HOW TO SAVE THE WORLD: LEARNING FROM CITIZEN ENGAGEMENT ON NUCLEAR WEAPONS¹¹

David S. Meyer (UC Irvine)

Learning for Effective Peace Advocacy

It's astonishingly easy to forget about nuclear weapons, or at least not think about them too closely. To be sure, a set of scholars, scientists, and strategists think about nuclear weapons all the time, mostly well out of the public eye most of the time. For most of us, it's more convenient not to think too much or too hard about the real and proximate danger of the 12,000 or so nuclear weapons spread out over at least nine different countries—at the moment. It's much harder to devote sustained attention to a nuclear reality which, daily, threatens the existence of life on earth. And we don't need to imagine a full-on apocalypse to recognize more limited uses of nuclear weapons that, like the attacks on Hiroshima and Nagasaki, would be devastating. Unlike other environmental threats, the damage from the military use of nuclear weapons could come suddenly and unanticipated, and unlike other environmental threats, the symptoms and instruments of nuclear destruction are far distant from most lives. And, also astonishingly, most of the time most of us aren't paying all that much attention not only to the dangers of nuclear weapons, but also the financial, scientific, and political costs of maintaining those threats.

Perhaps it's a little more surprising that, on occasion, nuclear weapons have made it onto a broader public agenda, pushed by strong social movements that bring fears and threats—and sometimes possible solutions—to the public square, generating attention from policy makers,

¹ I'm grateful for excellent help with research from Kaylin Bourdon and Alex Maresca.

politicians, artists, and ethicists, among others. Most people were unaware of the possibility of nuclear weaponry when the bombs were first dropped, but not too long after the end of World War II, the nuclear threat was featured in debates about science, foreign policy, and morality. Partly, this was a result of the horrific effects of the bombs, dramatically illustrated in reporting from the conquered Japan (Hersey 1989). But it was also critical that a substantial faction of those scientists who had cooperated to design the bomb had a head start in recognizing the dynamics of the nuclear threat, and they worked very hard to invite public attention and action. The scientists formed organizations, notably the Federation of American Scientists (FAS), lobbied political leaders, and engaged in ongoing efforts to alert and educate the public.

The initial wave of broad concern lasted just a few years, when fear of the Soviet Union in the West came to outstrip fear of nuclear war. But it would recur in campaigns that periodically emerged in subsequent decades (Wittner 1969, 1995, 1997, 2003a, 2003b). The social movement campaigns—against nuclear testing, antiballistic missiles (or other distinct weapons systems), and nuclear weapons generally, engaged diverse publics, animated political debate, and—most importantly—helped support some brakes on the nuclear arms race: successfully constraining nuclear testing, some weapons systems, spending, and effectively supporting the development of arms control regimes (e.g. (Marullo and Meyer 2004; Meyer 1990, 1993c, 1993a, 1993b; Meyer and Marullo 1992).

Of course, there are virtually always some people who are determined to bring the nuclear danger to public attention. On the eve of the anniversary of the first military use of a nuclear weapon at Hiroshima, the Oak Ridge Environmental Peace Alliance (OREPA) staged a march from a public park to the Y-12 National Security Complex, a manufacturing facility for the

components of nuclear weapons (Wales 2023).² The demonstration got little attention, and it's hard to see more than a couple of dozen participants from the pictures OREPA had posted on its own website (Oak Ridge Environmental Peace Alliance (OPERA) 2023). Activists pointed to the dangers and costs of the nuclear arms race in general, and the Y-12 facility specifically. The event, even accompanied by the release of a big-budget movie about Robert Oppenheimer, generated little attention or any visible response from the federal government.

An event is not a social movement. Although some committed individuals are always working to generate attention to the nuclear issue, they are rarely able to break through to a larger public. Despite the best efforts of the faithful, movements against nuclear weapons are episodic. Peaks in attention and mobilization are reactions to changes in the global politics, technology, and strategy, but also responses to ongoing and determined organizing by entrepreneurial activists dedicated to educate and mobilize non-experts to redress the nuclear threat. Those efforts worked, sometimes, somewhat, for a while(Cortright 1993). The historical record provides strong evidence that the movements promoted nuclear caution and made the world—and the arms race—a little less threatening. But the people who worried, marched, met, voted, and protested generally targeted for much more than what they got. And the nuclear threat remains, sometimes peeking again into public awareness in battles over new weapons systems, new international threats, and new nuclear nations. Indeed, by many measures the fate of the earth is in more jeopardy now than ever. One assessment, the FAS's iconic Doomsday Clock, a graphic heuristic of the nuclear threat initially set at 7 minutes to

²

² Y-12 in Oak Ridge had previously been a site for protesters to challenge the nuclear arms race. In 2012, three activists—including, all accounts emphasize, an 82 year old nun, had cut through perimeter fences surrounding the facility and spent a few hours painting graffiti before facing arrest.

midnight now sits at 90 seconds to midnight (as the Cold War and the Soviet Union ended in 1991, the clock was moved all the way back to 17 minutes to midnight (https://thebulletin.org/doomsday-clock/timeline/ Accessed August 31, 2023). The salience of an issue isn't necessarily related to its urgency. And Russia's ongoing aggressive war in Ukraine periodically reminds us about the permanence of a nuclear threat and expert speculation on just what mix of circumstance might trigger the use of nuclear weapons.

So, nearly a century after the genesis of the Manhattan Project, the politics of nuclear weaponry has traced a long history of sliding in and out of public attention, *sometimes* engaged and animated by broad social movements. In moments of engagement, both characterized and partly caused by increased mobilization and protest, groups and individuals attempt to promote or stop some element of policy. Other times, most of the time, nuclear weapons policy is the province of experts inside and outside government, unaffected by largely unsuccessful efforts of committed peace activists (often pacifists) to garner interest from a larger public.

Importantly, the public visibility and salience of an issue bears no necessary relationship to its urgency or importance. Historically, committed activists have, on occasion, made nuclear weapons visible to a broader public and forced mainstream institutional public figures to address the issue, and sometimes promote policy reforms that made the world a little less dangerous. Let's code those moments as modest wins, albeit ones that took extraordinary effort.

Could they have done better?3

Our fundamental question is whether there are lessons to be learned from this long history about public engagement on issues of national security and nuclear weapons that might inform more effective activism in the future. Can we distill some insights about the emergence, trajectory, and influence of social movements to reach and educate a public more easily, to extend those moments of attention, and to maximize wise influence on public policy? To answer this fundamental question, we need to consider a series of related questions, which I will address here. First, I will examine the logic between democratizing the politics of nuclear weapons, educating and engaging citizens without advanced specialized training or official responsibilities. Next, I will discuss the circumstances under which movements for restraint in the nuclear arms race have emerged, and trace their broad trajectories in context of politics and policy. I seek to identify commonalities across campaigns, and to specify activists strategies on claims, tactics, organization, and politics that may matter. I then propose a set of outcome measures that will allow the estimation of partial successes or failures. I will conclude with a call for more attention, more research, and more engagement.

