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**How to cite**

GIUGNI, Marco. Useless Protest? A Time-Series Analysis of the Policy Outcomes of Ecology, Antinuclear, and Peace Movements in the United States, 1977-1995. In: Mobilization, 2007, vol. 12, n° 1, p. 53–77. doi: 10.17813/maiq.12.1.b05j1087v7pxg382

This publication URL: <https://archive-ouverte.unige.ch/unige:86055>

Publication DOI: [10.17813/maiq.12.1.b05j1087v7pxg382](https://doi.org/10.17813/maiq.12.1.b05j1087v7pxg382)

## USELESS PROTEST? A TIME-SERIES ANALYSIS OF THE POLICY OUTCOMES OF ECOLOGY, ANTINUCLEAR, AND PEACE MOVEMENTS IN THE UNITED STATES, 1977-1995\*

Marco Giugni<sup>†</sup>

*I confront three models of the policy impact of social movements with data on the mobilization of ecology, antinuclear, and peace movements in the United States between 1975 and 1995 by means of time-series analysis: the direct-effect model, the indirect-effect model, and the joint-effect model. My analysis suggests that social movements have little, if any, impact on public policy and that, if they are to have an impact, it depends on the combination of overt protest activities, the type of issues they raise, and external resources such as public opinion and political alliances with institutional actors. Thus, it appears that, if they are to have a policy impact, movements need the joint occurrence of mobilization, support from political allies, and public opinion favorable to the cause.*

Scholars recently have begun to pay much closer attention to the outcomes of social movements and to study them more systematically than in the past (e.g. Amenta 2005, 2006; Amenta, Carruthers, and Zylan 1992; Amenta, Dunleavy, and Bernstein 1994; Amenta, Caren and Olasky 2005; Andrews 1997, 2001; Banaszak 1996; Burstein 1999; Burstein, Einwohner, and Hollander 1995a; Costain and Majstorovic 1994; Cress and Snow 2000; Deng 1997; Giugni 2004; Giugni, McAdam, and Tilly 1998, 1999; Kane 2003; King, Cornwall, and Dahlin 2005; MacDougal, Minicucci, and Myers 1995; McAdam and Su 2002; McCammon, Campbell, Granberg, and Mowery 2001; Soule 2004; Soule, McAdam, McCarthy, and Su 1999; Soule and Olzak 2004; Tarrow 1993).<sup>1</sup> Most of this renewed interest focuses on the determinants of movement policy outcomes. In other words, most work assesses whether, when, and how movements influence the policy process and its outcomes (see Amenta and Caren's 2004 review).

There are various ways to model the relationship between movements and outcomes (e.g., Amenta et al. 1992; Andrews 2001; Kane 2003). Here I would like to suggest how three main explanations of the policy impact of social movements can be distinguished according to the role played by the social movements themselves, the resources found in their environment, and the nature of the relationship between movement mobilization and those resources. I call them the direct-effect, indirect-effect, and joint-effect models. The direct-effect model maintains that movements can have a positive impact on policy through their own forces and in the absence of external support. The indirect-effect model sees movements as having an impact following a two-stage process, first by influencing certain aspects of their external environment—specifically, political alliances and public opinion—and then by allowing the effect of the public opinion to influence policy. The joint-effect model states that movement impact is

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\* This article is based on data and related findings discussed at more length in Giugni (2004). Although the findings presented here are consistent with those presented in the book, I interpret them somewhat differently (especially with regard to the overall assessment of movement impact). In addition to people acknowledged in the book, I would like to thank Dan Myers and two anonymous reviewers for their helpful comments on a previous draft of this article. A special thanks goes to Florence Passy, with whom I discussed at length in an earlier stage the ideas in which this article originates.

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forthcoming when political allies or public opinion (or both) intervene together with movement mobilization.

Reflecting in some way common sense about the effectiveness of popular protest, all three models point to a substantial impact of social movements on public policy, although in different ways and following different paths. I would like to take a more skeptical stance and leave open the possibility that movements have no impact at all. After all, these are minority actors that have little power. So, why should they have an impact? The source of policy change would lie elsewhere, namely within the institutional arenas in which the powerful actors are or, if outside such arenas, in much larger numbers than those mobilized by social movements, such as those provided by shifts in public opinion. Thus, I suggest that movements have, at best, a moderate impact on public policy and, if they are to have a real impact on public policy, they need to take advantage of favorable external resources. Here I follow work that has stressed interactive and contingent effects of social movements, political opportunity structures, public opinion, as well as other contextual factors (Amenta 2005, 2006; Amenta et al. 1992; 1994, 2005; Cress and Snow 2000; Giugni 2004; Kane 2003; Soule and Olzak 2004) and argue that the joint-effect model has more explanatory power than both the direct-effect and the indirect-effect models. In particular, I stress the importance of the presence of powerful political allies and a favorable public opinion as crucial external resources that, when they accompany the mobilization of social movements, facilitate the impact of the movement on public policy.

The main goal of this article is to assess the strength of these three models of social movement outcomes. I use time-series analysis to confront the three models with original data on the mobilization of three policy-oriented movements—ecology, antinuclear, and peace movements—covering the period from 1975 to 1995. In spite of the strong mobilization displayed by these movements over the past three decades, we know very little about their effectiveness. Most of the existing assessments are quite impressionistic and are not grounded in a theory of movement impact (but see Rucht 1999 on the ecology movement; Midttun and Rucht 1994 on the antinuclear movement; Burstein and Freudenburg 1978, McAdam and Su 2002; Meyer 1999 on the peace movement; and Giugni 2004 on all three movements). In addition, unlike most previous studies, which focus on single movements, organizations, or campaigns, I compare the policy outcomes of three distinct movements with different mobilizing structures, goals, and strategies. This comparison constitutes a better ground for drawing empirical generalizations than specific case studies.

### **DIRECT, INDIRECT, AND JOINT EFFECTS OF SOCIAL MOVEMENTS**

Earlier studies of the policy impact of social movements have been framed along two main lines of inquiry and attempt to answer one of two basic questions (Giugni 1998): (1) Are disruptive movements more likely to influence public policy than moderate movements? (2) Are strongly organized movements more successful than loosely organized ones? Underlying both questions are the more fundamental issues of the power of social movements and their ability to bring about policy changes through their protest activities. There are essentially two kinds of answers to this question. On the one hand, scholars point to the ability of social movements to influence the policy makers thanks to their internal characteristics (e.g. Cress and Snow 2000; Frey, Dietz, and Kalof 1992; Gamson 1990; Kowalewski and Schumaker 1981; Mirowsky and Ross 1981; Steedly and Foley 1979). They differ, however, in the evaluation of the ways in which movements can do so: either through disruptive or even violent tactics (McAdam and Su 2002; Piven and Cloward 1979), by using moderate and institutional tactics (e.g., Rochon and Mazmanian 1993; Soule and Olzak 2004), or by building a strong organizational infrastructure, resources, and leadership that allow them to employ multiple mechanisms of influence (Andrews 2001). All these works, implicitly or explicitly,

establish a direct link between social movements and the responsiveness of authorities. Since no other factor intervenes in the relationship between protest actions and their alleged outcomes, I call this model the *direct-effect model* of social movement outcomes. In the direct-effect model, movements can have a positive impact on policy, with their own forces and in the absence of external support.

On the other hand, scholars also stress the importance of the political environment and the context of social support (e.g. Barkan 1984; Goldstone 1980; Kitschelt 1986; Jenkins and Perrow 1977; Lipsky 1968; McAdam 1999; Schumaker 1975, 1978), suggesting that movement impact depends on external conditions. In this perspective, various studies emphasize the role of political opportunity structures (Amenta 2005, 2006; Amenta et al. 1992, 1994, 2005; Kitschelt 1986; Kriesi, Koopmans, Duyvendak, and Giugni 1995; McCammon et al. 2001; Jenkins and Perrow 1977; Soule and Olzak 2004; Tarrow 1993, 1998). In this respect, the presence of powerful allies within the institutional arenas and, more generally, of the political alignments within the institutionalized political system can crucially facilitate the impact of social movements on public policy. Other scholars argue that public opinion may give social movements a big hand in their attempts to influence policy and is a major determinant of policy change (Burstein 1998a, 1999; Burstein and Freudenburg 1978; Burstein and Linton 2002; Costain and Majstorovic 1994; Kane 2003; McAdam and Su 2002; Soule and Olzak 2004). Burstein (1998b; Burstein and Linton 2002), for example, argues that when scholars find a direct effect of protest on policy, the policy impact diminishes or disappears if they include the preferences of the public in their models.<sup>2</sup>

Both factors work in two ways that are often blurred in the literature. First, political allies carry into the institutional arenas the issues addressed by social movements in the public space. They react to movement claims by incorporating them into their own agenda. Once they are in the institutional arenas, challengers' claims have better chances to translate into policy changes. Thus, social movements' demands gain access to the political system and are more likely to succeed. In other words, movements are able to mobilize more powerful actors to advance the movements' cause, as in what Andrews (2001) called the "action-reaction models." Second, protest actions may influence public opinion, which in turn will encourage the power holders to act for policy change. This may be due to the fact that political elites fear the threat of not being elected, as predicted by the theory of representative democracy (Burstein 1998b; Krehbiel 1991; Lohmann 1993). The most important aspect for my present purpose, however, is that, in both cases, the impact of social movements depends on an intervening variable—political alliances or public opinion—and therefore it is an indirect effect rather than a direct one. Accordingly, I call this an *indirect-effect model* of social movement outcomes. I distinguish between two variants of the indirect-effect model, depending on whether political alliances or public opinion are seen as the most important factor.

