
Psychology and Nuclear War

A Chapter in Our Legacy of Social Responsibility

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ABSTRACT: *Psychologists' current participation in nuclear armament issues constitutes the latest moment in a telling chronicle of engagement. Psychologists' work on nuclear-war-related problems since 1945 has been sporadic, and their research corresponds with modulations in government policy. The history of these activities presents a sobering case that we can use to evaluate both the underlying forces on our research and the feasibility of our professional model of social responsibility. The recent activities of psychologists suggest some alternatives for our involvement in an imperative global issue, specifically for rethinking just what is psychological about the problems, and for determining what problems might or should concern psychologists. The present exploration of psychologists' past engagements suggests that we must go beyond simply evaluating our science as a corpus of either intellectual innovations or ideologies. We must begin more critical scrutiny of how we attain appropriate questions and share our answers.*

North American psychologists' concern with nuclear armament has escalated over the last several years. Throughout the country, groups of psychologists have begun to assist in the grassroots antinuclear movement, and at the 1982 annual meeting of the American Psychological Association (APA), the Council of Representatives passed a nuclear freeze resolution. Although in keeping with the new antinuclear cause, psychologists' involvement is not novel but actually represents a rather measured step in a historical progression. Knowledge of this history casts the recent events as somewhat expected occurrences and, in turn, gives reason for sober reflection on psychologists' participation. For although psychologists' nuclear-related activities exemplify an enduring commitment to the preservation of human welfare, they also feature several problems associated with those revered commitments. The discipline's heritage of contributing expert knowledge to social policy has long employed a model that equates responsible involvement with the provision of objective knowledge derived independently of political interests. However, neither political impartiality nor

steadfast commitment to what is a compelling problem proves to be the case in this particular history. Perhaps, then, it is not so startling that the history also undercuts another implicit assumption of our professional model: the belief that psychology's expert advice is heeded in government decision making.

Psychologists' concern with questions about nuclear war commenced almost simultaneously with public knowledge of the atomic bomb, and their research practices appear to have vacillated in accordance with the general political climate in the United States, specifically with changes in foreign policy. To some critics these parallels would suggest that socially relevant social scientific research is influenced either by concrete linkages between government, business, and the academic world or by a hegemony of corporate ideology (see Domhoff, 1970, 1978; Shroup & Minter, 1977; Wise & Ross, 1964). Although these hypotheses are deserving of investigation it is not necessary to demonstrate any orchestrated collaboration. Textual analyses of the pertinent documents reveal that psychologists' conventional practices are sufficient in themselves to have cemented such bonds. What follows is not a comprehensive history, for we still need to learn more about the direct connections between theory, research, and application. This history, comprised from a review of nuclear-related research (1945–1984), raises questions about our venerated and largely self-designated model of social responsibility. The history of psychologists' involvement in nuclear war issues forces us to reconsider our scientific obligations, personal options, and professional self-appraisals.

Psychology and Social Practice

Psychologists' acclaimed dedication to bettering human life predates the establishment of professional associations, laboratories, and the institution of psychology as a scientific discipline (Leary, 1980; Morawski, 1982; Sarason, 1981). Even the first generation of American psychologists contemplated the social benefits and the special obligations of the discipline. The mandates for socially responsible practices eventually became, and remain, visible in the con-

stitutional declaration of the APA, and as perusal of any recent copy of the *American Psychologist* will confirm, the discipline's contributions to social welfare are still construed as a significant function of contemporary psychology.

The acclaimed dedication to human welfare has long rested on several fundamental postulates about the nature of research and the proper modes of utilizing knowledge in the management of society. A fundamental premise is that psychological knowledge is privileged only by virtue of being derived through objective procedures. This premise in turn demarcates the ideal role of psychologists in managing society according to a "natural" bifurcation of facts and values, in which psychologists are obliged to provide only the former. Here also lie the ostensible grounds for the distinction between acting as a psychologist and as a citizen. Given an associated assumption that policy decision making is and should be rational, the provision of psychological facts ultimately ensures competent policy judgments and, hence, an advancement in human welfare (for critical analyses of this model see Feyerabend, 1978; Garfinkel, 1978; Morawski, 1983). Throughout the development of the discipline psychologists have promoted this formula with a certain complacency. Although some have become wary of the model, they typically have concentrated on the problems of disseminating knowledge once it is acquired (Bevan, 1976; Miller, 1969). With few exceptions (e.g., Argyris, 1975; Sampson, 1977; Sarason, 1984), the knowledge-generating aspects of the model have gone unchallenged.

