five-member IRB was to require 20 percent of the membership to be outside, meaning unaffiliated with the institution" (p. 16).

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