SOCIAL MOVEMENTS, NUCLEAR WEAPONS, AND THE DEMOCRATIC DILEMMA

The basic premise underlying the mobilization of mass movements on nuclear arms policy is that an engaged democracy will, ultimately, produce better and safer policies than leaving the broad outlines of policies and decisions to a set of experts, an atomic priesthood, largely

³ The question can be posed for all sorts of movements, which represent strategic efforts to influence politics and policy. We've seen recent serious inquiries on the efficacy of civil rights protest (Ricks 2022) and on more recent climate change (Fisher, Berglund, and Davis 2023).

insulated from domestic political pressures. This is expressed as an article of faith, stressed not only by activists, but also often ritually affirmed by politicians and even nuclear experts of all sorts, even as the past few years have given us all cause to be suspicious of populist uprisings.

Russell Baker emphasized this position in a 1982 column, written at the height of the nuclear freeze movement (Baker 1982). According to Baker, nuclear weapons policy is, "a complicated business, but it's nowhere near as hard to understand as economics, and during the elections this fall President Reagan urged everybody in the country to have an opinion about his economic policy.....

"There, a small group of 'strategic thinkers' has been elevated above mere experthood to a kind of secular priesthood. To suggest that they may be just as wrong about their business as economists usually are about theirs is treated, if not as an act of heresy, at least as an impudence silly in the extreme.

"Why 'strategic thinkers' should be immune to the skepticism to which all other experts are subjected is a mystery..... Gradually, I evolved....[a] theory; namely, that nobody bothers to challenge them because nobody has yet had provocation to do so. When an economist's theory puts you out of work you're likely to look at him with a skeptical eye. In the same way, I suppose, if the nuclear philosophers got us all blown to pieces we would revise our respect for their credentials. But of course, by that time, there wouldn't be much point in it.

"This being the case, it seems to me that the time to start treating the 'strategic thinkers' priesthood as just another bunch of experts is right now. In this belief, I urge them to persuade their political front men to quit telling us we are too dumb to understand nuclear strategy.

"Over 30 years their theories, aimed at protecting the country from destruction, have produced arsenals here and abroad sufficient to destroy civilization several times more than necessary to preserve it. Maybe this makes sense, but I doubt it....

"Sure, we're dumb about economics and dumb about nuclear strategy too, but genuine unforgivable dumbness consists in letting ourselves be persuaded that the experts don't need us shouting at them to keep them in touch with human reality."

Even the experts have long called for public education and engagement. By November of 1945, Harold Urey (Urey 1945), the Nobel-prize winning physicist and veteran of the Manhattan Project, published an urgent appeal for public engagement in *Science*, explicitly trusting an informed public would make rational decisions about the future of nuclear weaponry. In 1946, Albert Einstein defined the goal of the new Emergency Committee on Atomic Scientists as educating and engaging a broad public, announcing in an interview published in the *New York Times Magazine*, "Our representatives in New York, in Paris, or in Moscow depend ultimately on decisions made in the village square. To the village square we must carry the facts of atomic energy. From there must come America's voice." (Melillo 2023)

Politicians would express similar sentiments, albeit often as aphorisms that obscured politics and substituted for meaningful action. President Eisenhower, who presided over a massive expansion of America's nuclear arsenal, warned of the "acquisition of unwarranted influence, whether sought or unsought, by the military-industrial complex. (Anon 2021)," and expressed (unwarranted) faith in the wisdom and influence of the common people. "I like to believe that people, in the long run, are going to do more to promote peace than our governments. Indeed, I think that people want peace so much that one of these days governments had better get out of the way and let them have it." (Radio and Television Broadcast with Prime Minister Macmillan in London, 8/31/59.)

It may be that politicians, scientists, and strategists are ideologically committed to democracy, that they really believe in the inherent wisdom of the broad public. Or maybe they recognize political advantage in affirming faith in democracy while simultaneously evading democratic accountability on existential issues relevant to survival of the species. I suspect

there is a an inherently political dimension to calls for democratic engagement, one clearly described by E.E. Schattschneider (Schattschneider and Adamany 1975) long ago: the losers in any political fight have an interest in expanding the playing field and bringing in new actors. The history of movements for nuclear restraint of all sorts is one that features elite mobilization of democratic pressures in response to likely losses in policy. Democratic mobilization is messy and uncertain, complicated, and slow, an alternative for influence that is attractive only when everything else seems blocked. This insight is critical to understanding the episodic nature of cycles of protest about nuclear weaponry.

WHEN AND WHY MOVEMENTS AGAINST NUCLEAR WEAPONS EMERGE AND DECLINE

Some individuals and groups are virtually always actively working to bring nuclear weapons issues to the public square, but broad active engagement in those issues is episodic. Varying strategies or innovation in tactics and claims explain less of the variance in mobilization than shifts in politics and policy, elements of what scholars describe as the "structure of political opportunities," which make activist claims about the risks and costs of the arms race more or less resonant with a broader public (Meyer 2004). Scholars of social movements differ on how to conceptualize and operationalize political opportunities, but clearly prospects for mobilization vary across issues along with salience of particular policy debates. The historical record indicates that mobilization generally occurs in response to elite dissensus on critical policy issues. It's not that there's generally a consensus on all relevant decisions, so much as that generally different factions among policy experts are sufficiently satisfied that their

positions will be heard and that gross mistakes are unlikely. When faith in expert institutional politics falters, experts and elites on the losing side turn to the public for help, suggesting less faith in democracy than desperation. The genesis of policy problems that make for democratic mobilization can come from technological advancements represented by new weapons (e.g., the bomb, the hydrogen bomb, the MX missile), from new recognition of the dangers of the arms race (e.g., nuclear fallout from weapons testing, crisis relocation drills, nuclear winter), or from political shifts on issues like arms control (e.g., SALT II's failure; the withdrawal from superpower arms talks) (Meyer 1993c, 1993b).

Organizers need to be persistent in the face of defeats, and *opportunistic* when circumstances offer openings for their claims. Opportunism means adapting and responding to the possibilities of the moment, developing claims and innovating tactics that leverage the politics of the moment. The effective opportunist monitors changes in politics and policy, devising rhetoric, offering tactics, and negotiating alliances in response to available opportunities. Large political movements reflect tremendous success of political organizers in the face of conspicuous failures by policy makers. When the nuclear issue opens, civil society rushes in carrying established ways of dealing with all sorts of issues. Clergy, for example, carry moral and religious concerns about nuclear weapons (Bishops 1984) to the public square deploying their familiar tools, including sermons and pastoral letters as well as prophetic civil disobedience (Nepstad 2022). Educators develop curricula, design classes, and hold seminars and conferences. And politicians shift their rhetoric, offering criticism and suggesting alternatives.