This essentially unexamined model, however, contains at least one dilemma that will become evident in the case of nuclear-war-related research. The dilemma and its objectionable consequences are exemplified in the thinking of one consumer of our knowledge, the Republican Senator Orrin Hatch. In an address to psychologists on the use of psychology "to build a better and stronger society," Hatch (1982) claimed that "among the first considerations is the relationship of psychology as a science to politics in general. Science is a nonpartisan pursuit of knowledge. We in America have a long-standing commitment to the pursuit of new knowledge and to disseminating that knowledge as widely as possible throughout our society" (pp. 1036-1037). Senator Hatch then appended a material caveat by demanding that

in cases where the values of society do not match those of the individual psychologist or the groups of psychologists, it seems to me wisdom would dictate that psychologists

should be very cautious and sensitive to the image they are projecting. If psychology is to be accepted as a scientifically valid monitor of society and, even more, if psychology wants to be accepted as a reliable agent for positive social change, psychologists cannot be seen as a group on the fringe of social normality who are promoting social deviance. (p. 1035)

That his proscription on socially *unacceptable* yet *valid* knowledge is seldom appraised by psychologists may well be owing to the fact that, in practice, it rarely occurs. The history to be recounted here indicates all too clearly how the research procedures used by psychologists ensure against the "deviance" Senator Hatch noted. The degree to which psychologists complicitly avoid such "deviance" remains to be ascertained. What is of interest at this point, however, is how the dilemma appears to be resolved through a paradox. Through our selection of research orientations, our selective way of viewing a phenomenon, we may diminish or eliminate the actual potential of that research to positively transform social life.

Psychologists' concern with atomic war commenced with the 1945 bombing of Hiroshima and Nagasaki. In the last 39 years their efforts have ebbed and flowed largely with the tides of political climate. Although the methods and benevolent intentions of these psychologists dedicated to the nuclear issue did not change much—an emphasis on survey techniques and a hope to promote world peace—the particular foci of their investigations have varied. Research undertaken in the 15 years following World War II largely supported government policy in an attempt to socialize Americans to the benefits of atomic weaponry and energy. During a brief period in the early 1960s, however, psychological research on nuclear war constituted something of a critique of the psychological misperceptions inherent in government policy and foreign affairs. From the mid-1960s until the 1980s, a period of general public quietude, research on psychological issues of the nuclear age nearly ceased. In the last several years, clinically oriented psychologists have begun investigating the psychological consequences of living with the constant threat of nuclear holocaust. Despite changes in the focus of research, certain themes have persisted to structure, and perhaps to inhibit, psychologists' work. Most notable of these themes is the isomorphism between research interests and the prevailing political climate, a correspondence of such magnitude that it belies the value-neutrality mandated in the prototypic model of research practice. Furthermore, despite intense proclamations of responsibility to extend expert knowledge, many psychologists demonstrated reluctance or inability to sustain their commitment. Finally, psychologists have largely refrained from self-reflection on their

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involvements and have neglected to consider reflexively the denial of the nuclear threat that they repeatedly observed in their subjects. A closer review of psychological research on nuclear issues illustrates these themes.

