

**Where Do Movements Matter? The United States Environmental Movement and
Congressional Hearings and Laws, 1961-1990**

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Abstract

Research examining the political outcomes of social movement activities has been characterized by a nearly exclusive focus on the final stage of the political process, the passage of laws, as well as a limited conceptualization of how movements affect that process. Here, we empirically assess, for one social movement, the importance of organizational capacity, protest and institutional activities, public opinion, and political opportunities in garnering policy-maker attention to movement-salient issues at two distinct stages in the policy making process. Our findings strongly suggest that environmental movement organizational capacity as well as protest and institutional activities directly influence agenda setting stages in the political process. While we find only limited evidence that the environmental movement directly influenced the passage of federal environmental laws, there is some indication that successful agenda setting facilitated this outcome.

Beginning in the late 1960s and continuing through the mid 1980s, the U.S. environmental movement experienced an upsurge in organization building and direct action protest activities. Environmental issues, meanwhile, became an increasingly institutionalized element of the federal policy making agenda during this period (Andrews 1999; Portnoy 1990). Although observers have tended to assume a link between citizen mobilization around environmental issues and federal attention to those same issues, empirically this link remains largely unexplored. What role, if any, did the environmental movement have in affecting change in federal policy making? Has the movement been more influential at certain stages of the legislative process than others? And, *how* did the movement achieve success: does the use of disruptive tactics, participation in institutionalized politics, or greater organizational capacity best account for political success?

In addressing these questions this research contributes to understanding developments within the U.S. environmental movement, one of the largest and most politically active social movements in the United States today. Beyond this substantive contribution, we advance the study of social movement outcomes generally by explicitly addressing two shortcomings in the extant literature. First, existing empirical analyses have tended to emphasize single causal factors of policy change, such as the role of movement organizational capacity (McVeigh, Welch and Bjarnason 2003), movement activities (Soule et al 1999), public opinion (Page and Shapiro 1983; Stimson, MacKuen and Erikson 1995), or political opportunities (Jenkins and Perrow 1977) limiting our understanding of the relative importance of these factors and the way they combine and interact to effect the policy making process. We simultaneously account for each of the major causal factors hypothesized to influence policy change.

Second, reviews of the empirical literature on social movement political outcomes make clear that this work has been limited by a nearly exclusive focus on the final, and most visible, outcome of political action: the passage of laws that align with the goals of a social movement (Andrews and Edwards 2004; Burstein 1998; Burstein and Linton 2002; Giugni 1998). Here, we conceive of federal policy making as a continuous process. Rather than examine only the end-point of that process, we employ indicators at multiple points, paying particular attention to agenda setting activities in the United States Congress. While high agenda salience does not necessarily assure outcomes desired by “the movement,” it does represent an intermediary step that is expected to increase the likelihood of achieving desirable outcomes (Baumgartner and Jones 1993; Cobb and Elder 1975; Kingdon 1984). We suspect that social movement mobilization is more successful at garnering congressional attention to its key issues than it is at achieving desirable policy change outcomes.

THE MODERN ENVIRONMENTAL MOVEMENT

Though rooted in the late nineteenth and early twentieth century conservation movement, it is the extensive period of organization building beginning in the late 1960s, and continuing through the 1980s, which marks the beginning of the modern environmental movement in America (Brulle 2000; Gottlieb 1993). The rate of new environmental movement organization (EMO) foundings surged after 1965, peaked in 1970, and remained high throughout the 1980s, as the total size of the U.S. environmental social movement industry continually expanded (Johnson and McCarthy 2004). A great many of the EMOs founded during this period can be aptly characterized as proto-typical professional movement organizations (McCarthy and Zald 1977), with a heavy reliance on full-time paid staffs of scientists, lawyers, and lobbyists rather

than an active membership. The professional skills these organizations brought to environmental issues translated into the movement embracing a greater diversity of tactics than its predecessors.

The rapid emergence and growth of a popularly supported national environmental movement with a large organizational infrastructure and increasingly diverse tactical repertoire is thought to have spurred the development of an environmental regulatory framework in the United States, institutionalizing environmental issues on the American political landscape. The national Environmental Protection Agency (EPA) began operations in 1970, centralizing in one agency federal responsibility for environmental protection and regulation. Over the course of the 1970's "environmental era," in particular, there was unprecedented attention to, and bi-partisan support for, ecological issues in national policy. In all, more than thirty major pieces of federal environmental legislation were passed during the 1970s (Miller 1991). While the inauguration of Ronald Reagan decidedly shifted the political climate in which the movement operated, environmental issues remained firmly institutionalized within the U.S. political system. Legislative attention to these issues remained fairly high during the 1980s, even as the federal regulatory machinery for enforcing environmental laws was systematically weakened through a policy of deregulation, defunding and devolution (Andrews 1999: 257).

While a link between the growth and diversification of the national environmental movement, public support for environmental issues, and federal attention to those issues has generally been assumed, empirical assessments remain undeveloped. What has been the role of the U.S. environmental movement in garnering federal attention to, and affecting policy change on, environmental issues? How has the national environmental movement influenced the political process: has the use of disruptive tactics, participation in institutionalized politics, or

greater organizational capacity been most effective? And, has the movement been more influential at certain stages of the legislative process than others?

