The Founding of Environmental Justice Organizations Across U.S. Counties during the 1990s and 2000s: Civil Rights and Environmental Cross-Movement Effects

Paul B. Stretesky, *University of Colorado—Denver*

Sheila Huss, *University of Colorado—Denver*

Michael J. Lynch, *University of South Florida*

Sammy Zahran, *Colorado State University*

Bob Childs, *Colorado State University*

This research expands upon organizational ecology theory to examine variations in founding of organizations in the formalized sector of the environmental justice movement across U.S. counties for two time periods (1990–1999 and 2000–2008). Cross-movement effects are examined to determine if founding is more or less likely to occur in counties where related civil rights and environmental organizations are located. Consistent with the notion of agglomeration effects, we hypothesize that during the 1990s the relationship among civil rights density, environmental density, and environmental justice founding is positive and suggests cooperative efforts. That is, environmental justice organizations should form in counties where civil rights organizations and environmental organizations exist. Because the focus of environmental justice organizations may have expanded over time and created a more competitive atmosphere, cross-movement relationships that were positive across counties during the 1990s are hypothesized to turn negative across counties during the 2000s. Multivariate analysis suggests mixed support for these hypotheses. Specifically, civil rights density is positively associated with environmental justice founding during the 1990s and negatively associated with environmental justice founding during the 2000s—suggesting potential cooperative and then competitive effects across counties over time. However, the correlations between environmental density and environmental justice founding, while positive and statistically significant during the 1990s, are not statistically significant during the 2000s. Thus, in the case of organizations in the formalized sector of the environmental and environmental justice movements it appears that there is a trend toward competitive effects even as those effects have yet to materialize. Keywords: organizational ecology; organization formation; social movements; density dependence; environmental movements.

While organizational ecology is traditionally focused on for-profit organizations, the theory easily lends itself to the study of nonprofit and political organizations. As a result, an increasing number of studies have drawn upon concepts from organizational ecology to help make sense of social movement organizations (Clemens 1997; Davis et al. 2005; Haveman, Rao, and Paruchuri 2007; Minkoff 1994, 1995; Nownes 2010; Schneiberg, King, and Smith 2008; Soule and King 2008; Walker and McCarthy 2010). Despite this expansion, organizational ecology has not been utilized to explain the spatial distribution of social movement

The authors would like to thank the anonymous reviewers and the editor of *Social Problems* for their comments and suggestions. Any errors that remain in the manuscript are solely the responsibility of the authors. Direct correspondence to: Paul Stretesky, University of Colorado Denver, School of Public Affairs, Denver, CO 80217. E-mail: paul.stretesky@ucdenver.edu.

***Social Problems*, Vol. 58, Issue 3, pp. 330–360, ISSN 0037-7791, electronic ISSN 1533-8533.**
DOI: 10.1525/sp.2011.58.3.330.

organizations, or the distribution of environmental justice organizations (EJOs) in particular. This research is unique in that it examines whether cross-movement effects that occur across counties may be important for understanding where social movement organizations develop. Moreover, it may be the case that these cross-movement effects change over time so that potential agglomeration effects vary by decade. The present study draws upon organizational ecology to examine EJO founding across U.S. counties for the formalized sector of the movement. Specifically, we examine founding during two different time periods—1990 to 1999 and 2000 to 2008—to investigate whether existing civil rights and environmental organizations serve as potential sources of legitimacy or competition for EJOs.[1]

There are important theoretical reasons to believe that the location of civil rights and environmental organizations may have implications for the founding location of EJOs. For example, many environmental justice researchers suggest EJOs are specialized organizations that gain an advantage by co-locating near existing civil rights and environmental organizations. Over time, however, these relationships may change. Robert Benford (2005), for instance, has recently proposed that the organized sector of the environmental justice movement has lost its radical focus and become a movement of "everything." As Benford suggests, EJOs have undergone a "frame extension" that resulted in an organizational change from less specialized (and more radical) to more general environmental justice concerns. Thus, as environmental justice organizations change focus, it is likely that cooperative interorganizational relationships will change and become competitive across counties (Benford 2005; Gamson 1992; Taylor 2000).

Many of the observations about EJOs stem from qualitative research and have therefore produced a rich base of knowledge about these particular organizations. The generalizability of that knowledge, however, has not been broadly assessed, and the findings of qualitative studies have opened the door for quantitative analysis. In this respect, organizational ecology has the potential to contribute to the understanding of EJO founding rates across space and time. Before empirically analyzing factors associated with EJO founding, we examine the connection between organizational ecology and environmental justice. Specifically, we apply organizational ecology theory to the spatial distribution of EJOs, noting how specialization and cross-movement effects are likely to play out over space.

Environmental Justice and Organizational Ecology

Organizational ecology is concerned with the conditions that lead to organizational change and the rate at which new organizations are formed or die (Carroll and Hannan 2000; Hannan and Carroll 1992; Hannan and Freeman 1977). Much of this research has focused on for-profit firm samples (Wollebaek 2009:365). There has, however, been increased interest in applying organizational ecological perspectives to nonprofits, such as political organizations, to examine the creation, disbandment, and restructuring (births, deaths, and change) of

1. "Legitimacy" is a term used throughout the organizational ecology literature (see Hannan and Freeman 1977). Hannan and Freeman assume that the number of existing organizations (density) is a measure of organizational legitimacy. That is, the more organizations that exist, the lower the cost of mobilization and therefore the more organizational founding. Zucker (1989), however, criticizes the use of identical organizations as a measure of legitimacy, as it is indirect and explains little. We believe that legitimacy is a precondition for mobilization, which in turn influences founding. At various points throughout the manuscript we reflect upon suggestions in the environmental justice literature that civil rights and environmental organizations helped create the legitimacy necessary for the emergence of EJOs. We do not, however, examine that legitimacy directly. Instead we examine the role of existing civil rights and environmental organizations as potentially important mobilizing structures that also may be indirect indicators of EJO legitimacy within any particular county. This treatment of legitimacy does not solve the problems Zucker (1989) identified, but it does allow us to examine whether the claims of environmental and civil rights legitimacy are consistent with existing empirical evidence—at least with respect to the formal bureaucratic structure of the movement.

nonprofit and political organizations (Clemens 1997; Davis et al. 2005; Haveman et al. 2007; Minkoff 1994, 1995; Nownes 2010; Schneiberg et al. 2008; Soule and King 2008; Walker and McCarthy 2010).

The present study focuses on the concepts of specialization and space within the organizational ecology literature by examining founding rates for formalized environmental justice organizations at two points in time. Central to the concepts of specialization and space is the notion of density dependence, which is widely accepted within the business, public administration, political science, and sociology literatures. Density dependence suggests that within a particular sector of organizations, the number of existing organizations will influence the founding rates of emerging organizations in opposite directions during the two stages of organizational development (Carroll and Hannan 2000). During the first, or legitimatization, stage, an increase in the number of existing organizations provides the ideological space for similar organizational founding, producing a positive relationship between density and founding. During the second, or competition, stage, an increase in organizational density creates competition that prevents new organizations from forming, generating a negative association between density and founding. In short, over time the association between density and founding is nonmonotonic and is shaped like an inverted "U." Research on the nonmonotonic relationship between density and founding is robust across studies of financial organizations and has been examined across a variety of firms, including automobile manufacturing (Hannan et al. 1995), newspaper publishing (Carroll and Hannan 1989), credit unions (Barron, West, and Hannan 1994), and telephone service providers (Barnett and Carroll 1995). Recent studies have also found evidence of nonmonotonic relationships among political organizations (Nownes 2010:690).

As noted, the emphasis on density dependence led organizational ecologists to focus on organizational births (and deaths) over time, and it is not surprising that this same focus is found in the social movement organization formation literature. Much of that research focused on the concept of organizational competition. As Sarah Soule and Brayden King (2008) note: "Although we would like to think that SMOs in an industry cooperate in order to achieve a common goal, in reality SMOs often compete with each other for limited resources" (p. 1570). Empirical studies, however, find mixed support for competition effects across related organizations and sectors. This is especially true in the case of cross-effects for movement competition.

Debra Minkoff (1997), for instance, discovered that "Black organizations . . . promoted the formation of new women's organizations *without a significant competitive effect*" (p. 729; emphasis added). This finding is consistent with the notion of legitimation and suggests that women's organizations were able to "piggyback" off the established efforts of other civil rights organizations. Thus, Minkoff's work suggests an organizational sequencing in which initial civil rights organizations lent legitimacy to future civil rights organizations. More importantly, Minkoff (1997) notes that the absolute lack of competition between different types of civil rights groups indicates "early risers can establish and maintain a protected niche for their organizations even as more groups enter the social movement arena" (p. 796). Consistent with the notion that competition develops only at higher levels of organizational density, Minkoff also discovered that feminist groups began to compete over time as the density of organizations increased as feminist organizational density suppressed the founding of future feminist organizations. Thus, once the density of women's organizations reached a sufficient number, competition between women's groups emerged.

Anthony Nownes (2010) used organizational ecology theory to study interest group mobilization among transgender interest groups over time and found empirical support that mirrors Minkoff's study of feminist organizations. In short, Nownes found evidence that transgender organizations follow the classical nonmonotonic-shaped relationship between density and founding. He specifically noted that the monotonic effect suggests that "interest group populations most likely have stable carrying capacities" (Nownes 2010:689).

The studies by Minkoff and Nownes are important in that they expand the study of organizational founding rates over time to social movement organizations, but the question remains as to whether organizational effects also exist across space. That is, do existing civil rights and environmental organizations promote or suppress EJO founding rates across counties? The notion that similar organizations may influence founding rates is known as "cross-effects" because it emphasizes that the density of one population may aid or inhibit the expansion of related organizations (Hannan and Carroll 1992).

Except as noted (i.e., Minkoff 1997; Nownes 2010), there is no research examining the effects of organizational density on SMO formation. In the present study, organizational ecology's notion of density dependence is applied to civil rights and environmental organizations to examine more closely the concepts of legitimation and competition in the founding of EJOs. The changing nature of EJOs over time may account for changing organizational relationships suggested by recent developments in the environmental justice literature. This approach is unique in that it tests notions of density dependence, cross-movement effects, and organizational sequencing over space. Though such an analysis has not been conducted, recent developments in the organizational ecology literature provide strong theoretical reasons for pursuing such efforts.

The Specialization of Environmental Justice Organizations

Charles Jordan and Donald Snow (1992) observe that minorities and the working class are under-represented in many U.S. environmental organizations (see also Brulle 2000; Bullard 1993:22–24; Taylor 2000). As a result, specialized environmental justice organizations have formed to focus on the intersections among race, class, and the environment. As Robert Brulle (2000:213–15) argues, environmental justice discourse and organizations emerged from the citizen-worker movement, which is largely concerned with exposure to toxins in white working class communities, and the people of color environmental movement, which is concerned primarily with equity issues in ethnic and minority communities. These movements, while diverse, both incorporated concerns regarding toxic waste that threatened peoples' families, homes, and communities.