Mass concern declines after a time, but explanations that emphasize fatigue or inevitable cycles of engagement miss something important (e.g., Downs 1972): movements interact with mainstream political institutions. It's not that activist mobilization needs to solve the problems it raises; rather, mobilization declines when political institutions appear to demonstrate some elements of the capacity to manage those problems, and the costs of staging massive mobilization appear less necessary or urgent. Movements build around simple demands, those that might fit on a placard or poster. No to nuclear destruction or testing or a particular weapons system. Yes to restraint, responsibility, and arms control. Peace, not war. Movements decline when institutional politics renders those simple demands less urgent or appealing, making it more difficult to build and maintain a broad and diverse activist coalition.

The accumulation of social and political responses, sometimes echoed or amplified internationally, changes nuclear politics within government institutions, and often the rhetoric and the policies. Paradoxically, responsiveness to activist concerns makes it harder to continue to mobilize activism and concern. There is then a kind of cyclic pattern in which a deviation from previous policy—particularly when coupled with a perception of political exclusion of opponents—can spur mobilization, reorganization, and a kind of resurrection of the *status quo* ante. Of course, even modest changes in rhetoric or policy can have longer term effects. Most notably, the restoration of arms control in the early 1980s—a response of the Reagan administration to the pressures of a large movement against nuclear weaponry—afforded Soviet leader Mikhail Gorbachev the leverage to continue political reforms that ultimately unwound the Cold War and the Soviet Union itself (Meyer and Marullo 1992).

Given that successful mobilization is partly contingent upon political circumstances, any evaluation of what is to be done and why it might matter must recognize the political context in which powerful movements emerge. The dynamics of political and social protest on nuclear weapons outlined above suggest that means recognizing influence, even victories, that are substantially less than what activists rally around and demands that leaders articulate. Failing to "ban the bomb" for example, is less a mark of defeat than of a recognition of the complex politics of national security. Even those movements that exercise the most substantial influence have generally asked for much more.

And against what demands should a movement be scored anyway? Because movements are comprised of diverse coalitions, articulated demands and—to an even greater extent—actual expectations will vary widely (Brooker and Meyer 2018). Some organizers will campaign against Antiballistic missiles, for example, intending to preserve the deterrent value of offensive weapons, while others will see stopping the ABM as a step toward ending the nuclear arms race altogether (Primack and Von Hippel 1974). The eventual Antiballistic Missile Treaty severely limited the number and placement of weapons intended to shoot down other weapons, thus limiting the cost of maintaining the nuclear arms race and mutually assured strategic deterrence. To be sure, it's a win for the activist forces, but not one that peace activists could easily brag about. During peak movements of broad mobilization there will always be contingents pressing different demands and even maintaining vastly different understanding of what those demands mean. Because powerful social protest movements virtually always contain partisans articulating extreme reform positions, it is always easier to find disappointments than victories in the wake of a campaign (Meyer 2006). Therefore, we need to

develop ways to recognize movement influence that activists themselves might be unable to recognize or reluctant to claim.

The summary above suggests several simple and clear lessons: successful movements must find ways to sustain themselves during periods when it is extremely difficult to do so; they must abide through periods of limited attention and interest—or even repression. Organizers must then be opportunistic, finding ways to take advantage of the moments when they might reach a larger public. Knowing the difficulties of identifying those moments, they must try far more than they will succeed. Effective organizers need to build broad and inclusive coalitions that are diverse demographically, ideologically, and organizationally, even recognizing that the power that comes from such a coalition also carries inherent political vulnerabilities. Finally, they need to negotiate and claim as victories achievements that are far more modest than what they initially demanded of authorities and promised to activists.

HOW CAN WE SEE INFLUENCE: POLICY, POLITICS, AND THE PROBLEM OF TIME

Political leaders are understandably reluctant to credit protest movements for influencing their decisions on anything, particularly on matters of national security. Rather, officials are far more likely to claim the credit for any change in policy, sometimes articulated as an achievement effected despite the obstacles created by what the activists wanted and what they did. As a result, methods rooted in elite interviews or reviews of memoirs (Small 1988) provide little in the way of evidence of influence or assessment of particular approaches. Instead, we need a method based on inference, identifying changes in elements of policy that cannot be

⁴ My own aphorism: "Effective social movements are opportunistic, inclusive, and abiding" (Meyer 2020).

readily explained without accounting for the influence of protest movements. Toward that end, we can identify observable elements of national security policy, track them over time, and set them in a political context that helps explain change and resilience in resisting change.

The range of political actors with direct influence on the conduct of nuclear weapons policy is far more limited than other policy areas. State and local government officials have no access to the levers of policy, and judges and even members of Congress can generally affect only indirect influence at most, perhaps increasing the salience of an issue and encouraging reformers in the Executive Branch and in the bureaucracy.⁵

Antinuclear weapons movements have pushed generally for nuclear restraint, cuts in procurement and deployment of weapons, particularly new weapons, and advancing arms control. The ultimate place to look for influence is in policy outcomes, which are trackable. rhetoric. Effectiveness, for a social movement, is seen by pushing policy in the general direction activists desire. Toward that end, analysts need to attend to nuclear weapons and strategic policy, looking for discernible shifts and proposed shifts that might take place....eventually.

Official strategic doctrine, articulated in presidential directives and posture statements from the State Department and the military represent one place to look for influence. The contours of essential debate on US nuclear weapons developed and largely stabilized in the 1950s and 1960s. There is a long skepticism about the political and military utility of nuclear weapons, because people who make decisions about war and peace have a hard time imagining the United States—and most other states—actually using those weapons in a military conflict.

-13-

_

⁵ The succeeding framework develops ideas I first prospected long ago (Meyer 1991).

The unthinkability (incredibility) of using nuclear weapons strictly limits their deterrent value.

As a result, since the 1950s, defense strategists have engaged in a series of intellectual and political efforts to ameliorate that skepticism by developing doctrine and weapons systems that appear more usable, and thus provide more effective deterrence (Freedman 2003).