EXPLAINING SOCIAL MOVEMENT OUTCOMES

In attempting to explain the political outcomes of social movements, analysts have focused on the role of organization capacity, or tactical repertoires, or public opinion, or the political opportunity structure. Recently, however, social movement and political process scholars (Agnone 2004; Burstein and Linton 2002; Soule and Olzak 2004) have forcefully argued for the need to combine in models of political outcomes information on all of these causal factors in order to assess their relative impact on securing desired policy change. We contribute to this effort by integrating data on movement activities, public support for the goals of the movement, the structure of political opportunities, and environmental movement organizational capacity.

TACTICS

Early work on the effect of social movements' tactical repertoires (Tarrow 1998) on achieving desired outcomes focused squarely on the dramatic and disruptive nature of social movement activities and how the resulting threat to elites prompts a response, be it concession or repression (e.g. Gamson 1975; Piven and Cloward 1979). More recent work on social movement policy outcomes has attended to the full range of the tactical repertoire invoked by movements and emphasized the importance of other routine, or institutionalized, social movement activities as well as protest (Andrews 2001; Banaszak 1996; Cress and Snow 2000). We expect that both insider and outsider activities on the part of the environmental movement will be positively related to political attention to, and action on, environmental issues.

PUBLIC OPINION

Research on the impact of social movements has been strongly critiqued for failing to account for public opinion in theories and models of political outcomes. In particular, Burstein (1998; Burstein and Linton 2002) has urged researchers to account for the role of public opinion in determining the policy impact of social movement mobilization. Drawing on democratic theory (Dahl 1989; Page and Shapiro 1983), which asserts that elected representatives most often vote in a manner consistent with the majority of public opinion in order to facilitate re-election, Burstein has generally asserted the pre-eminence of public opinion in accounting for political outcomes.

Only a handful of research has examined both movement mobilization or activities and public opinion together in order to predict shifts in public policy and this research has produced decidedly mixed results, suggesting that public opinion is important only under certain conditions. Santoro (2002), for instance, finds that public opinion fails to explain the adoption of Equal Employment legislation prior to the breakthrough adoption of the 1964 Civil Rights Act but public opinion important in explaining legislation from this point through 1972. The work of Soule (2004; Soule and Olzak 2004) is more supportive of the role of public opinion generally. She finds that favorable public opinion, as well as social movement organizational capacity, both significantly contribute to the state level adoption of same-sex marriage bans (Soule 2004) and ratification of the Equal Rights Amendment (Soule and Olzak 2004). Based on the balance of available evidence, we (cautiously) speculate that public opinion will, to some extent, drive Congressional attention to environmental issues as well as the passage of environmental laws.

STRUCTURE OF POLITICAL OPPORTUNITIES

Originally developed to explain the emergence and incidence of social movement activities (McAdam 1982; Tilly 1978) the political opportunity structure (POS) concept has more

recently been invoked to explain the success (and/or failure) of social movements as well (Andrews 2001; Meyer and Minkoff 2004). The same factors that facilitate social movement mobilization are also thought to impact the attainment of SMO goals, such as policy change. We hypothesize that an open POS will be positively related to both political attention to environmental issues and the passage of environmental laws.

ORGANIZATIONAL INFRASTRUCTURE

Social movement organizations (SMOs) provide evidence of denser submerged networks and perform a number of important functions within social movements (Minkoff 1997b). A relatively dense organizational infrastructure facilitates influence on political agendas by allowing the movement to claim relatively larger numbers of adherents as well as to bring greater amounts of resources to bear on the political process. SMOs also allow for the possibility of routinized access and influence in the political sphere by establishing stable “partners” for policy makers and supporting staffs of professional scientists, lawyers and lobbyists which can act as extensions of congressional staffs, providing important information, assistance in framing issues and help in drafting relevant legislation (Baur, Pool and Dexter 1963; Milbrath 1963). We hypothesize that organizational capacity will be positively related to both political attention to environmental issues and the passage of environmental laws.

MEASURING MOVEMENT OUTCOMES

Rather than focus solely on the final legislative outcome of collective action (i.e. passage of laws), we conceive of policy making as a continuous process. Arguably the most important stage in that process, in the U.S. and elsewhere, is placing issues of importance to a social movement on governmental agendas (Baumgartner and Jones 1993; Cobb and Elder 1975; Kingdon 1984). Agenda setting is the process by which issues rise or fall on the public agenda.

Placing an issue on the public agenda, the set of problems and issues being seriously considered by policy makers, represents the initial phase of the legislative process. Before decisions can be made and policies enacted on any given issue, the problem must first garner the attention of political decision makers via, for instance, the introduction of relevant bills or convening of Committee hearings. While high agenda salience does not necessarily assure outcomes desired setting is an important precursor to the development of public policy.

Research on other forms of political pressure groups, such as PACs and lobbyists, suggests that they are much more able and likely to influence earlier stages in the political process than the passage of laws (for a review, see Baumgartner and Leech 1998: Ch. 7). Likewise, it is at the agenda setting stage that social movements are thought to have the greatest potential to influence the policy making process (Andrews and Edwards 2004: 492-3; King, Cornwall and Dahlin 2005). As an initial stage in the legislative process, agenda setting activities respond more easily to changing information flows and demands by special interests than do later stages (Jones and Baumgartner 2004). Additionally, the mobilization of concern on legislative agendas is likely to lead to the mobilization of countermovements, decreasing the probability of legislative success.