Scholars and researchers note that environmental justice organizations are unique and began to emerge in the late 1970s and early 1980s (Benford 2005; Brulle 2000; Cable and Shriver 1995; Cole and Foster 2001; Edwards 1995; Liu 2001; Pellow and Brulle 2005; Taylor 2000). These initial organizations were largely local and specialized (Bullard 2001). As Dorceta Taylor (2000) suggests, environmental justice organizations allowed "Blacks, Native Americans, Latinos, Asians, and whites concerned with social justice issues to fashion campaigns and develop policies around environment and inequality . . . [and keep] . . . their potency and focus on the environmental inequality of marginalized people" (p. 520). The idea that EJOs are specialized can be framed in terms of niche theory, which suggests that while all organizations occupy a niche, specialized organizations occupy a more restricted niche than generalist organizations do (Kovacs and Carroll 2010). Niche theory research, however, has been largely confined to for-profit firms and focuses on the extent to which organizations narrow their niche by specializing in "tastes of potential consumers and members, the availability of various kinds of input (e.g., human and financial capital), and legal and regulatory regimes" (Kovacs and Carroll 2010:30). In niche theory, the principle of allocation suggests that specialist firms outperform generalist firms as they operate within a set of conditions that minimizes competition. Nevertheless, researchers such as Soule and King (2008) note that generalist organizations have a significant competitive advantage over more specialized organizations because the conditions in which organizations operate can change. Thus, risk may prompt organizations to favor a more general niche and therefore to trade efficiency for security (Hannan and Freeman 1977).

In sum, niche theory's resource partitioning approach suggests that if generalist organizations are large and general enough, they can outperform specialized organizations over the

long run (Carroll 1985; Singh and Lumsden 1990). This idea cannot be tested in the present analysis but is consistent with the notion that EJOs have important cross-movement effects with the more general civil rights and environmental organizations—especially because they occupy unique niches. Jitendra Singh and Charles Lumsden (1990) do note, however, that specialist organizations can survive because more generalist groups sit at the center of the market. Thus, competition is minimized (Singh and Lumsden 1990). These arguments may be relevant for understanding early EJO founding and the potential agglomeration of EJOs, civil rights organizations, and environmental organizations.

During their initial development, EJOs took over the environmental/social inequality "niche" related specifically to environmental harms within the general environmental and civil rights movements (Taylor 2000). Given that EJOs are specialized, they appear to generate little competition with general civil rights and environmental organizations—at least through the early 1990s, when the original framing of the movement began to be considered radical and innovative (Benford 2005:41–51). In short, EJOs may have provided little competition to civil rights and environmental organizations when they filled a niche at the periphery of those movements. As noted, however, this relationship may have changed over time and placed environmental justice organizations in direct competition with their more generalized counterparts.

In addressing EJO founding, competition, and cooperation with other social movement organizations, it is important to take a diverse array of potential contributing factors into account. Because EJOs have tended to address localized issues, it is important to consider the geographic location of these organizations. The importance of geography is being increasingly addressed in the organization ecology literature and is being applied to nonprofit and political organizations for the purpose of predicting the density (as opposed to the founding) of organizations across geographic units (Corbin 1999; Luksetich 2008; Matsunaga and Yamauchi 2004; Salamon and Anheier 1998; Saxton and Benson 2005). These density analyses pave the way for an ecological approach to the spatial analysis of EJO founding.

The Spatial Distribution of Environmental Justice Organizations

Researchers (Barnett 1997; Hannan and Carroll 1992) suggest that density models *could* take geography into account, and social movement organization studies have been receptive to this idea while simultaneously ignoring the potential implications of spatial clustering for organizational cooperation and competition (Zald and Ash 1966; Zald and McCarthy 1994). In the case of EJOs, spatial characteristics may produce conditions that reduce or increase barriers to organizational entry into a market (Sternberg and Litzenberger 2004) for two reasons. First, legitimation effects vary over time (Carroll and Hannan 1989) and possibly space. The idea that legitimation effects may have a spatial dimension is consistent with the idea that knowledge (and innovation) is shared among individuals who are clustered in space (see Wissen 2004). When innovation is shared among similar individuals who occupy the same geography, they are likely to develop a shared understanding about how environmental problems and inequalities can be better addressed through, for example, collective action and shared networks. These spatial effects may provide regional incentives for organization formation when the framing and solutions to social problems resonate widely among potential movement participants and become diffused into the general culture of the area. In short, there may be benefits to the clustering of some forms of social movement organizations when the right conditions exist.

Second, organizational ecology notes that spatial clustering may present *lower* costs and therefore increase the number of for-profit firm startups. Firms, for example, may benefit from sharing proximate suppliers, producing a cluster effect. This for-profit firm effect may be generalizable to EJOs. As Brulle and Jonathan Essoka (2005) observe, formalized EJOs are increasingly reliant upon external funding sources and talented human capital. Thus, organizations

that can attract funding and talent may help create agglomerated EJO counties because existing suppliers and organizations may attract (or create) additional organizations. Moreover, larger social movement organizations are probably more likely than their same-sector grassroots counterparts to rely on material resources and may therefore be likely to draw upon synergistic effects produced by the agglomeration of human, economic, and social capital. Glenn Carroll (1985) supports this interpretation among for-profit firms, and notes that specialist organizations may get considerable benefit from co-locating near other organizations. Thus, cross-movement effects among environmental, civil rights, and environmental justice organizations in the same geographical space are likely.

The spatial clustering of organizations is also consistent with the resource mobilization literature because nonprofit clustering may signal that counties with strong social movement communities are synergistic (Lincoln 1977; McCarthy, Baker, and Mosakowski 1988; Saxton and Benson 2005; Wikle 1995; see also Horton and Shen 2002 for international voluntary associations). For instance, Gregory Saxton and Michelle Benson (2005:32) found that government spending in an area was positively related to nonprofit growth, suggesting that government and nonprofits should be "viewed as complementary partners." Kirsten Gronbjerg and Laurie Paarlberg (2001) discovered that variables that measured the supply of resources for nonprofits, such as percentage of church adherents, the percentage of college graduates aged 25 and older, and the middle-aged population were positively related to nonprofit formation. Saxton and Benson's (2005) study of nonprofit organizations in 284 counties found that nonprofit organizations were more likely to emerge in counties that already had a large number of existing nonprofits—again, providing support for organizational ecology's hypothesized agglomeration effects.

Only one prior study specifically addressed the spatial distribution of generalist environmental organizations (Andrews and Edwards 2005). That study did not, however, use an organizational ecology theoretical framework. One of the most comprehensive spatial studies of nonprofits, it examined the geographic distribution of 738 environmental organizations across 100 North Carolina counties. Andrews and Edwards discovered that environmental grievances, county population, and nonprofit capacity were positively related to the formation of environmental groups. While that research focused on environmental groups rather than on formalized EJOs, the study's results are consistent with the organizational clustering effects noted in the organizational and resource mobilization literatures.

The influence of space can also be applied to the environmental justice literature. For example, Figures 1 and 2 illustrate the agglomeration effects of environmental, civil rights, and environmental justice organizations by examining the density of these organizations and EJO founding between 1990 and 2008. As noted in those illustrations, EJOs appear to form near environmental (Figure 1) and civil rights organizations (Figure 2).

Figures 1 and 2 are also consistent with observations about movement development in the environmental justice literature. For instance, Taylor (2000) argued that the legitimacy of the environmental justice movement is tied to a blending and unification of several existing social movement frames of reference (e.g., civil rights, environmental, labor) that had already attained legitimacy. As researchers note, by joining together, civil rights and environmental groups effectively legitimized and helped produce EJOs (Bullard 1993:28; Taylor 2000:534). As an example of the importance of cooperation within space, consider the case of Warren County, which marked the beginning of the racially based EJO movement in 1982 (Bullard 1999; Burns, Lynch, and Stretesky 2008; Chavis 1993). The Warren County protests were started by working class whites and directed at North Carolina officials who proposed a PCB-contaminated soil landfill. The initial movement was therefore an anti-toxins movement. However, the protests turned into a civil rights issue when the anti-toxin organization failed to stop the landfill in court. At that point, community members with a history of membership in civil rights organizations began to argue that Afton was chosen because most of its residents were black (Bullard 1990; McGurty 2000). Eileen McGurty (2000:377) noted that "the

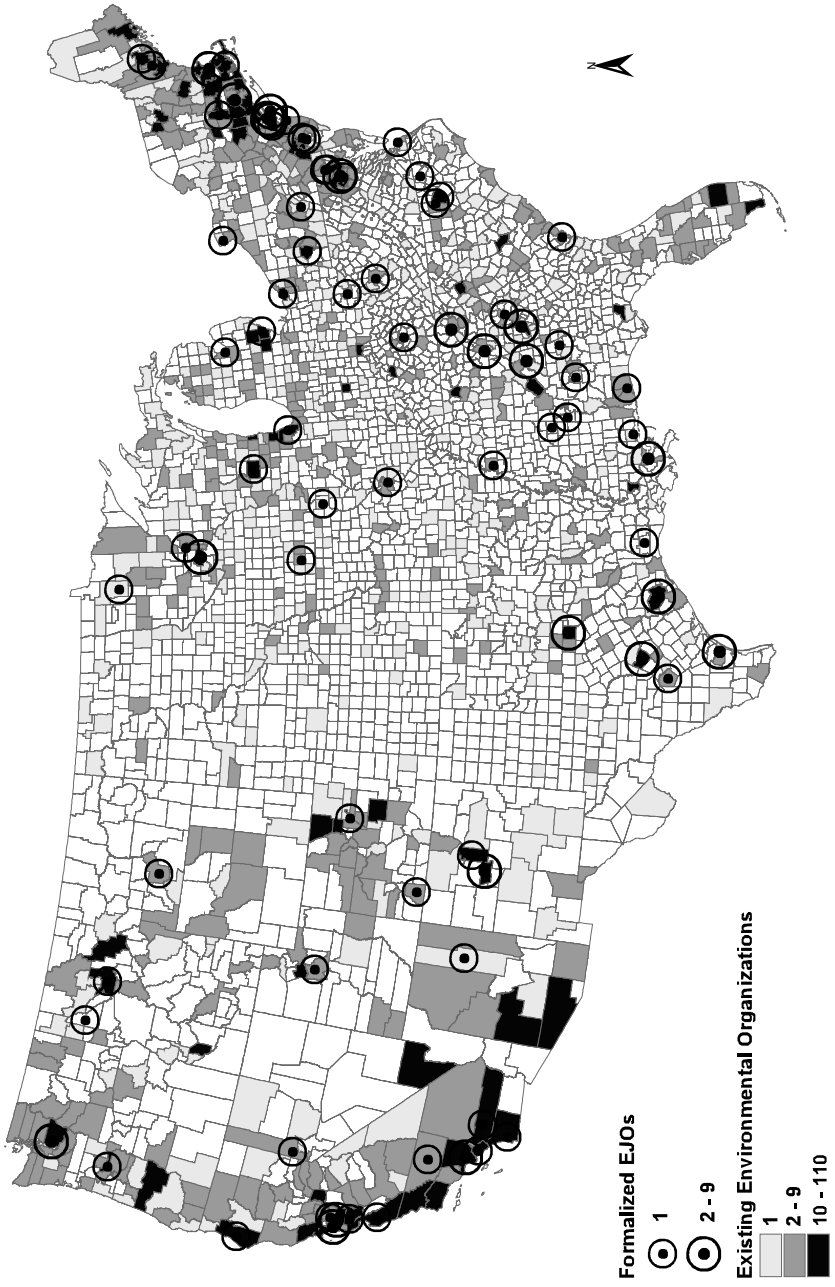

Figure 1 • ***Spatial Distribution of Formalized EJOs and Existing Environmental Organizations at the County Scale, 1990–2008***

