INSTITUTIONAL VARIATION IN THE EVOLUTION OF SOCIAL MOVEMENTS:
THE SPREAD OF RECYCLING ADVOCACY GROUPS

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ABSTRACT

Drawing on ideas from the literatures on organizations and social movements, I study how a shift in logics created changes in the causal drivers of state-level recycling advocacy group creation in the U.S. Specifically, I show that the formation of early state recycling advocacy groups was enabled by state-level conditions that were favorable to ecological activism. These early organizations were loosely connected and promoted a holistic logic of recycling that emphasized a vision of recycling as a mechanism to restructure Capitalistic production and consumption processes and enable community-building and development. As the recycling movement unfolded, it took on a more hierarchical, national character, structured by a new national social movement organization, the National Recycling Coalition. This national organization promoted a more technocratic logic of recycling that valorized the creation of a mass-market in recycling commodities as a way to promote the development of a profitable recycling industry. As a result, the widespread diffusion of recycling advocacy groups was enabled, but mainly in states with high levels of state incinerator capacity. Recycling advocacy groups that emerged under the technocratic logic focused more on implementing recycling programs and engaging in jurisdictional battles with waste-to-energy incineration proponents over the solid waste stream. Implications for organization theory and the study of social movements and institutional change are discussed.
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Students of organizations and social movements have recently highlighted the potential fruitfulness of examining the ways in which ideas and research developments in the organizational theory and social movement literatures can be usefully brought together to advance knowledge (Fligstein, 1996; Clemens, 1997; David & McAdam, 2000; Rao, Morrill & Zald, 2000). In this paper, I aim to push such cross-pollination further by reorienting research attention away from the study of institutionalization that has been prominent in both literatures. The institutionalization of social movements involves the transformation of contentious politics that involve tactics such as protest into more conventional forms of political action such as lobbying (Meyer & Tarrow, 1998). In organization theory, institutionalization typically refers to the processes by which particular kinds of practices or forms becomes legitimate and diffuse throughout organizational populations (Strang & Soule, 1998). Both literatures have tended to invoke an imagery of incremental change that focuses on how existing social structures maintain stability and elite positions become reproduced.

Recently, some organizational institutionalists have begun to eschew the study of institutionalization and focus more on how qualitative shifts in the core practices of organizations change in tandem with broader institutional beliefs or logics (Scott, 2001). The concept of institutional logic has been used to highlight the interconnections between higher order belief systems and lower level material practices and routines (Dobbin, 1994). In discussing societal level logics, Friedland & Alford (1991: 243) make this dual relationship explicit:
Institutions are supraorganizational patterns of human activity by which individuals and organizations produce and reproduce their material subsistence and organize time and space. They are also symbolic systems, ways of ordering reality, and thereby rendering experience of time and space meaningful.

There have been a number of studies that have demonstrated the usefulness of the logic concept as a focal point for analysis. Haveman and Rao (1997), for example, argued that shifts in broader belief systems linked to the emergence of Progressive ideology around the turn of the 20th century led to the creation of new organizational forms in the early thrift industry. Focusing on hospital organizations, Ruef and Scott (1998) highlighted how organizational legitimacy depended upon ownership characteristics that shifted in tandem with a transformation in healthcare logics since World War II. Similarly, Thornton and Ocasio (1999) showed how a shift from an editorial to market logic in the higher education publishing industry led to changes in executive succession practices.

By focusing attention on how organizations are shaped by logics that shift over time, this recent work provides a new direction for the study of institutional processes that emphasizes historical variation and contingency over the inevitability of institutionalization (Clemens, 1999; Lounsbury & Ventresca, 2002). Further, logic transformation opens up the possibility for status mobility and a reconfiguration of elites (Lounsbury, 2002), providing a corrective to previous institutional research that has emphasized the robustness of existing institutional structures and incumbents. Drawing attention to the role of broader logics and contexts of action is also consistent with recent directions in social movements research that have extended the resource-focus of the political process perspective (e.g., McAdam, 1982) by creating a more cosmopolitan framework that takes the study of cultural processes seriously (e.g. McAdam, McCarthy & Zald, 1996; Zald, 2000; Armstrong, 2002; Moore & Hala, 2002).

Drawing on these trends in the analysis of institutional change, I explore how shifts in institutional
logics shaped the creation of recycling advocacy groups in the U.S. While some advocacy organizations are akin to interest groups that have easy access to the centers of political decision making (Jenkins, 1987), the recycling advocacy groups I study are more like social movement organizations (SMOs). A social movement organization is “a complex, or formal, organization which identifies its goals with the preferences of a social movement or a countermovement and attempts to implement those goals (McCarthy & Zald, 1977: 1218). While social movement scholars have recently begun to investigate SMO evolution (e.g. Minkoff, 1993; Kriesi et. al., 1995), no systematic attention has been paid to how SMO dynamics qualitatively change with shifts in institutional logics. For social movements researchers, an analytical focus on institutional variation redirects attention away from the ideologically loaded and teleological conceptualization of social movement institutionalization as co-optation and towards the specification of how and what kinds of changes occur in social movements over time.