Unfortunately, even more so than the body of research examining movement outcomes generally, work on agenda setting has been marked by a paucity of empirical analyses, relying instead on interviews with officials and case studies of policy initiation/non-initiation. As two of the pre-eminent contemporary researchers on public agenda setting note, the largest impediment to systematic empirical analysis of agenda setting has been the lack of readily available data (Baumgartner and Jones 1993). Following their lead (Jones and Baumgartner 2004), we employ data on the number of Congressional hearings convened on environmental issues as an indication

of Congressional attention and priority regarding this policy arena. The convening of Congressional hearings on an issue signals the importance of that issue to Congress. Collectively, committee hearings provide an indication of an issue's relative ranking on the Congressional agenda. Importantly, committee hearings are consequential beyond the limited confines of the particular committee in which they are held. These hearings provide information to the *entire* Congress, both through the intrinsic generation of information and, importantly, from the very decision to hold a hearing on a particular topic (Diermeier and Feddersen 2000). Further, hearings provide outlets for interest groups to express policy preferences and allow members of Congress to develop policy proposals that are then available in the event that conditions conducive to major policy change occur. We hypothesize that both social movement organizational capacity and activities (i.e. insider/outsider tactics) will be more likely to result in legislative attention to environmental issues, through the introduction of bills and convening of hearings, and less likely to impact the passage of environmental laws.

DATA AND METHODS

POLITICAL OUTCOMES

Yearly counts of Congressional hearings convened on environmental issues are employed as a measure of Congressional agenda setting. This data comes from the Policy Agendas Project (PAP) Congressional Hearings Database, containing information on each U.S. Congressional hearing held between 1947 and 1998, coded from the Congressional Information Service Abstracts. Each hearing is coded according to 19 major topics, from which we select all hearings in the "environment" topic.

We also follow the majority of empirical research in analyzing the outcomes of social movement mobilization by employing a yearly measure of the incidence of laws passed. This

data comes from the Policy Agendas Project (PAP) Public Laws Database, containing information on each public law passed in the United States between 1947 and 1998.¹ Each law is coded according to the same 19 major topics categorizing laws and, again, we select all hearings in the “environment” topic.

THE ENVIRONMENTAL MOVEMENT

Data on the incidence of environmental movement collective action events were drawn from a massive dataset assembled by a consortium of social-movement researchers (principal investigators: McAdam, McCarthy, Olzak and Soule) containing 19,143 discrete social movement events, collected from daily editions of *The New York Times* between 1961 and 1990 (see Earl et al. 2003; McAdam and Su 2002; Soule and Earl 2005 for discussion of these data). To be included in this dataset an event had to be collective in nature, have articulated some claim (either a grievance against, or expression of support for, some target) and must have occurred in the public sphere or have been open to the public to be eligible for inclusion. From this dataset we extracted all events (n=482) for which the organizing claim was coded as environmental. This final dataset includes both events that can be characterized as employing primarily “insider” tactics (e.g. information distribution, press conference/statement, lawsuit/legal maneuver) as well as those primarily utilizing “outsider” tactics (e.g. demonstration, march, civil disobedience).

Data on environmental movement organizational capacity come from the *Encyclopedia of Associations, National Organizations of the U.S.* (Gale Research Inc. 1956-2003), a yearly survey of national non-profit associations active in the United States published annually since

¹ The data used here were originally collected by Frank R. Baumgartner and Bryan D. Jones, with the support of National Science Foundation grant number SBR 9320922, and were distributed through the Center for American Politics and Public Policy at the University of Washington and/or the Department of Political Science at Penn State University. Neither NSF nor the original collectors of the data bear any responsibility for the analysis reported here.

annually since 1974 and intermittently before that since 1956. The *Encyclopedia* has been employed in a broad array of analyses as a census for bounding populations of SMOs (Baumgartner and Jones 1993; Minkoff 1997a; Johnson and McCarthy 2004). Work (Martin, McCarthy and Baumgartner 2005) evaluating the representativeness of this data source concludes that, although the *Encyclopedia* is somewhat more likely to include the largest and most well-known groups in any category, it likely provides an adequate sampling frame for populations of national SMOs.

National EMOs were identified using headings that indicate environmental concern (see Johnson and McCarthy 2004 for detailed discussion of methods used to identify national EMOs). Both highly institutionalized issue advocacy organizations (e.g., Sierra Club or National Wildlife Federation) and more confrontational, loosely structured direct action groups (e.g., Earth First! or The Clamshell Alliance) are included in the sample (n=608). Collectively, these organizations exhibit a wide range of tactics, discourse frames, structures, and constituencies. The total number of U.S. national EMOs active in each year was computed from organizational birth and death information contained in the *Encyclopedia*.

PUBLIC OPINION

As noted by several scholars, environmental public opinion data is infrequent prior to 1970, with trend data nonexistent (Dunlap and Scarce 1991; Gilroy and Shapiro 1986; Guber 2003). Given this constraint, we employ an environmental attitudes index previously constructed to analyze the joint impact of protest and public opinion on the passage of environmental laws (see Agnone 2004 for details). Our measure of environmental public opinion is constructed by entering the responses calling for more action on the part of the government from 64 readings of public opinion on the environment from 1954 through 2000 into Stimson's (1999) WCALC

program. In addition, we measure the salience of environmental issues as the proportion of respondents indicating that environmental concerns are the Most Important Problem facing the nation (data provided by the PAP).