Postwar Organization

The first visible responses of psychologists to deployment of atomic weapons in 1945 consisted of the establishing of four committees. Plagued by disorganization and limited commitment on the part of their members, the committees were relatively short-lived, but they nevertheless depict the general tenor of psychologists' professional stance. At about the same time several psychologists issued individual statements reiterating the need to base policy decisions on social scientific knowledge (e.g., Krech, 1946a). As Ernest Hilgard (1945) argued, "Millions of dollars invested in social science research in the immediate future would be a small price to pay if the costs of war could be avoided." The committees were sponsored by the existing professional organizations of the APA and the Society for the Psychological Study of Social Issues (SPSSI). The APA Committee on the Implications of Atomic Energy, established in the fall of 1947, was to report "on the psychological aspects of the present explosive situation which threatens the unity of mankind and of civilization itself." Its tasks were to survey research on social interaction and initiate liaisons with comparable committees. Confusion pervaded the chairmanship, title, and the delegation of responsibilities.² After realizing no substantial accomplishments, the committee was disbanded by APA in the fall of 1949 despite requests for renewed funding because three SPSSI committees were assumed to be adequately serving the function intended for the APA Committee on the Implications of Atomic Energy.³

In response to a request made by the Federation of American Scientists in 1946 for psychologists to assist in understanding and controlling public attitudes regarding the atomic bomb crisis,⁴ SPSSI created the Committee on International Peace in 1947, chaired by David Krech, and the Committee on Atomic Education in 1948. The achievements of the former committee included two reports (Krech, 1946a; SPSSI, 1946) that dealt with education and panic reduction concerning atomic warfare and that encompassed the conclusion that "atomic energy has become a psychological problem" (Krech, 1946b, p. 358). Krech, like several others to follow, attempted to make his views known to government officials.⁵ The latter committee disbanded in 1950 after no visible accomplishments when only two committee members appeared at their scheduled meeting. (Committee on Atomic Education, 1948; N. L. Gage to S. Goldstein, personal communication, December

1, 1982). The third SPSSI Committee on Implications of Atomic Energy was founded in the spring of 1947. Its sole duty was the awarding of the Edward L. Bernays Atomic Energy Award to Hornell Hart for proposing research on the "social implications of atomic energy (SPSSI, 1947).⁶ Hart's proposal was commended but never actualized.

The assorted undertakings of these committees and independent researchers share several potent yet unarticulated premises. Above all, their activities convey an overriding ambiguity about ultimate objectives. Despite such uncertainty, several positions were made clear. First, the documents repeatedly affirm that the problems at hand were essentially "psychological" and that beyond the questions of military preparedness, political strategy, and technological progress lay the most crucial issues of the psychological dimensions of a possible nuclear war. These early committee and research reports gave greatest attention to civilian competence: They emphasized the need to accurately assess and control public opinion in order to achieve public consensus regarding foreign relations and atomic war. Finally, infused in the statements was an accepting sense that a future nuclear confrontation was inevitable.

These positions undoubtedly reflect a degree of professional concern about the roles of psychologists in the postwar American economy. But they also appear to have roots originating beyond the idiosyncrasies of professional security: The positions mirror with exceptional resolution several predominant government policies and strategies. Immediately after the war the United States government, contemplating the lack of war preparedness and facing the unknowns of postwar international relations, struggled toward reorganization through committee work and expert debates. The multiple and ambiguous policy

¹ Membership included Jerome Bruner, Eugene Hartley, Theodore Lentz, Rensis Likert, Ronald Lippitt, Otto Klineberg, Gardner Murphy, and Ruth Tolman. See APA Committee on the Implications of Atomic Energy, Archives of the APA, Library of Congress, section 1, box D-14, Washington, DC.

² Dael Wolfe to Ruth Tolman, July 19, 1948 (see Archives of the APA, Library of Congress, section 1, box D-14, Washington, DC).

³ Dael Wolfe to Eugene Hartley, October 14, 1949 (see Archives of the APA, Library of Congress, section 1, box D-14, Washington, DC).

⁴ The Federation of American Scientists (FAS), a network of physical scientists and engineers, was formed in order "to meet the increasingly apparent responsibility of scientists in promoting the welfare of mankind and the achievement of a stable world peace" (FAS, 1946).

⁵ Krech forwarded a copy of his 1947 plan to Representative May advising him of the deleterious consequences that could result from the House's 1946 adoption of Senate Bill S.1717 (David Krech to Representative May, July 22, 1946, SPSSI Archives, University of Akron, Akron, OH).