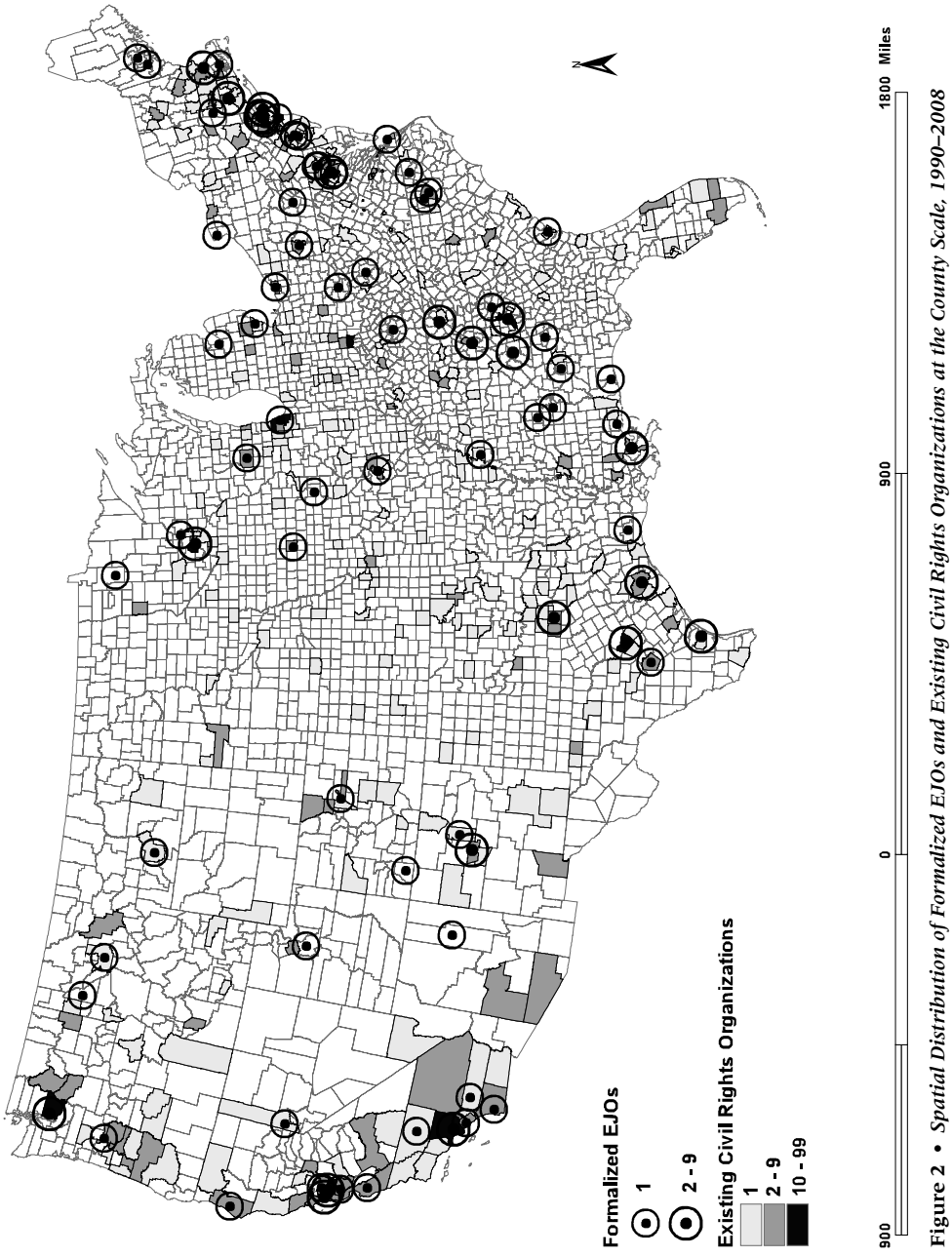

Figure 2 • *Spatial Distribution of Formalized EJOs and Existing Civil Rights Organizations at the County Scale, 1990–2008*

NIMBY frame and civil rights frame had a conceptual link in Warren County that enabled the emergence of environmental justice," indicating the spatial importance of this intra-group cooperation among newly emerging and specialized organizations. These observations concerning the environmental justice movement lead to the following two hypotheses:

Hypothesis 1: Civil rights organizational density in 1989 is positively associated with EJO formation across counties during the 1990s.

Hypothesis 2: Environmental organizational density in 1989 is positively associated with EJO formation across counties during the 1990s.

Environmental Justice Organizations: Changing Over Time?

Despite observations that environmental justice organizations may have initially cooperated with various civil rights and environmental organizations, contemporary literature on the environmental justice movement notes major changes in the movement and its organizations. Thus, examining cross-effects at two points in time should help reveal potential changes in the density founding relationships over time and space. This is the case because EJOs (the ones we focus on in this analysis) have become more bureaucratized, oligarchic, and generalized (Brulle and Essoka 2005). Recently, Benford (2005) suggested that over time EJOs have become alike in that they are changing into social justice/civil rights organizations in order to be "everything to everyone." The notion that organizations within a social movement sector become similar over time is not new to the sociology of organizations. For instance, Paul DiMaggio and Walter Powell (1983)—in contrast to Michael Hannan and John Freeman (1977)—observe that organizations become more homogeneous and that organizational change seems to be more about processes "that make organizations similar without necessarily making them more efficient" (p. 147). Moreover, they specifically note that these changes occur in organizational fields, which means organizations share suppliers, sources, and product consumers. If Benford (2005) is correct and environmental justice organizations have become generalist environmental and social justice organizations (i.e., isomorphic), we should be able to draw upon notions of organizational density to understand the potential impact of this change on founding rates.

As previously noted, a niche is the set of the circumstances and conditions that lead an organization to prosper (Popielarz and Neal 2007:67). For the environmental justice movement, niche is a unique intersection of environment and civil rights (Bullard 2003; Pellow and Brulle 2005; Taylor 2000). Benford (2005), however, has argued that EJOs have moved away from this restricted niche toward a more generalized niche where organizational issues cover virtually "every social problem," becoming more bureaucratic in the process (Brulle and Essoka 2005). If Benford is correct, EJOs may be moving into an environment that places them in direct competition with generalist environmental and civil rights organizations. The argument, from an organizational ecology standpoint, stresses the expansion of the environmental justice niche from specialized to generalized. This transition may be related to trends in the general environmental movement (Bell 2009).

Recent observations of the formalized sector of the environmental justice movement suggest that EJOs are becoming even more formalized and have altered their original environmental justice framing. Moreover, as the EJO population matured, the organizations became increasingly homogenous and similar to their generalist counterparts in the civil rights and environmental movements. This increasing homogeneity should lead to greater competition between EJOs and organizations in the latter two movements. This logic leads us to the following two hypotheses:

Hypothesis 3: Civil rights organizational density in 1999 is negatively associated with EJO formation across counties during the 2000s.

Hypothesis 4: Environmental organizational density in 1999 is negatively associated with EJO formation across counties during the 2000s.

Originally, EJOs emerged as unique organizations and were aided by the existence of civil rights and environmental "initiator movements." Over time, EJOs engaged in "frame extension," became more general, and were more likely to compete with civil rights and environmental organizations. Such a result would clearly suggest Minkoff's findings are not generalizable across movement sectors and that cross-time and -space transitions in the EJO movement are unique.

Data and Methods

As evidence of their appeal, hundreds of EJOs emerged across the United States during the 1990s. These organizations are diverse and range from relatively small grassroots community organizations to the large specialized EJOs studied here (Bullard 1999; Bullard and Johnson 2000). While the study of decentralized, interpersonal, egalitarian EJOs is interesting, and case studies have revealed important information about the founding process in the case of individual EJOs, there has been no research that examines EJO formation processes among a sample of bureaucratic organizational forces behind the movement.[2] As previously noted, this study attempts to discover factors that explain EJO founding across space at two points in time and includes an assessment of the influence of civil rights and environmental organizations. To enable measurement of factors described above as potentially relevant, counties were employed as the unit of analysis because they are a common geopolitical unit of analysis for which data can easily be gathered (McCarthy, Baker, and Mosakowski 1988)[3] and because they provide an approximate consideration of the resources and membership from which EJOs are likely to draw.

Dependent Variables

Based on prior research, it can be hypothesized that the spatial distribution of EJOs will be influenced by the location of civil rights and environmental organizations. The main problem is identifying and classifying social movement organizations (Klandermans and Staggenborg 2002; Lofland 1996) and, among those groups, isolating EJOs so that their spatial location can be measured.

Identifying social movement organizations is a difficult task, and many can be small and hidden (e.g., kitchen table groups) and may actually fail to meet the definition of a social movement organization (Della Porta and Diani 2006; Diani 1992). To locate well-organized, visible environmental justice organizations founded between 1990 and 2008 a sampling frame of potential EJOs was constructed by consulting several online databases and print directories and employing conventional methodology for identifying these organizations. These sources were as follows.

The *People of Color Environmental Groups Directories*, created by Robert Bullard, contained over 400 organizations working on environmental justice-related issues.[4] The organizations

2. Andersen and Taylor (2004) observed that "the shape of a movement's organization may range from formal bureaucratic structures to decentralized, interpersonal, and egalitarian arrangements. *Many social movements combine both"* (p. 623; emphasis added; see also Rios 2000). Early environmental justice groups avoided formalized organizational structure, a key strategy confirmed at the original 1991 Summit. Therefore, it is likely that there may be more informal organizations than formal organizations making up the environmental justice movement. Thus it is important to emphasize that the organized groups we study here are not necessarily representative of the entire environmental justice movement and that they can be generalized only to the formalized sector of the movement. We thank an anonymous reviewer for pointing this out.

3. We found evidence that many organizations (63 percent) focus on environmental justice issues in their local area. This is theoretically consistent with a county-level analysis. In addition, even organizations that report having a state or national focus also appear to focus on local issues as needed.

4. The current directory lists more than 400 environmental justice groups in the continental United States as well as the District of Columbia, Puerto Rico, Canada, and Mexico. Directory listings were derived from individuals who provided the EJRC with names of organizations that were working on environmental justice issues. The original

in Bullard's directory are broadly defined to include many organizations that participate in environmental justice struggles, and so many are not niche organizations but generalist civil rights or environmental organizations.

Six additional print directories and online databases were employed in this search, including: (1) the *Encyclopedia of Associations* (Associations Unlimited 1990–99, 2009), (2) *Conservation Directory* (National Wildlife Fund 1990–99), (3) Active Cause, The Social Giving Network (Active Cause 2009), (4) IRS Business Master Files (IRS 2008), (5) the National Center for Charitable Statistics [NCCS] Core Data Files, 1989 to 2004 (NCSS 2008), and (6) GuideStar's National Nonprofit Research Online Database (Guidestar 2009). Finally, in an effort to identify groups excluded from these data sources, Google and newspaper (Lexis-Nexis) searches were conducted.

Organizations identified by these sources were used to create the dependent variable if those organizations self-identified as an EJO in their mission statement using at least one of the following terms: "environmental justice," "environmental injustice," "environmental racism," "environmental equality," "environmental inequality," "environmental equity," and/or "environmental inequity." There was unanimous inter-coder reliability between the two authors who engaged in coding these organizations. It should also be noted that while mission statements can change over time, researchers made efforts to examine those statements consistent with the founding date of the organization. This coding resulted in 161 organizations that used environmental justice terminology in their mission statements,[5] a sample that stands favorably to prior EJO research.[6] Of these organizations, a total of 106 were founded after

list of environmental justice SMOs was expanded using snowball sampling techniques. Groups were also identified by separate unsolicited mailings to groups, foundations, and activists that could potentially identify any environmental justice organizations working in their communities. All environmental justice organizations were contacted to obtain the demographic information listed in the directory.

5. We find more broadly that nearly 1,341 organizations had environmental justice-related activity. These additional organizations did not specialize in environmental justice and were instead often identified as general civil rights and environmental organizations sympathetic to environmental justice causes and concerns, or they had participated in environmental justice related activities as noted somewhere in their additional printed materials or Web postings (if online). These additional organizations do not list "environmental justice," "environmental injustice," "environmental racism," "environmental equality," "environmental inequality," "environmental equity," and "environmental inequity" in their mission statements or organization purpose. Organizational ecology theory distinguishes these more generalist organizations from specialized environmental justice organizations.