POLITICAL OPPORTUNITIES

The presence, or absence, of elite allies is a key component in most conceptualizations of the political opportunity structure that should encourage Congressional outcomes favorable to the goals of a social movement. Democrats have long been identified as allies of the environmental movement in the United States (Guber 2001) and, consequently, as one measure of political opportunity we compute Democratic party advantage in Congress. This variable is computed as the number of Democrats, minus the number of Republicans, in the House of Representatives and Senate ² and is expected to be positively correlated with both agenda setting activities and favorable political outcomes.

As a second measure of political opportunities we control for national elections, employing a dichotomous variable coded as 1 during Congressional election years. National elections represent periods of instability in political alignments (Meyer and Minkoff 2004; Snyder and Tilly 1972) that are expected to have disparate effects on the dependent variables examined here. Electoral campaigning requires large investments of time on the part of individual legislators running for office, thus during election years it is expected that the incidence of environmental hearings convened will decrease. Conversely, during election years political parties and individual legislators are subject to heightened scrutiny by the electorate and

² Information on the number of Democrats and Republicans in the House of Representatives comes from the Clerk of the House at http://clerk.house.gov/histHigh/Congressional_History/partyDiv.html. Information on the number of Democrats and Republicans in the Senate comes from the Secretary of the Senate at http://www.senate.gov/pagelayout/history/one_item_and_teasers/partydiv.htm.

can be expected to push through important legislation in an attempt to present themselves in the best light possible. As such, it is expected that the passage of environmental laws will increase during election years.

As a third measure of political opportunities we control for the presence of a Democratic president (Meyer and Minkoff 2004). This is a dummy variable, coded as 1 during years of a Democratic presidential administration. Again, Democrats are presumably more open to the claims-making activities of environmentalists and the presence of a Democratic president is expected to facilitate environmental issue agenda setting as well as actual political outcomes.

OTHER COVARIATES

Because the media presumably plays an important role in agenda setting processes we also employ a measure of media attention to environmental issues. Specifically, we use yearly counts of the number of articles per page listed under environmental keywords within the *Readers' Guide to Periodical Literature* and the number of environmental articles from the *NY Times Abstract* as a percentage of the total articles summarized in the abstract. These measures (correlated at .87) were combined by adding Z-scores to construct a yearly media attention index.

Environmental degradation is measured according to yearly U.S. emissions of five air pollutants: particulate matter less than 10 microns, carbon monoxide, sulfur dioxide, nitrogen dioxide and volatile organic compounds (U.S. Census Bureau 2003). Yearly emissions for each of these pollutants were standardized and combined to create an air pollution index, with each pollutant weighted equally. The resulting index is a direct measure of environmental degradation that integrates data on a diversity of types and sources of emissions (Environmental Protection Agency 2000).

Finally, we control for the number of environmental hearings held in the previous year for two reasons. First, legislative inertia may be at work, as hearings on one topic may spur the need to hold hearings on related topics of interest. Second, controlling for hearings held the previous year is necessary in order to investigate the impact of agenda setting on the passage of future legislation, as most bills begin as topics explored in specialized hearings. This variable is identical to the hearings variable described above, except that it is lagged one year.

METHODS OF ANALYSIS

Assembled data were analyzed using techniques appropriate for count data. Poisson regression, rather than ordinary least squares regression, is the preferred statistical inference technique when fitting models with count data as the dependent variable (Long 1997: Ch. 8). In poisson regression, a log transformation prevents the model from producing negative predicted values, adjusts for a skewed distribution, and models the variance in event counts as a function of the mean (Liao 1994; Long 1997). The Poisson distribution does, however, have a rather restrictive assumption that the mean equal the variance, known as *equidispersion*. If this assumption is violated extradispersion is present in the dependent variable, which downwardly biases the standard errors while leaving the regression coefficients unaffected (Hoffmann 2003). When the assumptions of the Poisson distribution are violated, such as when extradispersion is present, negative binomial regression is more appropriate. Both dependent variables in the analysis, laws and hearings, are indeed overdispersed, with variances greater than the means. In taking this into consideration, we began by fitting negative binomial models which provide a formal statistical test for the presence of overdispersion in the data. The likelihood ratio test of the dispersion parameter α was significantly different from zero for hearings but not for laws, suggesting that Poisson regression is more appropriate when modeling laws and negative

binomial regression more appropriate for hearings. Plotting the observed proportion of both hearings and laws against the expected proportions for the negative binomial and Poisson distributions further confirms the results of the alpha test in each case.

RESULTS

The results from multivariate negative binomial regression models examining the determinants of federal environmental hearings from 1961-1990 are shown in Table 1. All told, the U.S. environmental movement is extremely efficacious in directing the attention of legislators to environmental issues. In all of the agenda setting models presented, measures of environmental movement activity are positive and statistically significant, with the exception of institutional activity shown in Model 6, but this is due to the high covariation between this measure and the density of environmental organizations.

