

# Social Control and Contested Environmental Illness: The Repression of Ill Nuclear Weapons Workers

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## *Abstract*

*Using in-depth interviews, participant observation, and document analysis, we examine obstacles faced by a group of nuclear workers organizing to challenge the Oak Ridge Nuclear Reservation and the Department of Energy (DOE) over health grievances. The Coalition for a Healthy Environment (CHE) is comprised of ill employees, formed after workers from the nuclear facility realized a pattern of denial and resistance to their health concerns. We highlight environmental problems in Oak Ridge and share respondents' narratives regarding the use of social control to limit mobilization. We focus on hard and soft forms of social control utilized by DOE/corporate management, physicians, and co-workers, conceptualizing repression on a continuum representing severity of harm. Social control tactics included on-the-job harassment in the form of task reassignment and layoffs, monitoring, lack of diagnosis and treatment, stigmatization, and ostracism. We also analyze how social control impacts CHE's recruitment, tactics, and mobilization of resources and discuss implications for future research on ill workers and social control.*

**Keywords:** *environmental activism, social control, contested environmental illness, nuclear industry*

## **Introduction**

Since the 1980s, citizens have frequently mobilized at the grassroots level to address health concerns related to exposures to environmental hazards in their communities and

workplaces (Brown 1990; Edelstein 1988; Edelstein and Wandersman 1987; Freudenberg 1984; Freudenberg and Steinsapir 1992; Johnson 2006; Levine 1982). Residents of the working class community of Love Canal, New York mobilized as they gradually became aware of environmental threats posed by the chemical landfill on which the community was built. Mobilization at Love Canal was quickly followed by community activism in response to the partial meltdown of a commercial nuclear reactor at the Three Mile Island plant in Pennsylvania. These two cases heralded the emergence of the anti-toxics movement, a grassroots segment of the larger environmental movement, in which non-ill citizens organized to demand amelioration of environmental contamination in their communities (Cable and Cable 1995; Levine 1982; Walsh 1988).

Exposures to environmental hazards eventually result in environmental illnesses. Inevitably, many residents of contaminated communities who became ill connected their symptoms to hazardous exposures and became involved in community mobilization. Residents of Legler, New Jersey mobilized when they were evacuated because of groundwater contamination from a nearby landfill. Woburn, Massachusetts residents attributed a high incidence of leukemia among neighborhood children to groundwater sources contaminated with industrial solvents (Edelstein 1988). Workers increasingly participated in community movements as they perceived links between their illnesses and hazardous exposures in the workplace.

All social movements challenge authorities and are therefore subject to social control efforts. But ill workers

who mobilize against government and corporate polluters may be at greater risk of repression because they target the institutions that most benefit from the very technologies creating the hazardous exposures. Institutional motivation to repress ill workers' grievances is likely high, and institutional resources for social control substantial. What forms of social control are leveraged against movements of ill workers?

We address this question through an examination of the experiences of nuclear workers at the Oak Ridge Nuclear Reservation in East Tennessee. Many Reservation workers attributed their illnesses to workplace exposures to hazardous production materials such as radioactive substances and heavy metals. In 1994, they formed the Coalition for a Healthy Environment (CHE) and we had the opportunity to follow the organization from its early beginnings. What agents of social control acted to silence CHE activists? What forms and tactics of social control did agents deploy against them? What were the impacts of social control on the movement? We first review the research on the social control of social movements and then consider the particular case of the social control of environmentally ill activists. After a description of the research strategy, we trace the emergence and development of CHE to analyze the agents, forms, tactics, and impacts of social control deployed to silence activists.

## Social Control and Environmental Illness

The majority of research on social control is contained in the social movement literature. Additional insights on the social control of ill workers are offered in the contested illness literature. After an examination of the social movement literature to identify various classification schemes for the forms and tactics of social control, we turn to relevant portions of the contested illness literature to assess social control forms and tactics implemented against the environmentally ill. Drawing from those literatures, we then describe the analytical frame we use to analyze the social control experiences of CHE members.

### The Social Control of Social Movements

The social control literature offers significant insight into various classification schemes for forms of social control. Most discussions of the social control of movements focus on the state as the social control agent and on direct coercion and violence as principle forms of social control, such as policing, direct assault, intimidation, imprisonment and death (Carley 1997; Cress and Meyers 2004; della Porta 1996; Earl 2003, 2004, 2006; McPhail and McCarthy 2005; Stotik et. al. 1994).

Ferree (2004) contends that such overt forms of repression represent only one weapon in institutional arsenals. Fer-

ree (2004, 88) distinguishes between "hard" and "soft" forms of harm imposed by social control authorities: "Whereas hard repression involves the mobilization of force to control or crush oppositional action through the use or threat of violence, soft repression involves the mobilization of non-violent means to silence or eradicate oppositional ideas." She describes soft repression tactics such as verbal attacks and name calling, stigma used to devalue and discourage movement identification, and silencing that blocks movement access to the media.

Earl (2003, 2004, 2006) offers a similarly useful typology of forms of protest control distinguished by three dimensions: the agent of repression (tightly connected state/loosely connected state/private agents); the character of the repressive action (coercion/channeling); and the observability of the repressive action (observable/unobserved). Earl (2003, 2004) describes the use of channeling in company towns whereby the private agent, unobserved and with the assistance of public opinion, operates covertly to use soft social control to stifle a movement. Ferree's (2004) and Earl's (2003, 2004, 2006) typologies overlap somewhat in identifying social control as either hard/coercive or soft/channeling.

Some movement scholars document soft social control measures such as intelligence gathering (Carley 1997; Marx 1981), appeals to the larger society (Cable et al. 1999; Carley 1997), stigmatization (Zavestoski et. al. 2004) and on-the-job harassment (Draper 2000). In a study of social control and the American Indian Movement, Carley (1997) describes the FBI's counterintelligence program's use of "opinion control," which included disinformation, propaganda, and media manipulation. Opinion control prevented the dissemination of accurate information and caused the movement to act defensively and focus on repression rather than movement goals. Activists' defensive position promoted violent strategies and tactics that limited recruitment and legitimated for much of the public the state's repression of the movement.

Some researchers argue that soft forms of social control set the stage for hard forms, depending on public opinion. In a study of extreme right activism in the Netherlands, Linden and Klandermans (2006) examine the interaction of hard and soft forms of repression utilized by state and non-state actors. They found that public acceptance of soft forms of repression fosters an escalation to harder forms of repression: "Soft repression—in the form of ridicule, stigmatization or silence—prepares the ground for hard repression" (2006, 226). They suggest that the unpopular nature of the movement and the prevailing public opinion promoted an unsupportive social environment for activists that encouraged the state's use of more repressive tactics. In this case, soft repression combined with negative public opinion set the stage for hard repression and limited the attainment of movement goals.