6. Because Brulle and colleagues' list of environmental organizations is considered to be the gold standard for comparison, we compared our final list of organizations to theirs for the subset of environmental justice organizations that they gathered. We are indebted to Robert Brulle for supplying these data on February 8, 2010 (see Brulle et al. 2007). We were able to locate in our initial data set every organization in Brulle and colleagues' subset of environmental justice organizations. As Brulle and colleagues (2007) note, however, their data look at "degrees of involvement" in the environmental justice movement to classify organizations. We classify organizations that claim to specialize in environmental justice by what they report in their mission statement. To be listed as having a major focus the group had to report that more than 50 percent of its activities were environmental justice-related (Brulle et al. 2007). Brulle and colleagues identified 124 "major" environmental justice organizations founded between 1970 and 2003 according to this classification. They also found several additional organizations that were much less involved in the movement. The difference between Brulle and colleagues' coding scheme and ours is based on descriptive and theoretical differences. Brulle and colleagues (2007) are interested in national-level discursive frames over time, while we are interested in the founding of specialized EJOs across space. Brulle and colleagues (2007:257) exclude local environmental justice organizations, as their focus is on national environmental groups. We identify organizations that claim that their primary mission is environmental justice. Thus, we find that a total of 52 of Brulle and colleagues' 124 "major" environmental justice organizations (i.e., based on discursive frames) also "specialize" (according to organizational ecology). For those nationally focused organizations, there is almost complete overlap between Brulle and colleagues' data set and ours. The remaining environmental justice organizations in Brulle and colleagues' data set are classified by us as general civil rights and environmental organizations and are considered generalist organizations that may compete in the formal sector of the environmental justice movement. To be clear, these groups are involved in environmental justice-related activities, but they do not report specializing in environmental justice. In addition to Brulle and colleagues' 52 organizations, we located 109 formalized environmental justice organizations. These 109 organizations are specialized and formalized organizations that specialize in state- or local-level environmental justice issues. Our focus is on formalized and specialized organizations at the county level of analysis and is therefore consistent with an organizational ecology approach to studying the spatial agglomeration of organizations.

1990. The 106 EJOs founded between 1990 and 2008 are examined in this analysis. The 55 EJOs founded prior to 1990 are included in the analysis as a measure of EJO density that may influence EJO founding (as noted below).

Two dependent variables were created to measure EJO founding. *Founded 1990–1999* is a variable that measures whether an EJO was founded in a county during the 1990s (1 = EJO founded; 0 = EJO not founded). *Founded 2000–2008* is a variable that measures whether an EJO was founded in a county between 2000 and 2008 (1 = EJO founded; 0 = EJO not founded). Only a few counties had multiple founding dates during the two decades examined (e.g., San Francisco, 6 EJOs founded during the 1990s; District of Columbia, 4 EJOs during the 1990s; Fulton County, 4 EJOs during the 1990s), so both *Founded 1990–1999* and *Founded 2000–2008* were constructed as dichotomous variables. Between 1990 and 1999, 75 organizations specializing in environmental justice were founded in 51 different counties, while between 2000 and 2009, 31 were founded in 28 different counties.

Civil Rights and Environmental Density

To assess the effects of civil rights and environmental organizations on EJO founding, it is necessary to identify these groups. The number of civil rights organizations per county in 1989 and 1999 were identified using the core data files obtained from the National Center for Charitable Statistics (NCCS). The NCCS is one of the most comprehensive sources of nonprofit data available to date and uses the National Taxonomy of Exempt Entities (NTEE) system to classify organizations in keeping with its mission to promote uniformity and comparability of data within specific nonprofit sectors. To estimate civil rights density, organizations coded as "R" in the NTEE taxonomy (R01, R12, R19–R22, R24, and R29) in 1989 (*Civil Rights Density_1989*) and in 1999 (*Civil Rights Density_1999*) were employed. Civil rights groups include those that focus on a variety of civil rights, including African American, Hispanic, Asian American, Native American, and women's organizations. NCCS core files were also employed to extract the number of environmental organizations per county in 1989 and 1999 (*Environmental Density_1989* and *Environmental Density_1999*). Environmental groups use the "C" NTEE codes in the NCCS (C01, C12, C20–C35, and C50).

Controls

In addition to examining the relationship between density and founding, controls for other community-level variables that may be indicators of founding rates, such as community resources and political engagement, or that may alter the relationship between density and founding, were included (Jenkins 1983; McAdam and Scott 2005; McCarthy and Zald 2003). Specifically, the following control variables were included: (1) environmental justice density, (2) community resources and political engagement, (3) black churches and minority population demographics, (4) environmental hazards, and (5) population and regional controls. In each case, the same variables were created for use in the 1990–1999 founding analyses and the 2000–2008 founding analyses so that comparisons could be made across decades.

Environmental Justice Density. To examine the relationship between environmental justice density and founding, a count of the number of existing specialized environmental justice organizations in counties in 1989 and in 1999 (*EJO Density_1989* and *EJO Density_1999*) was produced. As previously noted, the environmental justice literature suggests that existing organizations represent the new environmental paradigm and provide the ideological space for subsequent environmental justice groups to emerge. This observation is consistent with discussions about legitimacy in the organizational ecology literature (Carroll and Hannan 2000). Thus, the relationship between existing and future organizations should be positive, especially during the 1990s when the number of specialized environmental justice organizations expanded.

Community Resources and Political Engagement. EJOs are likely to emerge in counties with high levels of education, income, financial support, and political engagement. First, EJOs should develop in areas where more educated and affluent populations exist, as they can provide money and expertise (McAdam 1982; McGurty 2000). Per capita income, percentage of college graduates, and foundation assets were employed to measure education and affluence. Income and education variables were derived from the 1990 and 2000 *Census of Population and Housing STF 3a* files (U.S. Bureau of the Census 1992, 2004). Income measures per capita income (in thousands of dollars) across counties in 1990 (*Per Capita Income_1990*) and in 2000 (*Per Capital Income_2000*). Education measures the percentage of college graduates age 25 and older in 1990 (*Percent College_1990*) and in 2000 (*Percent College_2000*).

The potential capacity for existing county organizations to aid in the financial support of EJOs is also controlled. Research suggests that community resources in the form of foundations are positively related to SMO formation since they provide the funding opportunities necessary for SMO formation (McCarthy, Baker, and Mosakowski 1988). The potential financial resources available to local EJOs was measured by examining aggregate assets (in dollars) of local environmental and civil rights foundations. These assets may be distributed to aid nonprofit environmental justice organizations. These data were obtained from the NCCS and represent the total assets per county (in hundreds of thousands of dollars) for environmental foundations (R12 [fundraising and distribution] and R19 [other support]) and civil rights foundations (C12 and C19) in 1989 (*Foundation Assets_1989*) and in 1999 (*Foundation Assets_1999*).

Opportunities in the political environment may provide space for EJOs to form. Voting is one aspect of the political climate that can be easily controlled in the analysis of SMO formation. To control for these influences, the percentage of eligible county voters who turned out for the presidential elections in 1992 and 2000 (*Percent Voted_1992* and *Percent Voted_2000*) was included. Low voter turnout may signal alternative forms of political engagement because traditional political mechanisms must be challenged through unconventional social movement tactics (Schock 1999). Thus, voter turnout is likely to be negatively associated with EJO founding. The second measure of political engagement is the ratio of Democrat to Republican votes in both the 1988 and 2000 presidential elections (*Democrat/Republican_1988* and *Democrat/Republican_2000*). While environmental issues combined with issues of justice and equity are often seen as bipartisan in nature, there is certainly room to argue that Democrats are more favorable to social programs that promote these issues through stronger regulation and oversight (Vig and Kraft 2000). Counties where Democrats outnumber Republicans by large voting margins should theoretically provide more political opportunities to EJOs.

Black Churches and Minority Demographics. Scott Fitzgerald and Ryan Spohn (2005) note that "[c]lergy can direct members' actions toward progressive causes and political action [and] provide a cultural legitimate forum from which moral and ethical opposition to oppression is cultivated and diffused" (p. 1019). Black churches, and more specifically the adherents of those churches, are noted for working to alleviate social problems in the black community such as poverty, racism, unemployment, and violence. Melissa Checker (2004) found that "many members [of the Southern African American Environmental Justice Network] were black Baptists and believed that the Christian faith was a primary source of both spiritual and political power" (p. 175). Moreover, many members in that network felt that the environmental movement was simply an extension of the civil rights movement and also relied heavily on black churches and their members for support. William Arp and Ketih Boeckelman (1997) note that black church attendance is a strong individual predictor of environmental justice participation. Research on black churches during the civil rights movement indicates that these organizations can support other organizations with space, personnel, supplies, and a membership base (McAdam 1982). While previous research offers strong evidence of a possible association between black church adherence and EJO founding, the relationship between

religion and political activity is complicated. Churches may derail or support environmental justice political activity since they may orient members and resources in ways that promote conventional or unconventional political activism (Brown and Brown 2003; Stepan-Norris and Southworth 2007). To address the potential relationship between black church adherence and EJO founding, the proportion of African American adherents in traditional black churches (*AA_Churches*) across counties was measured using the *Religious Congregations and Membership Study* (*RCMS*) obtained from the Association of Religion Data Archives (2008). While many scholars have argued that the *RCMS* provides the best and most complete enumeration of religious congregations, it nevertheless suffers from considerable problems. For example, African American membership and the number of adherents in black churches are not counted in the 2000 *RCMS* survey (Finke and Scheitle 2005). Thus, 2000 *AA_Church* was estimated using 1990 *RCMS* data and adjusted using data from the *1990 Census of Population and Housing STF 3a* files (Finke and Scheitle 2005). Black churches are identified as African Methodist Episcopal, Christian Methodist Episcopal, Church of God in Christ, National Baptist Convention (American and USA), National Missionary Baptist Convention of America, Pentecostal Assemblies of the World, and Progressive National Baptist Convention.

Doug McAdam, John McCarthy, and Mayer Zald (1996) note that opportunities and resources predict organization founding, but shared meanings and definitions that people bring to their situation also encourage mobilization. This notion of meanings advanced by the "new social movement" approach during the 1980s suggests that contemporary social movements differed from those of the industrial era (Pichardo 1997). Race and ethnicity are important indicators of social location, which can determine how people frame problems and issues, especially those related to the environment (Taylor 2000). Thus, it is important to take into consideration the demographic composition of each county by measuring the percentage of black and Hispanic residents as potential indicators of EJO founding across counties in 1990 (*Percent Black_1990* and *Percent Hispanic_1990*) and 2000 (*Percent Black_2000* and *Percent Hispanic_2000*). Both variables were derived from the *Bureau of Census STF 3a* files and should be positively related to EJO formation because these particular segments of the population represent the base of the environmental justice movement in terms of ideas and members (Taylor 2000). As Zald and Roberta Ash (1966) note, people who identify with a movement represent the potential support base for the organization and are therefore highly important to the formation of the movement.

Environmental Hazards. Early movement literature suggests that grievances stimulate SMO formation (Gusfield 1970, Kornhauser 1959), and that affluent and educated members of society are likely to use conventional political avenues to pursue grievances, while the disadvantaged are likely to use "protest politics" (Fitzgerald and Spohn 2005). As theories of SMO formation continued to develop, the central focus on grievances subsided (Shefner 1995). While John Lofland (1996) noted that by itself a grievance is not enough to cause an SMO to emerge, the existence of a grievance may generate a context in which existing social arrangements and inequities are questioned, increasing the likelihood that SMOs emerge. In support of this view, Robin Saha and Paul Mohai (2005) suggest that EJOs are rational responses to environmental inequalities that emerged and intensified over time. In addition, a considerable body of research indicates that there is a relationship among environmental hazards, race, and income (Downey 2007). While the reason for this association has been questioned, the general consensus is that minorities and the poor are more likely to live near a variety of environmental hazards (Liu 2001; Ringquist 2005).