In the 1960s and 1970s, recycling was a marginal practice promoted by activists, but by the 1990s, it had become a major for-profit industry. In 2000, there were approximately 10,000 curbside recycling programs and aggregate revenues from recycling were estimated to be $16 billion (U.S. Department of Commerce, 2001). I focus attention on how the evolutionary dynamics of state recycling advocacy groups shifted as recycling became transformed from a marginal activity to a mainstream solid waste practice. More specifically, I examine how the spread of state recycling advocacy groups was enabled and shaped by a change in recycling logics from one that was more holistic to one that was more technocratic. Even though this shift in causal effects was bound up in the process by which recycling became transformed into a mainstream industry, it was more proximately driven by the creation of a peak national social movement organization, the National Recycling Coalition, that helped
to transform recycling logics and the raison d’être of state recycling advocacy groups.

In the next section, I provide a brief overview of the history of U.S. recycling, focusing attention on the development and role of state-level recycling advocacy groups. Based on historical research and interviews with over 30 longstanding recycling activists and solid waste field insiders, I develop hypotheses about how a shift in logics shaped the spread of state recycling advocacy groups. Drawing on event history analysis, I show that recycling advocacy groups promoting a holistic recycling logic were initially created in states that were prone to environmental activism, while the subsequent creation of more technocratically-oriented advocacy groups occurred in states where implementation challenges were greatest as a result of the existence of W-T-E incinerators that provided a competing solid waste solution. I conclude with a discussion of the implications of this study for students of social movements and organizations.

THE RISE OF U.S. RECYCLING: FROM HOLISTIC TO TECHNOCRATIC LOGICS

While recycling was considered a marginal solid waste solution in the 1960s and 1970s, today it is a core component of the U.S. solid waste management field (Lounsbury, Ventresca & Hirsch, 2003). Initially promoted by social movement activists, recycling became a major for-profit industry by the late 1990s. As part of the process of the making of a recycling industry, however, there was a shift from a holistic to technocratic logic of recycling. Table 1 summarizes the characteristics of these two ideal types of recycling logics.
In the late 1960s and 1970s, recycling was bound up in a holistic logic that matched a set of ideas and beliefs with practices. Noticeable signs of environmental degradation and associated health hazards such as those associated with pesticides (Carson, 1962) and pollution (Crenson, 1971) motivated the emergence of a broad based environmental movement by the late 1960s (Schnaiberg, 1973). As part of these developments, attention was also drawn to problems related to population growth and the rapid growth of mass consumerism and discards (Packard, 1960). Activists involved in the recycling movement were motivated by these broader societal problems and promoted the development of recycling as a way to restructure the extant social organization of society and economy.

Recycling was envisioned as an important mechanism to rebuild communities and achieve social justice, while at the same time restructure capitalist forms of production…

Recycling was practical and educational. It was a vehicle for restructuring our thinking about the determinants of waste in our society. It was a path away from the concentration of political and economic power which treated virgin resources as a grand barbecue of the American continent, and similarly exploited the resources beyond our borders. We began to think about decentralized methods of production with closed-loop production/re-use/recycle systems (Seldman, 1986: 6).

Recycling was viewed as a replacement for other kinds of solid waste solutions such as landfilling and incineration. The mantra of “reduce, reuse and recycle” which became popular in the late 1980s was in its formative stages in the 1960s. Ecoactivists promoting recycling were keen to transform societal consumption patterns and to drastically reduce discards; recycling would be a practical solution for materials that could not be reused. The recycling movement took shape in the creation of nonprofit drop-off recycling centers that were run by volunteers; approximately 3,000 such
centers were created in the first six months after the first Earth Day on April 22, 1970 (Hanson, 1972).

The notion of the drop-off center implied that people who recycled had to be active, engaged and committed to recycling. It was not a trivial exercise to clean and set aside recyclable materials, load up your vehicle, drive to the drop-off center and unload recyclables into their appropriate piles. Recycling activists believed that if they could convince citizens to actively participate in this way, people would become more reflective consumers as well as more civic-minded. The ultimate aim for these movement activists was to use recycling as a way to build their communities. Replacing the prominence of exchange value (the driver of mass consumerism) with a focus on use value, recycling activists not only aimed to better the ecosystem, but to create self-sustaining production systems that were geographically bounded. Further, while nonprofit centers mainly relied on volunteer labor, many recycling activists sought to create a revenue-generating system that would enable recycling centers and processors to hire underprivileged citizens (Gould, Schnaiberg & Weinberg, 1996). Hence, holistic recycling would enable commodity production and consumption flows to be contained more exclusively within a particular community, and thereby reduce a community’s connection to broader scale commodity production systems that featured manufacturing conglomerates and multinationals (Seldman, 1995).