Recruitment and protest are particularly impeded when activists are economically dependent on the polluter. The literature on whistleblowing speaks to issues of social control within the organizational context, as employees at all levels challenge institutions to respond to professional, legal, moral, safety, and health concerns. Speaking out against one's employer often results in retaliation or suppression (Bernstein and Jasper 1996; Glazer and Glazer 1989; Martin 1996, 1999; Rothschild and Miethe 1999; Soeken and Soeken 1987). In a survey of 146 women filing complaints of employment discrimination, Parmerlee et al. (1982) found that organizations were most likely to retaliate when employees were valued for their expertise or education and when their cases lacked public support. Soeken and Soeken (1987) discovered that all but one of the 87 whistleblowers in their study experienced retaliation in the forms of harassment by superiors and co-workers, shifted job responsibilities, and job loss. Glazer and Glazer (1989) found similar tactics in their study of white-collar and blue-collar whistleblowers in government and industry who experienced blacklisting, dismissal, transfer, harassment and sexual exploitation. Draper's (1999) study of company doctors found that physicians actively assisted management in removing troublesome workers or workers perceived as high risk, due to the pressure they felt to be perceived as "team players."

Bernstein and Jasper (1996) characterize organizational response to dissent in the form of counterclaims intended to discredit the whistleblower. Such counterclaims include the identification of whistleblowing as a problem in itself and portrayals of the whistleblower as troubled, disgruntled, or publicity seeking. Disciplinary policies as well as institutional and public opinion limited employees' activities both inside and outside of the workplace (Earl 2003, 2004). This observation was especially evident in Draper's (2000) work on channeling and high risk workers in which harmful job rotation practices, stigmatization, and worker blame were implemented when employees became susceptible to chemical hazards (2000). In this case, mere susceptibility to illness initiated a social control response through the implementation of soft social control tactics.

A significant body of work examines mobilization and social control of whistleblowers, or ethical resisters, in the nuclear weapons production context (Bernstein and Jasper 1996; Draper 1999, 2000; Glazer and Glazer 1989; Hardert 1993, 2001; Kaplan 1997, 2000; Kinsella and Mullen 2007; Sheak and Cianciolo 1993; Shriver et al. 2000). Seeing themselves as acting from a sense of moral responsibility, nuclear workers often jeopardize their careers and economic well-being when they target their employers. Hardert (2001) delineates a legacy of harassment against nuclear scientists, workers, and grassroots activists at all three early Manhattan

Project sites, as well as Rocky Flats, Savannah River, and Palo Verde Nuclear Generating Station.

### **The Anti-Toxics Movement and Contested Illness Claims**

The anti-toxics movement consists of citizens who mobilize with grievances related to hazardous environmental exposures in their communities and workplaces and collectively seek resolution and amelioration of contamination. A subset of the anti-toxics movement is composed of the environmentally ill—industrial workers, residents of contaminated communities, and military veterans whose claims of illnesses caused by hazardous environmental exposures are contested by institutional authorities and who mobilize to secure adequate and compensated diagnoses and treatment (Brown 2000, 2007; Brown et al. 2000; Brown et al. 2004; Couch and Kroll-Smith 2000; Kroll-Smith and Floyd 1997; Kroll-Smith et al. 2000; Kroll-Smith and Ladd 1993; Rogers 1990; Shriver 2001; Shriver et al. 1998; Shriver et al. 2002; Shriver and Waskul 2006; Zavestoski et al. 2004). Environmental illness claims are frequently contested even when exposures are scientifically linked to illnesses.

Frickel and Vincent (2007) found in their study of contamination related to Hurricane Katrina that the uncertainty associated with contaminants' effects multiplies the complexity and escalates the uncertainty of the issue. As a consequence, the public and institutional authorities frequently respond negatively to impacted persons, stigmatizing them for their exposures and illnesses. Gibson (1997) found that victims were ostracized and denigrated because their illness claims conflicted with mainstream beliefs that the substances to which they were exposed were actually safe. Stigmatization is especially visible in the governmental and civilian response to health claims by Gulf War Illness activists (Shriver 2001; Shriver et al. 2002; Zavestoski et al. 2004).

### **Analytical Frame for CHE Study**

Social movements typically mobilize to achieve changes in institutional and organizational policies and practices. Institutional authorities benefit from existing policies and, consequently, act to thwart movement efforts. Authorities deploy social control measures to interfere with the critical movement tasks of recruiting the aggrieved, identifying the institution responsible for grievances, engaging in tactics to pressure authorities, and securing stable resources such as funding and public support among the non-aggrieved. The more successful authorities are in impeding movement tasks, the less likely is the movement to achieve changes. Thus, knowledge of social control measures is imperative for understanding the dynamics producing social movement success.

The social movement literature sheds light on social

control by identifying social control agents, offering typologies of social control, and providing descriptions of social control. The usual social control agents are the state and corporations, which are also the usual movement targets. Typologies of the social control of movements are typically dichotomous, such as Ferree's (2004) hard versus soft social control and Earl's (2003, 2004, 2006) observable versus not observable social control. Scholars describe incidents of social control as: violence, coercion, death, physical assault, imprisonment, verbal attacks, name calling, silencing, intelligence gathering, appeals to the larger society, on-the-job-harassment, stigmatization and ridicule, and opinion control (including disinformation, propaganda, and media manipulation). In addition, researchers discuss social control specific to the workplace: harassment by superiors, such as shifted job responsibilities, job loss, and counterclaims; and harassment by co-workers, such as ridicule and ostracism.

A few scholars document factors influencing the measures of social control adopted by agents. Several identify the role of institutional power and resources (Draper 1999; 2000; Earl 2003, 2004, 2006; Gibson 1997). Others mark the public's tolerance for social control, finding that the lower the public support for a movement, the more likely is the choice of hard forms of social control (Linden and Klandermans 2006). Earl (2003, 2004, 2006) emphasizes the observability of repression, such that the greater the observability, the more likely is the use of hard forms of social control. Moreover, employees of a polluting facility are more susceptible to certain forms of social control than are non-employees (Draper 2000; Earl 2003, 2004, 2006; Gibson 1997).

Research on the anti-toxics movement adds a crucial dimension to social control. Activists' grievances concern contamination and individual illnesses presumed to be linked to contamination. Community and workplace contamination is easier to confirm than are individual exposure-illness links. Uncertainty clouding those links may be used by institutional authorities and the public to justify the contestation of activists' illness claims. Contestation is social control and is manifested in stigmatization, ostracism, and denigration. In cases of mobilization by environmentally ill activists, physicians may act as social control agents in addition to state and corporate authorities.