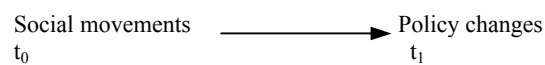
Elaborating on the indirect-effect model of movement outcomes and following previous work that has underscored the interaction between movement activities and external factors such as public opinion or political opportunity structures (e.g., Amenta 2005, 2006; Amenta et al. 1992, 1994, 2005; Cress and Snow 2000; Kane 2003; Schumaker 1978; Soule and Olzak 2004), I propose an alternative, though not necessarily competing view, that social movements, political alliances, and public opinion interact to produce policy change. In the theories discussed above, the impact of social movements on public policy occurs in two steps: movement claims first affect either political allies or public opinion; then these two intervening factors translate movement claims into policy changes. According to my alternative view, political alliances and public opinion do provide movements with crucial resources that help them to succeed. Yet, in order to force the power holders to engage in substantial policy reform, I argue, it is necessary to have the joint and simultaneous presence of a strong social movement and either the presence of a major political ally within the institutional arenas or a favorable public opinion, or both. This is what I call the *joint-effect model* of social movement outcomes. This idea is not new. For example, Schumaker (1978) has shown that the use of

disruptive tactics is more effective when the conflict is limited to the protest groups and their target, while it is less likely to lead to a successful outcome when the public becomes involved in the conflict. Similarly, the political mediation model (Amenta et al. 1992; see further Amenta et al. 1994, 2005) points to the conditional effects of political opportunity structures and social movements. More recently, Cress and Snow (2000), Kane (2003), Soule and Olzak (2004), among others, have all argued that the policy impact of social movements is better specified as interactive and contingent. I distinguish between three variants of the joint-effect model, depending on which political alliances, public opinion, or both factors are necessary. In this respect, the impact of protest on policy is greatest when both political alliances and public opinion form a favorable environment for policy changes to occur.

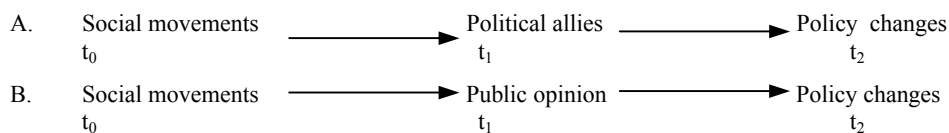
Figure 1 summarizes the three models. Timing is crucial here. The difference between an explanation in terms of joint effect and an explanation in terms of indirect effect lies precisely in that political allies and/or public opinion intervene simultaneously in the former and follows a two-step process in the latter. I hypothesize that, for the reasons mentioned earlier, the joint-effect model has greater explanatory power than the direct-effect model and, especially, the indirect-effect model. However, some claims are more difficult to meet than others, and certain movements therefore face a more difficult task, depending on the kind of issues or policy area they address.<sup>3</sup> Specifically, I distinguish between two aspects. First, in certain issues or policy areas, the authorities are less autonomous and have a more limited margin for action. This is the case, for example, of foreign policy, as opposed to domestic policy (Meyer 1999). There are external (i.e., international) factors involved in foreign policy that pose major constraints on the decisions of national authorities. Second, challenges that target certain issues or policy areas pose a more serious “threat” to the authorities than others to the extent that they strike the core interests of the state. Kriesi et al. (1995) have called them, respectively, “high profile” and “low profile.”<sup>4</sup> A number of reasons explain why certain issues or policy areas are more threatening than others: the amount of material resources involved, the power at stake, the electoral relevance, and the extent to which the “national interest” is challenged (Duyvendak 1995; Kriesi et al. 1995: ch. 4).

**Figure 1.** Three Models of Social Movement Outcomes

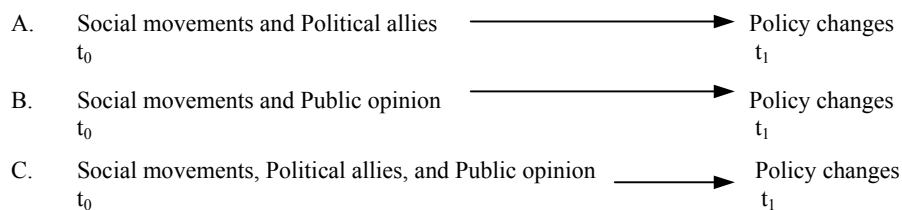
1. *Direct-effect model*



2. *Indirect-effect model*



3. *Joint-effect model*



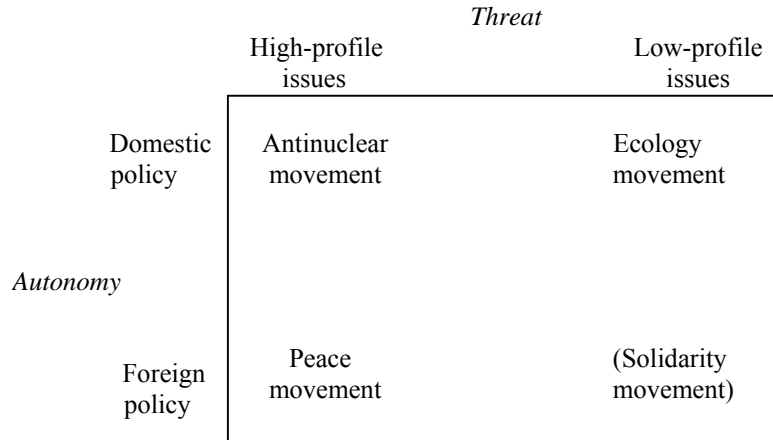
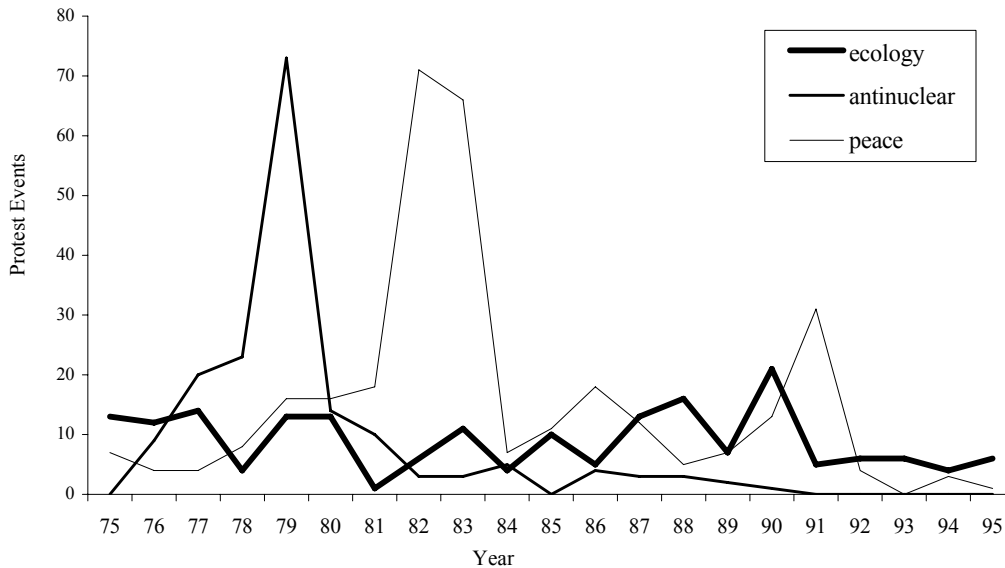
**Figure 2.** The Varying Viability of Claims by Policy Dimensions of Threat and Autonomy

Figure 2 maps variation in the *viability of claims* as a combination of the threat (high-profile/low-profile issues) and autonomy (domestic/foreign policy) dimensions. The three movements under study can be placed in different locations within this conceptual map. The peace movement targets a policy area that arguably is the most difficult to change among those considered here. In contrast, the ecology movement should have the highest chances to influence public policy, as this movement mostly addresses “valence issues” (Dunlap 1989), on which there is often a broad consensus.<sup>5</sup> The antinuclear movement is an intermediate case, insofar as it addresses a high-profile issue in a domestic policy area. The third-world solidarity movement, which is not part of this study, would be an example of a movement that partly mobilizes around low-profile foreign policies.<sup>6</sup> Thus, I hypothesize that the degree of difficulty to produce policy changes for the three movements studied here should be the following: more difficult for the peace movement, somewhat easier but still rather difficult for the antinuclear movement, and easier for the ecology movement.