Doctrine and Posture. In the context of a largely insular debate about nuclear posture, thumbnail sketches of different approaches leak into public discourse. President Eisenhower articulated a "massive retaliation" doctrine that threatened unacceptable damages to the opponent who challenged American interests. Partly a strategy to limit military spending, this posture paradoxically appeared weak to strategists convinced that opponents would not expect the United States to follow through with a nuclear response to anything but the most existential (nuclear) threat—"Mutual Assured Destruction." MAD, discussed during the 1960s, was accompanied by a very different "flexible response" approached, predicated on an arsenal that included a range of low-yield tactical nuclear weapons that could be used in response to less than existential threats—appearing more credible and thus, theoretically, more effective. Early statements from the Reagan administration announced the intent to develop an arsenal and approach that would allow the United States not only to respond to security threats, but to "prevail" in any sort of nuclear exchange. clearly different policy pre-scriptions than the "flexible response" of Kennedy's Robert McNamara. In his first reports to Congress, Reagan's Caspar Weinberger abandoned the criteria of "sufficiency" predominant in the 1970s in favor of a nuclear capability adequate to "prevail" in a conflict. None of the basic approaches is, strictly speaking new, but formal articulation or public emphasis can illustrate apparent shifts in policy—a reaction—or provocation—to activist response.

Technological Modernization. Statements of policy or doctrine depend upon the appearance of sufficient military capability to execute strategy. Strategists and engineers work consistently to produce weapons that are more effective, meaning more reliable, less vulnerable to opponents' attacks and easier to calibrate and deploy. Technological modernization is persistent, but all new possibilities are ultimately not pursued. Initial efforts to modernize the nuclear force in the 1950s led to bigger weapons, solid-fueled rockets, and the deployment of nuclear weapons on different platforms, including surface ships and submarines. Increased technological capacity opens additional strategic and tactical options for nuclear weapons. Notably, the development of MIRVs (multiple independently targeted reentry vehicles), antiballistic missiles (ABMs), space-based nuclear weapons, or increasingly precise targeting systems, can make the possibility of the first use of nuclear weapons more attractive to policymakers, who might fear an opponent destroying the capacity to retaliate—and thus deterrence. Scientific exploration of potential innovation is constant and rarely reaches public attention, but the articulated decision to develop such capabilities can spur public attention and debate. We can track technical modernization and modifications by monitoring the range and vigor of research and development programs in the military, assessing roads not taken, or at least not pursued aggressively.

Military spending. Since the onset of the Cold War, US military spending has been a massive component of all federal spending, often largely insulated from intense scrutiny and certainly protected from large reductions (Blimes 2024). A much-anticipated "peace dividend" of available monies for all sorts of social and economic progress never really materialized and is visible nowhere on the horizon (Cohen and Alderman 2023). Nonetheless, the magnitude and

contours of military spending change over time, partly in response to global conditions, and partly in response to the priorities of different administrations. Dramatic increases in spending can invite opposition, and assessments of military priorities through the budget can provide a sense of responses to political mobilization. Historically, peace movements have emerged in periods of increased spending (Meyer 1991). Looking below the top line of military spending can offer some insight into the strength of support for particular programs, nuclear and otherwise. It would be useful to assess when increased spending does and does not lead to oppositional mobilization, and whether shifts within the budget (procurement of large systems versus spending on personnel, for example) generate increased attention.

Arms control. Political leaders have used the pursuit of arms control agreements to manage not only the arms race and international security, but also domestic political opposition. When political movements press for reducing the threat of war and the costs of preparing for war, nuclear and otherwise, political elites can, often credibly, say they pursue the same aims through international negotiations. Arms control has historically been used to manage not only the arms race but domestic opposition to nuclear weapons policy as well. Importantly, progress on arms control has often followed intense political mobilization against facets of the nuclear threat. The Limited Test Ban Treaty followed a large international movement against nuclear testing, and the arms race more generally, as the campaign against ABM systems was followed by a treaty strictly limiting the number and placement of such systems. Paradoxically, the institutionalization of arms control has helped protect the arms race from political movements. The number of nuclear tests increased following the ratification of the LTB in 1963, albeit absent atmospheric testing. Arms control has protected the nuclear

arms race (Myrdal 1976). It's not surprising in this context that citizen movements against the arms race have provoked increased political attention to arms control. In this regard, we may be entering a new period of arms control politics. Although international efforts at containing nuclear proliferation through treaties continued—and continues, the number of nuclear nations increased, and big power efforts at arms control have faltered.

Still, the arms control process has been firmly institutionalized in the Arms Control and Disarmament Agency (ACDA), initially in a unit within the Department of State, then in 1961 as a freestanding agency—a response to a range of political pressures, before being returned to the State Department at the end of the last century. The ongoing presence of trained bureaucrats tasked with thinking about managing the nuclear arms race, keeps arms control on at least an internal political agenda. Although international agreements about nuclear weaponry have not resulted in anything approaching global disarmament, it's impossible to envision a disarmament process that doesn't make use of the tools of arms control, including negotiations, agreements, and verification protocols. For our purposes, tracking the content and vigor of arms control against mobilized public concern is likely to provide insight into the relationship of popular protest to institutional efforts to manage the arms race.

Political rhetoric. Authorities manage and legitimate the nuclear arms race through diplomacy, both public and private. Presidents and other officials talk about the interests, assets, and plans to send messages to allies and opponents. A great deal of national security

-

⁶ Opening, and then eventually shuttering, ACDA was a matter of some controversy. Most generally, downgrading the agency was a favorite point of arms control critics (e.g., Tierney 1995) while advocates of the arms control process have pressed to restore its former status (e.g., Bracken 2021).

policy is symbolic, so policymakers' public statements are significant. Nuclear weaponry doesn't always play a large part in the public statement of president, but Executive attention often matches public concerns, sometimes provoking alarm with bellicose rhetoric (e.g., Scheer 1982) and other times working to assuaging public concerns with promises of arms control and cooperation, while proclaiming the unacceptability of nuclear weapons. The most familiar pattern in presidential rhetoric is a mix of confrontation and conciliation—when nuclear weapons come up at all (Meyer 1995). Pressuring President Ronald Reagan to declare nuclear war "unwinnable" and "unthinkable" was a small but not insignificant influence effected by the nuclear freeze movement, one that eventually led to more concrete victories on policy (Meyer 1990).

Culture. Artists respond to the world around them. Entertainment executives seek to serve audiences. Social movements affect the cultural milieu in which they emerge, potentially including how people think about a particular set of problems, and how and how often they think about those problems (Amenta and Polletta 2019). But they can go beyond that, affecting cultural practices, including language and fashion, as well as cultural products, like movies, books, and songs. To be sure, the novelist scratching through inspiration may have picked up on nuclear issues long before finishing a blistering work of fiction on the nuclear threat. Still, the concentration and public reception to a cultural product can provide some sense of the influence of a movement. Notably, a few very visible movies were responses to political movements on nuclear weapons issues, and were scooped up by eager audiences. A few movies, like *On the Beach* (1959), *Dr. Stangelove* (1964), and *The Day After* (1983) figure into the historical narratives of the periods in which they appeared. In each case, the film spurred

talk about the existential and political issues associated with nuclear weapons and the arms race—as well as commentary on its relative artistic achievements. It's hard to see the critically and artistically successful Oppenheimer (2023) playing a similar political role.