[Table 1 about here]

Our measures of the political opportunity structure are significant in some of the models, with Democratic advantage in Congress being positively associated and the presence of a Democratic President negatively associated with the annual count of environmental hearings held in a given year. The dummy variable measuring Congressional election years is negatively associated with hearings and is statistically significant in all models less Model 1. The current level of pollution is consistently positive and statistically significant, suggesting that legislators are responsive to the current state of the environment when determining what hearings to convene. There also appears to be a “momentum” effect, as the number of hearings held the year prior positively contributes to hearings held in the current year. Finally, we receive mixed results concerning public attention to and concern over environmental issues. Media attention to environmental concerns and public opinion regarding environmental issues are both positively

associated with the annual number of hearings held focusing on environmental concerns. However, media attention is only statistically significant in two of our models and public opinion is statistically significant in half of the models—the effects of both fail to achieve statistical significance one we take into account the number of environmental hearings held the year prior. On the other hand, the salience of environmental concerns is strongly negative in its association with hearings and is statistically significant at the .01 level in nearly every model. This suggests that while the legislator is responsive to media attention and public opinion, the general salience of the environmental movement in the public’s eyes negatively impacts the number of hearings convened.

[Table 2 about here]

Next we examine the results from multivariate Poisson regression models of the determinants of the passage of environmental laws from 1961-1990, shown in Table 2. Contrary to what we see regarding hearings, the U.S. environmental movement only moderately impacts the passage of environmental legislation. While social protest never directly contributes to the passage of environmental legislation, both institutional actions and environmental organizational density are positive and statistically significant when examined without the presence of lagged environmental hearings. It appears that the inclusion of lagged environmental hearings, which is positively and statistically significant at the .01 level, may also be encompassing the indirect impact that the environmental movement has on the convening of hearings. However, this is just speculative in the absence of a path analysis, which is beyond the scope of this article.

As is the case in the hearing models, each of the laws models in Table 2 is composed of variables measuring the political opportunity structure, attention to environmental issues and the pollution index. While some of these effects are consistent across the two legislative processes,

such as the effects of the political opportunity structure, most of the results appear distinctive to the process at hand. The dummy variable measuring Congressional election years is positively associated with the passage of environmental laws and is statistically significant at the .01 level in all models. The current level of pollution is negative and statistically significant in several models, possibly identifying an increase in industry lobbying during pollution increases. We receive mixed results concerning public attention to and concern over environmental issues. Our measure of media attention to environmental concerns is unstable across the models and lacking statistical significance. Public opinion regarding environmental issues is negatively associated with the annual number of environmental laws passed in every model except the baseline. Contrary to the effect on hearings, the salience of environmental concerns is positively related to the passage of environmental laws and is statistically significant in all of the models that control for the number of environmental hearings held in the prior year. This suggests that while the legislator is apparently unresponsive to the salience of environmental concerns while attending to hearings, they are aware of it as they seek to pass environmentally oriented legislation.

CONCLUSION

We assess environmental movement outcomes on two important stages in the policy process: agenda setting and actual law passage. And, we do so while accounting for the independent and combined effects of movement organizational capacity, protest, institutional activities, public opinion and political opportunities. Our results provide strong support for the hypothesis that social movements effect political agenda setting processes and little evidence of a direct effect on the incidence of law passage. Environmental movement organizational capacity, insider activities and protest are all positively associated with incidence of Congressional hearings on environmental issues.

But, while movement variables are significant in partial models, when all covariates are controlled there is no indication of a direct effect between organizational capacity, institutional actions, or protest and the incidence of law passage. This does not mean that social movements have no effect on the passage of laws, however. Congressional agenda setting activities are strongly associated with the incidence of law passage and it may be that movements exert an indirect effect on law passage that operates through agenda setting. Importantly, we also do not account here for the content of laws which are passed. If the environmental movement contributes to the setting of legislative agendas, as this research indicates, it may also have some effect on the content of laws which are passed by that legislature. In other words, to the extent that a social movement is able to define the issues under consideration, it should also influence the alternative policy solutions proposed, making some solutions more acceptable than others (Baumgartner and Jones 1993; Rochefort and Cobb 1994). Over the period under observation here U.S. federal policy shifted from a nearly exclusive focus on managing the environment as a natural resource to a strong focus on issues of environmental quality. Over the same period there was a changing emphasis within the movement itself away from issues of resource and wildlife protection and towards quality of life issues, such as environmental pollution and its human health effects. While we are unable to demonstrate a direct relationship between the growth of the environmental movement and the rate at which laws are passed, the significant agenda setting results suggest that the movement does influence the content of those laws. The research presented here, however, is unable to speak directly to the influence of the movement on the content of those laws. Clearly, this is a subject meriting further empirical analysis.

How generalizable are the findings reported here likely to be, both to other movements and other time periods? Some of them, we think, are quite general. Most pertinent, a growing

body of research suggests that movements are more effectual at the agenda setting stage than the law passage stage of the political process (Baumgartner and Leech 1998: Ch. 7; King et al. 2005; Soule et al. 1999). Clearly, however, there are particularistic characteristics of the time period and movement studied here that may be rather unique as well. First, the environmental movement has fairly low rates of protest, especially compared to other U.S. social movements, such as civil rights, peace and anti-nuclear. Further, environmental protest has largely been a peaceful exercise, as very few of these events are marked by violence on the part of protesters or police (in only 11 of the 482 events employed in analyses was violence reported). Research (McAdam and Su 2002) suggests that violent protest is ineffectual or even detrimental at the agenda setting stage, in bringing issues to vote, but that when issues do come to vote it makes their passage more likely. The relative success of protest in our models at setting congressional agendas and insignificance in predicting law passage is consistent with the suggestion that different types of protest are more effectual at different stages of the political process.