By the mid-1970s, non-profit, volunteer recycling was considered a failure by solid waste management field insiders and the general public (Kimball, 1992). Materials to be recycled began to accumulate at recycling centers because there were no outlets for recyclables—supply had outstripped demand. The problem for recycling proponents was to figure out how to build an infrastructure that would facilitate growth in the demand for recyclables. It was not at all certain, however, whether
recycling would become instantiated as a mainstream solid waste management solution. If it did become an acceptable solution, it is unclear what form it would take.

While the recycling movement had emerged as a loosely structured set of efforts, mainly on the West Coast in the 1960s and 1970s, in 1978, a national recycling association was created—the National Recycling Coalition (NRC)—that would reshape the logic of recycling and work intensively with solid waste management field insiders to make recycling an acceptable mainstream solution (Lounsbury, Ventresca & Hirsch, 2003). In particular, the NRC allied with major solid waste haulers such as Browning Ferris and Waste Management to develop an approach to recycling that would be profitable. To increase demand, the NRC lobbied government agencies to set procurement guidelines that encouraged the use of recycled products such as paper. They also worked with commodity manufacturers through associations such as the American Paper Institute to develop a supporting infrastructure that would make recycling processes cost effective.

This more technocratic orientation to recycling essentially abandoned the non-profit roots of recycling and its holistic logic. Instead of conceptualizing recycling as a way to restructure society and economy, the focus shifted towards the creation of recyclable commodity markets or what has come to be known as secondary materials markets. The NRC sold their ideas about recycling as a complement to landfilling and incineration, creating much consternation in the grassroots recycling community. Under the technocratic logic, recycling was no longer about restructuring the consumption patterns of citizens, but providing an efficient solid waste management mechanism.

Nonprofit drop-off centers were replaced with curbside recycling programs and associated for-profit organizations that employed paid professional staff. With curbside recycling, participants no
longer needed to be reflective about their activities in the world. Instead, citizens were reconceptualized as service recipients. Even though many curbside recycling programs still require people to clean and sort discards, these programs are often coupled with incentives such as pay-as-you-throw garbage collection that enables people to view recycling as a direct cost savings (this, of course, assumes no-cost citizen labor). Hence, instead of the labor-intensive nature of non-profit voluntary recycling efforts, curbside collection relies on free household labor to clean and sort waste, lowering the overall cost to solid waste conglomerates, facilitating the creation of a profitable business. Hence, a focus on profits and efficiency replaced ideas of community-building and development that inspired early recycling activists.

My general argument is that this shift from the holistic to technocratic logic had repercussions for how the recycling movement unfolded. In the next section, I develop hypotheses about temporal variation in the creation of state-level recycling advocacy groups. Recycling advocacy groups are kinds of social movement organizations (SMOs) that provide an important organizational manifestation of the recycling movement. They provide crucial links between grassroots recyclers and governmental bureaucracies that create rules and incentives that authoritatively shape local solid waste practices.

HYPOTHESES: THE SHIFTING ROLE OF STATE RECYCLING ADVOCACY GROUPS

Thus far, I have argued that the shift from the holistic to technocratic logic of recycling facilitated a concomitant shift in the causal drivers of recycling advocacy group creation. In the organizations literature, shifts in causal effects have been prominently highlighted in the study of diffusion (Strang &
Soule, 1998). For instance, there have been a number of studies that focus on how early adopters of a practice have qualitatively distinct motivations than later adopters. Tolbert & Zucker’s (1983) classic study showed that early adopters of civil service reforms were motivated by technical considerations, whereas later adopters were motivated more by a legitimacy imperative that was decoupled from efficiency concerns. Focusing on core-periphery imagery, Menzel (1960) argued that centrally placed actors were early adopters when an innovation was culturally legitimate, but that illegitimate practices were adopted first by “marginal men” who were unconstrained by community norms. Supporting Menzel’s arguments, contemporary institutional research has shown that new or illegitimate practices are more likely to be pioneered or adopted by peripheral rather than core organizations (Leblebici et. al., 1991; Kraatz & Zajac, 1996).

Drawing on historical research and interviews, I develop grounded hypotheses about how early recycling advocacy creation under the holistic logic was facilitated by distinctively different factors than later recycling advocacy group creation under the technocratic logic. Since the state recycling advocacy groups I track gained authorized status among state governmental solid waste officials through their affiliation with the NRC, and the NRC authorizes only one such group per state, the existence of a state recycling advocacy group may be treated as a dichotomous variable. I therefore conceptualize the creation of recycling advocacy groups as a state-level diffusion process and make predictions about the rates by which state-level recycling advocacy groups are created.

In the 1970s, the recycling movement initially coalesced on the West Coast in the formation of recycling advocacy groups that promoted the development of holistic recycling through state government lobbying and protest activity. The first advocacy group created was the California
Resource Recovery Association (CRRA), founded in 1975. The CRRA was started by a handful of recycling activists in Northern California who were pioneers in the creation of non-profit volunteer recycling programs. Given that recycling was viewed as a fringe practice by mainstream actors in the solid waste management field, CRRA members focused a lot of their energy on making their voices heard. Their mission was to make recycling a legitimate solid waste solution through the passage of state and local laws and ordinances that would support its development at the local level. One of their most visible successes came with the passage of the 1978 California Litter Tax Law that created a fund for investment in recycling equipment and training. The vision was to promote holistic recycling through a state-nonprofit nexus.