The Problem of Time

The factors outlined above provide an inventory of effects and causes of social protest mobilization. But, partly because causality moves in both directions, assessing what influences what at which time is complicated. When activism is part of a process that reverses or limits an unfavorable policy, it's easy to neglect the struggle and see only the relative statis, because sometimes preventing something worse is a victory. Additionally, the political and cultural struggle over policy takes place in a larger social and political context in which the strategic decisions and capabilities of various actors—including politicians, bureaucrats, artists, and activists—matter, as do a host of unpredictable contingencies, ranging from the actions of other states and social movements to accidents of all sorts.

Moreover, the stories we tell about social movement influence virtually always truncate long and difficult campaigns that often span generations to produce a more easily comprehensible story (Meyer 2006). We can analyze the strategic choices of a Civil Rights Movement led by Martin Luther King at Selma, Alabama in 1965, tracing it to the passage of the Voting Rights Act weeks later (Garrow 2015) and get a dramatic and compelling story that puts the interests and interactions of protesters and authorities in high relief. But the Selma story is hard to imagine without the Rosa Parks and the bus boycott years later, which was encouraged by the Supreme Court's decision in *Brown v. Board of Education*, which was built on a

foundation of cases orchestrated by the NAACP Legal Defense Fund over a period of nearly twenty years (Kluger 2004). Similarly, when we return to the nuclear issue, we see the nuclear freeze movement declining as presidential rhetoric moderated but spending on the military budget increased while NATO placed new nuclear weapons placed in Europe. But we can also see the Berlin Wall and the Soviet Union unraveling just a few years later, and the number of nuclear weapons held by the big powers declined substantially in the following decades (Meyer and Marullo 1992).

Recognizing the long and complicated timeline that runs between a critical moment in a citizen campaign and visible progress on the focal issues presents obvious challenges to the analyst—or to the contemporary activist seeking to extract lessons about what works. Rather than struggling to identity the particular straw that immediately precedes an identifiable strain in the camel's back, it makes more sense to think about actions that increase the burden on authorities for maintaining targeted policies without worrying too much about which additional action will be most proximate to visible change. And there are many ways to increase the burden, including increasing activity and visibility and information in the broad public, recruiting new allies recruited, encouraging supporters to take action, and reducing the risks and costs for allies in positions of power to make concessions. This means our evaluation needs to focus more on process than on discernible policy outcomes.

In this regard, we can look at movement-generated outcomes that we could expect to feed into the political system and ultimately affect policy, reflections of the strength of a movement. This can start with the public visibility of nuclear weapons issues and the amount of strategic policy receives in mainstream culture. Social mobilization is both a product and cause of attention to policy issues, and we can track the number of events, the number and strength of organized groups, and the number and

variety of events activists stage. The premise is that the more active and extended a campaign is, the more likely it is to exercise influence. We can see signs of influence when authorities grant access to activists and offer some support for their concerns.

STRATEGIC CHOICES THAT MIGHT MATTER

So much of social movement visibility, mobilization, and influence is far outside the control of the organizers who imagine and animate those movements, but acknowledging structural limits to agency allows us to assess the choices that organizers get to make. In seeking to learn from the past and improve the prospects for influence in the future, we need to recognize the world outside the movement, to be sure, but also the elements that are volitional. When the nuclear issue periodically reemerges, activists and organizations generally turn first to the things they've already done, what's familiar and accessible—regardless of their assessment of what's worked in the past. Strategy, to the extent deliberate implementation of a plan for influence, generally comes later.

Although there are surely moments of spontaneity in ongoing social movement campaigns (see Snow and Moss 2014), focusing on those moments offers little useful guidance in plotting out effective campaigns for the future. Instead, we need to attend to the deliberate plans, organizational structures, and orchestrated efforts organizers make.

Organizational Governance. Since the first use of nuclear weapons, activists have worked to promote limits on their development and use. To be sure, we can remember notable individual actions, like the Russell-Einstein manifesto calling for the abolition of nuclear

weapons (Anon n.d.), Norman Cousins's "Modern Man is Obsolete," originally published in the Saturday Review, which questioned the morality of nuclear weapons (Cousins 1945), and Albert Bigelow's marine trespass of a nuclear testing area (Bigelow 2018). But sustained campaigns are undergirded by professionalized organizations (McCarthy and Zald 1977), beginning with the Federation of the Atomic Scientists (later, the Federation of American Scientists), founded in 1946, initially representing concerned veterans of the Manhattan Project. Social movement politics in America is virtually always the product of multiple organizations with different sets of resources, styles of governance, constituencies, claims, and approaches (Brooker and Meyer 2018; Staggenborg 1986; Zald and McCarthy 1979). Every organizational form brings with it distinct strengths and vulnerabilities. Well-funded organizations generally enjoy a broad array of institutional political actions, but invariably develop an infrastructure that constrains innovation in claims and tactics. Smaller ideologically committed groups can undertake more dramatic action with more limited resources, but generally lack institutional access. Platform groups, that is those oriented as a base to legitimate a small cadre of leaders, enjoy great control over message and the ability to respond to changing circumstances, but can't do much to engage local activists (Kretschmer and Meyer 2007). Groups oriented toward grassroots engagement can do a better job with local engagement but face difficulties in shifting tactics or claims in response to changes in the political environment. Organizational structures lead to distinct strategic choices and, likely, distinct political and organizational outcomes (Edwards and Marullo 1995).

We want to be able to assess the organizational forms most likely to be associated with effective engagement, favorable media coverage (Amenta and Caren 2022; Rohlinger 2006;

Rohlinger and Brown 2013), mobilization, and institutional access, as all are likely to affect policy....eventually. Although there are apparent trade-offs involved in founding and maintaining organizations, mandating and enforcing a particular template for all groups working on an issue. Individuals and groups make their own decisions about whether and how to engage on specific issues and in particular campaigns. Organizations, founded at a distinct historical moment and for a specific purpose are rarely well-suited for new issues and innovations. Newer issues, tactics, and constituencies present challenges to existing organizations. Sometimes, extant groups manage conflict associated with innovation, and sometimes they cede leadership on changed circumstances to newer groups (Kretschmer 2019; Reger 2002).

Groups operating generally on the same side of a political issue have incentives to cooperate on matters of policy, but they also compete for attention, members, and all sorts of other resources. In times when a movement is growing, it's easier to manage this inherent tension, but when resources are scarce, groups are more likely to differentiate. Historically, peace groups have adapted different strategies for managing conflict. The Committee for a Sane Nuclear Policy (SANE) and the Committee for Non-violent Action explicitly specialized in institutional and extra-institutional actions to manage competition and, leaders hoped, increase their efficacy. Later groups have focused on particular constituencies, ideologies, organizing strategies, and tactics (Meyer and Corrigall-Brown 2005). We can learn something about the critical task of managing relationships among ostensibly cooperating groups to allow organizers to benefit from a diversity of approaches.