### U.S. ECOLOGY, ANTINUCLEAR, AND PEACE MOVEMENTS, 1975-1995

I test my two main hypotheses concerning the joint effect and the viability of claims on the mobilization of ecology, antinuclear, and peace movements in the United States. Figure 3 shows the development of the number of protest events carried by these three movements between 1975 and 1995.<sup>7</sup>

Protests addressing environmental issues were quite stable over the whole period, in spite of ebbs and flows.<sup>8</sup> Nevertheless, the late 1970s witnessed a slightly declining mobilization of the ecology movement. The declining trend displayed under Carter’s administration reversed during the years of Republican presidency. The substantial cuts made by Reagan in the environmental policy area in favor of military spending, especially during his first mandate, provoked a reaction by environmentalist groups and organizations, though a moderate one. A strong “toxic waste movement” emerged during this period (Szasz 1994) and, after the case of Love Canal in 1978, attracted the attention of the media nationwide. The renewal of mobilization sped up under the Bush administration. Finally, when the Democrats seized the power again, the level of mobilization went down to reach its lowest level since the 1970s.

**Figure 3.** Ecology, Antinuclear, and Peace Protest Events in the United States, 1975-1995

Antinuclear protests display a very different pattern. They were relatively rare in the first half of the 1970s, when the movement was still acting mainly through institutional channels and conventional means (Joppke 1993),<sup>9</sup> but went up abruptly between 1976 and 1979. Acts of civil disobedience at the Seabrook (New Hampshire) and Diablo Canyon (San Luis Obispo, California) planned facilities captured national attention and stimulated further actions across the country. Even so, the peak of mobilization was reached in the aftermath of the accident that occurred at Three Mile Island (Harrisburg, Pennsylvania) on March 28, 1979. After this abrupt but short-lived wave of protest, antinuclear mobilization declined rapidly and stabilized at a very low level. This decline is in part a result of the lack of a target after that event as the U.S. nuclear energy industry nearly collapsed (Campbell 1988).

Peace protests show a similar pattern characterized by a large but short-lived protest wave. They peaked in the late 1960s and early 1970s.<sup>10</sup> After the end of the Vietnam war, however, the level of mobilization went down considerably. It resumed in the late 1970s, when the nuclear weapons issue came back on the agenda of pacifist groups and organizations. Reagan's election worsened the international climate, already in a bad shape after the Iran-hostage crisis of 1979. The military buildup operated by the Republican administration and the president's hostility toward the Soviet Union provoked an impressive wave of protest between 1979 and 1984. This mobilization, which was mostly carried under the banner of the nuclear freeze movement, reached its peak in 1982 with the June 2 demonstration in New York, probably the largest ever with its estimated one million participants. Nevertheless, the Freeze movement was soon co-opted by the political elites (Meyer 1990, 1993) and mobilization declined as fast as it went up. During the second half of the 1980s, peace actions focused upon the foreign policy carried by the Reagan administration in Central America (Smith 1996) and military spending, but only rarely did they involve large numbers of participants. A last outburst of mobilization, within the period under study, occurred between 1990 and 1991, when thousands of people protested against U.S. intervention in the Persian Gulf. This protest wave was as short-lived as the Gulf War and left the peace movement to its lowest level ever, thus contributing to open a phase of relative abeyance of all three movements during the years of the Clinton administration.

## DATA AND METHODS

### *Dependent Variable*

Public policy data come from the following sources: the budget of the U.S. Government (Historical Tables 1998) for environment; the Annual Energy Review (Energy Information Administration) for nuclear power; Stanley and Niemi (1995) for national defense. In spite of the problems of expenditure data (Burstein and Freudenburg 1978; Hofferbert 1974), I follow the lead of earlier work (Dye 1966; Hofferbert and Sharkansky 1971; Jacob and Vines 1971) and measure public policy through government spending. Alternatively, I could have focused on legislative activity or production (Burstein and Freudenburg 1978; Costain and Majstorovic 1994; McAdam and Su 2002), but I use spending because the value of a unit change is equally distributed over time. In contrast, laws are often qualitatively different from one another. Some laws imply a fundamental transformations in a given policy area, while others are cosmetic changes and hence have much less important implications.

For environmental policy I use a specific measure of government spending: the total budget of the Environmental Protection Agency (over the total central government expenditures), which is the main governmental office in charge of dealing with these issues. Since, in a federal state as the United States, a large part of environmental policy is made at the local level in addition to the national one, I include a measure of spending for environmental protection by the states (again, over the total state's expenditures). Change in the area of nuclear policy is also measured through two indicators, which can be considered as the equivalent of expenditures in the two other policy areas: the production of nuclear energy (over the total electricity production) and the number of construction permits for nuclear power plants. Finally, to measure policy change in the area addressed by the peace movement I look at federal outlays for national defense (over the total central government expenditures).

While environmental spending is a straightforward indicator of the policy changes sought by the ecology movement, my use of measures of nuclear policy and defense spending requires some clarifications. On the one hand, it might be argued that nuclear energy production is not a measure of public policy in the case of the United States because it does not represent government action. To be sure, in the United States orders and construction are mainly in the hands of utilities. There are indications, however, that the state is far from absent from the game. First, the federal government has invested large amounts of money to help the private sector develop and commercialize the light water nuclear reactor, the basis of American nuclear energy systems (Campbell 1988). The public sector, though not directly involved in exploiting the commercial advantages of nuclear power, engaged intensively in its promotion. Second, governmental regulation is fundamental for the development of private industry, even in a country with a very light bureaucratic apparatus and traditionally discreet state intervention. Third, political processes influenced choices in nuclear policy, and the state was part of such processes. Even in the United States, decisions made outside the state by utilities, manufacturers, and banks were shaped decisively by public policies (Jasper 1990). On the other hand, defense spending is admittedly less direct an indicator of the policy changes sought by the peace movement than the indicators I use for ecology and antinuclear movements. Most peace movement mobilization during the period under study focused on the arms race or on specific military interventions such as in the Gulf War, which are only indirectly related to the size of defense spending. Yet building a nuclear arsenal and intervening in a conflict presupposes large state appropriations that fall into the military budget, as the increases in spending during the most intense period of the arms race in the early 1980s and after the Gulf War attest.

### *Independent Variables*

*Social movements.* To measure social movement mobilization, I use protest event analysis (see Koopmans and Rucht 2002 for a methodological discussion). Specifically, I

collected data on protest events staged by ecology, antinuclear, and peace movements by content analyzing the *New York Times*. Protest events range from peaceful forms such as rallies and public demonstrations to more radical actions such as blockades, occupations as well as other confrontational, illegal, or violent actions. I also collected more conventional events such as political and juridical challenges or public statements. Since the conventional events are likely to be strongly underrepresented in my sampling strategy, I exclude them from the analyses. Thus, when I speak of protest events, I mean unconventional events, that is, demonstrative, confrontational, and violent actions. Following a sampling and coding procedure similar to that used by Kriesi et al. (1995), all Sunday and Monday editions of the paper were coded for the period covering 1975 to 1995. From the original, event-based file, the data were then aggregated into yearly counts of the protest events carried by each of the three movements and stored into a new file specifically organized for time-series analysis.<sup>11</sup>

*Political alliances.* I measure political alliances in two ways. On the one hand, I use an indicator of the formal configuration of power in the party system: the percentage of seats held by the Democratic Party in Congress (assuming that the Democrats are generally closer than the Republicans to the claims of the three movements under study and hence more willing to support them). I also use a supplemental indicator of political-alliances measure: substantial support given by institutional actors to the three movements, or at least to the issues they address via public statements. These data come from the same newspaper source used to gather protest events. I used this source also to collect public statements by political elites on environmental, nuclear, and peace issues, but only to the extent that they were overtly in favor of the movements' goals (pro-ecology, antinuclear, and pro-peace).