The time period observed here is also unique in that it represents a period of extremely high mobilization within the environmental movement. The 1965-1985 period, in particular, is also one of high legislative attention to environmental issues, what Baumgartner and Jones (1993) refer to as a period of punctuated equilibrium. In periods of lower movement activity and/or legislative attention we might expect the relationship between movement and political dynamics to be altered. It may be, for example, that following a period of punctuated equilibrium and the institutionalization of a field that high movement mobilization may be focused more on implementation of law than aimed at passage. Unfortunately, we know relatively little about the political outcomes of movements in periods of stable or declining mobilization. The majority of recent analyses of movement outcomes, for example, have studies

movements in extreme periods of heightened mobilization (Andrews 2001; McAdam and su 2002; Santoro 2002) or excluded cases from analysis once movements achieved a certain level of success, such as the passage of a state level Equal Rights Amendment (Soule and Olzak 2004). We would like to see more research assessing the outcomes of movements in periods of stable or declining mobilization.

We think that future work in this area would also benefit from a more processual conceptualization of the political process. We presented one approach here, but this is far from the only approach that could be adopted. Indeed, though we think of policy making as a continuous process, one limitation of our methodological approach is that, though an improvement on previous approaches, it assesses only two discreet steps in that process. The recent release of data on Congressional bill introductions by the PAP (cite) opens the possibility of analyses tracing bills through the contingent bill making process, much as King et al (1995) have done examining state level ERA ratification. To reiterate a point from above, however, we also think that social movement analysts could profitably examine the effects of agenda setting activities on the content of legislation.

We hope that this research will move scholars to more routinely account for the variety of theoretical explanations designed to explain policy outcomes and to work harder at assessing the effect of movements across various stages in the political process. The combination, we think, has the potential to contribute greatly to our understanding of how movements influence the political process and under what scope and conditions they exert that influence.

BIBLIOGRAPHY

- Agnone, Jon. 2004 *Amplifying Public Opinion: The Policy Impact of the U.S. Environmental Movement*. Paper presented at the 99th annual meeting of the American Sociological Association, San Francisco, California.
- Andrews, Kenneth T. 2001. "Social Movements and Policy Implementation: The Mississippi Civil Rights Movement and the War on Poverty, 1965 to 1971." *American Sociological Review* 66: 71-95.
- Andrews, Kenneth T. and Bob Edwards. 2004. "Advocacy Organizations in the U.S. Political Process." *Annual Review of Sociology* 30: 479-506.
- Andrews, Richard N.L. 1999. *Managing the Environment, Managing Ourselves: A History of American Environmental Policy*. New Haven, CT: Yale University Press.
- Banaszak, Lee Ann. 1996. *Why Movements Succeed or Fail: Opportunity, Culture and the Struggle for Woman Suffrage*. Princeton: Princeton University Press.
- Baumgartner, Frank R. and Bryan D Jones. 1993. *Agendas and Instability in American Politics*. Chicago: University of Chicago Press.
- Baumgartner, Frank R. and Beth L. Leech. 1998. *Basic Interests: The Importance of Groups in Politics and in Political Science*. Princeton, NJ: Princeton University Press.
- Brulle, Robert J. 2000. *Agency, Democracy, and Nature*. Cambridge, MA: MIT Press.
- Burstein, Paul. 1998. "Bringing the Public Back In: Should Sociologists Consider the Impact of Public Opinion on Public Policy?" *Social Forces* 77: 27-62.
- Burstein, Paul and April Linton. 2002. "The Impact of Political Parties, Interest Groups, and Social Movement Organizations on Public Policy: Some Recent Evidence and Theoretical Concerns." *Social Forces* 81(2): 380-408.

- Cobb, Roger W. and Charles D. Elder. 1975. *Participation in American Politics: The Dynamics of Agenda Building*. Baltimore, MD: Johns Hopkins Press.
- Cress, Daniel M. and David A. Snow. 2000. "The Outcomes of Homeless Mobilization: The Influence of Organization, Disruption, Political Mediation, and Framing." *American Journal of Sociology* 105(4): 1063-1104.
- Dahl, Robert. 1989. *Democracy and Its Critics*. Yale University Press.
- Diermeier, Daniel and Timothy J. Feddersen. 2000. "Information and Congressional Hearings." *American Journal of Political Science* 44(1): 51-65.
- Dowie, Mark. 1995. *Losing Ground: American Environmentalism at the Close of the Twentieth Century*. Cambridge, Mass.: MIT Press.
- Dunlap, Riley E. and Rik Scarce. 1991. "The Polls—Poll Trends: Environmental Problems and Protection." *Public Opinion Quarterly* 55: 651-72.
- Earl, Jennifer, Sarah A. Soule, and John D. McCarthy. 2003. "Protest Under Fire? Explaining the Policing of Protest." *American Sociological Review* 68(4): 581-606.
- Environmental Protection Agency. 2000. *National Air Pollutant Emission Trends, 1900-1998*. EPA 454/R-00-002
- Giugni, Marco G. 1998 "Was it Worth the Effort? The Outcomes and Consequences of Social Movements." *Annual Review of Sociology* 24: 371-393.
- Gale Research Inc. 1956-2003. *The Encyclopedia of Associations, Volume 1, National Organizations of the U.S.* Detroit, MI: Gale Research Co.
- Gamson, William A. 1975. *The Strategy of Social Protest*. Homewood, Ill: Dorsey Press.
- Gottlieb, Robert. 1993. *Forcing the Spring: The Transformation of the American Environmental Movement*. Washington: Island Press.