Our purpose in this report is to contribute to the social control literature through a case study of CHE, a movement organization formed by ill nuclear weapons workers at the DOE's Oak Ridge Nuclear Reservation. The Oak Ridge site and the case of CHE are illustrative for three primary reasons. First, this case provides an opportunity for analysis of an organization in the early stages of mobilization, experiencing unique public and institutional repression to limit movement emergence, development, and success. Social movement or-

ganizing against DOE Oak Ridge was largely unheard of until the 1990s and a culture of control imposed by the institution as well as the Oak Ridge community limited worker involvement in grievances against DOE. Second, the case of CHE presents an occasion to better understand mobilization among the environmentally ill, with a focus on workers who may experience the most significant repression due to their employment at the polluting facility. After decades of state-imposed secrecy, workers attributing their illnesses to exposures to nuclear weapons production materials organized to gain access to adequate diagnoses and treatments despite continued repression efforts put in place by institutions and the public alike. Third, the case of CHE allows for an analysis of the forms and tactics of repression by various actors illustrating the dynamic and progressive nature of soft and hard forms of social control.

Following a discussion of our research strategy, we provide a brief historical and contextual analysis of Reservation workers' path from silence to insurgence before turning to an account in which we address three research questions drawn from the literature to guide our description and analysis:

- Which social actors engaged in social control measures against movement activists?
- What specific actions and behaviors by social control agents impeded fulfillment of the movement tasks?
- How did agents' actions interfere with activists' recruiting the aggrieved, identifying the institution responsible for grievances, engaging in tactics to pressure authorities, and securing stable resources such as funding and public support among the non-aggrieved?

Finally, we extrapolate from our findings to suggest some analytical directions for continued research in this area.

Our research contributes to a more nuanced analysis of the social control of movements by utilizing and extending earlier conceptualizations of "hard" and "soft" social control to distinguish the forms and the tactics of repression used by social control agents. We discuss the use of direct and indirect tactics by DOE/Corporate Management, Physicians and Co-workers aimed at the activists' body, livelihood and social status to impede activists' fulfillment of movement tasks. Following Ferree (2004) and Earl (2003, 2004, 2006), we more clearly articulate that forms of repression can be defined by the level of harm intended to activists. By building on earlier formulations of hard and soft social control and consideration of direct and indirect tactics as well as repression characterized by intent to harm, we are better able to understand not only the progression from soft to hard forms of repression, but also the progression from soft to hard tactics with the same repressive form.

## Methods

Data sources for this project are in-depth interviews, observation at community and social movement meetings, and document analysis. The primary data derive from in-depth interviews with 20 respondents involved in CHE. Using purposive sampling, we began by interviewing several of CHE's most active core members and subsequently employed snowball sampling by asking respondents to identify others who might participate in the interviews (Berg 2004).

Early contacts with CHE members were made through public community meetings, interactions with activists, and visits to the area. Upon invitation, the first author regularly attended CHE meetings. CHE maintained a membership base of 30-40 people with 7-12 core activists regularly attending meetings. A year's worth of observations and field notes provided an understanding of the nature of CHE and the context in which it was formed. This understanding was used in the design of an open-ended interview schedule focused on respondents' experiences and concerns about exposures, illnesses, and institutional responses at the Reservation.

The audio-taped in-depth interviews were conducted over a ten month period and ranged from one and a half to four hours. The first author used the interview guide to prompt respondents, but encouraged them to elaborate on their experiences. Follow-up interviews were conducted with several respondents to clarify issues and obtain updates on CHE's activities. Approximately 35 hours of taped interviews were transcribed and coded using qualitative data analysis techniques. The coding process focused on the identification of key themes. We began with a process of line-by-line coding of key words and phrases that resulted in a substantial list of common concepts. The codes were then grouped into major thematic categories representing respondents' shared concerns, such as: faith in government, secrecy, government framing, hazards-exposures, living with environmental illness, union issues, healthcare/treatment, and social control.

We supplemented observational and interview data with primary and secondary documents including: the Oak Ridge and Knoxville daily newspapers; Department of Energy (DOE) documents; correspondence between physicians and patients claiming production-related illnesses; State of Tennessee public documents; and activists' correspondence. Analyses of these documents corroborated other data sources, aided in the establishment of a chronology of relevant events, and provided a rich source of historical and contextual information (Hill 1993; Patton 2002). In-depth interviews, researcher observations, and activists' correspondence represented the perspectives of CHE members. Newspaper articles, DOE documents, and physicians' correspondence of-

fered insights into the actions of social control agents. We purposely did not include interviews with social control agents for three critical reasons: (1) our research focus was workers' experiences and perceptions of social control; (2) in such a tense atmosphere, our legitimacy with activists would have been endangered if we interviewed "the enemy"; and (3), much like the Emerald City and Oz, nobody but nobody gets to see the wizard—we would have quickly been shunted off to a public relations officer.

## Secrecy, Hazardous Exposures, and Worker Mobilization in Oak Ridge

The Oak Ridge Nuclear Reservation is a 33,000 acre site in Oak Ridge, TN that is part of the federal nuclear weapons complex. The complex is overseen by the DOE, whose authorities contract with private corporations for on-site management of the facilities. Currently, the Reservation employs about 12,000 people. Formed initially as a uranium enrichment facility during World War II, the Reservation was one of three primary sites created for the Manhattan Project, the US government's program to build the world's first atomic bomb. Other sites include Hanford, a plutonium production site, and Los Alamos, a weapons research and design laboratory. From the initial production activities at Oak Ridge, workers routinely handled hazardous substances. For nearly 40 years, they remained silent about their job tasks, their possibly hazardous exposures, and any concerns about their health. What broke the silence and precipitated mobilization?

The history of Oak Ridge, like those of the other Manhattan Project sites is one of science, secrecy and patriotism. The wartime message posted throughout the Reservation, "What you see here, what you hear here, let it stay here, when you leave here" may as well have been engraved in worker's minds, so strict was their conformity. Workers at the secret site were kept ignorant of the government's secret project; most were unaware of their roles in the war effort until the first atomic bomb was exploded over Hiroshima in 1945 (Johnson and Jackson 1981).