⁶ Hart was presented the award for his work "Manhattan Project of the Social Sciences."

issues faced by these macrogroups were not substantially different from those faced by the psychologists' groups. Both the governmental and psychological committees came to perceive foreign policy as resting on a psychological basis. This orientation is particularly evident in the United States policy of "containment," which recognized the Soviet Union as a threat yet asserted United States security as a higher priority than intervention into Soviet foreign affairs (Gaddis, 1978, p. 34). Besides conjectures on the psychological processes underlying foreign relations, national leaders also contemplated the possibility of public hysteria and advocated behavioral control of civilians. For instance, a 1947 forecast of the world political situation prepared by the Joint Chiefs of Staff predicted the likely possession of atomic weapons by two opposed nations in the next decade. It was concluded that these conditions "will probably result in a tense and excitable state of world public opinion—possibly in a species of world hysteria—wherein minor political incidents are exaggerated into political crises" (reprinted in Etzold & Gaddis, 1978, p. 290). Finally, government officials unquestioningly accepted the inevitability of future atomic confrontations and asserted the need for civilian, military, and political preparedness. The similarities between the responses of psychologists and government officials extended beyond general procedures for postwar organization to specific emphases on the "psychological" underpinnings, civilian control, and the inevitability of some future atomic confrontation with the Soviet Union.

Thinking Right in the Atomic Age

By 1950 the various committees had either dissolved or had made tenuous progress. However, they seem to have inspired or at least anticipated a host of empirical studies on the psychological aspects of nuclear energy and weaponry. Most of the research undertaken during the 1950s examined one of three core problems: fear reduction, attitude assessment, and treatment of the psychological casualties of atomic war. Interspersed throughout these studies, as well as throughout the proceedings of a 1950 special roundtable where psychologists and scientists discussed "Social Psychology and the Atomic Bomb," were repeated assurances that psychological expertise could be used to adjust people's thinking about atomic issues (Marquis, 1950). Psychologists worked alongside government and military officials to create programs of civil defense and military preparedness.

The empirical assessments of Americans' attitudes toward atomic energy and weapons conducted in the late 1940s and the 1950s yielded some puzzling findings. Although those who were surveyed consistently reported a high level of awareness of the bomb and of the improbability of international

control of atomic energy, a surprisingly small number expressed worry or fear about the situation (Cottrell & Eberhart, 1948). Researchers typically attributed this apparent contradiction in beliefs to "fear-suppression," which, in turn, was thought to be generated by a sense of impotence (e.g., see Douvan & Withey, 1953; Harris, Proshansky, & Raskin, 1956; Michael, 1955). Without any explicit sense of irony, these researchers concluded that people had relinquished responsibility to expert authorities. As one investigator reported, "It seems unlikely that many people will feel active concern about a problem before which they feel helpless" (Woodward, 1948, p. 11). A few related the apathy to a guilt about the bombing of Hiroshima (see Perry, 1954) and attributed the negativity toward atomic power to that tragic first experience with atomic energy (Kay & Gitlin, 1949). It was not suggested that "fear-suppression" might in some way be a maladaptive response. The surveys explicitly claimed value-neutrality while sometimes revealing a bias to promote both public consensus with government policy and abdication of public opinion to expertise.

Other researchers, often employed by the military or associated agencies, concentrated on studies of fear reduction. Although many of the studies were intended to develop techniques for ridding military personnel of their reluctance to participate in atomic maneuvers, some sought means for preventing panic in the general public. Especially in the military-oriented studies, the fear being observed was considered irrational, "appalling," and one of those "unfortunate psychological reactions" (Cooney, 1949, p. 969). In order to accurately evaluate this fear a number of psychologists conducted field studies of soldiers who were stationed in close proximity to atomic test blasts (e.g., Berkun, Timiras, & Pace, 1958), and some appreciated the unique opportunity to test psychological theory in a natural setting (Walker & Atkinson, 1958). The measurement of reactions was often followed by the development of techniques for fear reduction. One study reported a successful decrease in soldiers' anxiety level by indoctrinating them about the destructive capacities of the bomb and the protective measures that could be employed (Schwartz & Winograd, 1954). Another reported that the "Mental Conditioning of the Soldier for Nuclear War" could be accomplished by toughening the "moral fiber" of the soldiers (moral fiber being a willingness to sacrifice one's life and a development of battlefield courage), by "preconditioning" about the effects of radiation, and by practicing with small, tactical nuclear weapons (Rand, 1960).