To examine these influences, three measures of environmental hazards were included in the analysis: (1) hazardous waste sites, (2) toxic releases, and (3) Superfund sites. These three indicators of county pollution should be positively related to the location of EJO founding. Thus, it may be the case that organizations are likely to develop in response to disproportionate levels of environmental hazards in the community.

The location of hazardous waste sites was measured dichotomously and indicates whether a treatment, storage, and disposal facility (TSDF) was sited in the county prior to 1990, i.e., during the 1980s, and prior to 2000, i.e., during the 1990s (*TSDF_1990*; *TSDF_2000*). These data were obtained from the *Environmental Services Directory* (Environmental Information Limited 1995). TSDFs are highly controversial because of their negative health and economic impacts on surrounding communities. Thus, TSDFs may become lightning rods for community protest and may increase feelings of inequality among county residents.

Toxic releases (in hundreds of thousands of pounds) reported per square mile in 1990 (*Toxic Releases_1990*) and 2000 (*Toxic Releases_2000*) for each county, averaged over a three-year period to avoid large fluctuations in reporting, were also measured (e.g., 1989, 1990, and 1991 for the 1990 model; and 1999, 2000, and 2001 for the 2000 model). Data on total toxic releases to air, ground, and water were obtained from the U.S. Environmental Protection Agency's *Toxic Release Inventory Explorer* database, or TRI (EPA 2008). This database was created to notify the public of the types and amount of chemical releases in their communities in the hope that public disclosure would prompt companies to reduce their chemical emissions (Burns et al. 2008). The TRI database consists of information on approximately 650 chemicals released at approximately 23,000 facilities across the United States. Industries that manufacture or use toxic chemicals above limits set by law are required to report those releases annually to the EPA. Counties with higher levels of toxic releases are more likely to be aggrieved and form organizations to fight hazardous waste pollution.

The number of Superfund sites in each county in 1990 (*Super_1990*) and 2000 (*Super_2000*) was measured to determine their impact on EJO formation, which might account for the relationship between density and founding. Superfund sites are abandoned waste sites that pose a significant health risk to the surrounding community, as measured by a hazard ranking score. Contaminated sites with a large-enough score are placed on the National Priority List (NPL) by the federal government and are eligible for taxpayer money to assist with cleanup and to become designated Superfund sites. The relationship between Superfund sites and EJO formation should be positive since such sites tend to be located in disadvantaged communities where EJOs are likely to emerge (Stretesky and Hogan 1998). Data on Superfund sites and the date they were listed on the NPL were obtained from the U.S. Environmental Protection Agency (EPA) (2010).

Additional Demographic and Regional Controls. The more residents there are in a county, the more likely it is that some of them will organize to demand environmental justice. Moreover, larger populations are able to provide a larger recruitment base (Lofland 1996:181). McCarthy and colleagues (1988) found, for example, that population size was one of the strongest predictors of the formation of anti-drunk-driving SMOs. Thus, we included a measure of total population size in each county in 1990 and 2000 (*Population Size_1990* and *Population Size_2000*), measured in hundreds of thousands of residents, to account for the SMO demand. The variable was created using the 1990 and 2000 *Census of Population and Housing, STF 3a* files (U.S. Bureau of the Census 1992, 2004). If previous research is a useful guide, the greater the number of county residents, the more likely it is that an EJO will form.

Finally, we created a dummy variable that measures region of the country (*Region* [*Midwest* vs. *West, South,* and *Northeast*]) using the 1990 and 2000 *Census of Population and Housing*. This variable addresses whether the relationship between density and EJO founding varies regionally (Bullard 1990).

Analyses

The dependent variables *Founding 1990–1999* and *Founding 2000–2008* measure rare events, as 106 EJOs were founded across 3,144 counties during the two time periods under investigation (see Appendix A). Gary King and Langche Zeng (2001) demonstrate that logistic

regression coefficients can be biased when rare events are examined. Therefore, all regression estimates are produced using the ReLogit procedure in STATA.[7] Because this analysis examines counties, spatial correlations among model residuals are also a concern and may bias logistic regression coefficients. As a result, the residuals estimated in STATA were exported into GeoDa so that Moran's I, a common indicator of global spatial correlation, could be examined (Anselin 2003). Results for Moran's I suggest that residuals are not autocorrelated in the 1990–1999 models (1A to 1E) but are correlated in the 2000–2008 models (2A to 2E). To correct for spatial correlation, two spatial lag variables (*Spatial Lag 1990* and *Spatial Lag 2000*) were created and included in each model estimated in Tables 1 and 2, as noted below. The spatial lag variables simply represent the number of EJOs founded in adjacent counties. This procedure reduced, but did not completely eliminate, spatial correlation among the residuals in Table 2 models. Thus, in addition to rare events logistic regression with a spatial lag, several alternative spatial error models were estimated in GeoDa. These additional models eliminated the autocorrelation in the Table 2 models, but did little to change the statistically significant variables in the various models.[8] First-order interactions and nonmonotonic relationships do not exist in these data. Multicollinearity, which was assessed through the use of variance inflation factor (VIF) scores and bivariate associations (see Appendix B), does not appear to be problematic.[9]

Five logistic regression models examine variation in EJO founding across counties between 1990 and 1999, and five models examine variation in EJO founding across counties between 2000 and 2008. Each model contains the independent variables of interest (*Civil Rights Density* and *Environmental Density*) as well as the three variables thought to be critically important in organizational founding (*EJO Density*, *Total Population*, and *Region*). As previously noted, EJO density is an important indicator of legitimacy and competition, while total population has been identified as an important predictor of social movement organization formation (McCarthy et al. 1988; Zald and Ash 1966). Region of the country is included in all models because environmental justice research suggests that EJOs vary considerably by region (see Bullard 1994).

7. ReLogit in STATA corrects for potential bias in coefficients when the dependent variable measures a rare event. We also conducted an analysis on the count of founding as an alternative approach to logistic regression. This was done in order to capture variation in the dependent variable for the counties where multiple EJOs were founded during the 1990s (thirteen counties) and the 2000s (two counties). This alternative analysis required the use the count of EJO as the dependent variable as opposed to the dichotomous EJO variables. Both negative binomial regression and zero-inflated negative binomial regression were used to examine those counts and they suggest very few important differences from ReLogit (results available upon request).

8. Coefficients and standard errors were different from those estimated using rare events logistic regression since GeoDa does not model dichotomous dependent variables.

9. Multicollinearity is always a concern when several variables are examined simultaneously, since it may distort standard errors that may distort tests of statistical significance (Fox 1991). For instance, Fox (1991) determined that for multivariate models, variance inflation factors (VIF) scores as low as four may signal problems of multicollinearity. In the fully specified model in Table 1 (Model 1E), the mean of the VIF score across all variables is 2.01, with the largest VIF score equal to 3.70 for the variable *Civil Rights Density 1989*. When *Civil Rights Density 1989* was removed from the fully specified model in Table 1, Model 1E (results not shown), the coefficients and standard errors remained the same for all variables in the model except *Environmental Density 1989*, which became more positive and statistically significant (OR = 1.24; $p < .05$; two tailed). Coefficients and standard errors for other variables in the Model changed little, suggesting that *Civil Rights Density 1989* did little to distort statistical significance tests. Moreover, the average VIF scores for the variables remaining in Model 1E dropped to a modest 1.83, providing additional support for the position that multicollinearity is not problematic in these models except as noted above. We repeated this procedure for the fully specified model in Table 2. Again we found that VIF scores averaged 2.09, with the highest score equal to 3.79 for *Environmental Density 1999* in the fully specified model in Table 2 (Model 2E). When *Environmental Density 1999* was removed from the fully specified model (results not shown), *Civil Rights Density 1999* became more negative and statistically significant (OR = .83; $p < .05$; two tailed). Again, the ORs and standard errors remained the same for the variables that remained in the model. Overall, we were unable to find evidence that any variables distorted statistical significance tests because of the collinearity that they introduced into the models.

Our analysis examines the correlation among civil rights density, environmental density, and founding while adjusting for *EJO Density*, *Total Population*, *Region*, and three sets of theoretically similar control variables. We begin with the baseline Models 1A (Table 1) and 2A (Table 2) to examine the correlation among civil rights density, environmental density, and EJO founding while only adjusting for EJO density, county population, region, and the spatial lag. Models 1B and 2B examine the correlation among civil rights density, environmental density, and founding while adjusting for community resources as measured by percent in college, per capita income, and foundation support and political engagement as measured by percent voting and the Democrat to Republican ratio. Models 1C and 2C adjust for demographics in the form of the percentage of a county's population that is black and Hispanic as well as the proportion of the black population devoted to traditional African American churches. Finally, Models 1D and 2D examine the correlation among civil rights density, environmental density, and founding, while adjusting for environmental hazards in the form of toxic releases, treatment, storage and disposal facilities, and Superfund sites. The fully specified Models 1E (Table 1) and 2E (Table 2) examine the association among civil rights density, environmental density, and founding by simultaneously adjusting for all possible control variables. The associations in the fully specified model should be viewed with caution, however, since there is a limited number of EJOs founded in any one decade.

Results

Tables 1 and 2 provide the rare events logistic regression coefficients, standard errors, and their associated odds ratios for variables of interest and controls. Odds ratios can be interpreted as probability or risk ratios because the marginal probability of a founding is so low that the odds and probabilities are essentially identical.

While the correlation between civil rights density and EJO founding is statistically insignificant in Model 1A, the results approached statistical significance (OR = 1.45; $p = .109$; two tailed) and, when combined with the results for the coefficients in Models 1B through 1E, do not completely rule out support for Hypothesis 1, that civil rights organizations provided cross-movement support for the formation of environmental justice organizations. In fact, when the coefficients for civil rights density are examined across all five models in Table 1, they are statistically significant two times and approach statistical significance three times (ranging from $p = .109$ to $p = .138$; two tailed). Importantly, in the fully specified Model (1E), *Civil Rights Density 1989* is statistically significant and supports Hypothesis 1, which suggests that civil rights density is related to the formation of EJOs (OR 1.35; $p < .10$; two tailed). In short, the overall picture for in Table 1 lends moderate empirical support for the hypothesis that civil rights organizations provide important positive cross-movement effects for EJOs and that spatial agglomeration of civil rights organizations and EJO was occurring between 1990 and 1999. In making this claim it is important to keep in mind that even with the multitude of controls all coefficients for *Civil Rights Density 1989* are in the predicted direction; are statistically significant or fall just outside statistical significance ($p < .10$; two tailed); and that the coefficient for *Civil Rights Density 1989* is statistically significant in the fully specified model.