*Public opinion.* Generating consistent time series of public opinion spanning several years is often difficult due to a lack of available data. This task is made easier in the United States by the presence of long-standing opinion poll institutes. Even so my series are limited to fifteen or eighteen yearly observations and include missing data that were replaced with estimates based on linear interpolation. To measure public-opinion changes, I use one series for each movement referring, respectively, to the number of people who think that spending on improving and protecting the environment is too little (NORC poll reported in Dunlap 1992), the number of people who oppose the building of more nuclear plants (Harris poll reported in Rosa and Dunlap 1994), and the number of people saying that spending for defense is too much (reported in Stanley and Niemi 1995). It is important to stress that my measures of public opinion refer to shifts in preferences and not in public attention or issue salience.<sup>12</sup>

*Interactive terms.* As my principal argument is that social movements have the greatest impact on public policy when their action is supported by powerful political allies and faces a favorable public opinion, I introduced a number of two-way and three-way interactive terms in the analyses. First, six variables (two for each movement) combine protest (as measured through the number of protest events) and two indicators of political alliances (Democratic seats in Congress and pro-movement statements). The next three variables (one for each movement) measure the joint effect of protest and public opinion. Finally, six variables (two for each movement) look at the joint effect of protest, political alliances, and public opinion.

### *Estimation Technique*

All the variables entered in the analyses that follow consist of yearly time series covering the period from 1975 through 1995. In addition, all the dependent variables are expressed in terms of percentage change from the value of the previous year. Using percentage changes instead of absolute numbers is a simple and straightforward way to reduce the chances that the residuals (or error terms) of the regressions display significant serial correlation (or autocorrelation), which is a major problem in time-series analysis, especially with expenditure variables that have a strong build-in trend. Alternatively, I could have differenced the dependent variables. I opted for percentage changes because some of my dependent variables (the num-

ber of protest events and the number of construction permits for nuclear plants) represent changes in units. This type of variable is more likely to follow a Poisson distribution rather than a normal distribution as changes in units have a lower probability to occur when small numbers are involved. Therefore, assuming a normal distribution in statistical tests tends to yield biased coefficients. Transforming the variable from units to percentages allows us to perform statistical tests based on the assumption of normal distributions.

My analyses are bivariate regressions among time series. All the findings presented below consist of standardized regression coefficients indicating the strength of relationships between lagged variables, i.e., independent variables (expressed in absolute terms) measured at time  $t_0$  and dependent variables (expressed as annual percentage changes) measured at time  $t_1$ , with a one-year lag.<sup>13</sup> In addition, although I reduce the problem of serial correlation by measuring the dependent variables as percentage changes, for each coefficient I also show the Durbin-Watson statistic for autocorrelation.<sup>14</sup>

I opted for lagged relationships because they allow us to make a stronger case for causal effects. Coefficients were generated with the Prais-Winsten method, a generalized least-squares method for estimating a regression equation whose errors follow a first-order autoregressive process, using the AREG procedure in SPSS. The Prais-Winsten method assumes a first-order autoregressive process among the error terms, i.e., a model of a time series in which the current value of the series is a linear combination of previous values of the series, plus a random error. Autocorrelation function (ACF) in ARIMA showed that most of the variables used in my analyses follow an autoregressive process of order one, which led me to opt for a specification of time series with a one-year lag. Protest event data do not allow for shorter lags (especially as regards antinuclear and peace protests) due to the small number of events. The use of a one-year lag is a reasonable choice to study policy change with the dependent variable that I am using. This holds true especially in the case of government spending as budgets are adopted in one fiscal year for the following year, so that it usually takes a year before the administration can have an impact on budgets and hence on policy. As I am dealing with short time series, I consider a 10% level of significance in addition to the more usual 5% and 1% levels for the standardized regression coefficients.

## FINDINGS

### *Direct Effects*

I can now confront the three models of the outcomes of social movements with my data on the mobilization of U.S. ecology, antinuclear, and peace movements between 1975 and 1995. I first look at the direct effect of protest on public policy. Table 1 presents results regressing the five measures of policy change on the number of protest events produced by each of the three movements. No statistically significant relationship is found, with one exception. The regression coefficient for the peace movement is significant at the 10% level. The positive sign of the coefficient indicates the presence of a positive relationship between peace protests and state spending for national defense purposes. This prevents speaking of an impact of the movement on policy, if by impact I mean a change in defense expenditures in the direction of the movements' mobilization. An impact of the movement would be indicated by a negative relationship, not a positive one.

Thus, this first analysis suggests that there is no direct effect of social movements on public policy and leads to rejection the direct-effect model. The lack of a direct effect is consistent with previous analyses of social movements, which have shown to what extent they are powerless actors that alone can hardly have any impact on policy, that is, without political or public support (Amenta et al. 1992; Jenkins and Perrow 1977; but see Andrews 2001). This finding is also consistent with the theory of representative democracy, which states that minority actors such as social movements are not likely to be successful because they do not

**Table 1.** Direct Effect of Social Movements on Public Policy

	Spending for environmental protection (national) (t <sub>1</sub> )	Spending for environmental protection (local) (t <sub>1</sub> )	Nuclear energy production (t <sub>1</sub> )	Number of construction permits (t <sub>1</sub> )	Spending for defense (t <sub>1</sub> )
Ecology protests (t <sub>0</sub> )	.02 (1.92)	-.21 (1.91)	-	-	-
Antinuclear protests (t <sub>0</sub> )	-	-	-.31 (1.97)	-.08 (2.15)	-
Peace protests (t <sub>0</sub> )	-	-	-	-	.45* (1.88)

\* p < .10; \*\* p < .05; \*\*\* p < .01

Note: Standardized regression coefficients (bivariate) generated with a generalized least-squared method of estimation (Prais-Winsten) assuming a first-order autoregressive process. Durbin-Watson test for serial correlation and number of observations (series length) are shown between parentheses. All independent variables include a one-year lag. The dependent variables are expressed as annual percentage changes.

represent a sufficiently large “electoral reservoir.” Even with regard to a low-profile policy area such as environmental protection, it appears that the U.S. ecology movement was not able to affect the decisional process in the absence of external support.

#### *Indirect Effects*

Next I look at the two variants of the indirect-effect model, which maintains that social movement outcomes occur in two steps: first the movements influence their political allies and/or public opinion, and then these intervening factors affect public policy. The upper section of table 2 (A) looks at the impact of protest on the movements’ political allies.<sup>15</sup> The results point to a lack of effect by ecology and antinuclear movements, while a statistically significant coefficient can be observed in the case of the peace movement, this time pointing in the right direction. It should be stressed that national security and defense matters are often contested issues and the objects of “framing struggles” among political elites. It is therefore likely that when strong mobilizations occur around those issues, politicians are willing to address them in the public space, a phenomenon that becomes particularly visible during electoral campaigns. It is probably in this sense that this relationship should be interpreted. A clear example of that occurred in 1984, when the arms race issue was at center stage during the presidential election campaign that offered Reagan his second term. Not by coincidence, this occurred shortly after the freeze movement had produced one of the largest protest waves in American history.

The lower section of table 2 (B) shows coefficients regressing the five measures of policy change on the two indicators of political alliances. Three out of four coefficients referring to the area of environmental policy are statistically significant (at the 5% or 10% level). This seems to confirm previous studies indicating that spending in these two policy areas is related to shifts in the configuration of power (Meyer 1990; Sale 1993). As far as the formal measure of political alliances (the share of Democratic seats in Congress) is concerned, a positive effect can be observed both on national-level and local-level spending for environmental protection. The substantial measure (pro-ecology statements by political elites) has a statistically significant effect only at the local level, but both coefficients are relatively strong and in the right direction.