The studies of the psychological casualties of citizens in an atomic war surmised comparable reactions. Those who conducted research with vic-

tims of Nagasaki and Hiroshima or with survivors of conventional warfare cautioned about the limited generalizability of their data but nevertheless proffered predictions based on the data. Researchers typically inferred rather minor or transient consequences of atomic bombing, suggesting that neurotic reactions would be short-lived and prolonged psychotic reactions would be infrequent (Glass, 1956; Janis, 1951; Michael, 1955; Stevens, 1951). Proposals for appropriate postbombing strategies included creation of temporary rest camps for "those who are too disturbed to return to productive activity," pamphlets with "reassuring information" about treatment of disfiguring injuries (Janis, 1951, pp. 190, 223), and proper administration to injuries, pain, or hunger by distributing warm drinks rather than tranquilizers (Glass, 1956). The relatively primitive state of weapons notwithstanding, these proposals reveal psychologists' own avoidance of the possible consequences of an atomic war and as such are consistent with government programs that encouraged homeowners to build backyard bomb shelters and taught school children to protect themselves in the event of an atomic bombing by the "duck and cover" method.

Personal attitudes and public opinion were seen as pivotal factors in the rational organization for atomic warfare. With the leverage of empirical findings it was ascertained both that consensus of opinion was necessary and that adequate preparation for an atomic bombing could be achieved. Researchers reiterated the conviction that psychological expertise was instrumental for attaining this delicate balance of psychological energies, a balance where "in each person's private image of his own future, the threat must come gradually into focus at a time when the menace is not perceived as being overwhelmingly great" (Janis, 1951, p. 250). It should be noted, however, that even at this time a handful of social scientists dissented from the majority and criticized arms build-up and the risks of nuclear war. Some of these social scientists organized committees to make their views public.⁷

Cold War policies also revealed a growing emphasis on civil and military preparedness. The policy of deterrence, stressing the need for United States nuclear superiority in order to "deter" a Soviet attack, replaced the earlier policy of containment. Deterrence necessitated the projection at home and abroad of the idea of American military supremacy and readiness to fight a nuclear war. It reinforced a

perception of the Soviets as enemies and expounded the possibility not simply of fighting but, more important, of surviving a limited nuclear war. Democratic consensus to a policy of deterrence was deemed desirable, and perhaps necessary, and resulted in a marked government interest in public attitudes (Etzold & Gaddis, 1978, p. 403). Apparent public consensus in support of government policy during the Cold War period, however, might better be described as a tendency toward public acquiescence to the administration's decisions (Huntington, 1961). Nevertheless, deterrence and the mental and military preparedness it necessitated—along with the careful manipulation of public and foreign attitudes—was perceived as an inherently psychological program.

Toward a Psychology of International Peace: The Early 1960s

The early 1960s witnessed a shift from psychological studies on civilian and military attitudes to investigations of the psychological dimensions of international relations in the nuclear age. Psychologists seemed less concerned with treating anticipatory fears or resultant casualties of atomic attack than with designing diplomatic strategies for preventing war. The orientation is typified by two central publications during the period: an edited volume entitled *Preventing World War III: Some Proposals* (Wright, Evan, & Deutsch, 1962) and a special section of the *Journal of Social Issues* (Russell, 1961a). These and other studies embodied three significant changes in psychologists' approach to the study of nuclear issues. First, the level of analysis was shifted from that of individuals to nations. Second, psychologists began to promote prevention of, rather than preparation for, war. And third, whereas previous research had attempted to document or generate public consensus with government policy, the new work was critical of American foreign relations.