Tactics. Advocates of restraint in the nuclear arms race have deployed a wide variety of tactics to communicate their concerns and commitments. They've written letters, songs, and sermons, written books and produced movies. They've organized meetings in Congressional offices, church basements, and in activists' kitchens. They've developed educational programs and curricula targeted for different groups, delivered lectures, and testified before Congress. They've staged large and small demonstrations, played concerts featuring all sorts of music, and held prayer vigils. They've protested on the Washington Mall, outside the offices of arms manufacturers, in front of military bases, and at the United Nations. They've promoted initiatives in city councils and stage legislatures, organized referenda, and endorsed candidates, sometimes raising and spending large sums of money. They've assembled on city streets during civil defense drills, refused to pay taxes, and held the Washington Monument hostage. They've chained themselves to fences, hammered on missile nosecones and computer keyboards, blocked railway tracks, and refused the orders of police to disperse. They've tried to appear in courts as plaintiffs, challenging the legality of the nuclear arms races, and appeared in courts as defendants who broke laws in the service, they claimed, of higher laws.

All the actions noted above, a partial list of social movement tactics employed in pursuit of peace, represent tactics, which can best be seen as messages—targeted generally at several different audiences (Rochon 1998). A successfully deployed tactic demonstrates concern and strength, invigorating and encouraging allies, recruiting bystanders, and warning authorities and opponents that more is possible. The tactics that make sense at any given time are contingent upon the resources of a movement (electoral efforts and mass demonstrations depend upon numbers, for example; trespassing at a nuclear test site requires intense

commitment) and the moment. Novelty generally helps in getting coverage, but novelty wears out fairly quickly (McAdam 1983). Violent action, against property as well as persons, provokes opposition and repression. And individuals and groups come to collective action with their own familiar repertoires and exclusions (Meyer 2023). Seeking a particular tactic that always works without attending to resources and context. What works, in recruiting support, provoking more action, and inviting policy responses, isn't static; there isn't some special tactic likely to be effective across all contexts. Organizers need to find ways to innovate and often escalate in ways that continue to gain attention and support without generating too too much opposition. Any algorithm for choosing tactics would need to consider the salience of a problem, the extent and placement of allies and opponents, the resources and restrictions of supporters, and the cultural resonance of the issues, activists, and approach. There is no such algorithm, but consideration of the past should help inform the decisions we make in the future.

Message and Claims. People protest because they want something—or they want something to stop. Social movements, broad coalitions of diverse populations, understandably organize and mobilize around relatively simple claims. The placard a demonstrator carries is ill-suited to convey a complicated or extended message. The simplest message is generally "No," no to nuclear war, climate change, discrimination, poverty, inequality, pollution, taxation, corruption, violence, or oppression. Popular campaigns often falter when filling in the details below the big demand. Understandably, campaigns against nuclear weapons and for peace more generally begins with simple demands: no to war and the preparations for war.

Passionate and articulate meditations about the dangers of the nuclear arms race gave rise to a series of calls to stop the race. "Ban the Bomb" is followed by "End Nuclear Testing," and then

by a series of campaigns against particular weapons systems, including Antiballistic Missiles (Primack and Von Hippel 1974), the B-1 Bomber (Kotz 1988), the MX missile, Pershing II and Cruise missiles in Europe ((Johnstone 1984), and "Star Wars." But authorities found it relatively straightforward to turn back popular movements by replacing fear of nuclear war with fear of nuclear-armed opponents. The "nuclear freeze" was an answer to this strategy, which stipulated that limits on US weapons would only come into effect when Soviet weapons were similarly limited. But citizen movements are hardly a vehicle for supervising the complex dynamics of negotiating and enforcing arms control agreements. Devising and organizing around claims is difficult under any circumstances, but particularly so when the object of opposition is distant and processes for implementing change are extremely complicated.

The demand is an identifier for a social movement, and a vehicle for engaging and uniting groups and individuals in a cause. The issue of appealing to both potential activists and authorities has received a great deal of scholarly attention. David Snow and collaborators developed a theory of *framing* that reflecting attention to small group politics, translating broad concerns to human interaction, or micromobilization (Snow et al. 1986). William Gamson and collaborators offered a somewhat different conception of framing that examining the presentation of claims in public settings and in mass media ((Ferree et al. 2002; Gamson 1992), and Francesca Polletta developed an argument about the power of a more dynamic means of communication based in narrative (Polletta 2009). In all of the theoretical approaches, however, activists face a common challenge of interpretation, filling in the details and even the implementation of a desire communicated in a frame or demonstrated in a story. Organizers and authorities could use the same terms and mean very different things (Benford 1993).

A demand must ultimately convey a sense of what's wrong, what's possible as alternative, and the sense that purposeful action can help bring about desired policy outcomes. These demands are conveyed in a variety of settings, broadcast to large audiences through mainstream and alternative media, in small groups and one-on-one conversations at front doors, and in academic and legislative environments where definitions and details can become critical. Successful crafting of demands should ultimately speak to the broad outlines of policy and evoke both intellectual and emotional responses.

CONCLUSIONS: LEARNING FROM EXPERIENCE

The preceding pages have staked out a relatively ambitious program, making sense of past efforts to improve activist efficacy and the prospects for a peaceful world in the future. There is plenty of history to learn and analyze, and there is no shortage of circumstance and events as raw materials for study. The task, however, is extremely difficult, for at least a few clear reasons. It's worthwhile to look at those obstacles so that we can begin to devise solutions.

First, the first challenge is analytical. In the complicated policy environment of nuclear weapons, where policy can be affected not only by citizen movements, but also by technological advances (and setbacks), the actions of other states, academic theories, and the personalities and misconceptions of policymakers, identifying a clear causal impact is no easy matter. Establishing causality in a meaningful way means learning the case fully and situating it in a broad historical frame. It also means focusing on effects that cannot be explained without reference to citizen action. It also means assessing a real range of possibilities independent of the demands that activists pushed. The campaign against nuclear testing resulted in a Treaty

that banned atmospheric testing and left underground and underwater tests untouched. Surely less than what people marching in the streets demanded, a negotiated limit is nonetheless an effect. Similarly, smaller numbers of B-1 bombers, Antiballistic missile systems, and MX missiles were built than what planners and politicians proposed—and they were built more slowly than promised, partly because of campaigns to abolish those weapons altogether. A clear-eyed approach to assessing influence notes effects without imposing a scoresheet calibrated with utopian demands.