- Gilroy, John M., and Robert Y. Shapiro. 1986. "The Polls: Environmental Protection." *Public Opinion Quarterly* 50: 270-279.
- Guber, Deborah L. 2003. *The Grassroots of a Green Revolution: Polling America on the Environment*. Cambridge: MIT Press.
- 2001. "Voting Preferences and the Environment in the American Electorate." *Society and Natural Resources* 14(6): 455-469.
- Hoffmann, John P. 2003. *Generalized Linear Models: An Applied Approach*. Pearson Publishing.
- Jones, Bryan D. and Frank R. Baumgartner. 2004. "Representation and Agenda Setting." *Policy Studies Journal* 32: 1-25.
- Johnson, Erik. 2006 (forthcoming). "Changing Issue Representation Among Major United States Environmental Movement Organizations" *Rural Sociology*.
- Johnson, Erik and John D. McCarthy. 2004. "The Sequencing of Transnational and National Social Movement Mobilization: The Organizational Mobilization of the Global and U.S. Environmental Movements. Pp. 71-94 in *Transnational Protest and Global Activism*. (Donatella della Porta and Sidney Tarrow eds.). New York: Rowman and Littlefield.
- King, Brayden G., Marie Cornwall, and Eric C. Dahlin. 2005. "Winning Woman Suffrage One Step at a Time: Social Movements and the Logic of the Legislative Process." *Social Forces* 83(3): 1211-1234.
- Kingdon, John W. 1984. *Agendas, Alternatives, and Public Policies*. Boston: Little, Brown.
- Liao, Tim F. 1994. *Interpreting Probability Models: Logit, Probit, and other Generalized Linear models*. Newbury Park, CA: Sage Publications.
- Long, J. Scott. 1997. *Regression Models for Categorical and Limited Dependent Variables*. Thousand Oaks: Sage.

- McAdam, Doug. 1982. *Political Process and the Development of Black Insurgency, 1930-1970*. Chicago: University of Chicago Press.
- McAdam, Doug and Yang Su. 2002. "The War at Home: Antiwar Protests and Congressional Voting, 1965-1973." *American Sociological Review* 67: 696-721.
- McCarthy, John D. and Mayer N. Zald. 1977. "Resource Mobilization and Social Movements: A Partial Theory." *American Journal of Sociology* 82: 1212-1241.
- Meyer, David S. and Debra C. Minkoff. 2004. "Conceptualizing Political Opportunity." *Social Forces* 82(4): 1457-1492.
- Milbrath, Lester W. 1963. *The Washington Lobbyists*. Chicago: Rand McNally.
- Miller, G. Tyler Jr. 1991. *Environmental Science: Sustaining the Earth*. Belmont, CA: Wadsworth.
- Minkoff, Debra C. 1997a. "The Sequencing of Social Movements." *American Sociological Review* 62: 779-99.
- 1997b. "Producing Social Capital: National Social Movements and Civil Society." *American Behavioral Scientist* 40(5): 606-619.
- Page, Benjamin I., and Robert Y. Shapiro. 1983. "Effects of Public Opinion on Policy." *The American Political Science Review* 77: 175-190.
- Piven, Frances Fox and Richard A. Cloward. 1979. *Poor People's Movements: Why They Succeed, How They Fail*. New York: Vintage Books.
- Portnoy, Paul. 1990. *Public Policies for Environmental Protection*. Baltimore: Johns Hopkins University Press.
- Rocheftort, David A. and Roger W. Cobb. 1994. "Problem Definition: An Emerging Perspective." Pp. 1-31 in D.A. Rocheftort and R.W. Cobb (eds.), *The Politics of Problem*

- Definition: Shaping the Policy Agenda.* Lawrence, KS: The University Press of Kansas.
- Santoro, Wayne. 2002. "The Civil Rights Movement's Struggle for Fair Employment: A 'Dramatic Events-Conventional Politics' Model." *Social Forces* 81: 177-206.
- Snyder, David and Charles Tilly. 1972. "Hardship and Collective Violence in France, 1830-1960." *American Sociological Review* 37(5): 520-532.
- Soule, Sarah A. 2004. "Going to the Chapel? Same-Sex Marriage Bans in the United States, 1973-2000." *Social Problems* 51(4): 453-477.
- Soule, Sarah A. and Jennifer Earl. 2005. "A Movement Society Evaluated: Collective Protest in the United State, 1960-1986." *Mobilization: An International Journal* 10(3):345-364.
- Soule, Sarah A., Doug McAdam, John McCarthy, and Yang Su. 1999. "Protest Events: Cause or Consequence of State Action? The U.S. Women's Movement and Federal Congressional Activities, 1956-1979." *Mobilization* 4(2): 239-256.
- Soule, Sarah A., and Susan Olzak. 2004. "When Do Movements Matter? The Politics of Contingency and the Equal Rights Amendment." *American Sociological Review* 69: 473-497.
- Stimson, James A. 1999. *Public Opinion in America: Moods, Cycles, and Swings, 2nd ed.* Boulder: Westview Press.
- Tarrow, Sidney. 1998. *Power in Movement: Social Movements and Contentious Politics.* New York, NY: Cambridge University Press.
- Tilly, Charles. 1978. *From Mobilization to Revolution.* Reading, MA: Addison-Wesley.
- U.S. Department of Commerce. 2003. *Statistical Abstracts of the United States.* Government Printing Office.