**Table 2:** Indirect Effect of Social Movements on Public Policy, First Variant: Political Alliances

## A. Step One: Impact of Social Movements on Political Allies

<i>Dependent variables:</i>	Pro-ecology Statements (t <sub>1</sub> )	Antinuclear Statements (t <sub>1</sub> )	Pro-peace Statements (t <sub>1</sub> )
Ecology protests (t <sub>0</sub> )	.11 (2.19) (20)	-	-
Antinuclear protests (t <sub>0</sub> )	-	-.23 (2.09) (20)	-
Peace protests (t <sub>0</sub> )	-	-	.45* (2.21) (20)

## B. Step Two: Impact of Political Allies on Public Policy

<i>Dependent variables:</i>	Spending for environmental protection (national) (t <sub>1</sub> )	Spending for environmental protection (local) (t <sub>1</sub> )	Nuclear energy production (t <sub>1</sub> )	Number of construction permits (t <sub>1</sub> )	Spending for defense (t <sub>1</sub> )
% Democratic seats in Congress (t <sub>0</sub> )	.44* (1.96) (20)	.47** (2.13) (20)	.05 (1.92) (20)	.67*** (1.99) (20)	-.25 (1.99) (20)
Pro-ecology statements (t <sub>0</sub> )	.37 (1.90) (20)	.44* (1.99) (20)	-	-	-
Antinuclear statements (t <sub>0</sub> )	-	-	-.24 (1.95) (20)	-.00 (2.15) (20)	-
Pro-peace statements (t <sub>0</sub> )	-	-	-	-	.09 (1.94) (20)

\* p &lt; .10; \*\* p &lt; .05; \*\*\* p &lt; .01

*Notes:* Standardized regression coefficients (bivariate) generated with a generalized least-squared method of estimation (Prais-Winsten) assuming a first-order autoregressive process. Durbin-Watson test for serial correlation and number of observations (series length) are shown between parentheses. All independent variables include a one-year lag. The dependent variables are expressed as annual percentage changes.

The situation is much less favorable for the antinuclear and peace movements. I do observe a significant—and, indeed, very strong—relationship between the strength of the Democratic Party and the number of construction permits for nuclear plants: the strength of the Democratic Party seems to be related to an increase in the number of construction permits. Once again, however, the positive sign of the coefficient prevents us from speaking of an impact meeting the antinuclear movement's goals, which are rather to stop the construction of new plants. None of the other three coefficients concerning this movement is statistically

significant. Finally, both the formal and the substantial measure of political alliances do not have a significant effect on spending for national defense.

Taken together, these results do not support the first variant of the indirect-effect model. While peace movement mobilization had an impact on pro-peace statements by elites, political allies had a positive impact (from the point of view of challengers) on public policy only in the area addressed by the ecology movement. The latter, however, was not able to affect the public statements made by its potential allies within the institutional arenas. Therefore, I cannot conclude that the movement has had an indirect effect via its influence on their institutional allies, at least not if I take this indicator of political alliance.

**Table 3:** Indirect Effect of Social Movements on Public Opinion and Public Policy

A. Step One: Impact of social movements on public opinion

<i>Dependent variables:</i>			
	Says spending for the environment is too little ( $t_1$ )	Is against more nuclear plants ( $t_1$ )	Says spending for defense is too much ( $t_1$ )
Ecology protests ( $t_0$ )	.11 (1.99) (15)	-	-
Antinuclear protests ( $t_0$ )	-	-.10 (1.93) (15)	-
Peace protests ( $t_0$ )	-	-	.16 (2.06) (18)

B. Step Two: Impact of public opinion on public policy

<i>Dependent variables:</i>					
	Spending for environmental protection (national) ( $t_1$ )	Spending for environmental protection (local) ( $t_1$ )	Nuclear energy production ( $t_1$ )	Number of construction permits ( $t_1$ )	Spending for defense ( $t_1$ )
Says spending for the environment is too little ( $t_0$ )	.34 (1.93) (16)	-.29 (2.08) (16)	-	-	-
Is against more nuclear plants ( $t_0$ )	-	-	-.09 (1.94) (16)	.62** (1.70) (16)	-
Says spending for defense is too much ( $t_0$ )	-	-	-	-	-.33 (1.90) (19)

\*  $p < .10$ ; \*\*  $p < .05$ ; \*\*\*  $p < .01$

*Note:* (Table 3) Standardized regression coefficients (bivariate) generated with a generalized least-squared method of estimation (Prais-Winsten) assuming a first-order autoregressive process. Durbin-Watson test for serial correlation and number of observations (series length) are shown between parentheses. All independent variables include a one-year lag. The dependent variables are expressed as annual percentage changes.

Turning to the second variant of the indirect-effect model, the first step consists in looking at the impact of social movements on public opinion. The results, shown in the upper section of table 3 (A), suggest that there is no direct relationship between protest and shifts in public opinion. This goes against the often-held assumption that one of the major consequences of social movements is to sensitize the public. Thus, I obtain quite a negative picture of the possibilities for our three movements to influence the public opinion in the absence of some dramatic event such as an oil spill, a nuclear accident, or a war, which may sensitize the public to certain issues. Social movements, however, may contribute to making the public aware of the potential threat posed by an external event such as an environmental catastrophe, transforming that event in a “suddenly imposed grievance.” As Joppke (1993) has suggested for the case of the antinuclear movement in the United States, this would imply that movements alone do not affect public opinion, but that they are able to do so only insofar as they can take advantage of external, potentially threatening events.

The lower section of table 3 (B) allows us to ascertain whether changes in public opinion have affected policy. The only significant relationship refers to the antinuclear movement, but the sign of the coefficient is once again in the wrong direction. Thus, these data do not provide consistent support to the hypothesis of an impact of public opinion on public policy. Taken together, these results do not support the second variant of the indirect-effect model.

It could be argued that the impact of public opinion depends on the degree of attention or concern of the public toward a given issue (Jones 1994). Burstein (1998a), for example, found that EEO legislation was more likely to be adopted when the public opinion was strongly concerned about civil rights issues. Since changes in public attentiveness imply variations in the salience of an issue (Rabinowitz, Prothro, and Jacoby 1982), in this perspective, decision makers would react to the salience of an issue rather than to the public’s preferences. My indicators of public opinion measure the latter aspect, and this may explain their weak effect. Yet, while previous work might have found a positive relationship between public attention and policy change because highly salient issues were concerned (such as civil rights in the 1950s and 1960s), the movements here are unlikely to capture the attention of the majority of citizens.<sup>16</sup> Even so, shifts in attentiveness can occur without changes in preferences (Jones 1994). Although here I am most interested in the public’s preferences as a potential support of the movements’ goals, I ran the analyses performed in the lower section of table 3 using two measures of issue salience.<sup>17</sup> The results (not shown) confirm the lack of impact of public opinion as none of the lagged variables pertaining to issue salience, including those regarding environmental protection, has a statistically significant impact on public policy.

### *Joint Effects*

My analyses provide very little—if any—support to both variants of the indirect-effect model of social movement outcomes. Yet political alliances and public opinion may play a crucial role in the process through which social movements can bring about policy changes, not following a two-step process, but rather jointly with the movement’s mobilization, as predicted by the joint-effect model. I operationalize this model, which has three variants (protest and political alliances, protest and public opinion, and all three factors together), by introducing a series of interactive terms as described in the methodological section.

I examine the first variant of this model by regressing the indicators of policy change on two interactive terms, each one representing a combination of the number of protest events and the two measures of alliances (the percentage of Democratic seats in Congress and pro-movement statements). The results, shown in the first section of table 4 (A), provide some support to the view that social movements benefit from the presence of political allies within institutional arenas. I observe two statistically significant coefficients: one for the ecology movement and one for the peace movement. Only the coefficient concerning the ecology movement is in the desired direction, suggesting a successful outcome of the movement. Also,

**Table 4.** Joint Effect of Social Movements on Public Policy

<i>Dependent variables</i>	Spending for environmental protection (national) (t <sub>1</sub> )	Spending for environmental protection (local) (t <sub>1</sub> )	Nuclear energy production (t <sub>1</sub> )	Number of construction permits (t <sub>1</sub> )	Spending for defense (t <sub>1</sub> )
<i>A. First variant</i>					
Protest * allies 1 (t <sub>0</sub> )	.04 (1.92) (20)	-.17 (1.91) (20)	-.32 (1.97) (20)	-.07 (2.15) (20)	.45* (1.87) (20)
Protest * allies 2 (t <sub>0</sub> )	.48** (1.93) (20)	.37 (2.04) (20)	-.29 (1.99) (20)	-.14 (2.16) (20)	.32 (1.90) (20)
<i>B. Second variant</i>					
Protest * public (t <sub>0</sub> )	.17 (1.93) (16)	-.26 (1.95) (16)	-.49* (2.12) (16)	-.10 (1.99) (16)	.35 (1.89) (19)
<i>C. Third variant</i>					
Protest * allies * public 1 (t <sub>0</sub> )	.22 (1.93) (16)	-.21 (1.95) (16)	-.49* (2.11) (16)	-.09 (1.99) (16)	.35 (1.89) (19)
Protest * allies * public 2 (t <sub>0</sub> )	.66*** (2.02) (16)	.41 (2.10) (16)	-.44* (2.16) (16)	-.17 (2.00) (16)	.29 (1.89) (19)

\* p < .10; \*\* p < .05; \*\*\* p < .01

*Note:* Standardized regression coefficients (bivariate) generated with a generalized least-squared method of estimation (Prais-Winsten) assuming a first-order autoregressive process. Durbin-Watson test for serial correlation and number of observations (series length) are shown between parentheses. All independent variables include a one-year lag. The dependent variables are expressed as annual percentage changes. See Appendix B for a description of the interactive terms.

only the substantial indicator of political alliances (the number of pro-ecology statements by political elites) plays a role here, while the formal indicator (the percentage of Democratic seats in Congress) has no effect. This result suggests that institutional actors may have a greater impact when they act in the public space, outside their privileged arena, to the extent that they join their forces with social movements (as the lack of a direct effect of political allies on public policy indicates).