Several psychologists in the early 1960s argued that a policy of deterrence was inherently unstable and wracked with psychological paradoxes. Some attempted to show how deterrence actually decreased national security by fueling an arms race (e.g., Deutsch, 1961; Milburn, 1961; Osgood, 1959, 1962). Others likened the behavior of national leaders to "mental patients," claiming that their actions aggravated the threat that they purported to avert (Frank, 1960, p. 245; also see Osgood, 1962, p. 20). "Psychologic" and "mirror imaging" were identified as psychological factors underlying and perhaps undermining international relations. Here psychologic refers to unrealistic and emotional perceptions that prevent individuals from rational analysis through the creation of black and white, or "good guy/bad guy," dichotomies of opposing forces such as the

⁷ In 1958 a group of Harvard University students, supervised by David Reisman, formed Tocsin, an organization that campaigned for legislators supporting peace platforms and disseminated information related to nuclear war to Washington policymakers (personal communication, S. Goldstein to David Reisman, March 30, 1983, and Robert Lifton, March 28, 1983). A similar group was formed in 1961 (Krim, 1962).

United States and the Soviet Union (White, 1965). Mirror imaging refers to the phenomenon by which the United States and the Soviet Union maintain the same misperceptions regarding each other (Bronfenbrenner, 1961).

In critical diagnoses of deterrence strategies, investigators repeatedly argued the need for psychological expertise in the reshaping of political policy (Russell, 1961b; Wright, Evan, & Deutsch, 1962). They reiterated their conviction that the arms race was a psychological problem requiring behavioral or some other form of psychological control. From these evaluations emerged several programs for resolving international tensions. Most recommended that the move to peaceful coexistence required alternative means for an acting out of aggressive tendencies, behaviorally monitored programs for deescalation of arms, and greater opportunities for positive cultural exchange (see Deutsch, 1961, 1963; Frank, 1960, 1961; Osgood, 1959, 1962). The most fully developed of these proposals, and the one receiving most recognition outside the social scientific community, was Osgood's (1962) "GRIT" plan for calculated deescalation of the arms race (Gradual Reciprocation in Tension-Reduction). Osgood favored GRIT over the deterrence model, which he argued both engendered nuclear confrontation and threatened democratic practices. The basic strategy of GRIT requires the United States to take gradual steps toward disarmament with the expectation that each reduction would be reciprocated by the Soviet Union.⁸ Some psychologists recognized their new critical awareness of government affairs to be a result of the relaxing of Cold War constraints on political criticism. However, the shift, one that was to be followed by a rapid demise in concern about atomic issues, occurred during a rather unsettling period. American foreign policy endorsed an aggressive nuclear arms build-up in reaction to the Soviet launching of Sputnik, fear of a missile gap, and the Cuban Missile Crisis. It was a time of heightened controversy over nuclear issues, which included a brief flurry of public antinuclear activism spurred by total war scenarios and fears of radiation fallout from nuclear testing (DeBenedetti, 1980). Controversies raged not only in the public sector but also among experts who advocated assorted models of deterrence, gaming, and peace negotiations (Herzog, 1963). Herman

Kahn (1961), author of the best seller *On Thermonuclear War*, and physicist Edward Teller (Teller & Brown, 1962) were two such outspoken experts who strongly supported the development of viable nuclear war strategies. Psychologists can perhaps be seen as another group of enthusiasts who jumped on (and then off) the bandwagon of nuclear politics in the early 1960s. The establishment of the Test Ban Treaty in 1963 came to mark a new period in the American political climate as it quieted many public fears and encouraged a protracted period of detente in which the threat of nuclear confrontation disappeared from everyday concerns (Mandelbaum, 1979; Quester, 1970; Relman, 1982). A wane in psychologists' involvements coincided with this comparatively calm respite from (or denial of) the threat of nuclear war. Psychologists' criticisms and prescriptions in the early 1960s were followed by a period of little visible activity. The mid-1960s saw few publications and no organizational work, and the period of quietude persisted until the late 1970s. With the exception of the psychoanalytically oriented contributions of Robert J. Lifton (1968) and the works of Jerome Frank (1967, 1976), the only relevant psychological writings appear to be primarily on international relations (e.g., Kelman, 1965; Stagner, 1967) and attitudes of apathy (Granberg & Faye, 1972; Jeffries, 1974). This dearth of attention—though parallel with national sentiment and thus constituting another question about psychological commitment—may also be related to the political economy of the profession. Psychological interest in nuclear research may have become subsumed under broader projects concerning peace and international relations. More important, given that a finite number of psychologists were producing social-welfare-oriented research, many of them may well have been occupied by the domestic crises surrounding interracial conflicts, the Vietnam War, and the feminist movement.