Table 1. Negative Binomial Regression Estimates of the Effects of Environmental Movement on Congressional Hearings, 1961-1990

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Intercept	-3.006*	-0.391	1.022	1.817+	2.232*	2.352*
	(1.357)	(0.857)	(0.773)	(1.067)	(0.973)	(0.976)
Congressional Democratic Advantage	0.003	0.002*	0.001	0.002+	0.001	0.000
	(0.002)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Democratic President	-0.261	-0.548**	-0.278	-0.455*	-0.267+	-0.214
	(0.276)	(0.196)	(0.176)	(0.180)	(0.161)	(0.207)
Congressional Election Year	-0.203	-0.311**	-0.302**	-0.491**	-0.430**	-0.422**
	(0.145)	(0.091)	(0.080)	(0.097)	(0.096)	(0.098)
Pollution _(t-1)	0.679*	0.216	0.371*	0.297+	0.400**	0.431**
	(0.278)	(0.168)	(0.155)	(0.168)	(0.152)	(0.167)
Media Attention _(t-1)	0.224*	0.092	0.064+	0.011	0.017	0.022
	(0.105)	(0.070)	(0.035)	(0.053)	(0.034)	(0.035)
Environmental Issue Salience _(t-1)	-27.454**	-22.001**	-13.615*	-19.274**	-13.545**	-12.558*
	(6.837)	(5.008)	(5.359)	(4.216)	(4.623)	(5.295)
Environmental Public Opinion _(t-1)	0.131**	0.074**	0.038*	0.026	0.013	0.010
	(0.024)	(0.016)	(0.015)	(0.021)	(0.019)	(0.019)
Environmental Movement Institutional Activity _(t-1)		0.033**		0.025**		-0.009
		(0.010)		(0.008)		(0.015)
Environmental Movement Protest Activity _(t-1)		0.054**	0.042**	0.033*	0.030+	0.029+
		(0.015)	(0.016)	(0.017)	(0.015)	(0.016)
Environmental Movement Organizational Density _(t-1)			0.003**		0.002**	0.003*
			(0.001)		(0.001)	(0.001)
Environmental Hearings Held _(t-1)				0.009**	0.006*	0.006+
				(0.003)	(0.003)	(0.003)
Observations	30	30	30	30	30	30
Pseudo R-squared	0.1144	0.1868	0.2200	0.2147	0.2345	0.2357
Log Likelihood	-132.891	-122.034	-117.042	-117.835	-114.870	-114.696

Robust standard errors in parentheses

+ significant at 10%; * significant at 5%; ** significant at 1%

Table 2. Poisson Regression Estimates of the Effects of Environmental Movement on Congressional Laws, 1961-1990

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Intercept	-0.380 (1.671)	1.133 (1.686)	2.289 (1.585)	5.891** (1.729)	6.024** (1.648)	5.839** (1.712)
Congressional Democratic Advantage	0.003+ (0.002)	0.003* (0.002)	0.002 (0.001)	0.002+ (0.001)	0.002 (0.001)	0.002+ (0.001)
Democratic President	-0.230 (0.256)	-0.389+ (0.213)	-0.192 (0.234)	-0.302+ (0.162)	-0.263+ (0.140)	-0.326+ (0.181)
Congressional Election Year	1.104** (0.162)	1.035** (0.141)	1.037** (0.138)	0.713** (0.114)	0.714** (0.115)	0.706** (0.116)
Pollution _(t-1)	0.051 (0.077)	-0.050 (0.064)	-0.075 (0.059)	-0.231** (0.061)	-0.225** (0.058)	-0.230** (0.060)
Media Attention _(t-1)	0.093 (0.323)	-0.155 (0.353)	-0.032 (0.351)	0.021 (0.242)	0.044 (0.251)	0.007 (0.248)
Environmental Issue Saliency _(t-1)	0.623 (7.325)	6.190 (5.580)	12.336+ (7.030)	10.459* (5.016)	10.599* (5.381)	9.687* (4.806)
Environmental Public Opinion _(t-1)	0.034 (0.027)	-0.001 (0.027)	-0.029 (0.027)	-0.101** (0.032)	-0.104** (0.030)	-0.099** (0.032)
Environmental Movement Institutional Activity _(t-1)		0.029* (0.012)		0.006 (0.008)		0.010 (0.013)
Environmental Movement Protest Activity _(t-1)		0.025 (0.018)	0.012 (0.021)	-0.012 (0.013)	-0.014 (0.013)	-0.011 (0.013)
Environmental Movement Organizational Density _(t-1)			0.002** (0.001)		0.000 (0.001)	-0.000 (0.001)
Environmental Hearings Held _(t-1)				0.018** (0.003)	0.018** (0.003)	0.018** (0.004)
Observations	30	30	30	30	30	30
Pseudo R-squared	0.3965	0.4301	0.4365	0.4834	0.4828	0.4835
Log Likelihood	-81.450	-76.916	-76.051	-69.720	-69.800	-69.703

Robust standard errors in parentheses

+ significant at 10%; * significant at 5%; ** significant at 1%