Turning to Hypothesis 2, Model 1A suggests that even while controlling for EJO density, population, region, and the spatial lag, environmental density is positively related to environmental justice founding (OR = 1.34; $p < .01$; two tailed). This finding provides initial support for Hypothesis 2, that EJO formation is positively correlated with the number of existing environmental organizations across counties between 1990 and 1999. However, when the correlations between environmental organizations and EJO formation are examined across all models in Table 1, they appear statistically significant and positively related to EJO formation

Table 1 • ***Rare Events Logistic Regression Predicting EJO Founding Across U.S. Counties, 1990–1999***

	Model 1A b(se) Odds Ratio	*Model 1B b(se) Odds Ratio*	*Model 1C b(se) Odds Ratio*	*Model 1D b(se) Odds Ratio*	*Model 1E b(se) Odds Ratio*
EJO density 1989	2.18(.86)	2.02(.83)	1.96(.94)	2.00(.81)	1.72(.84)
	8.83**	7.54**	7.09**	7.39***	5.58**
Civil rights density	.37(.21)	.29(.19)	.31(.21)	.37(.20)	.30(.17)
1989	1.45[a]	1.34[b]	1.36[c]	1.47*	1.35*
Environmental	.29(.11)	.19(.10)	.29(.10)	.27(.11)	.16(.10)
density 1989	1.34***	1.21*	1.34***	1.31**	1.17[d]
Percent college 1990		.11(.02)			.12(.02)
		1.12***			1.13***
Per capita income		−.08(.09)			−.09(.09)
1990		.92			.91
Foundation assets		−.68(.32)			−.64(.32)
1990		.51**			.53**
Percent voted 1992		−.04(.03)			−.03(.03)
		.96			.97
Democrat/Republican		.40(.19)			.24(.20)
1988		1.49**			1.27
AA churches			.02(.01)		.02(.01)
			1.02**		1.02***
Percent black 1990			.02(.01)		.02(.02)
			1.02		1.02
Percent Hispanic 1990			.02(.01)		.01(.01)
			1.02		1.01
Toxic releases 1990				−.74(2.34)	.11(.19)
				.48	1.12
TSDFs 1990				.27(.18)	.17(.17)
				1.31	1.18
Superfund sites 1990				−.03(.21)	.004(.17)
				.97	1.00
Total population 1990	.21(.06)	.21(.06)	.18(.06)	.16(.07)	.14(.06)
	1.23***	1.23***	1.19***	1.17**	1.15***
Region (vs. Midwest)					
Northeast	.90(.90)	.72(.81)	.84(.94)	1.00(.84)	.92(.77)
	2.45	2.05	2.32	2.72	2.50
South	1.14(.51)	.84(.53)	.52(.56)	1.21(.53)	.52(.58)
	3.09**	2.31	1.68	3.35**	1.68
West	1.23(.60)	.78(.60)	1.2(.64)	1.27(.63)	.96(.67)
	3.39**	2.18	3.32*	3.56**	2.61
Spatial Lag 1990	−.62(.26)	−.70(.22)	−.61(.25)	−.48(.24)	−.55(.20)
	.54**	.50***	.54***	.62**	.58***
Constant	−5.84(.46)***	−5.31(1.22)***	−6.14(.52)***	−5.97(.51)***	−6.02(1.38)***
N	3137	3108	3137	3137	3108
Psuedo R^2	.39	.43	.40	.40	.44
Log Likelihood	−158.56	−146.17	−155.30	−156.95	−142.84

[a] $p = .109$ [b] $p = .116$ [c] $p = .138$ [d] $p = .106$ (two-tailed tests)
*$p < .10$ **$p < .05$ ***$p < .01$ (two-tailed tests)

Table 2 • *Rare Events Logistic Regression Predicting EJO Founding Across U.S. Counties, 2000–2008*

	Model 2A b(se) Odds Ratio	*Model 2B b(se) Odds Ratio*	*Model 2C b(se) Odds Ratio*	*Model 2D b(se) Odds Ratio*	*Model 2E b(se) Odds Ratio*
EJO density 1999	.78(.30)	.72(.30)	.68(.29)	.70(.29)	.60(.30)
	2.18***	2.06**	1.97**	2.01**	1.82**
Civil rights density 1999	−.06(.08)	−.25(.10)	−.09(.08)	−.04(.08)	−.18(.10)
	.94	.78**	.91	.96	.84*
Environmental density 1999	.04(.05)	−.01(.04)	.05(.04)	.03(.04)	−.01(.04)
	1.04	.99	1.05	1.03	.99
Percent college 2000		.05(.03)			.06(.04)
		1.05			1.06
Per capita income 2000		.03(.05)			−.02(.60)
		1.03			.98
Foundation assets 2000		.15(.10)			.13(.09)
		1.16			1.13
Percent voted 2000		.01(.03)			.04(.04)
		1.01			1.04
Democrat/Republican 2000		.83(.20)			.56(.29)
		2.29***			1.75*
AA churches			.03(.01)		.03(.01)
			1.03***		1.03***
Percent black 2000			.04(.01)		.03(.02)
			1.04***		1.03
Percent Hispanic 2000			.02(.02)		.02(.03)
			1.02		1.02
Toxic releases 2000				.50(.17)	.70(.19)
				1.64***	2.01***
TSDFs 2000				−.26(.19)	−.20(.19)
				.77	.82
Superfund sites 2000				.13(.09)	.10(.08)
				1.14	1.11
Total population 2000	.11(.04)	.11(.03)	.08(.04)	.16(.04)	.15(.06)
	1.12***	1.12***	1.08**	1.17***	1.16**
Region (vs. Midwest)					
Northeast	1.96(.87)	1.15(.78)	1.62(.86)	1.34(.85)	.69(.80)
	7.10***	3.15	5.05	3.82	1.99
South	.91(.80)	.78(.67)	−.29(.87)	.60(.72)	−.24(.80)
	2.48	2.18	.74	1.82	.79
West	1.33(.87)	1.12(.75)	1.26(.96)	1.04(.77)	.96(.81)
	3.78	3.06	3.52	2.15	2.61
Spatial lag 2000	.37(.62)	.06(.64)	.20(.65)	−.08(.87)	−.36(.85)
	1.44	1.06	1.22	.92	.70
Constant	−6.11(.71)***	−7.91(1.48)***	−6.55(.76)***	−5.92(.58)***	−9.66(.85)***
N	3137	3111	3137	3137	3111
Psuedo R^2	.24	.30	.28	.26	.35
Log Likelihood	−121.67	−111.26	−115.50	−118.75	−104.67

*$p < .10$ **$p < .05$ ***$p < .01$ (two-tailed tests)

four out of five times and marginally insignificant ($p = .106$; two tailed) but positively correlated EJO formation in the fully specified model (Model 1E). This finding, again, lends only moderate empirical support to Hypothesis 2 and the notion that environmental organizations provide important positive cross-movement effects for EJOs between 1990 and 1999. The fact that correlation between environmental organizations and EJOs is marginally insignificant in the full model does not support Hypothesis 2, and could be a function of specification error as we include several seemingly statistically irrelevant variables in the fully specified model. In short, results are more suggestive than supportive.

One potential reason that only moderate support exists for Hypotheses 1 and 2 when Table 1 models are considered in total might be the fact that civil rights and environmental organizations are more general indicators of existing political organization density and therefore tap the same general concept that EJOs emerge where supporting organizations exist—regardless of the kind (i.e., environmental or civil rights) of supporting organization. Importantly, when *Civil Rights Density 1989* was estimated, removing only *Environmental Density 1989* from Models 1A through 1E, it was statistically significant ($p < .05$; two tailed) and positively related to EJO formation in each model estimated and is therefore is highly supportive of Hypothesis 1 (analysis not shown but available upon request). At the same time, when the coefficient for *Environmental Density 1989* was estimated, removing only *Civil Rights Density 1989* from Models 1A through 1E, that coefficient was statistically significant in every model ($p < .05$; two tailed) and highly consistent with Hypothesis 2 (results not shown but available upon request). Thus, while there is moderate support for Hypotheses 1 and 2, it may also be the case that general levels of environmental and civil rights organizational density are important in the formation of EJOs across counties between 1990 and 1999. Despite these findings one can be fairly certain that for the relatively large and formalized EJOs examined here, existing civil rights and/or environmental organizations tend to be positively associated with EJO formation across counties between 1990 and 1999. This suggests that environmental and civil rights organizations are more likely than not to have positive cross-movement effects on the founding of EJOs during the 1990s.

Several control variables are also correlated with EJO formation across counties between 1990 and 1999. First, EJO density is positively related to EJO formation in each model (1A to 1E). This finding is consistent with the for-profit research on the relationship between density and founding (Carroll and Hannan 2000). This finding also lends support to the agglomeration effects identified in the organizational ecology literature in the for-profit organizational literature. County population is also consistently associated with EJO formation and suggests that larger, more formalized EJOs form in more populated counties. This finding is also consistent with McCarthy and colleagues' (1988) observations on the effect of population on social movement organization formation.

Second, the proportion of black church adherents was a strong and positive predictor of EJO founding (OR = 1.02; $p < .01$; two tailed) in Models 1C and 1E in Table 1. Thus, each additional 1 percent of African American adherents in traditional black churches increased the odds of EJO formation by a factor of 1.02. This result provides some support for Arp and Boeckelman's (1997) qualitative observations that black church adherence is an individual-level predictor of environmental justice participation. Third, we discovered that foundation assets were negatively related to EJO formation, opposite of the expected effect (OR = .51; $p < .05$; two tailed; and OR = .53; $p < .05$; two tailed). Theoretically, environmental and civil rights foundations should provide financially supportive environments for the emergence of EJOs. A post hoc explanation for this finding may be that EJOs are primarily grassroots organizations that first emerged in counties with considerable ideological support (as noted by the odds ratios for civil rights, environmental, and environmental justice organization density in Models 1A to 1E, Table 1) but few financial resources by way of environmental and civil rights foundations. Also, as noted by Daniel Faber and Deborah McCarthy (2001) in their study of foundation resources, EJOs receive little in the way of funding compared to other

environmental organizations. Our results concerning funding seem to confirm that finding, but more research is needed to determine why this is the case. Finally, in Table 1 the proportion of college graduates is positively correlated with EJO formation across counties. For instance, in Models 1B and 1E the percentage of college graduates in the county is associated with an increase in the odds that an EJO will emerge (OR = 1.12; $p < .01$; two tailed; and OR = 1.13; $p < .01$; two tailed), suggesting that these organizations are likely to develop where more educated populations exist (McAdam 1982).

Table 2 displays the results for EJO foundings that occurred between 2000 and 2008. In contrast to the results for civil rights and environmental density in Table 1, it appears that civil rights and environmental organizations are moving in a direction that could signal competition with forming EJOs—though, as explained shortly, there is not significant support for Hypotheses 3 and 4. With respect to the correlation between civil rights density and EJO formation there seems to be some weak to moderate support for Hypothesis 3. First, as previously noted, the association between civil rights density and EJO formation was uniformly positive in Table 1, and statistically significant in two of those five models (Models 1D and 1E). In Table 2 the association between civil rights density and EJO formation is consistently negative and statistically significant in two of the five models (Models 2B and 2E). Thus, while many of the other important variables in Table 2, such as *EJO Density 1999*, *Population 2000*, and *AA Churches* remain statistically significant and consistent with the positive direction of the association with *Founding 1990–1999* as reported in Table 1, this is not the case for civil rights organizations. In short, in Model 2B each additional civil rights organization is associated with a decrease in the odds of an EJO's being founded in a county between 2000 and 2008 by a factor of .78 ($p < .05$; two tailed). In Model 2E each additional civil rights organization is associated with a decrease in the odds of an EJO's being founded by a factor of .84 ($p < .10$; two tailed). Taken together, Models 2A through 2E suggest that civil rights density is inversely related to EJO formation, providing moderate support for Hypothesis 3.