In 1949, the fences surrounding the town were removed and the town gates were opened to the public, but the Cold War and the nuclear arms race that immediately followed the signing of war-ending treaties reinforced and reinvigorated the government's insistence on secrecy in the protection of national security. The fusion of secrecy, science, and patriotism combined with the region's utter economic dependence on the Reservation to create a strong community identity (Cable et al. 1999; Shriver et. al. 2000) that involved internalization of state assertions about the relationship between weapons production and public health: that weapons production was safe because it was planned, executed, and moni-

tored by the nation's top scientific experts; that the government's protection of citizens assured that the rare accidents that occasionally occurred did not harm workers or the public; and that national security depended on the release of information on a need-to-know basis only (Cable et al. 1999).

This cultural code of patriotic silence was ruptured with a series of government revelations beginning in 1983 about off-site migration of hazardous weapons production materials. The first revelation was that, between 1950 and 1977, approximately 2.4 million pounds of mercury had been inadvertently released to the environment (Cable et al. 1999; Shriver and Cable 1995). Similar announcements soon followed: mercury, arsenic, barium, iron, lead, cadmium, uranium and radioactive materials had also been uncontrollably released; four waste water ponds were leaking metal plating wastes, acids and solvents into ground water; and at least 12 million cubic feet of low-level radioactive waste were scattered in dumps throughout the Reservation. In 1989, the Reservation was placed on the Environmental Protection Agency's National Priority List for remediation. As a consequence of the Superfund listing, the Reservation was no longer exempted from laws regulating the treatment of hazardous wastes, and was subject to the requirement of frequent and substantial input regarding remediation programs by residents via a variety of public meetings.

With serious fissures in the cultural code of secrecy, first residents and then workers became less reluctant to speak out about their exposure and illness experiences. In 1993, ill female residents formed a support group that evolved into a social movement organization challenging DOE authorities to conduct health studies. The women's mobilization was stimulated by DOE and corporate management's treatment of oncologist Dr. Bill Reid. Reid persistently tried to obtain from DOE a list of substances to which his patients, suffering from rare tumors and symptoms of heavy metal poisoning, were likely exposed. The local medical authorities retaliated, labeling Reid as a drug addict and a fraud. He was vindicated in a peer review, but the hospital refused to renew his annual contract. As he prepared to vacate his office, patients who had gathered to express their sorrow at his leaving discovered similarities in their symptoms and experiences with medical authorities and subsequently organized.

Although the women's organization was unable to mobilize a wide support base, nuclear workers soon began to speak more candidly to one another about violations of safety procedures at the Reservation, their exposure incidents, and their illnesses. Many ill workers attributed their symptoms to workplace exposures to radioactive materials, various chemicals, and heavy metals such as cyanide and beryllium. They discovered shared symptoms of memory loss, sensitivity to chemicals and fragrances, suppressed immune systems,

chronic fatigue, severe and chronic headaches, allergies, tremors, rashes, night sweats, insomnia, and depression. Despite accepted scientific evidence of links between exposures to production substances and the symptoms workers presented, workers' illness claims were contested.

In late 1995, a worker individually sought technical assistance from the Agency for Toxic Substances Disease Registry (ATSDR) for concerns about his cyanide exposures at the K-25 plant that he believed caused his symptoms of headaches, fatigue, depression, muscle aches, sleeplessness, and muscle tremors. ATSDR referred him to the National Institute of Occupational Safety and Health (NIOSH) and the agency initiated a workplace evaluation at the plant. As part of the NIOSH evaluation, Reservation management in 1996 instituted a cyanide working group in which members met with a management facilitator during work hours to participate in dialogues about their cyanide exposures.

Despite management's mandate that members not meet outside of the mediated discussions, workers gathered privately in each others' homes to compare symptomology and devise a plan for obtaining medical treatment. Initially referring to themselves as The Exposed, ill workers adopted a more formal organizational structure and organized under the name Coalition for a Healthy Environment with the primary goal of creating a health clinic. Other goals included intermediary and long-term access to health care, adequate treatment by knowledgeable doctors, and appropriate compensation and disability rights. CHE's consistent demand was government accountability for worker health and safety.

CHE activists worked in a variety of venues to fulfill movement tasks successfully so that their goals could be achieved. They recruited the aggrieved by word-of-mouth through their social networks. They mobilized funding and public support among the non-aggrieved through the internet and public speaking. Activists utilized their social networks on the internet to disseminate information and educate about environmental risks. They spoke publicly whenever possible to raise awareness and enlist public support. Members pressured authorities by making their collective presence known at the DOE's public meetings that were required by environmental statutes.

Activists identified the institutions responsible for hazardous exposures as the DOE and corporate management. They conducted extensive library research to become knowledgeable about the production materials used at the Reservation and then displayed their knowledge at DOE public meetings to challenge authorities. When an adverse event such as a fire or chemical release occurred, CHE members were quick to pressure authorities by questioning management officials. CHE members secured resources by building relationships with citizen and worker groups at other DOE sites,

including Hanford and Los Alamos, using the relationships to exchange information on tactical matters. They explored legal measures for pressuring management to take responsibility for workers' health problems and for off-site contamination of the community.

Movement tasks are inherently interrelated—publicizing grievances to aid recruitment also pressures authorities and mobilizes public support; securing resources may be enhanced with the identification of the culpable institution. For example, in 1997, Tennessee's most widely distributed newspaper, *The Tennessean*, published a series of articles on environmental contamination and worker health grievances at Oak Ridge (Thomas et al. 1997) for which reporters interviewed several CHE members. CHE's activities were at least partially responsible for the series, and the series significantly expanded awareness across the state about the DOE's mismanagement of the Reservation—likely aiding recruitment efforts, increasing movement resources, and adding to the pressure on authorities to take appropriate actions.

CHE morphed over time from a top-down, management group, to a bottom-up, independent support group, and finally to a political organization and watchdog group. With each shift, CHE's actions became more publicized, more widely supported, and more challenging to authorities' position. Consequently, members faced increased efforts by authorities to quash the movement.

## The Social Control of Nuclear Weapons Workers

Our empirical account of the social control of CHE members is guided by three research questions: Which social actors engaged in social control measures against movement activists? What specific actions and behaviors by social control agents impeded fulfillment of movement tasks? How did agents' actions interfere with activists' recruiting the aggrieved, identifying the institution responsible for grievances, engaging in tactics to pressure authorities, and securing stable resources such as funding and public support among the non-aggrieved?

### Social Actors and their Repressive Actions

Consistent with the literature, respondents identified the primary social control agents at the Reservation as DOE/management authorities and physicians. But activists also indicated a third agent: their co-workers.