Second, it's critical to recognize and account for negative outcomes. Activist efforts can inspire antipathy from legislators and members of the public just as easily as support. Often, this is likely to accompany disruptive tactics that veer toward violence or utopian demands. It's certainly possible that polarizing efforts could promote desired reforms in some contexts, but surely those circumstances are not always present. Finding setbacks as well as advances should be useful to analysts and contemporary activists who want to avoid making the same mistakes as their predecessors.

Third, we must recognize changes in circumstance that affect tactics. Some of this means reflecting on the cultural and political context. News coverage is no longer dominated by broadcast networks and broadsheet newspapers; there are alternative means for promoting alternatives and events. The current moment features strong negative partisanship and a polarized mainstream political context. This likely means that gaining support from one political party will automatically generate opposition from the other. It hasn't always been this way. And cultural values are also in flux. The appeal of an identified Noble Laureate's support surely carried more weight in the early 1960s than today, potentially undermining the attractiveness

of producing and promoting an appeal or letter from scientific elites—or, for that matter, from notable clergy. Lessons must generate principles for analysis more than scripts from the past.

Fourth, academics and activists generally come to the study of previous movements with preferences and commitments about what's important, and sometimes those priors are based in ideology, misunderstandings, or distorted histories can easily cloud our perceptions. We can romanticize heroic actions, inspiring speeches, or savvy deal makers. To do better, however, we need to lay out a fuller range of actions and effects, situated in an informed historical context.

Social movements can make change, but not by themselves and not just as they choose, to paraphrase an earlier analyst. Under the right circumstances, sustained and purposeful action can push policy in smarter and less dangerous directions. It is likely to be far less than what activists want, and it will take longer and require more effort. We need to recognize that this is what meaningful victories look like.

REFERENCES

- Amenta, Edwin, and Neal Caren. 2022. *Rough Draft of History: A Century of US Social Movements in the News*. Princeton: Princeton University Press.
- Amenta, Edwin, and Francesca Polletta. 2019. "The Cultural Impacts of Social Movements." *Annual Review of Sociology* 45(1):279–99. doi: 10.1146/annurev-soc-073018-022342.
- Anon. 2021. "President Dwight D. Eisenhower's Farewell Address (1961)." *National Archives*. Retrieved September 11, 2023 (https://www.archives.gov/milestone-documents/president-dwight-deisenhowers-farewell-address).
- Anon. n.d. "Russell-Einstein Manifesto." Retrieved February 12, 2024 (https://websites.umich.edu/~pugwash/Manifesto.html).
- Baker, Russell. 1982. "SUNDAY OBSERVER." The New York Times, December 12.

- Benford, Robert D. 1993. "Frame Disputes within the Nuclear Disarmament Movement." *Social Forces* 71(3):677–701. doi: 10.2307/2579890.
- Bigelow, Albert. 2018. The Voyage of the Golden Rule: An Experiment with Truth. Papamoa Press.
- Bishops, National Conference of Catholic. 1984. *The Challenge of Peace: God's Promise and Our Response*. United States Catholic Conference.
- Blimes, Linda J. 2024. *The Ghost Budget: Paying for America's Endless Wars.* New York: Cambridge University Press.
- Bracken, Paul. 2021. "Bring Back the Arms Control Agency." *The Hill*. Retrieved February 6, 2024 (https://thehill.com/opinion/national-security/553911-bring-back-the-arms-control-agency/).
- Brooker, Megan E., and David S. Meyer. 2018. "Coalitions and the Organization of Collective Action." Pp. 252–68 in *The Wiley Blackwell Companion to Social Movements*. John Wiley & Sons, Ltd.
- Cohen, Patricia, and Liz Alderman. 2023. "The 'Peace Dividend' Is Over in Europe. Now Come the Hard Tradeoffs." *The New York Times*, May 3.
- Cortright, David. 1993. *Peace Works: The Citizen's Role In Ending The Cold War*. 1st edition. Boulder, Colo.: Westview Press.
- Cousins, Norman. 1945. Modern Man Is Obsolete. Viking.
- Downs, Anthony. 1972. "Up and down with Ecology—the 'Issue-Attention Cycle." *The Public Interest* 28(Summer):38–50.
- Edwards, Bob, and Sam Marullo. 1995. "Organizational Mortality in a Declining Social Movement: The Demise of Peace Movement Organizations in the End of the Cold War Era." *American Sociological Review* 60(6):908–27. doi: 10.2307/2096432.
- Ferree, Myra Marx, William Anthony Gamson, Jürgen Gerhards, and Dieter Rucht. 2002. Shaping Abortion Discourse: Democracy and the Public Sphere in Germany and the United States. Cambridge University Press.
- Freedman, Lawrence. 2003. *The Evolution of Nuclear Strategy, Third Edition*. 3rd edition. Houndmills, Basingstoke, Hampshire; New York: Palgrave Macmillan.
- Gamson, William A. 1992. *Talking Politics*. Cambridge England; New York, NY, USA: Cambridge University Press.
- Garrow, David J. 2015. *Protest at Selma: Martin Luther King, Jr., and the Voting Rights Act of 1965*. New Haven London: Yale University Press.
- Hersey, John. 1989. Hiroshima. Reprint edition. New York, NY: Vintage.
- Johnstone, Diana. 1984. The Politics of Euromissiles. London: New York, NY, USA: Verso.

- Kluger, Richard. 2004. Simple Justice: The History of Brown v. Board of Education and Black America's Struggle for Equality. Revised edition. New York, NY: Vintage.
- Kotz, Nick. 1988. Wild Blue Yonder: Money, Politics, and the B-1 Bomber / Nick Kotz. 1st ed. New York: Pantheon Books.
- Kretschmer, Kelsy. 2019. Fighting for NOW: Diversity and Discord in the National Organization for Women. Minneapolis: Univ Of Minnesota Press.
- Kretschmer, Kelsy, and David S. Meyer. 2007. "Platform Leadership: Cultivating Support for a Public Profile." *American Behavioral Scientist* 50(10):1395–1412. doi: 10.1177/0002764207300163.
- Marullo, Sam, and David S. Meyer. 2004. "Antiwar and Peace Movements." *The Blackwell Companion to Social Movements* 641–65.
- McAdam, Doug. 1983. "Tactical Innovation and the Pace of Insurgency." *American Sociological Review* 48(6):735–54. doi: 10.2307/2095322.
- McCarthy, John D., and Mayer N. Zald. 1977. "Resource Mobilization and Social Movements: A Partial Theory." *American Journal of Sociology* 82(6):1212–41.
- Melillo, Wendy. 2023. "How Einstein, Oppenheimer and Other Scientists Failed to Convince Americans About Controlling Nuclear Weapons." *Smithsonian Magazine*.
- Meyer, David. 1990. *A Winter of Discontent: The Nuclear Freeze and American Politics*. Bloomsbury Publishing USA.
- Meyer, David, and Catherine Corrigall-Brown. 2005. "Coalitions and Political Context: US Movements against Wars in Iraq." *Mobilization: An International Quarterly* 10(3):327–44.
- Meyer, David S. 1991. "A Research Agenda." *Peace & Change* 16(2):131–61. doi: 10.1111/j.1468-0130.1991.tb00156.x.
- Meyer, David S. 1993a. "Institutionalizing Dissent: The United States Structure of Political Opportunity and the End of the Nuclear Freeze Movement." *Sociological Forum* 8(2):157–79.
- Meyer, David S. 1993b. "Peace Protest and Policy: Explaining the Rise and Decline of Antinuclear Movements in Postwar America." *Policy Studies Journal* 21(1):35–51.
- Meyer, David S. 1993c. "Protest Cycles and Political Process: American Peace Movements in the Nuclear Age." *Political Research Quarterly* 46(3):451–79. doi: 10.2307/448943.
- Meyer, David S. 1995. "Framing National Security: Elite Public Discourse on Nuclear Weapons during the Cold War." *Political Communication* 12(2):173–92.
- Meyer, David S. 2004. "Protest and Political Opportunities." Annu. Rev. Sociol. 30:125–45.
- Meyer, David S. 2006. "Claiming Credit: Stories of Movement Influence as Outcomes." *Mobilization: An International Quarterly* 11(3):381–298.