A Reawakening: Nuclear Psychology in the 1980s

Numerous indications of psychologists' interest in nuclear issues have appeared in the last 4 years. These include the associations of Social Scientists Against Nuclear War, Psychologists for Social Responsibility, The Nuclear Psychology Program, along with the APA nuclear freeze statements. Many psychologists have identified the nuclear arms race as an imminent danger that both encompasses and produces psychological consequences. Current research has revitalized a concern for the psychological aspects of international relations that was popular in the early 1960s (Fischer, 1983; Tetlock, 1983) and for the attitudes of citizens (Fiske, Pratto, & Pavelchak, 1983; Kramer, Kalick, & Milburn, 1983; Tyler

⁸ The GRIT plan may well be taken as a prototype of psychologists' aims during the 1960s. Not only was the GRIT plan well received in psychological circles but it was also seriously contemplated by policymakers (Deutsch, 1980; Etzioni, 1967). There is evidence that President Kennedy and his staff examined Osgood's plan (R. A. Dungan to C. Osgood, August 5, 1961; L. F. O'Brien to M. M. Ohlsen; C. Osgood to J. F. Kennedy, April 21, 1961, July 31, 1961; M. Bundy to C. Osgood, February 27, 1962—see John F. Kennedy Archives, John F. Kennedy Library, Dorchester, Massachusetts).

& McGraw, 1983). However, the major focus has been on the psychological consequences of living in the nuclear age. Most studies on the subject recommend neither compliance with government policy nor the reduction of international tensions through improved diplomacy as paramount measures. However, some adamantly support popular political action as a means to promote both peace and individual mental health, as a means for psychological empowerment.

A leader in this latter movement is the psychohistorian and psychiatrist, Robert J. Lifton. Currently the senior researcher for the Nuclear Psychology Program, Lifton (1968) began by documenting the psychological effects suffered by the survivors of Hiroshima. Lifton's recent research (Lifton, 1979, 1982; Lifton & Falk, 1982) has centered on the psychological consequences of the nuclear age. He has identified and cautioned against several psychological dimensions including reactions to the loss of traditional paths to immortality, nuclear illusions (erroneous beliefs concerning nuclear strategies), psychic numbing (the denial of the actual danger of nuclear war), and nuclearism (a worship of nuclear weapons). A related line of research has focused on children's responses to the threat of nuclear war. John Mack and his associates have found that the threat of nuclear war has indeed penetrated the consciousness of youngsters in the United States (Goodman, Mack, Beardslee, & Snow, 1983; Mack, 1981; Mack, Rogers, Beardslee, Carson et al., 1982). These researchers concluded that adolescents display both cynicism and pessimism regarding their chances for survival and hence are reluctant to plan for the future. The imminent threat of nuclear disaster also has been found to interfere with children's ability to form stable ideals and a sense of continuity in their personality development (Escalona, 1982; Schwebel, 1982). Most of this research recommends adult action in protest of nuclear weapons as a means of reassuring children that adults are actively confronting the objects of their fears.

Psychologists' current activities regarding nuclear war resemble their earlier assertions that psychological expertise is essential.⁹ Their tendencies to disassociate with or oppose government policy are atypical but not unique among professionals. But their means for disseminating their knowledge is innovative: Many psychologists have chosen to circumvent the conventional modes of influence, preferring instead to establish direct contact with citizens

and to encourage citizen activism rather than total reliance on intermediary agencies.