#### *DOE/Corporate Management*

The specific actions by DOE/management authorities that impeded movement tasks were forced job loss, forced job changes, monitoring, phone taps, and the use of infor-

nants. CHE members noted the significant retribution of layoffs for some workers who spoke out about environmental illness related to the nuclear facility. A worker explained,

*We've seen more people be retaliated against and more and more of our group lose their jobs through being fired or laid off. In many instances it absolutely looks to me like it was just pure retaliation. That one little layoff that took the [name] family out. There wasn't but 300 people that were laid off at all three of the sites which was a pool of like 12,000 people. They lay off 300 people and take 8 people out of the 30 member CHE group. Nobody will ever tell me that is coincidence. I think that was planned that way!*

Several respondents reported violations of facility policy not to lay off workers who were receiving partial disability for their illness. CHE activists contended that several of their members on disability were laid off without explanation from their supervisors.

Respondents identified forced job changes as another effort to muffle activism. Workers were frequently reassigned to new job tasks that entailed dirty or dangerous work. A respondent explained, "They would move you to the *dirty jobs* if you had questioned that something wasn't being done right." Another respondent commented: "They're [DOE/management] pretty good at making examples of people in order to keep the other people in line." A CHE member described her reassignment to a dirty job:

*They punished me when I stood up to this group of people and to the supervisors by setting me up in that place to crush all these drums. You would have to pick the drum up, a 55 gallon drum and empty it. There would still be oil or chemicals in the bottom.*

DOE/management was legally implicated in the highly publicized case of whistleblower Bud Varnadore, who regularly complained about procedural violations in handling hazardous materials (Munger 1996). After Varnadore was interviewed in a CBS report, he was reassigned to an office housing radioactive wastes and instructed to conduct an inventory of the hazardous materials. When a health physicist demanded that he be removed from the office, he was reassigned again to a mercury reclamation room and told to conduct an inventory of contaminated items. Varnadore filed and won a whistleblower case at the local level, but his claim was rejected by the Department of Labor because charges had not been filed within the required 30 days. Although Varnadore was not affiliated with CHE, respondents spoke of his ill treatment as a signal to other workers to maintain secrecy.

Activists claimed that they were also subjected to moni-

toring and phone taps by DOE/management. Several believed that their activities were watched, as one worker described it: “the eyes are watching.” A respondent observed that, as CHE members became more informed and active, evidence of phone taps increased.

CHE members described DOE/management’s use of informants as a social control measure. Many referred to management’s long-term practice of rewarding workers for “ratting out” their co-workers, arguing that “informants” were routinely placed within the worker population. As a CHE member explained, “If you work in the national security domain, there are folks implanted there specifically to watch the other workers.”

### Physicians

Physicians also engaged in specific actions that kept CHE members from fulfilling movement tasks. A movement composed of ill activists seeks above all to obtain appropriate diagnoses and treatment. But, as is frequently the case with environmental illness claims, physicians denied that workers were ill, neglected to conduct appropriate medical tests, and stigmatized them with inaccurate diagnoses (Brown et. al. 2003; Brown et. al 2004; Couch and Kroll-Smith 2000; Kroll-Smith and Floyd 1997; McCormick et. al. 2003; Shriver and Waskul 2006; Zavestoski et. al. 2004). Most respondents reported serious difficulties in having their illnesses validated, diagnosed, and treated, even when workers attributed their symptoms to probable exposures to materials known to cause health problems—radiation, cyanide, and beryllium.

Workers were routinely encouraged to seek medical treatment from the on-site Reservation medical unit where physicians were Reservation employees. CHE members were highly suspicious of the hired physicians, believing that DOE/management exerted substantial control over the treatment and diagnosis of environmental illnesses. Respondents described Reservation doctors, as well as their private physicians, as reluctant to treat their illnesses because of the example of Bill Reid. A respondent stated, “All the doctors around here are *afraid* to say anything.” A CHE member summarized the state’s control of the local medical establishment:

*The doctors and everyone around, they are all in cahoots together. They are not going to tell you what is wrong with you or tell you it is job related because DOE or the government has more pull on them.*

Some workers believed that physicians were ignorant, perhaps intentionally so, of the health effects associated with workplace exposures. A worker explained, “I don’t know

what medical care I need. I don’t think my doctors know about toxins and chemicals and how to treat them.” Another respondent believed that physicians did not want to deal with environmental illness claims: “I think you realize that you go to doctors and nobody knows what’s going on. Nobody *wants* to treat you.” A CHE member described her attempt to gain a diagnosis. Her doctor suspected cyanide poisoning, and he drew a blood sample to send it for confirmation, but “[t]he medical director [at the Reservation] absolutely wouldn’t let him do it. The blood sample was a bright red, which is a real indicator that there was cyanide in the blood. But he wouldn’t let him send the blood sample.”

CHE members reported that their symptoms were largely dismissed by physicians or attributed to psychological problems. A respondent declared, “I’ve actually had the doctors label me psycho - ‘he’s crazy.’ And they don’t want to do anything about it.” Diagnoses of mental instability and depression stigmatized CHE members and barred them from relief of symptoms:

*The doctors were telling me they couldn’t find anything with a lot of the problems I was having, basically telling me that it was in my head. I’ve been healthy all of my life then all of a sudden I couldn’t function. Then I found out that other people feel the same way. The doctors are telling them the same thing, and they were trying to find doctors. We found a lot of people that had a lot of the same symptoms but didn’t have a clue as to why they might be feeling this way. They didn’t realize that it may be because they had been exposed to some of these chemicals.*

Because of inaccurate/false diagnoses, workers were unable to establish eligibility for long-term disability. For example, a worker explained,

*I put my application in and had two doctors fill out the forms and write letters. The application was denied. I appealed because I didn’t buy their reasoning. They are trying to blame it all on depression.*

### Co-workers

CHE members’ co-workers also engaged in behaviors that hampered the movement’s efforts through criticism and ostracism. Several activists reported that, when they spoke out, the first people to squelch their health concerns were their fellow workers, worried about the economic repercussions for *all* workers because of the actions of a few. A worker mused:

*The most negative remarks that I have had have been from some of my co-workers that have said*



*'you keep this up, you're going to get the plant shut down.' Well, if the plant is dangerous, it probably should be shut down!*

Criticisms include co-workers' labeling of activists as "troublemakers." One CHE member recalled,

*I had problems with co-workers because I had a reputation that I raised hell in that respirator shop. I was a troublemaker. No supervisor wanted me so I was shifted from one supervisor to the next. I'd be with one supervisor a week and then sent to somebody else and then they'd ship me back and forth.*

Labeling in some cases escalated to ostracism. As a CHE member described:

*I became an enemy. Typically what happens whenever you get in a case like that, you get kind of ostracized by all your friends that you used to have . . . which is fine—you're kind of pissed off at them, and they're kind of afraid to talk to you.*

### **The Impacts of Repression**

Our third research question was: how did social control agents' actions interfere with movement tasks of publicizing the grievances, identifying the culpable institution, recruiting new members, using tactics that pressure authorities, and securing stable resources?