In contrast, the positive sign of the effect of the first interactive term on defense spending indicates that, at best, spending goes up as a consequence of the joint action of the movement and its institutional ally. Based on these results, I cannot conclude that the peace movement has had an impact. Finally, I find no statistically significant effect on the two measures of nuclear policy, although both indicators of political alliances are negatively correlated to nuclear energy production.

The second section of table 4 (B) refers to the second variant of the joint-effect model, that is, the joint effect of social movements and public opinion. Here I find a statistically significant relationship only in the case of the antinuclear movement. Increases in protest activities accompanied by favorable shifts in public opinion do not translate into policy changes in the areas of environmental protection (ecology movement) and national defense (peace movement). While this lack of effect could be expected, in the light of the more difficult position of the peace movement with regard to the viability of its claims, as it turns out,

public opinion, contrary to my predictions, does not appear to be a crucial resource for the ecology movement, at least not in the United States between 1975 and 1995. In contrast, the antinuclear movement has had a joint effect with public opinion on nuclear energy production, as I observe a negative and statistically significant relationship between the interactive term for this movement and the level of production of nuclear energy.

The final analyses deal with the third variant of the model, that is, the joint effect of all three factors (social movements, political alliances, and public opinion). I do so by regressing my four measures of public policy on a pair of three-way interactive terms. The results, shown in the last section of table 4 (C), in a way combine those found for the first and second variants of the joint-effect model, and to a large extent confirm what I have found so far: that the ecology and antinuclear movements were able to take advantage of the external resources provided by political alliances and public opinion, whereas the peace movement remained without any significant policy impact. Interestingly, there is a difference between the case of the ecology movement and that of the antinuclear movement. This difference is seen by comparing these findings to the significant coefficients observed for the first and second variants of this model. The difference between the two movements is that, while political alliances were the decisive factor for the ecology movement, public opinion was responsible for the impact of the antinuclear movement.

In sum, although the results are not as systematic as one could wish, these data support the joint-effect model of social movement outcomes. The ecology and antinuclear movements have had an impact on policy when their mobilization was accompanied by the presence of political allies within the institutional arenas and/or by favorable shifts in the public opinion. The peace movement, in contrast, does not seem to have taken any advantage of available political and public resources. Thus, only the two movements addressing low-profile issues and/or domestic policy could profit from the external resources provided by the presence of political allies or a favorable public opinion. This is consistent with my hypothesis regarding the viability of claims. Specifically, domestic policy is more easily influenced than foreign policy. Contrary to my hypothesis, however, there is little if any difference between low-profile and high-profile issues within domestic policy, as the ecology movement does not score better than the antinuclear movement in this respect.

### **SOCIAL MOVEMENT ORGANIZATIONS AND CONVENTIONAL ACTION**

Thus far I have measured movement action only through unconventional protest events. But the strength of social movements, especially the kind of policy-oriented movements studied here, also lies elsewhere: in conventional action (such as lobbying) and organizational growth (Andrews 2001; Cress and Snow 2000; Soule 2004; Soule et al. 1999; Soule and Olzak 2004). These two aspects reflect, respectively, what Andrews (2001) has called the “access-influence” and the “movement-infrastructure” modes. Furthermore, to look at movement organizations is critical with regard to a discussion of democratic participation in civil society and hence to an assessment of social movements with respect to democratic theory.

For all these reasons, although I am most interested in the impact of overt mobilization and protest, I conducted additional analyses with indicators for the other two aspects. As far as conventional mobilization is concerned, I use a proxy for lobbying activities: the amount of money spent by movement-related political action committees (PACs) to sponsor election campaigns by candidates who are considered as supporters of the movements’ claims.<sup>18</sup> Admittedly, this is a very crude measure of conventional or lobbying activity by social movements, but it can at least help us to get a grasp of the problem. I have run all the previous analyses using this measure in place of the number of protest events. The results (not shown) are quite straightforward. There is no statistically significant impact of PACs on public policy, whether I adopt a direct-, indirect-, or joint-effect model of movement outcomes. Only the

relationship between PAC spending and pro-peace statements by elites is significant. This result confirms what I found with protest events and thus yields a stronger case for the impact of the peace movement on the rhetorical appropriation of issues by politicians as a way of engaging in a “framing struggle” on certain issues. Yet, in general, conventional or lobbying action seems as ineffective as overt protest actions in provoking policy changes for the three movements studied, even when they deal with low-profile or domestic issues.

Concerning organizational growth, I use the number of members of several major organization for each movement.<sup>19</sup> The analyses corresponding to the ones shown above for protest show no significant effect of organizational growth on policy, again whether directly, indirectly, or jointly with political and/or public support (results not shown). Once again, I observe an impact on pro-movement statements, which this time is statistically significant for all three movements. I can interpret this finding as a sign that the higher the number of people who are involved in movement organizations, the more likely are politicians to take the issues addressed by these organizations seriously into account. In the perspective of democratic theory, this would indicate that citizen involvement in political associations, as Alexis de Tocqueville pointed out about two centuries ago, stimulates the public debate around certain issues and hence, from a normative point of view, improves the prospects for the development of democracy. Of course, a more skeptical observer might argue, not without some reason, that this kind of responsiveness by elites is a way for politicians to use citizen concern for their own interests. Regardless of how I evaluate them, these findings suggest that organizational growth alerts the political elites of the presence of a mobilization potential and shows them that the society is organizing around issues about which citizens are concerned. Yet this does not seem to be enough for social movements to have a substantial impact on public policy.

## DISCUSSION

Based on the analyses above, I can say that the three movements studied here did not fundamentally influence public policy. This finding holds whether I look at unconventional protest actions, conventional and lobbying activities, or organizational strength. Table 5 gives an overall assessment of the three models of social movement outcomes tested in this study. It summarizes the results of the analyses presented above. It shows the presence or absence of an effect and gives the overall assessment across the three movements for each model. Apart from the weak impact that I can see both across movements and across the various models, the overall assessment is in line with my expectations: while there is no direct or indirect effect (for both variants of the latter), I observe some impact all three variants of the joint-effect model. Even here, however, I have only a marginal impact of the first and second variants (those stressing a single external factor, respectively political alliances and public opinion), while the third variant, which shows a moderate impact, is perhaps the only model that points to the existence of a real impact of the movements on public policy.

Thus, if they are to have a policy impact, social movements need the support of political allies and public opinion, but jointly, that is, occurring simultaneously with their mobilization. The viability of claims also appears to play a role. Not all movements are able to have a joint effect on public policy. In the case at hand, only the two movements addressing domestic policy (the ecology and antinuclear movements) were able to influence public policy to some extent. The claims of these two movements are more viable than those of the peace movement. Therefore, their margin for action is larger and their impact on policy becomes more likely when their actions are politically and publicly supported.

According to these data, environmentalists could take advantage of some support from political alliances, while antinuclear activists benefited from a favorable public opinion. The importance of political alliances is in line with research that underscores the role of political opportunity structures in explaining of protest behavior (Kriesi 2004). The presence or absence

**Table 5.** Overall Assessment of Direct, Indirect, and Joint Effects of Social Movements

	Ecology movement	Antinuclear movement	Peace movement	Overall
Direct effect	no	no	no	none
Indirect effect 1 (political alliances)	no	no	no	none
Indirect effect 2 (public opinion)	no	no	no	none
Joint effect 1 (protest and political alliances)	yes	no	no	marginal
Joint effect 2 (protest and public opinion)	no	(yes)	no	marginal
Joint effect 3 (protest, political alliances, and public opinion)	yes	(yes)	no	moderate

*Note:* The presence of effect is given by a significant regression coefficient with  $p < .05$  or  $p < .10$  (between parentheses). Protest is measured through unconventional actions. When there are two indicators for the same independent variable (e.g. configuration of power), an effect is present if at least one of them is significant. An effect concerning spending for environmental protection is present if the coefficient is significant either at the national or local level.

of elite allies is one of the main dimensions of opportunities. Most often, scholars have stressed the ways in which political alliances may contribute to the emergence of protest. Much less frequent are works showing how political allies within the institutional arenas may help social movements to obtain substantial gains and hence to be successful. This study has elaborated on this line of reasoning, suggesting that movements and their political allies may have a joint effect on public policy, provided that their claims are sufficiently viable.