Results reported in Table 2 concerning environmental density are not as convincing as those for civil rights density. First, none of the correlations between environmental density and EJO founding is statistically significant in Table 2. Moreover, only two correlations are negative, while three are positive. Thus, findings for environmental organizations do not provide sufficient support for Hypothesis 4. For instance, as previously noted, in Table 1 four of the five correlations between environmental density and EJO formation were statistically significant and positive. Also, as previously noted, in Table 1 three of the five correlations between environmental density and EJO formation were statistically significant and positive. In Table 2, none of the associations was statistically significant and two of the five had negative coefficients. Thus, while definitive support for Hypothesis 4 is lacking, there may be an emerging, perhaps competitive, relationship between formal environmental and environmental justice organizations. Both the negative and statistically significant coefficient for civil rights density in the fully specified model and the trend from positive to negative correlations for both civil rights and environmental organizations between Tables 1 and 2 are consistent with Benford's (2005) observations that EJOs are becoming generalist organizations and may therefore be like any other generalist organizations. These results also suggest that movement organization sequencing occurs within the context of the spatial distribution of environmental justice, where the relationships may have turned from cooperative to competitive across counties and over two time periods (see also Minkoff 1997). It also signals that the EJO/environmental/civil rights formalized sector of movements may be becoming isomorphic.

Several controls also appear to be related to EJO formation. In particular, EJO density is positively correlated with EJO founding across counties between 2000 and 2008. This finding of a positive relationship between *EJO Density* and *EJO Founding* occurs across all models (2A through 2E) in Table 2. Just as in Table 1, this finding suggests agglomeration effects and the continued clustering of EJOs within counties. Importantly, then, competition effects among environmental justice organizations do not appear to be playing out across counties between

2000 and 2008, as EJO density is positively related to EJO founding. More specifically, in the fully specified model in Table 2 (Model 2E), each existing EJO in a county during 1999 increases the odds of another EJO's being founded in that county between 2000 and 2008 by a factor of 1.82 ($p < .05$; two tailed).

Other control variables are also statistically significant in Table 2. First, consistent with Table 1 results, the ratio of Democrats to Republicans in the 2000 presidential election was positively related to EJO formation (OR = 2.29 [Model 2B]; $p < .01$ to 1.75 [Model 2E]; $p < .10$; two tailed), suggesting that counties where voters favor Democrats are more likely to see EJOs founded between 2000 and 2008. We also find, contrary to the results in Table 1, that the counties with a larger black population are more likely to see an EJO form in that county between 2000 and 2008. Second, consistent with results in Table 1, the presence of African American church adherents was a strong predictor of EJO founding and the odds ration remained stable across Models 2C and 2E (OR = 1.03; $p < .01$; two tailed). In Model 2E, the fully specified model, a 1 percent increase in African American adherents across counties increases the odds of an EJO's forming in that county by a factor of 1.03. Again, just as in Table 1, we note that these findings provide support for Arp and Boeckelman's (1997) qualitative observations that traditional black churches play a role in environmental justice organization founding. We also find, contrary to the results in Table 1, that the counties with a larger black population are more likely to see an EJO form in that county between 2000 and 2008. This finding is consistent with a move away from the working class struggles that characterized one branch of the early environmental justice movement, toward more of a focus on racial justice. This finding also appears consistent with Benford's (2005) claims that the radical economic restructuring focus of initial EJOs has given way over time to more traditional social justice concerns—many of which appear to have a racial focus.

Table 2 also shows a correlation between toxic releases and EJO founding between 2000 and 2008. EJOs appear to emerge in counties with more toxic releases per square mile than counties with fewer (Model 2E; OR = 2.01; $p < 01$; two tailed). This finding departs from the results in Table 1 and provides partial support for the proposition that EJOs are a response to variations in toxic releases. It is interesting to note that environmental hazards were not associated with EJO formation in Table 1. This finding could simply be due to chance or could signal better measurement of toxic releases across the decades, and thus the impact of environmental hazards on EJO formation should not be dismissed completely. Finally, as noted in Table 1, population is positively correlated to EJO formation in all models estimated (2A through 2E; $p < .05$; two tailed). This finding provides continued support for the position that formalized organizations emerge in more populated counties.

Discussion and Conclusion

This research examined EJO founding across counties between 1990 and 1999 and between 2000 and 2008. Predictions about the EJO founding were based on the organizational ecology literature and were used to frame the hypotheses for civil rights and environmental density for each decade. At issue is whether formal organizations that specialize in environmental justice draw support from proximate civil rights and environmental groups and are therefore more likely to co-locate near those groups. These cross-effects do appear to take on a spatial component and thus appear to extend previous findings by Minkoff (1997) to different sectors and to special units of study. Between 1990 and 1999, we find some empirical evidence that specialized EJOs were more likely to be founded in counties that have elevated civil rights density. We also find weak support for the position that EJOs were more likely to form in counties with more environmental organizations. This finding is consistent with the concept of organizational niches in the organizational ecology literature that suggests that while all organizations occupy a niche, specialized organizations occupy a narrower niche

than generalist organizations, so cooperation may be more likely than competition. In short, the fact that during the 1990s EJOs may be interpreted as being specialized radical organizations may minimize the competitive effect and increase cooperative effects with generalist civil rights organizations (Benford 2005). The idea that environmental justice organizations occupied a relatively restricted niche in the beginning of the movement is also supported by the literature. Overall, civil rights and environmental organizations that existed in counties in 1989 may be viewed from the perspectives of political opportunity and resource mobilization frameworks, indicating that specialist EJOs are likely to emerge where civil rights and environmental organizations do not address perceived environmental injustice because of tension or coverage. This finding and interpretation is clearly unique in that the spatial study of environmental justice movements has yet to be examined within an organizational ecology context to determine if the theory may be applied to the distribution of organizations over space. As noted, our results provide moderate support for such an interpretation.

The results for EJO founding between 2000 and 2008 suggest that the relationship between the density of existing environmental organizations and EJO founding changed over time and that the cross-movement effects that lead to increasing agglomeration subsided over time. In the fully specified models, civil rights density that was positively correlated with EJO founding during the 1990s was negatively correlated with EJO founding during the 2000s. We hypothesized this might be the case given the observations of environmental justice scholars who noted fundamental changes in the environmental justice movement, from one focused largely on environmental justice to one focused on a variety of concerns regarding civil rights, social justice, and the environment. In short, EJOs, while identified in their mission statements as specializing in environmental justice, have become "everything to everybody" (Benford 2005). This finding suggests that, at the very least, the synergy between the civil rights movement and EJOs dissipated in the latter period, perhaps due to increasing competition between the two, and stagnated the positive effects that came from legitimation and resource sharing. This result is important because it has yet to be noted in many environmental justice case studies, which still tend to emphasize cooperation between movement organizations. However, the finding is consistent with recent research on the relationship between civil rights and environmental justice (Bryant and Hockman 2007). We found similar trends for environmental density, though the results were not statistically significant or consistent.

It is important to note that the emergence of apparent competition over time does not indicate that the formalized environmental justice movement has declined significantly. These results relate to founding and do not address the effectiveness of EJOs in addressing important community concerns. Moreover, founding rates may decline over time as EJOs saturate the most noticeable or widely affected communities. Our analysis of EJO density on founding suggests that the carrying capacity has not been reached despite the decrease in movement founding over time. This is good news for citizens who potentially benefit from the environmental justice movement, even if this is an observation about the more formalized sector of the movement. These results also suggest that there is not competition among the formalized sector of the movement across counties, even while apparent competition appears to be emerging between EJOs and other organizations. This result contradicts research by Nownes (2010) and Minkoff (1997).

Alternative explanations for our findings should be considered. For example, changing organizational missions may reflect increased participation in environmental justice as secondary or even tertiary objective of civil rights and environmental organizations. Thus, spatial competition is still likely to occur, not because environmental justice organizations are changing their form, but because civil rights and environmental organizations are doing more environmental justice-related work. This is consistent with Taylor's notion of an environmental justice paradigm that sees all environmental issues framed from such a perspective even as

specialized groups may exist, but it is contrary to Benford's hypothesis. Further research is needed to examine changes in environmental justice organizational form to determine if this might be true.

Several limitations impact these results and their generalizability. First, while we attempted to identify all environmental organizations that specialize in environmental justice, this task is complicated, and it is likely that there are unknown organizations that exist outside the data sources employed in this analysis. Nevertheless, our procedures to capture environmental justice organizations compare favorably with other EJO research (Brulle and Essoka 2005; Brulle et al. 2007). The extent to which including these unknown organizations would be likely to alter the results of this research is uncertain. Most excluded organizations are likely to be small and therefore are more likely to operate within a restricted niche and to be clustered near larger civil rights and environmental groups. This could strengthen findings for the 1990 model while attenuating those for the 2000 model—assuming a sufficiently large number of these organizations could be located. However, the extent to which these smaller organizations belong in the data set is clearly questionable since we specifically examined larger, identifiable EJOs that fit the definition of an SMO. In terms of generalizability, our results cannot be extended to the entire movement and generalizations about continued success of the movement as related to cross-movement effects must be drawn only for formalized EJOs. We nevertheless encourage future researchers to examine local grassroots environmental organizations to see if these results can be replicated beyond the environmental justice movement's formal bureaucratic structures to its more decentralized and egalitarian arrangements.

The dependent variable in this analysis disproportionately excluded Native American EJOs because tribal councils rather than specific EJOs are actively involved in environmental justice struggles.[10] Further research is required to address issues specifically related to the development of environmental action within the Native American community. Moreover, because there are not many Native American EJOs in our sample, it is possible that the inverse association between civil rights density and environmental justice founding has been intensified. This idea also suggests that results may differ across types of environmental justice organizations. However, currently there are few bureaucratic and formalized environmental justice organizations when broken down by type, space, and time, so it is difficult to examine this proposition given data limitations.

In the end, our research is unique in that it extends the study of organizational ecology on political organizations over space using counties as the unit of analysis and EJOs as an example. Our analysis has important implications for the future study of political organizations. In short, spatial effects appear to intensify or decrease cross-movement organizational effects. Space matters in the study of social movement organizations, especially within the context of organizational ecology. We hope that the role of space will continue to have theoretical and empirical implications for organizational research in social movement studies, and we believe that we have contributed to that ongoing effort in the study of social movement organizations.

10. We thank a reviewer for identifying this weakness.

Appendix A • ***Descriptive Statistics For Independent and Dependent Variables in Analyses***

Variable	*Mean/ Proportion*	*Standard Deviation*	*Minimum*	*Maximum*
Founded 1990–1999	.02	.13	0	1
Founded 2000–2008	.01	.09	0	1
EJO density 1989	.01	.1	0	2
EJO density 1999	.03	.29	0	8
Civil rights density 1989	.13	1.25	0	51
Civil rights density 1999	.18	1.21	0	48
Environmental density in 1989	.33	1.43	0	40
Environmental density in 1999	.94	3.01	0	66
Percent college in 1990	13.51	6.57	3.69	53.42
Percent college in 2000	16.53	7.79	4.88	63.75
Per capita income in 1990 (thousands)	11.16	2.72	3.42	28.38
Per capita income in 2000 (thousands)	17.51	3.94	5.21	44.96
Foundation assets in 1990 (hundreds of thousands)	.166	.262	0	7.959
Foundation assets in 2000 (hundreds of thousands)	.043	.708	0	28.059
Percent voted in 1992	44.05	7.61	7.14	100
Percent voted in 2000	45.03	7.91	11.35	100
Democrat/Republican in 1988	1.11	.6	.12	9.3
Democrat/Republican in 2000	.74	.53	.08	9.55
AA churches	.178	.223	0	100
Percent black in 1990	8.58	14.34	0	86.23
Percent black in 2000	8.71	14.52	0	86.12
Percent Hispanic in 1990	4.39	11.01	0	96.7
Percent Hispanic in 2000	6.13	12.06	0	98.1
Toxic releases in 1990	3,878	42,096	0	1,978,361
Toxic releases in 2000	3,283	24,988	0	903,072
TSDFs 1990	.25	1.015	0	31
TSDFs 2000	.17	.79	0	18
Superfund sites in 1990	.24	.91	0	15
Superfund sites in 2000	.24	1.17	0	23
Total population in 1990	79,269	263,969	107	8,863,164
Total population in 2000	89,624	292,504	67	9,519,338
Midwest	.34	.47	0	1
Northeast	.07	.07	0	1
South	.45	.5	0	1
West	.14	.35	0	1
Spatial lag in 1990	.02	.23	0	6
Spatial lag in 2000	.05	.23	0	4