Based on the visible success of the CRRA, recycling activists in the states of Washington and Oregon created similar organizations in the late 1970s. Recycling activists across these three states formed a loosely knitted coalition that provided an active support and advice network. Interviews with recycling activists from this era indicated that efforts to create holistic forms of recycling tended to be located in places where environmental activism was more generally prevalent—such as in California, Oregon and Washington.

One proximate indicator of the degree of environmental activism in the 1970s was the passage of bottle bills. As Schnaiberg & Gould (1994) have argued, states that passed bottle bills, legislation that was favored and promoted by recycling activists, had more active environmental movements and governments that were more open to the claims of environmentalists. Bottle bill debates heated up in the early 1970s when early recycling pioneers attempted to encourage reuse of materials by getting state’s to require consumers to pay a deposit on aluminum and glass container purchases that they
received back upon return of containers. Container vendors (e.g. soda pop conglomerates such as Coca-Cola) were encouraged to reuse or remanufacture returned containers. Since the passage of bottle bill legislation provides an indicator of the robustness of environmental activism in a state, especially since container vendors vociferously opposed such legislation, I predict that states that passed bottle bill legislation will be more likely to experience the creation of a recycling advocacy group during the holistic logic period.

**Hypothesis 1:** States that have passed bottle bill legislation will be more likely to experience the creation of a state recycling advocacy group during the holistic logic period.

While I argue that the creation of recycling advocacy groups during the holistic logic period will be limited to states that have more robust environmental movement activity, I posit that the drivers of recycling advocacy group creation will be distinctly different during the technocratic logic period. When the National Recycling Coalition allied with solid waste haulers to construct the technocratic logic of recycling in the 1980s, waste-to-energy (W-T-E) incineration had already taken shape as an authoritatively endorsed solid waste solution. In 1979, the Environmental Protection Agency (EPA), in an agreement with the Department of Energy, endorsed W-T-E as a solid waste solution. “These agencies teamed with industry to promote waste incineration through a comprehensive set of commercialization programs and regulatory adjustments, including grants, below market rate loans, loan guarantees, arbitrage and municipal bonding rules, price supports, energy entitlements, guaranteed resale of electricity (PURPA rates), and the reclassification of ash as a nonhazardous material” (Seldman,
Further, the Department of Energy created the Office of Commercialization of Municipal Waste to Energy, to oversee and promote the creation of 200 to 250 W-T-E plants between 1980 and 1992. The EPA was to provide technical assistance to municipalities interested in building such facilities.

The problem for recycling proponents was that W-T-E provided a solid waste solution that directly competed with recycling programs for access to the solid waste stream. For W-T-E incineration to be profitable and efficient, a steady flow of garbage is required, especially garbage such as paper that burns well. This led to the establishment of *flow-control* laws in many municipalities where waste-to-energy facilities have been built. These laws guarantee that a certain number of tons of garbage per year will be hauled to the incinerator. In some cases, this can completely preclude the possibility of recycling. In Hempstead, NY in the late 1980s, for example, the local incinerator required 750,000 tons of garbage per year, while the town itself was predicted to generate only 640,000 tons of burnable garbage (Besset & Bunch, 1989: 232).

While Not-In-My-Backyard movements inhibited the full-blown proliferation of W-T-E to which the EPA and DOE had agreed, a number of W-T-E incinerators were constructed throughout the country (Blumberg & Gottlieb, 1989). As recycling gained mainstream support from solid waste field insiders during the technocratic logic period, the main challenge for recycling advocacy groups shifted towards problems of jurisdiction and implementation. Interviews suggested that since W-T-E provided a directly competing solution to recycling, recycling advocacy groups spent a good deal of time lobbying local and state governmental officials to promote the advantages of recycling while noting the hazards of incineration. Hence, I posit that recycling advocacy groups are more likely to be created in states that
have high incinerator capacity in the technocratic logic period.

**Hypothesis 2:** States with higher aggregate incineration capacity will be more likely to experience the creation of a state recycling advocacy group during the technocratic logic period.

**QUANTITATIVE DATA AND METHODS**

My quantitative data set was constructed from archival data and from a survey of state recycling advocacy groups and solid waste officials. The survey data was mainly used to corroborate data on state recycling advocacy groups provided to me by the National Recycling Coalition. While states recycling advocacy groups were created before the NRC was founded, all became affiliated with the NRC over time since it became the peak national association for recycling advocacy. State recycling advocacy groups, however, are completely autonomous entities in contrast to most national nonprofit organizations that have a federated structure where somewhat autonomous state and local affiliates are considered important components of an overall bureaucracy that is guided by a national headquarters staff (Zald, 1967). That is, state recycling advocacy group affiliations with the NRC are voluntary and can be dissolved at any time.