The role played by public opinion as an external resource for social movements point to some implications of this study, not only for social movement theory, but also for democratic theory. Almost all models of governance in liberal democracies look at how mass preferences influence the development of public policies (Jones 1994). The theory of representative democracy views elites as responding to demands supported by a majority of citizens rather than to particular interests of minority groups, basically for electoral reasons (Burstein 1998b, Krehbiel 1991; Lohmann 1993). Thus, according to the theory of representative democracy, social movements and interest groups should not have a direct effect on public policy. My analysis of U.S. ecology, antinuclear, and peace movements supports this view. At the same time, the lack of direct movement effect is in line with a long-standing tradition in American politics that challenges the pluralist ideal of the political system's permeability—in particular, the American political system—on theoretical as well as empirical grounds (Gamson 1990).<sup>20</sup>

The theory of representative democracy predicts that public opinion has a strong impact on decision making. This article suggests that public opinion matters only for certain movements. Specifically, when it comes to military affairs, the American decision makers do not seem to have followed the will of the public. This outcome might be due to a lower public concern toward these issues. Yet data on issue salience indicate that lower levels of public concern were not a decisive factor. More plausibly, therefore, the degree of responsiveness of the power holders to mass publics may be lower than posited by the theory of representative democracy. My analysis suggests that democratic governments are most responsive to a combination of factors, which comprise public opinion, but which must also include the joint effect of protest activities and institutional allies.

## CONCLUSION

This study has inquired into the role of social movements' larger environment for their consequences on public policy. The findings suggest that movements have little leverage on policy. I found at best a marginal to moderate effect and only when protest activities are supported by crucial external resources that are available precisely when the movements' mobilization occurs. In line with previous studies (e.g. Amenta 2005, 2006; Amenta et al. 1992, 1994, 2005; Cress and Snow 2000; Kane 2003; Schumaker 1978; Soule and Olzak 2004), I found support only for the joint-effect model of social movement outcomes, and even following this model movements have at best a moderate impact. The findings suggest that social movements can be effective in producing policy changes only when they can take advantage of favorable political opportunities and public opinion. To conclude, I will outline some of the methodological qualifications of this study and suggest avenues for further research.

First, concerning the measure of policy impact I have used in my empirical analyses, I focused on state spending in the environmental and military policy domains (as well as its equivalent in the nuclear energy domain), assuming that movements have an impact on policy when their mobilization—with the help of crucial external factors such as political alliances and public opinion, according to my argument—brings about changes in that policy in the supposedly desired direction. This does not necessarily imply that when no change is observed the movement has had no effect at all. In other words, stability does not mean losses and can be viewed as a success by movement leaders and participants. Yet here I was interested in whether and how movements can bring about policy change, not in determining their success, which is a problematic notion not the least because the definition of what is success might change according to one's point of view (Giugni 1998).

Second, my analyses are simple and consists in bivariate regressions among yearly time series of the variables of interest. In other words, my models are underspecified and do not include controls. I did so due to the fact that I am dealing with very short series which prevent us to perform multivariate analyses and therefore wanted to keep the models as parsimonious as possible. In addition, the constitutive terms in the interaction models are omitted, which may lead to biases coefficient estimates and makes it difficult to interpret the interactive terms. Including all constitutive terms in an interaction model increases multicollinearity, thereby increasing the size of the standard errors and making it less likely that the coefficient on the interaction term will be significant. Since I am interested in the presence or absence of significant relationships rather than in the magnitude of effects, I preferred to avoid this risk. It should be stressed however that while this reasoning may be valid, it does not always justify the omission of constitutive terms (Brambor et al. 2005). The findings should be taken with caution, statistically speaking. At the same time, I should stress that the lack of control variables in my approach is less important than in other cases. Indeed, significant relationships, if any, usually diminish or even disappear when one introduce controls in a regression model. If I would introduce control variables in my models, they would be more likely to reduce effects rather than increase them, pointing to an even weaker impact of social movements on public policy. In this case, therefore, not having controls gives a higher chance to the null hypothesis that movements affect public policy.

Third, I focused only on one side of mobilization in the three policy areas addressed, that is, pro-environment, pro-peace or antimilitary, and antinuclear movements.<sup>21</sup> Furthermore, I looked only at this side also for public opinion. It is likely, however, that the organization of the opposition plays a role as well in influencing policy change, but this time in the opposing direction. Thus, one should take into account opponents and countermovements as well, both when studying the outcomes of social movements and their mobilization (Barkan 1984; McAdam 1999; Meyer and Staggenborg 1996; Schumaker 1975; Soule and Olzak 2004). Similarly, public opinion hostile to the goals of the movements should be explicitly specified in the explanatory models, although one might also argue that, unlike social movements, pub-

lic opinion is a zero-sum game and therefore it suffice to look at one camp. Antienvironmental, pro-military, and pro-nuclear forces—whether organized in social movements, other forms of interest representation, or expressed in public opinion polls—could have a counter-effect that might even cancel out the efforts made by the three movements studied here.

Further work should provide a firmer empirical anchoring of the arguments put forward in this article. Comparisons with other national contexts are crucial in this respect (Giugni 2004). Indeed, most of the existing work on the policy outcomes of social movements, including this one, focus on the United States. Yet cross-national analyses seem to indicate that the conditional effects of social movements, political alliances, and public opinion are not working in the same way in other countries (Giugni 2004). This may be due to differences in the political opportunity structures and in the role of public opinion across countries. For example, the United States is quite peculiar as regards the potential allies of the three movements considered in this study. These movements typically get their support from social democratic parties. Although I have considered the Democratic Party to be a sort of functional equivalent of the socialists with regard to the support they give to the kind of movements studied here, this situation is quite different from the one found in most European countries. Similarly, American elites may rely upon public opinion to a larger extent than their European counterparts due to a long-standing tradition of measuring the preferences of the public.

A second promising avenue for further research consists in going beyond an analysis of the impact of social movements on legislation or spending as indicators of public policy. Studies of policy change usually focus on policy adoption, ignoring what comes before and after that particular stage of the policy process. As King et al. (2005: 1211) have noted, however, “policy change takes place over a sequence of stages, which makes possible varying levels of policy success.” In other words, not only do we need more systematic research on the effects of movements on aspects other than policy adoption, both before and after adoption of specific legislation (Andrews 2001; Burstein et al. 1995b), but above all it is likely that one would observe a differential impact according to stage of policy process (King et al. 2005). Acknowledging that the impact of social movements on public policy is interactive and contingent, and that it can vary according to different stages in the policy process, would bring us a step further in the understanding the conditions and mechanisms through which movements influence their social and political environment.

## NOTES

<sup>1</sup> A main reason why students of social movements have somewhat eschewed a systematic analysis of the outcomes of movements lies in the methodological difficulties inherent in the task (Earl 2000 and Giugni 1998).

<sup>2</sup> A number of studies stress the close relationship between public opinion and policy, maintaining that, especially when an issue is felt as important or salient by the public, a clear and visible shift in the public opinion leads the authorities to modify their policies (Burstein 1998b; Page and Shapiro 1993).

<sup>3</sup> Gamson (1990), for example, found that limited goals were slightly more successful than displacement goals.

<sup>4</sup> These terms are often used in the literature to indicate the visibility of an issue. In spite of different meaning elsewhere, I will use these terms instead of other labels because I explicitly refer to their use in Kriesi et al. (1995).

<sup>5</sup> To use McCarthy and Wolfson’s (1992) terminology, the U.S. ecology movement is a “consensus movement.”

<sup>6</sup> Here I refer specifically to that branch of the solidarity movement that deals with issues not directly related to national politics (human rights, development aid to Third-World countries, etc.).

<sup>7</sup> The data with which this figure is built are described in the methodological section.

<sup>8</sup> My sample also includes data for 1970. I found 14 protest events for that year.

<sup>9</sup> No protest events are reported in my sample for 1970.

<sup>10</sup> I found 82 protest events in my sample for 1970.

<sup>11</sup> See Giugni (2004: Appendix A) for a discussion of methodological issues pertaining to my use of protest event data, including a comparison of the sample I use in my analyses with continuous time data.