The Delivery of Technical Knowledge

The enduring if oscillatory involvement in nuclear issues constitutes a continued commitment to promoting human welfare. For the most part, psychologists' contributions have been restricted to delivering expert (psychological) knowledge, with scant reflection on the process of knowledge production. Few have even contemplated the historical or economic dimensions of the tumultuous age of nuclear arms. Yet, the history of their work suggests that they were drawn along by these very historical and economic forces. And, although it is difficult to assess the impact that psychologists have had on nuclear policies, the present study uncovered little in the way of substantial influence. The recurrent correspondences between the research orientations and sociopolitical situations indicate a need for us to examine our self-appointed professional obligations and especially to explore how these endeavors have been inadequately structured and legitimated through a model of objective science and dispassionate decision making.

Some might conclude that psychological studies of nuclear-related issues have reified conceptions of nuclear war as inevitable or as ordinary. It might be argued that the entire research program, borrowing Lifton's concept, assists in fixing a mask of psychic numbing. The present study has not explored these possible consequences. Nor has it examined the crucial question of whether arms control is even a psychological issue—whether psychologists should even participate as professionals or should restrict themselves to citizen involvement. Rather, the study has been restricted to locating several implications of our prototypic model for improving human welfare. The separation of facts and values (assuming psychologists' ability to remain 'neutral' by operating within the factual domain) and the rational utilization of knowledge in policymaking actually function quite differently than is assumed. The presumed adequacy and purity of the model seem to serve more as markers for a domain of professional authority than as a guarantee for obtaining and utilizing veridical knowledge. Although many have acknowledged the impact of values on the conduct of research, few have traced the extent to which such value orientations (sometimes called "biases") structure both the answers and the research questions. Psychologists' decisions to study citizens' attitudes toward the bomb, fear and motivation in soldiers, or the mental processes of international politics were directed by implicit working rules. In turn, the studies yielded technical knowledge that was both constituted and constrained by these directives.

⁹Deutsch reiterated many of his earlier proposals for the establishment of peace in the nuclear age at both the conference of Social Scientists Against Nuclear War held in New York, June 1982, and at the 1982 meetings of the International Society for Political Psychology. Also see Frank (1982a) and his revision of *Sanity and Survival* (1982b).

These conclusions extend well beyond acknowledging psychologists' inconsistent participation in the nuclear issue. They illustrate some violations, if not the impossibility, of the prototypic model of beneficent research. The conclusions raise basic questions about what we believe we are or should be contributing to social welfare. A preeminent consequence of attempting to follow the conventional model is apparent in this study: As psychologists persevered in their efforts to affect policies of nuclear armaments they appear to have engaged in two forms of *benign counseling*. First, political and professional expectations limited researchers' vision; it was highly improbable that emancipatory knowledge would ensue from such a constricted system of inquiry. Although such a procedural model provides protection against producing the "deviant" knowledge condemned by Senator Hatch, it is equally unlikely to yield any generative understandings. Second, benign counseling is also evident in actual policymaking, where psychologists' self-image as valuable advisers is sometimes eclipsed by political priorities or expedencies (e.g., Gerard, 1983).

Recent involvements signal a shift away from some of these conventional practices. Psychologists have organized outside of their professional organizations as well as within them. They have initiated a related practice of bypassing policymaking channels and working directly with citizens. Finally, especially in the work of Lifton, there is an emerging perception that we must confront questions of nuclear warfare as being *political and historical* as well as psychological. These are but preliminary signs of change, ones that may not fare well with either the expectant policymaker or the conventional scientific psychologist, for they diverge from the institutionalized practices of expert counseling. Whatever the virtues of these reformulations—the moves toward political activism and new forms of research—the bases of our professional model warrant more reflective appraisal. And such appraisal must begin with nothing less than blunt honesty about the influence of politics, the constraints of methodology, and the risks of expertise.

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