The survey queried solid waste and recycling insiders in all fifty U.S. states that comprise the population I analyze from 1975 to 1995. There are no cases where states have more than one such organization since these organizations become “authorized” in the sense of providing a key linking mechanisms between the NRC and state solid waste officials. Since I was interested in understanding
the diffusion of “authorized” state recycling advocacy groups, the survey tracked if and when such a
group was created. I was able to obtain complete data for all U.S. states.

**Dependent Variable.** The dependent variable is the hazard rate of state recycling advocacy
group creation. Only 3 states had non-profit recycling advocacy groups before 1980. By the end of
1995, 39 states had an advocacy group, the majority of which were created since 1988 when recycling
had begun to gain widespread sociopolitical legitimacy (Lounsbury, Ventresca & Hirsch, 2003).

**Independent Variables.** The *Bottle bill* variable indicates whether and when a state passed
bottle bill legislation. This variable importantly taps into the robustness of a state’s environmental activist
community or state governmental openness to environmental activism since the passage of bottle bills
was heavily promoted by the action of environmental groups. *State incinerator capacity* is a time
varying measure of the aggregate amount of tons per day of waste that could be burned in a state’s
waste-to-energy incinerators. This variable, therefore, provides an indicator of the extent to which
incineration has been adopted as a solid waste solution in a state, encouraging the mobilization of
environmental activists who want to both close down existing and proposed incinerators and promote
recycling as an alternative. Incinerator capacity data come from the Environmental Protection Agency.
Independent variables are lagged one year and updated annually.

**Control Variables.** *Waste-to-Energy incineration presence* tracks whether and when a state
first had a W-T-E incinerator built. *Urban density* measures the degree to which a state is densely
populated. This variable, obtained from the Statistical Abstract of the United States, provides a
measure of which states are more likely to experience landfill scarcity since the amount of landfill space
is directly related to the degree to which a state has densely populated urban areas.
Industry attention to recycling tracks the percentage of articles dedicated to recycling in Waste Age. Waste Age, a solid waste trade magazine that started in 1970 is the preeminent solid waste management trade magazine. Solid waste managers look to Waste Age to provide information on how other municipalities are solving solid waste management problems and to keep abreast of the latest technological developments. As recycling became a legitimate technological solution in the solid waste management field, the coverage of recycling in Waste Age increased, creating normative pressures and providing important instrumental information that could encourage the creation of recycling advocacy groups. Percentage of states with recycling advocacy group tracks the extent to which state-level recycling coalitions have diffused. This is a standard measure used in the institutional literature to capture isomorphic pressures that shape diffusion (Davis, 1991).

I originally included a number of other control variable operationalizations, but omitted them from analyses due to multicollinearity problems with included variables. For instance, I gathered data on aggregate growth of the municipal solid waste, the amount of solid waste recycled, and the overall creation of curbside recycling programs in the U.S., but these variables were highly correlated with other time trend variables such as industry attention to recycling. While correlational problems prohibit the inclusion of these variables in the models, those high correlations provide some validation that the variables used are effectively capturing the main contours of the diffusion process. All independent variables are lagged one year and updated annually.

Analysis. I used event history analysis to examine the rate of state recycling advocacy group creation (Tuma and Hannan, 1984). To account for the shift from the holistic to technocratic logic, I employed piecewise exponential models with a period break at 1985. The year 1985 was chosen for a
couple of reasons. It was the first year that a state recycling advocacy group was created under the auspices of the National Recycling Coalition. This is a key event because the NRC was a key promoter of the technocratic logic and began to encourage the creation of state affiliate groups that would engage in recycling activism that was in accordance with NRC positions. Further, Lounsbury, Ventresca and Hirsch (2003) argued it was around 1985 when recycling had achieved legitimacy within the solid waste management field community. They showed that recycling became a distinct discourse category by 1985 in Waste Age as well as at the annual meetings of the Solid Waste Association of North America, a key forum where solid waste insiders gather to discuss latest developments in the field. Nonetheless, I ran sensitivity analyses for this periodization for three years before and after 1985 and results did not systematically differ.

Since I wanted to explore how causal effects differed across periods, I employed piecewise exponential models that allowed the intercepts and the effects of covariates to vary in an unconstrained way across time. The basic functional form of this model is summarized in the following equation:

\[ r_j(t) = \exp(\alpha_{jp} + \beta_j X_j), \]

where \( j \) is the origin state of no state recycling advocacy group, \( k \) is the destination state of recycling advocacy group creation, \( \alpha_{jp} \) is a constant coefficient associated with the \( p^{th} \) time period (in this case, the holistic logic period from 1975 to 1984 and the technocratic logic period from 1985 to 1995), \( \beta_j \) is an associated vector of coefficients, and \( X_j \) is a vector of explanatory and control variables used in the analysis.

To verify the appropriateness of piecewise exponential models, I conducted exploratory analyses and performed goodness-of-fit tests (Blossfeld and Rohwer, 1995). A variety of other
standard non-parametric and parametric models were also run to confirm that the choice of piecewise exponential competing risk models was the most appropriate estimation procedure (Wu, 1990). Models were estimated by the method of maximum likelihood using the software package TDA (Blossfeld and Rohwer, 1995).