- Meyer, David S. 2023. "Dilemmas and Dimensions of Social Movement Escalation1." *Sociological Forum* 38(4):1361–74. doi: 10.1111/socf.12949.
- Meyer, David S., and Sam Marullo. 1992. "Grassroots Mobilization and International Politics: Peace Protest and the End of the Cold War." *Research in Social Movements, Conflicts and Change* 14:99–140.
- Myrdal, Alva Reimer. 1976. *The Game of Disarmament: How the United States and Russia Run the Arms Race*. 1s ed edition. New York: Pantheon Books.
- Nepstad, Sharon Erickson. 2022. "Plowshares Movement." Pp. 1–2 in *The Wiley-Blackwell Encyclopedia of Social and Political Movements*. John Wiley & Sons, Ltd.
- Oak Ridge Environmental Peace Alliance (OPERA). 2023. "September 23 Newsletter Oak Ridge Environmental Peace Alliance." Retrieved October 31, 2023 (https://www.orepa.org/orepa_newsletters/september-23-newsletter/).
- Polletta, Francesca. 2009. *It Was Like a Fever: Storytelling in Protest and Politics*. University of Chicago Press.
- Primack, Joel R., and Frank Von Hippel. 1974. Advice And Dissent. First Edition. New York: Basic Books.
- Reger, Jo. 2002. "Organizational Dynamics and Construction of Multiple Feminist Identities in the National Organization for Women." *Gender & Society* 16(5):710–27. doi: 10.1177/089124302236993.
- Ricks, Thomas E. 2022. Waging a Good War: A Military History of the Civil Rights Movement, 1954-1968.

 New York: Farrar, Straus, and Giroux.
- Rochon, Thonas R. 1998. *Culture Moves: Ideas, Activism, and Changing Values*. Princeton University Press.
- Rohlinger, Deana A. 2006. "Friends and Foes: Media, Politics, and Tactics in the Abortion War." *Social Problems* 53(4):537–61.
- Rohlinger, Deana, and Jordan Brown. 2013. "Mass Media and Instituional Change: Organizational Reputation, Strategy, and Outcomes in the Academic Freedom Movement." *Mobilization: An International Quarterly* 18(1):41–64.
- Schattschneider, Elmer E., and David Adamany. 1975. *The Semisovereign People: A Realist's View of Democracy in America*. 1st edition. Hinsdale, Ill: Cengage Learning.
- Scheer, Robert. 1982. *With Enough Shovels: Reagan, Bush, and Nuclear War*. First Edition. New York: Random House.
- Small, Melvin. 1988. *Johnson, Nixon, and the Doves*. First Edition. New Brunswick: Rutgers University Press.

- Snow, David A., and Dana M. Moss. 2014. "Protest on the Fly: Toward a Theory of Spontaneity in the Dynamics of Protest and Social Movements." *American Sociological Review* 79(6):1122–43. doi: 10.1177/0003122414554081.
- Snow, David A., E. Burke Rochford, Steven K. Worden, and Robert D. Benford. 1986. "Frame Alignment Processes, Micromobilization, and Movement Participation." *American Sociological Review* 51(4):464–81. doi: 10.2307/2095581.
- Staggenborg, Suzanne. 1986. "Coalition Work in the Pro-Choice Movement: Organizational and Environmental Opportunities and Obstacles." *Social Problems* 33(5):374–90. doi: 10.2307/800657.
- Tierney, John. 1995. "Abolish the Arms Control and Disarmament Agency." *The Heritage Foundation*. Retrieved February 6, 2024 (https://www.heritage.org/defense/report/abolish-the-arms-control-and-disarmament-agency).
- Urey, Harold C. 1945. "The Atom and Humanity." Science 102(2653):435-39.
- Wales, Ella. 2023. "Trespassing, Vandalism, and Peace Activism in Oak Ridge | The Takeaway." WNYC Studios. Retrieved October 31, 2023 (https://www.wnycstudios.org/podcasts/takeaway/segments/291760-trespassing-vandalism-and-peace-activism-oak-ridge).
- Wittner, Lawrence S. 1969. *Rebels Against War: The American Peace Movement, 1941-1960*. New York: Columbia Univ Pr.
- Wittner, Lawrence S. 1995. The Struggle Against the Bomb: One World or None: A History of the World Nuclear Disarmament Movement Through 1953. Stanford, Calif: Stanford University Press.
- Wittner, Lawrence S. 1997. The Struggle Against the Bomb: Resisting the Bomb: A History of the World Nuclear Disarmament Movement, 1954-1970: 2. Stanford, Calif: Stanford University Press.
- Wittner, Lawrence S. 2003a. "The Forgotten Years of the World Nuclear Disarmament Movement, 1975-78." *Journal of Peace Research* 40(4):435–56.
- Wittner, Lawrence S. 2003b. *Toward Nuclear Abolition: A History of the World Nuclear Disarmament Movement, 1971-Present*. 1st edition. Stanford, Calif: Stanford University Press.
- Zald, Mayer N., and John D. McCarthy, eds. 1979. *The Dynamics of Social Movements: Resource Mobilization, Social Control and Tactics*. Cambridge, Mass.



Last updated: 28 March 2023

a, Robert S. Norris, and Eliana Reynolds, Federation of A..

Source: : Federation of American Scientists https://fas.org/initiative/status-world-nuclear-forces/