DOE/management's monitoring, use of informants, and phone taps provided authorities with strategic information on movement activities that they could use to target workers for layoffs and forced job changes. Social control measures adversely affected recruitment, choice of tactics for pressuring authorities, and resource mobilization. The high visibility of layoffs and forced job changes generated fears among workers that kept them from joining CHE. Activists shared stories of workers who expressed interest in CHE, but quickly withdrew their support for fear that informants would report their involvement. Issues of trust further limited recruitment efforts. One respondent recalled that a friend was interested and wanted to attend CHE meetings, but refrained because "she worked at X-10 [the national laboratory at the Reservation] and she was afraid that somebody that didn't need to see her at a CHE meeting *would* see her and report it. And there would be reprisals." A CHE member linked monitoring to recruitment difficulties: "They are scared to death! The eyes are watching, which we all know that they always do. If somebody sees them talking to me or whoever, then they are 'involved in that CHE group, and that's not good.'" Activists observed that the workers most likely to support CHE were seriously ill and, therefore, had less to lose from movement participation.

Workers' fears of official reprisals also limited CHE's tactics for pressuring authorities. Non-ill members still employed by the Reservation advocated more conservative tactics than did ill and ex-employee members who wanted to radicalize the organization, as did the respondent who explained:

*You're talking to a person here that is kind of radical—I'm one of the ones that tends to get real emotional and outspoken and angry. I think it is good that we have become more radical, because sometimes you have to do that to get attention, to let people know you are serious. There is a time for "please," "no, sir," and "yes, sir" and there is a time for more of a push. We have to be radical!*

Tactical disagreements generated conflict among activists and diluted the movement's effects. Some members became disillusioned:

*I think CHE has changed somewhat since we first started. I think they got a little more radical than I care to be. I'm not one to protest. I don't think that really accomplishes . . . you don't have to go aggravate the government officials. When you start all those radical things, I think they lose respect.*

DOE management's practices of layoffs and forced job changes limited movement funding. Many CHE members were on disability or had been laid off. With virtually no external sources of support, the group relied heavily on member donations. Consequently, as personal finances suffered, so did organizational funding. A CHE member declared, "The biggest problem we have as an organization is a lack of funding."

Physicians' actions of inaccurate/false diagnoses and the neglect of appropriate medical testing significantly interfered with the fulfillment of movement tasks. Physicians blocked activists' primary aim of obtaining diagnosis and treatment for members. A respondent explained: "Support to members was number one! And, then, finding out what happened to us."

Lack of diagnosis by medical authorities also limited CHE's tactics. Several respondents reported that they did not consider litigation as a strategy because the absence of medical validation for illness, according to one respondent "would have meant a lengthy, very frustrating litigation process." The lack of medical validation prolonged activists' bouts of illness and barred their access to disability compensation, increasing pressure on their monetary resources. The stigma attached to psychological diagnoses limited recruitment and the identification of culpable authorities. To recruit members, CHE members frequently struggled to convince

others of the validity of their illness claims, persuading potential recruits that they were *not* crazy.

Social control by management and medical authorities was compounded by some workers' responses to their co-workers' illness claims. Criticism and ostracism of CHE activists negatively impacted recruitment and the mobilization of resources, inhibiting CHE's abilities to recruit the aggrieved and mobilize a large support base. Negative perceptions of activists reduced attendance at protest events. Criticism in public meetings challenged activists' credibility.

## Discussion and Conclusions

Our analysis of the social control measures deployed against worker-activists at the federal government's nuclear weapons production site in Oak Ridge identified specific behaviors committed by DOE/management authorities, physicians, and co-workers that impeded movement efforts to fulfill necessary tasks and move toward achieving social changes. We reflect on our findings to suggest some analytical points for continued research in the social control of movements. We find particular analytical utility in distinguishing between the forms and the tactics used by social control agents.

Social control tactics are specific behaviors enacted by social control agents intended to impede activists' fulfillment of movement tasks. Tactics are aimed at the activist both directly and indirectly. Direct tactics target three aspects of the activist's life: his/her body, his/her livelihood, and his/her social status. Tactics aimed at the activist's body intend bodily harm; those aimed at the activist's livelihood intend income reductions; and tactics aimed at the activist's social status intend loss of prestige from peers. Indirect social control tactics aim at the activist's social status, intending loss of prestige from the public by destroying the activist's credibility and persuading the public to dismiss grievances and tolerate the repression of the movement.

We contend that a useful conception of forms of repression can be defined by the level of harm intended to activists. Typologies such as Ferree's (2004) hard-versus-soft social control measures suggest a continuum of intended harms to activists. Following the logic of "sticks and stones may break my bones, but names will never hurt me," one might perceive bodily harm as the hardest, or most severe, form of repression perpetrated by social control agents, followed by livelihood harm and social status harm.

"Hard" and "soft" are adjectives that apply to both the forms and the tactics of social control. This conception is beneficial in understanding not only the progression from soft to hard forms of repression but also the progression from soft to hard tactics with the same repressive form. For exam-

ple, public tolerance of soft forms of repression—social status harm—may encourage social control agents to escalate to harder forms—bodily harm. Similarly, public acceptance of a soft tactic intending bodily harm, such as assault, may encourage the use of a harder tactic of bodily harm, such as imprisonment. Besides public tolerance, agents' choices of forms and tactics of social control are also likely shaped by their level of institutional power relative to activists and by the tactic's visibility to the public.

We suggest the following schematic of forms of repression and tactics of social control that builds on the literature by integrating our findings.