RESULTS

Figure 1 plots the observed hazard rates of state recycling advocacy creation from 1975-1995. This figure shows that there are clear differences in the rates of advocacy group creation across the periods of interest. In the holistic logic period from 1975-1984, the hazard rates remained fairly low. In that period, only 9 state recycling advocacy groups were created. In the technocratic logic period, however, there are dramatic increases in the rate of advocacy group creation, with a large spike in 1989, a slightly smaller one in 1991 and relatively high rates from 1993-1995. 27 state recycling advocacy groups were created in this period. While variation in the rates of advocacy group creation highlights an important difference across periods, I am more interested in explaining the more specific state level factors that influenced recycling advocacy group creation in each of the periods.

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Table 2 reports basic descriptive statistics and correlations. There are no major correlational problems with the variables reported. Table 3 reports results of piecewise exponential event history analysis of state recycling advocacy group creation. These results show that there are significant differences in the dynamics of state recycling advocacy group creation as the holistic logic was replaced by the technocratic logic. The increase in the constant term between the two periods shows that the rate of recycling advocacy group creation increases, supporting the hazard rate graph shown in figure 1. Control variables are not significant with the exception of urban density that significantly affects recycling advocacy group creation in the technocratic logic period. I expected industry attention to recycling and the variable tracking the percentage of states that already had a recycling advocacy group to also be significant in the technocratic logic period, but they are not because of the heterogeneity of group creation rates across that period.

Shifting attention to hypothesized state level variables, table 3 shows that the Bottle bill variable is significant during the holistic logic period, supporting hypothesis 1. This indicates that early state
recycling group creation did tend to occur in states where environmental activism was more robust. The variable tracking *State incinerator capacity* was negative and not significant during the holistic logic period, but was positive and significant during the technocratic logic period, providing support for hypothesis 2. This finding indicates that in states where more incinerator capacity was built, there was a higher propensity for mobilization around recycling via the creation of a social movement organization. Overall, these results support my main claims about how the shift in recycling logics facilitated changes in the causal drivers of state recycling advocacy group creation.

**DISCUSSION AND CONCLUSION**

This study of shifting logics and the spread of state recycling advocacy groups showed that the creation of those social movement organizations were shaped by different state level conditions across periods. I showed that during the holistic logic period, state recycling advocacy group creation mainly occurred in states where environmental activism tended to be more robust and where state polities were more receptive to environmentalist claims as proxied by the passage of bottle bill legislation. I also showed that when the holistic logic was replaced by the technocratic logic, state recycling advocacy group creation occurred more in states that had built up high incineration capacity that provided a directly competing infrastructure to recycling. Under such conditions, state recycling advocacy groups emerged to engage in jurisdicational battles over solid waste flows.

The shift in logics was not exogenous to the practices of recycling advocacy groups, but was promulgated by the National Recycling Coalition that helped to reshape the logic of recycling as well as
the social organization of the recycling movement from a loosely connected structure of locally autonomous advocacy groups to a more hierarchical national structure with state recycling group affiliates. While a major, for-profit recycling industry emerged, a more simple focus on how recycling shifted from the margins to the mainstream would most likely miss important qualitative changes in movement organization and beliefs that were foregrounded in this paper. Such a shift in research attention away from the study of institutionalization and towards the study of institutional change as involving fundamental shifts in context has a number of implications for organization theory and social movements scholarship.

For instance, a focus on institutional variation and change makes the concept of legitimacy less central for organization theorists. While the concept of legitimacy does provide some utility in tracking how certain practices and behaviors become routine and taken-for-granted (Suchman, 1995; Tolbert & Zucker, 1996), contemporary research has tended to conflate it with economic and social forces having to do with resource munificence and dependence. This has detracted attention from the ways in which organizations are engaged in meaning-making processes and are embedded in broader cultural contexts that enable and constrain the possibilities for action (Clemens, 1997). A focus on institutional logics restores attention to broader social structures of resources and meanings and how those social structures themselves change and mediate flows of practices.

A shift in attention away from the concept of legitimacy also has implications for research on organizational demography. Organizational demographers have shown that there is an inverted U-shaped relationship between population density (the number of organizations) and the entry rate of organizations (see Hannan & Carroll, 1992 for a review). They theorize that the founding of
organizations is limited in the early stages of industry formation because new organizational forms lack legitimacy. But as organizations develop a track record and become established, more firms are created. It is posited that increases in organizational density indicate that the new activities and organizational forms have acquired the societal legitimacy necessary for further growth to occur. Once legitimate, founding rates in a new population rapidly increase until crowding effects begin to deter entry. When the number of firms increases to a point that encroaches on the carrying capacity limits of the population’s resource space, competition takes over and new entries level off.