<sup>12</sup> I agree with Jones (1994) that preferences are more stable than issue attention, which is more likely to be subject to abrupt shifts over time. Since I am interested in the evaluation that the general public gives of environmental,

antinuclear, and peace issues in order to determine to what extent these preferences help social movements to reach their policy goals, here I focus on preferences rather than on issue attention.

<sup>13</sup> I also tested models with shorter and longer time lags. The one-year lag produced the best results. In addition, shorter lags are problematic for protest events due to the low number of cases.

<sup>14</sup> The Durbin-Watson statistic, which is used to test for the presence of first-order autocorrelation (both positive and negative) in the residuals (or error terms) of a regression equation, has a range between 0 and 4. In the case of a series with 19 observations and 1 independent variable in the equation (i.e. for bivariate regressions), the null hypothesis that there is no significant correlation in the residuals can be accepted (at the level of significance of 5%) if the regression coefficient ranges between 1.40 and 2.60 (4 - 1.40).

<sup>15</sup> Here I rely upon my substantial measure of political alliances. It would make little sense to look at the formal indicator as it is hard to imagine that protest is so powerful as to modify the power balance in the parliamentary arena in the short or medium term. It should be noted, however, that the use of newspaper data in this case is more problematic as they consist of public speech acts, which are likely to be strongly underrepresented in the newspaper source due to my sampling strategy, and they are used to measure a dependent variable. Therefore, they are more vulnerable to criticism advanced in the literature (see Koopmans and Rucht 2002 for a review and Giugni 2004 for a discussion relating to the present study).

<sup>16</sup> Various indicators of the “most important problem” facing the nation queried by the Gallup polling organization show that most of the issues addressed by ecology, antinuclear, and peace movements were never very salient between 1975 and 1995, especially in comparison to such issues as the economy, unemployment, or crime. For example, only in January 1992 went environmental issues above 10%. The nuclear power issue is even less salient. The lack of public concern in this area in the late 1970s and early 1980s is surprising, especially in the light of such strong mobilizations as those that occurred in Seabrook, the accident at Three Mile Island, and the amount of attention given to those events by the media at that time. Peace issues, in contrast, have been highly salient at times, in particular in the Reagan administration’s years and during the Gulf war. Yet Americans seem much less concerned by national defense and military spending issues than by general (but threatening and fearful) issues linked to peace and war or by U.S. interventions abroad.

<sup>17</sup> The first measure consists of the mean of the figures from all available surveys in each year. The second measure takes only the highest figure in each year. The resulting variables were expressed as annual percentage changes, lagged one year, and entered in time-series analyses with the indicators of public policy used in the previous analyses. I performed two regressions (one for each measure of issue salience) for each of six areas related to the issues addressed by the three movements under study and which correspond to the various items in the polls (environment and pollution; nuclear power; peace, war, and nuclear; international problems and foreign policy; national defense and security; military spending), plus an aggregate measure for the four peace items.

<sup>18</sup> Data on PACs come from public files of the Federal Election Commission in Washington, DC. I selected all PACs that I judged as being close to the movements (15 for the ecology movement and eight for the peace movement). Yearly figures are the mean of two-year totals (the duration of a legislature) in primary disbursements. Missing values for 1995 have been replaced with estimates based on linear interpolation. Correlation coefficients indicate that protest and conventional action (at least as measured through PACs spending) follow quite different distributions over time (coefficients equal .02 for the ecology movement and .30 for the peace movement, both not statistically significant). Unfortunately, data usable in statistical analyses are available only for ecology and peace movements. This may on the other hand indicate that the antinuclear movement did not use this channel of influence.

<sup>19</sup> Data on membership of movement organizations come from the Encyclopedia of Associations, from a questionnaire sent to selected organizations, and from various additional sources. Missing values were replaced in the original source by repeating the last available figure. Other missing values have been replaced with estimates based on the mean of the first and last actual figures (when available), on linear interpolation, or by repeating the last available figure (when more plausible, for example when the figure for the first year of the series was lower than 0). Again, correlation coefficients indicate that protest and organizational strength follow different distributions over time (coefficients equal -.32 for the ecology movement, .26 for the antinuclear movement, and -.32 for the peace movement, all not statistically significant). An alternative measure of a movement’s organizational strength would consist of looking at the number of existing organizations (Meyer and Imig 1993; Minkoff 1995, 1997). Data on group formation and organizational density, however, is more difficult to obtain, which led us to rely on membership.

<sup>20</sup> It should be stressed that public opinion can also be considered as a dependent variable, not only as an explanatory factor of policy change. Here however, I focused on the way opinion can impact on public policy, thus working as a facilitating factor of the outcomes of social movements.

<sup>21</sup> My protest event data include these types of events, but the numbers are too low to be used in regression analysis.

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### APPENDIX A: DESCRIPTION OF VARIABLES

	N	Min	Max	Mean	Standard Deviation
<i>Social movements</i>					
Number of unconventional protest events by the ecology movement	21	1.00	21.00	9.14	5.15
Number of unconventional protest events by the antinuclear movement	21	.00	73.00	7.95	16.31
Number of unconventional protest events by the peace movement	21	.00	71.00	15.33	19.12
<i>Political alliances</i>					
Percentage of Democratic seats in Congress	21	47.00	66.00	59.48	4.68
Number of pro-ecology statements by political elites	21	.00	16.00	5.29	4.45
Number of antinuclear statements by political elites	21	.00	9.00	1.95	2.33
Number of pro-peace statements by political elites	21	.00	30.00	6.81	6.61
<i>Public opinion</i>					
Percentage of people who say spending for the environment is too little	16	48.00	71.00	56.25	7.38
Percentage of people who oppose building of more nuclear plants	16	30.00	63.00	42.18	11.08
Percentage of people who say spending for defense is too much	19	14.00	47.00	36.50	11.32
<i>Public policy</i>					
Total budget of the Environmental Protection Agency over total central government expenditures	21	.40	1.07	.61	.22
Spending by the states for environmental protection over total states' expenditures	21	1.78	7.78	4.68	1.98
Nuclear energy production over total electricity production	21	9.00	22.49	15.91	4.66
Number of construction permits for nuclear plants	21	6.00	90.00	39.71	32.40
Defense outlays over total central government expenditures	21	17.92	28.08	23.97	2.85

*Note:* Descriptive statistics referring to variables expressed in absolute terms. All variables concerning money are expressed in constant USD (basis: 1990).

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**APPENDIX B: DESCRIPTION OF INTERACTIVE TERMS (TABLE 4)**


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*Ecology movement*

- Protest \* allies 1: number of unconventional protest events by the ecology movement  
\* % of Democratic seats in Congress
- Protest \* allies 2: number of unconventional protest events by the ecology movement  
\* number of pro-ecology public statements by allies
- Protest \* public: number of unconventional protest events by the ecology movement  
\* % of people who say spending for the environment is too little
- Protest \* allies \* public 1: number of unconventional protest events by the ecology movement  
\* % of Democratic seats in Congress  
\* % of people who say spending for the environment is too little
- Protest \* allies \* public 2: number of unconventional protest events by the ecology movement  
\* number of pro-ecology public statements by allies  
\* % of people who say spending for the environment is too little

*Antinuclear movement*

- Protest \* allies 1: number of unconventional protest events by the antinuclear movement  
\* % of Democratic seats in Congress
- Protest \* allies 2: number of unconventional protest events by the antinuclear movement  
\* number of antinuclear public statements by allies
- Protest \* public: number of unconventional protest events by the antinuclear mvmt  
\* % of people who are against more nuclear plants
- Protest \* allies \* public 1: number of unconventional protest events by the antinuclear movement  
\* % of Democratic seats in Congress  
\* % of people who are against more nuclear plants
- Protest \* allies \* public 2: number of unconventional protest events by the antinuclear movement  
\* number of antinuclear public statements by allies  
\* % of people who are against more nuclear plants

*Peace movement*

- Protest \* allies 1: number of unconventional protest events by the peace movement  
\* % of Democratic seats in Congress
- Protest \* allies 2: number of unconventional protest events by the peace movement  
\* number of pro-peace public statements by allies
- Protest \* public: number of unconventional protest events by the peace movement  
\* % of people who say spending for defense is too much
- Protest \* allies \* public 1: number of unconventional protest events by the peace movement  
\* % of Democratic seats in Congress  
\* % of people who say spending for defense is too much
- Protest \* allies \* public 2: number of unconventional protest events by the peace movement  
\* number of pro-peace public statements by allies  
\* % of people who say spending for defense is too much