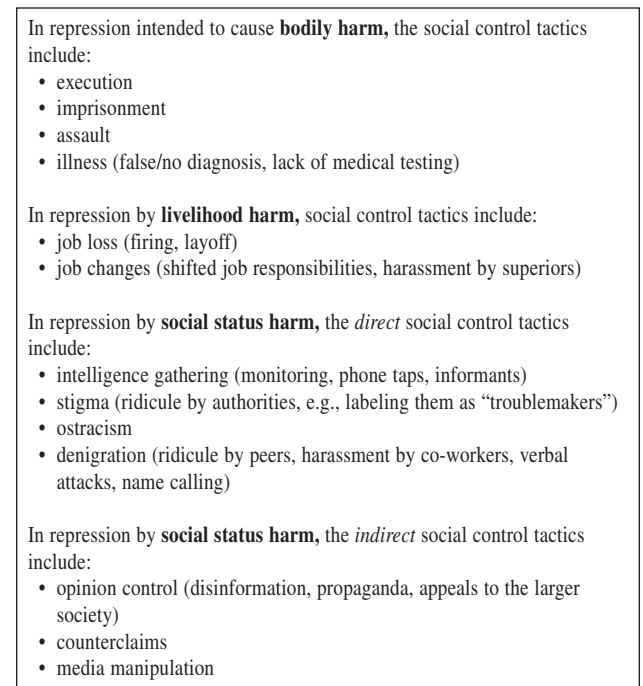


Figure 1. Schematic of Forms of Repression and Tactics of Social Control

Our schematic rendering of the forms and tactics of social control is not intended as a completed project but, rather, as a work-in-progress. Through a more nuanced analysis of repressive forms such as bodily harm, livelihood harm, and social status harm and the direct and indirect tactics used to cause such harm, we are better able to understand the social control dynamics that inhibit activists' achievement of movement tasks. This delineation of repressive forms and associated social control tactics makes transparent the possible avenues of progression from soft to hard forms of repression as well as the progression from soft to hard tactics with the same repressive form. Our desire is that the schema may provoke similar attempts to view the repression of social movements as deliberate attempts by agents of powerful institutions to

impose a variety of injuries on citizens lawfully seeking redress of their grievances. Increasingly, the environmentally ill are among those seeking relief from grievances. And, wittingly or not, the public plays a significant role in the type of harm inflicted on activists.

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## Endnotes

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## References

- Berg, B.L. 2004. *Qualitative Research Methods for the Social Sciences*. Boston, MA: Pearson Education, Inc.
- Bernstein, M. and J.M. Jasper. 1996. Interests and credibility: Whistleblowers in technological conflicts. *Social Science Information* 35, 565-589.
- Brown, P. 1990. *No Safe Place: Toxic Waste Crisis and Childhood Leukemia in Woburn, Massachusetts*. Berkeley: University of California Press.
- Brown, P. 2000. Popular epidemiology and toxic waste contamination: Lay and professional ways of knowing. In S. Kroll-Smith and V.J. Gunter (eds.), *Illness and the Environment: A Reader in Contested Medicine*, 364-383. New York: New York University Press.
- Brown, P. 2007. *Toxic Exposures: Contested Illness and the Environmental Health Movement*. New York: Columbia University Press.
- Brown, P., S. Kroll-Smith and V.J. Gunter. 2000. Knowledge, citizens, and organizations: An overview of environments, diseases and social conflict. In S. Kroll-Smith and V.J. Gunter (eds.), *Illness and the Environment: A Reader in Contested Medicine*, 9-25. New York: New York University Press.
- Brown, P., B. Mayer, S. Zavestoski, T. Luebke, J. Mandelbaum and S. McCormick. 2003. The health politics of asthma: Environmental justice and collective illness experience in the United States. *Social Science & Medicine* 53, 453-464.
- Brown, P., S. Zavestoski, S. McCormick, B. Mayre, R. Morello-Frosch and R.G. Altman. 2004. Embodied health movements: New approaches to social movements in health. *Sociology of Health and Illness* 26, 50-80.
- Cable, S. and C. Cable. 1995. *Environmental Problems Grassroots Solutions: The Politics of Grassroots Environmental Conflict*. New York: St. Martin's Press.
- Cable, S., T.E. Shriver, and D.W. Hastings. 1999. The silenced majority: Quiescence and social control on the Oak Ridge Nuclear Reservation. *Research in Social Problems and Public Policy* 7, 59-81.
- Carley, M. 1997. Defining forms of successful state repression of social movement organizations: A case study of the FBI's COINTELPRO and the American Indian Movement. *Research in Social Movements, Conflict and Change* 20, 151-176.
- Cress, D.M. and D.J. Meyers. 2004. Authority in contention. *Research in Social Movements, Conflicts and Change* 25, 279-293.
- Couch, S.R. and S. Kroll-Smith. 2000. Environmental movements and expert knowledge: Evidence for a new populism. In S. Kroll-Smith and V.J. Gunter (eds.), *Illness and the Environment: A Reader in Contested Medicine*, 384-404. New York: New York University Press.
- della Porta, D. 1996. Social movements and the state: Thoughts on the policing of protest. In D. McAdam, J.D. McCarthy, and M.N. Zald (eds.), *Comparative Perspectives on Social Movements*, 62-92. Cambridge: Cambridge University Press.
- Draper, E. 1999. Deviance and conformity in the work of company doctors. *Research in the Sociology of Work* 8, 39-72.
- Draper, E. 2000. Competing conceptions of safety: High-risk workers or high-risk work? In S. Kroll-Smith, P. Brown, and V.J. Gunter (eds.), *Illness and the Environment: A Reader in Contested Medicine*, 193-214. New York: New York University.
- Earl, J. 2003. Tanks, tear gas and taxes: Toward a theory of movement repression. *Sociological Theory* 21, 44-69.
- Earl, J. 2004. Controlling protest: New directions for research in the social control of protest. *Research in Social Movements, Conflicts and Change* 25, 55-83.
- Earl, J. 2006. Introduction: Repression and the social control of protest. *Mobilization: An International Journal* 11, 129-143.
- Edelstein, M. 1988. *Contaminated Communities: The Social and Psychological Impacts of Residential Exposures*. Boulder, CO: Westview Press.
- Edelstein, M. and A. Wandersman. 1987. Community dynamics in coping with toxic contaminants. In I. Altman and A. Wandersman (eds.), *Neighborhoods and Community Environments*, 69-112. New York: Plenum Press.
- Ferree, M.M. 2004. Soft repression: Ridicule, stigma, and silencing in gender-based movements. *Research in Social Movements, Conflicts and Change* 25, 85-101.
- Freudenberg, N. 1984. *Not in Our Backyards! Community Action for Health and the Environment*. New York: Monthly Review Press.
- Freudenberg, N. and C. Steinsapir. 1992. Not in our backyards: The grassroots environmental movement. In R.E. Dunlap and A.G. Mertig (eds.), *American Environmentalism: The U.S. Environmental Movement 1970-1990*, 27-38. New York: Taylor and Francis.
- Frickel, S. and M.B. Vincent. 2007. Hurricane Katrina, contamination and the unintended organization of ignorance. *Technology in Society* 29, 181-188.
- Gibson, P.R. 1997. Multiple chemical sensitivity, culture and deligitimization: A feminist analysis. *Feminism & Psychology* 7, 475-493.
- Glazer M.P. and P.M. Glazer. 1989. *The Whistleblowers: Exposing Corruption in Government and Industry*. New York: Basic Books, Inc. Publishers.
- Hardert, R.A. 1993. Public trust and governmental trustworthiness: Nuclear deception at the Fernald, Ohio Weapons Plant. *Research in Social Problems and Public Policy* 5, 125-48.
- Hardert, R. A. 2001. U.S. harassment of nuclear scientists, nuclear plant workers and grassroots anti-nuclear activists. *The International Journal of Humanities & Peace* 17, 80-84.