Legitimacy in the density dependence thesis, similar to much of the extant research in institutional research, is tightly tied to a focus on resources. While some scholars have noted that the density dependence thesis has not held up across all empirical contexts, has masked unobserved heterogeneity, and neglected the fine-grained richness of historical process (Delacroix & Rao, 1994; Baum & Powell, 1995), this study further highlights that there might be fundamental qualitative transformations in organizational forms over time that cast a shadow on population ecology findings that assume that organizational forms are static over long historical periods. This study did not analyze the spread of recycling advocacy groups as a founding process tied to changes in resource munificence, but as a diffusion process that highlighted important qualitative shifts over time in causal dynamics. Even though I did not emphasize a shift in organizational form per se in this paper, there were clear differences in the ideals and practices promoted by early recycling advocacy groups during the holistic logic period than ones created under the auspices of the NRC when the technocratic logic was ascendant. Nonetheless, this paper underscores the need for more historically sensitive institutional analyses of organizational evolution.
While the technocratic logic did become dominant over the holistic logic, enabling the rise of a for-profit industry, the discussion of logics in this paper has been somewhat oversimplified. In fact, the holistic logic did not completely disappear, but has remained as a competing logic (Friedland & Alford, 1991). This has been evidenced by the fact that many grassroots recyclers, such as those from California, Oregon and Washington, celebrate the proliferation of recycling practices, while simultaneously lamenting its contemporary social organization as a “market.” In interviews, many grassroots recyclers tied to state recycling advocacy groups noted that a tension continues to exist between the corporatist approach of the NRC and the more activist ideals of some local recyclers who still promote a non-profit, community-building approach to recycling (Gould, Schnaiberg & Weinberg, 1996). In fact, in 1995, supporters of the holistic logic created an umbrella organization of their own, the GrassRoots Recycling Network, that nominally works with the NRC while at the same time advocating their own local policies. Given that the relationship between grassroots recyclers and the NRC still exists, however, it is best viewed as a form of factionalism as opposed to schism (Balser, 1997). Nonetheless, the continued existence of the holistic logic keeps hope for the continued development of community-building recycling alive.

A focus on multiple logics also highlights the limitations of the concept of institutionalization that places emphasis on the reproduction and stability of social order. Instead of simply being co-opted, social movements often become embedded in multiple, overlapping institutions that enable continued struggle for change, albeit in ways that may be hidden and less dramatic than street protests (Lounsbury, 2001). Many changes that are driven by social movements and social movement–like processes occur in organizations and require more detailed analyses of how social movement activism takes shape in the
everyday realities of organizations (Zald & Berger, 1978; Creed & Scully, 2000; Scully & Segal, 2002). It is important to keep in mind that the “iron law of oligarchy” is not ironclad. Rothschild-Whitt (1979) has noted that advocacy organizations that remain small, rotate leadership and job assignments, and are strongly committed to democratic and participatory values are able to maintain social movement energy over time. Zald and Ash (1966) argued that if oligarchy does develops, the use of adversarial tactics may even increase. For instance, as the Sierra Club became more professionalized in the 1960s, disenchanted ecoactivists mobilized to form Friend of the Earth (Fox, 1981).

Recent social movements research has aimed to go beyond the ideologically loaded imagery of social movement institutionalization by redirecting attention towards the ways in which social movement outcomes are not only shaped by protest-oriented social movement organizations (SMOs), but also a wide variety of mainstream institutional actors (Giugni, McAdam, and Tilly, 1999). For instance, in their study of the activities and structures of SMOs, Kriesi et. al. (1995) extended Tarrow’s (1998) notion of protest cycle by showing how SMOs change from being more unstructured and protest-oriented to more formally structured and professionally-oriented over the course of a protest cycle. However, we still know little about the role of SMOs in driving such qualitative shifts or the more proximate mechanisms by which SMOs, especially non protest-oriented SMOs, change their orientations or practices over time. Meyer & Tarrow (1998: 20) argue that “much of the contention in contemporary societies does not come from movement organizations as such but from campaigns organized by parties, interest groups, professional associations, citizens’ groups, and public servants.” della Porta and Rucht (2002) have begun to analyze the complex mix of actors that get involved in environmental campaigns, highlighting the importance of both protest-oriented as well as professional social movement
organizations in promulgating challenges to extant institutions and fomenting or resisting change.

While recycling advocacy groups did become more professionalized under the auspices of the National Recycling Coalition, they still played an important role in ongoing institutional change by engaging in jurisdictional battles with waste-to-energy proponents. Further, the continued existence of the holistic logic suggests that there was not a full and complete transformation of recycling beliefs and practices. While a detailed specification of the ways in which the technocratic and holistic logics continue to be manifested was beyond the scope of this paper, our knowledge of institutional process and change would be greatly enhanced by research that attended to the multiplicity of social structures of resources and meanings that shape configurations and reconfigurations of social organization (Mische & Pattison, 2000; Schneiberg & Bartley, 2001; Lounsbury & Ventresca, 2002). As social analysts, we need to resist the teleological temptation of concepts such as institutionalization and probe deeply for the fracture lines of institutions and an understanding of the possibilities for ongoing change, whether incremental or epochal.
REFERENCES


McAdam, D., McCarthy, J.D. & Zald, M.D. 1996. Comparative Perspectives on Social Movements. NY: Cambridge University Press.


<table>
<thead>
<tr>
<th></th>
<th><strong>Holistic Logic</strong></th>
<th><strong>Technocratic Logic</strong></th>
</tr>
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<tbody>
<tr>
<td><strong>Ideology</strong></td>
<td>Recycling as a way to restructure society and economy</td>
<td>Recyclables as a commodity</td>
</tr>
<tr>
<td><strong>Relationship</strong></td>
<td>Reduce, reuse, recycle</td>
<td>Recycling as a complement to landfilling</td>
</tr>
<tr>
<td>to other solid</td>
<td>Non-profit drop-off center</td>
<td>Curbside pick-up (for-profit activity)</td>
</tr>
<tr>
<td>waste solutions</td>
<td><strong>Dominant</strong></td>
<td><strong>Labor</strong></td>
</tr>
<tr>
<td><strong>Dominant</strong></td>
<td><strong>Volunteers</strong></td>
<td>Paid professional staff</td>
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<td>organizational</td>
<td><strong>Approach to</strong></td>
<td><strong>Definition</strong></td>
</tr>
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<td>manifestation</td>
<td>participants</td>
<td>of success</td>
</tr>
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<td><strong>Labor</strong></td>
<td>Active/reflective partners</td>
<td>Community-building</td>
</tr>
<tr>
<td><strong>Definition</strong></td>
<td><strong>Service recipients</strong></td>
<td>Profits/efficiency</td>
</tr>
<tr>
<td>of success</td>
<td><strong>Profits/efficiency</strong></td>
<td><strong>Definition</strong></td>
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Table 1
Two Ideal Types of Recycling
Table 2
Descriptive Statistics and Correlations for State Recycling Advocacy Group Creation Analysis

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>s.d.</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Waste-to-Energy incineration Presence</td>
<td>.11</td>
<td>.44</td>
<td>---</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Urban density</td>
<td>6.38</td>
<td>7.00</td>
<td>.11**</td>
<td>---</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Industry attention to recycling</td>
<td>.35</td>
<td>.90</td>
<td>.09**</td>
<td>.01</td>
<td>---</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Ln (% states with advocacy group)</td>
<td>-2.57</td>
<td>1.20</td>
<td>.12**</td>
<td>-.13**</td>
<td>.25**</td>
<td>---</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Bottle bill</td>
<td>.18</td>
<td>.38</td>
<td>.09**</td>
<td>.27**</td>
<td>.01</td>
<td>-.04</td>
<td>---</td>
<td></td>
</tr>
<tr>
<td>6. Ln (State incinerator capacity)</td>
<td>.74</td>
<td>1.68</td>
<td>.51**</td>
<td>.31**</td>
<td>.13**</td>
<td>.22**</td>
<td>.20**</td>
<td>---</td>
</tr>
</tbody>
</table>

* Significance at p = 0.10     ** Significance at p = 0.05
Table 3  
Piecewise Exponential Event History Analysis of  
State Recycling Advocacy Group Creation, 1975-1995 (N=810)*

<table>
<thead>
<tr>
<th>Covariates</th>
<th>Holistic Logic</th>
<th>Technocratic Logic</th>
</tr>
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<tr>
<td>Constant</td>
<td>-3.530***</td>
<td>-2.997***</td>
</tr>
<tr>
<td></td>
<td>(.764)</td>
<td>(.571)</td>
</tr>
<tr>
<td>Waste-to-Energy</td>
<td>-.407</td>
<td>-.601</td>
</tr>
<tr>
<td>incineration presence</td>
<td>(.869)</td>
<td>(.473)</td>
</tr>
<tr>
<td>Urban density</td>
<td>-.087</td>
<td>.068**</td>
</tr>
<tr>
<td></td>
<td>(.086)</td>
<td>(.031)</td>
</tr>
<tr>
<td>Industry attention to</td>
<td>-.057</td>
<td>.005</td>
</tr>
<tr>
<td>recycling</td>
<td>(.220)</td>
<td>(.010)</td>
</tr>
<tr>
<td>Ln (% states with advocacy</td>
<td>-3.701</td>
<td>.942</td>
</tr>
<tr>
<td>group)</td>
<td>(10.402)</td>
<td>(1.410)</td>
</tr>
<tr>
<td>Bottle bill</td>
<td>1.335**</td>
<td>-.371</td>
</tr>
<tr>
<td></td>
<td>(.762)</td>
<td>(.581)</td>
</tr>
<tr>
<td>Ln (state incinerator capacity)</td>
<td>-.183</td>
<td>.091**</td>
</tr>
<tr>
<td></td>
<td>(.866)</td>
<td>(.046)</td>
</tr>
</tbody>
</table>

Log Likelihood -129.27

* p < .10; ** p < .05; *** p < .01
* Standard errors in parentheses. One-tailed tests are used for hypothesized variables.
Figure 1
Observed recycling advocacy group creation rates in U.S. states, 1975-1995