- Hill, M.R. 1993. Archival strategies and techniques: Analytical field research. *Qualitative Research Methods Series*, Volume 31. Newbury Park, CA: Sage.
- Johnson, E. 2006. Changing issue representation among major United States environmental movement organizations. *Rural Sociology* 71, 132-154.
- Johnson, C.W. and C.O. Jackson. 1981. *City behind a Fence: Oak Ridge, Tennessee 1942-1946*. Knoxville, TN: University of Tennessee Press.
- Kaplan, L. 1997. The Hanford Education Action League: An informed citizenry and radiation health effects. *International Journal of Contemporary Sociology* 2, 255-65.
- Kaplan, L. 2000. Public participation in nuclear facility decisions: Lessons from Hanford. In D.L. Kleinman (ed.), *Science, Technology, and Democracy*, 67-83. Albany, NY: State University of New York Press.
- Kinsella, W.J. and J. Mullen. 2007. Becoming Hanford Downwinders: Producing community and challenging discursive containment. In B.C. Taylor, W.J. Kinsella, S.P. Depoe, and M.S. Metzler (eds.), *Nuclear Legacies: Communication, Controversy, and the US Nuclear Weapons Complex*, 73-107. Lanham, MD: Lexington Books.
- Kroll-Smith, S. and A.E. Ladd. 1993. Environmental illness and biomedicine: Anomalies, exemplars, and the politics of the body. *Sociological Spectrum* 13, 7-33.
- Kroll-Smith, S. and H.H. Floyd. 1997. *Bodies in Protest: Environmental Illness and the Struggle over Medical Knowledge*. New York: New York University Press.
- Kroll-Smith, S., P. Brown, and V.J. Gunter (eds). 2000. *Illness and the Environment: A Reader in Contested Medicine*. New York: New York University.
- Levine, A.G. 1982. *Love Canal: Science, Politics, and People*. Lexington, MA: Lexington Books.
- Linden, A. and B. Klandermans. 2006. Stigmatization and repression of extreme-right activism in the Netherlands. *Mobilization: An International Journal* 11, 213-228.
- Martin, B. 1996. Critics of pesticides: Whistleblowing or suppression of dissent? *Philosophy and Social Action* 22, 33-55.
- Martin, B. 1999. Whistleblowing and nonviolence: Activist paradigm. *Philosophy and Social Action* 25, 5-18.
- Marx, G.T. 1981. Ironies of social control: Authorities as contributors to deviance through escalation, nonenforcement and covert facilitation. *Social Problems* 28, 221-246.
- McCormick, S., P. Brown and S. Zavestoski. 2003. The personal is scientific, the scientific is political: The public paradigm of the Environmental Breast Cancer Movement. *Sociological Forum* 18, 545-576.
- McPhail, C. and J.D. McCarthy. 2005. Protest mobilization, protest repression and their interaction. In C. Davenport, H. Johnston and C. Mueller (eds.), *Social Movements, Protest and Contention: Representation and Mobilization*, Volume 21, 3-32. Minneapolis, MN: University of Minnesota Press.
- Munger, F. 1996. Whistle-blower's case dismissed: Rules Varnadore waited too long. *Knoxville News-Sentinel* January 30, A1.
- Parmerlee, M.A., J.P. Near and T.C. Jensen. 1982. Correlates of whistleblowers' perceptions of organizational retaliation. *Administrative Science Quarterly* 27, 17-34.
- Patton, M.Q. 2002. *Qualitative Research & Evaluation Methods*. Thousand Oaks, CA: Sage.
- Rogers, S.A. 1990. *Tired or Toxic?* Syracuse, NY: Prestige Publishing.
- Rothschild, J. and T.D. Miethe. 1999. Disclosing misconduct in work organizations: An empirical analysis of the situational factors that foster whistleblowing. *Research in the Sociology of Work* 8, 211-227.
- Sheak, R.J. and P. Cianciolo. 1993. Notes on nuclear weapons plants and their neighbors: The case of Fernald. *Research in Social Problems and Public Policy* 5, 97-122.
- Shriver, T.E. 2001. Environmental hazards and veteran's framing of Gulf War Illness. *Sociological Inquiry* 71, 403-20.
- Shriver, T.E. and S. Cable. 1995. Government reveals mercury releases from Oak Ridge National Laboratory. In F.N. Magill (ed.), *Great Events from History II: Ecology and the Environment*, 1714-1718. Pasadena, CA: Salem Press Inc.
- Shriver, T.E., S. Cable, L. Norris, and D. Hastings. 2000. The role of collective identity in inhibiting mobilization: Solidarity and suppression in Oak Ridge. *Sociological Spectrum* 20, 41-64.
- Shriver, T.E. and D.D. Waskul. 2006. Managing the uncertainties of Gulf War illness: The challenges of living with contested illness. *Symbolic Interaction* 24, 465-86.
- Shriver, T.E., G.R. Webb and B. Adams. 2002. Environmental exposures, contested illness, and collective action: The controversy over Gulf War Illness. *Humboldt Journal of Social Relations* 27, 73-105.
- Shriver, T.E., D.A. White and A.S. Kebede. 1998. Power, politics and the framing of environmental illness. *Sociological Inquiry* 68, 458-75.
- Soeken, K.L. and D.R. Soeken. 1987. A Survey of whistleblowers: Their stressors and coping strategies. Unpublished paper. Laurel, MD.
- Stotik, J., T.E. Shriver, and S. Cable. 1994. Social control and movement outcome: The case of AIM. *Sociological Focus* 27, 53-66.
- Thomas, S., L. Frank and A. Paine. 1997. Contamination even worse than feared. *The Tennessean*. August 17, A1.
- Walsh, E.J. 1988. *Democracy in the Shadows: Citizen Mobilization in the Wake of the Accident at Three Mile Island*. Westport, CT: Greenwood.
- Zavestoski, S., P. Brown, S. McCormick, B. Mayer, M. D'Ottavi, and J.C. Lucove. 2004. Patient activism and the struggle for diagnosis: Gulf War Illness and other medically unexplained physical symptoms in the US. *Social Science & Medicine* 58, 161-175.