Appendix B • *Correlation Matrix*

	1	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*	*13*	*14*	*15*	*16*	*17*	*18*
1. Founded 1990	1.00																	
2. Founded 2000	.35	1.00																
3. EJO density 1989	.49	.22	1.00															
4. EJO density 1999	.95	.35	.74	1.00														
5. Civil rights density 1989	.59	.16	.48	.63	1.00													
6. Civil rights density 1999	.59	.19	.50	.64	.94	1.00												
7. Environmental density in 1989	.58	.21	.41	.59	.77	.75	1.00											
8. Environmental density in 1999	.59	.26	.41	.61	.71	.72	.88	1.00										
9. Percent college in 1990	.20	.13	.13	.20	.23	.27	.41	.47	1.00									
10. Percent college in 2000	.20	.13	.12	.20	.22	.26	.40	.46	.97	1.00								
11. Per capita income in 1990	.18	.13	.14	.18	.24	.27	.42	.46	.74	.75	1.00							
12. Per capita income in 2000	.17	.12	.13	.18	.22	.25	.39	.44	.72	.77	.94	1.00						
13. Foundation assets in 1990	.61	.18	.49	.64	.77	.74	.66	.60	.15	.15	.16	.16	1.00					
14. Foundation assets in 2000	.34	.12	.32	.37	.68	.68	.52	.51	.14	.13	.14	.13	.18	1.00				
15. Percent voted in 1992	−.03	−.02	−.05	−.04	−.03	−.04	.03	.05	.23	.27	.23	.32	−.02	−.02	1.00			
16. Percent voted in 2000	−.02	−.02	−.05	−.03	−.02	−.03	.04	.07	.30	.38	.35	.46	−.02	−.02	.82	1.00		
17. Democrat/Republican in 1988	.20	.10	.21	.23	.30	.29	.26	.24	−.06	−.07	−.15	−.13	−.02	.10	−.13	−.17	1.00	
18. Democrat/Republican in 2000	.33	.18	.30	.36	.44	.43	.46	.45	.25	.23	.13	.13	.25	.18	−.08	−.03	.79	1.00
19. AA churches	.06	.05	.04	.06	.06	.07	.07	.07	.01	−.01	.04	.02	.37	.05	−.37	−.27	.12	.11
20. Percent black in 1990	.09	.05	.05	.09	.10	.09	.06	.03	−.07	−.10	−.15	−.15	.04	.05	−.39	−.31	.31	.36
21. Percent black in 2000	.08	.05	.05	.08	.09	.09	.06	.03	−.06	−.09	−.14	−.15	.06	.05	−.39	−.32	.30	.37
22. Percent Hispanic in 1990	.06	.06	.06	.06	.06	.07	.05	.07	.04	.01	−.07	−.12	.05	.06	−.24	−.31	.15	.09
23. Percent Hispanic in 2000	.07	.06	.06	.08	.07	.09	.07	.09	.07	.03	−.02	−.09	.05	.06	−.27	−.36	.11	.07
24. Toxic releases in 1990	.11	.10	.04	.10	.09	.10	.15	.17	.08	.08	.11	.09	.05	.10	−.06	−.05	.01	.06
25.Toxic releases in 2000	.01	.03	.01	.01	.04	.03	.05	.06	.03	.02	.06	.05	.06	.03	−.05	−.05	.03	.06
26. TSDFs 1990	.29	.30	.10	.26	.22	.22	.33	.38	.22	.20	.24	.20	.01	.30	−.07	−.05	.03	.12
27. TSDFs 2000	.30	.21	.12	.27	.30	.29	.43	.47	.22	.22	.26	.22	.17	.21	−.04	−.03	.07	.19
28. Superfund sites in 1990	.15	.12	.08	.15	.15	.15	.32	.35	.28	.27	.37	.33	.22	.12	.00	.03	.01	.13
29. Superfund sites in 2000	.18	.17	.11	.18	.17	.18	.34	.39	.30	.29	.39	.34	.10	.17	−.02	.02	.02	.15
30. Total population in 1990	.42	.30	.17	.39	.46	.45	.57	.63	.31	.30	.37	.31	.11	.30	−.09	−.06	.11	.27
31.Total population in 2000	.42	.30	.17	.38	.44	.44	.56	.63	.32	.31	.38	.32	.38	.30	−.09	−.06	.09	.26
32. Midwest	−.05	−.05	−.04	−.05	−.04	−.05	−.07	−.10	−.07	−.04	−.01	.05	.36	−.05	.37	.32	−.12	−.05
33. Northeast	.04	.04	.03	.04	.07	.06	.22	.22	.22	.21	.29	.23	−.03	.04	.03	.06	.03	.18
34. South	−.01	−.02	−.02	−.01	−.03	−.02	−.09	−.12	−.19	−.20	−.19	−.20	.06	−.02	−.47	−.40	.13	−.03
35. West	.06	.06	.07	.07	.04	.06	.07	.14	.21	.19	.08	.05	−.03	.06	.16	.10	−.05	−.01
36. Spatial lag in 1990	.21	.21	.27	.26	.25	.28	.34	.37	.30	.31	.40	.38	.04	.21	−.05	.01	.12	.28
37. Spatial lag in 2000	.06	.08	.13	.10	.16	.17	.17	.19	.12	.12	.16	.14	.25	.08	−.02	−.02	.09	.14

(*continued*)

Appendix B • *Correlation Matrix (Continued)*

	19	*20*	*21*	*22*	*23*	*24*	*25*	*26*	*27*	*28*	*29*	*30*	*31*	*32*	*33*	*34*	*35*	*36*	*37*
19. AA churches	1.00																		
20. Percent black in 1990	.54	1.00																	
21. Percent black in 2000	.51	.99	1.00																
22. Percent Hispanic in 1990	−.08	−.11	−.11	1.00															
23. Percent Hispanic in 2000	−.06	−.11	−.11	.98	1.00														
24. Toxic releases in 1990	.10	.07	.08	.03	.04	1.00													
25.Toxic releases in 2000	.01	.05	.05	−.01	−.01	.22	1.00												
26. TSDFs 1990	.08	.06	.06	.09	.11	.44	.09	1.00											
27. TSDFs 2000	.09	.09	.10	.05	.07	.33	.08	.62	1.00										
28. Superfund sites in 1990	.07	−.01	−.01	.02	.04	.15	.04	.38	.38	1.00									
29. Superfund sites in 2000	.08	.00	.00	.03	.05	.16	.04	.39	.39	.95	1.00								
30. Total population in 1990	.10	.07	.08	.12	.15	.29	.07	.64	.73	.45	.48	1.00							
31. Total population in 2000	.10	.07	.07	.13	.16	.28	.07	.64	.72	.45	.48	1.00	1.00						
32. Midwest	−.31	−.35	−.34	−.21	−.23	−.03	−.03	−.05	−.01	−.04	−.06	−.06	−.07	1.00					
33. Northeast	.00	−.09	−.08	−.04	−.05	.01	.00	.08	.07	.30	.29	.16	.15	−.20	1.00				
34. South	.42	.51	.50	.06	.07	.03	.03	−.01	−.06	−.14	−.13	−.07	−.06	−.66	−.25	1.00			
35. West	−.19	−.21	−.21	.24	.25	−.01	−.01	.03	.04	.02	.05	.07	.08	−.28	−.11	−.36	1.00		
36. Spatial lag in 1990	.06	.04	.05	.09	.11	.07	.03	.18	.18	.23	.27	.35	.35	−.13	.13	−.02	.11	1.00	
37. Spatial lag in 2000	.06	.04	.04	.07	.07	.13	.05	.17	.15	.21	.23	.22	.22	−.08	.10	−.02	.07	.35	1.00

References

Active Cause. 2009. "Active Cause: The Social Giving Network." Retrieved April 20, 2009 (http://active-cause.com; site discontinued).

Andersen, Margaret and Howard Taylor. 2004. *Sociology: Understanding a Diverse Society*. Belmont, CA: Wadsworth/Thompson Learning.

Andrews, Kenneth and Bob Edwards. 2005. "The Organizational Structure of Local Environmentalism." *Mobilization: An International Quarterly* 10:213–34.

Anselin, Luc. 2003. *GeoDa 0.9 User's Guide*. Urbana-Champaign, IL: Spatial Analysis Laboratory, Department of Agricultural and Consumer Economics at the University of Illinois

Arp, William and Keith Boeckelman. 1997. "Religiosity: A Source of Black Environmentalism and Empowerment." *Journal of Black Studies* 28:255–67.

Association of Religion Data Archives. 2008. *The 1990 Religious Congregations Membership Study.* Retrieved May 15, 2008 (http://www.thearda.com).

Associations Unlimited. 1990–1999. *Encyclopedia of Associations*. Detroit, MI: Gale Research.

———. 2009. *Encyclopedia of Associations Online*. Detroit, MI: Gale Research Group. Retrieved January 20, 2010 (www.gale.cengage.com).

Barnett, William. 1997. "The Dynamics of Competitive Intensity." *Administrative Science Quarterly* 42: 128–60.

Barnett, William and Glenn R. Carroll. 1995. "Modeling Internal Organizational Change." *Annual Review of Sociology* 21:217–36.

Barron, David, Elizabeth West, and Michael Hannan. 1994. "A Time to Grow and a Time to Die: Growth and Mortality of Credit Unions in New York City." *American Journal of Sociology* 100:381–419.

Bell, Michael. 2009. *An Invitation to Environmental Sociology*. Thousand Oaks, CA: Pine Forge Press.

Benford, Robert. 2005. "The Half-Life of the Environmental Justice Frame: Innovation, Diffusion, and Stagnation." Pp. 37–53 in *Power, Justice, and the Environment: A Critical Appraisal of the Environmental Justice Movement*, edited by D. Pellow and R. Brulle. Cambridge, MA: MIT Press.

Brown, Khari and Ronald Brown. 2003. "Faith and Works: Church-Based Social Capital Resources and African American Political Activism." *Social Forces* 82:617–41.

Brulle, Robert. 2000. *Agency, Democracy, and Nature*. Cambridge, MA: MIT Press.

Brulle, Robert and Jonathan Essoka. 2005. "Whose Environmental Justice? An Analysis of the Governance Structure of Environmental Justice Organizations in the United States." Pp. 205–18 in *Power, Justice, and the Environment: A Critical Appraisal of the Environmental Justice Movement*, edited by D. Pellow and R. Brulle. Cambridge, MA: MIT Press.

Brulle, Robert, Liesel Turner, Jason Carmichael, and Craig Jenkins. 2007. "Measuring Social Movement Organization Populations: A Comprehensive Census of U.S. Environmental Movement Organizations." *Mobilization: An International Quarterly Review* 12:255–70.

Bryant, Bunyan and Elaine Hockman. 2007. "A Brief Comparison of the Civil Rights Movement and Environmental Justice Movement." Pp. 205–18 in *Power, Justice, and the Environment: A Critical Appraisal of the Environmental Justice Movement*, edited by D. Pellow and R. Brulle. Cambridge, MA: MIT Press.

Bullard, Robert. 1990. *Dumping in Dixie: Race, Class, and Environmental Quality*. Boulder, CO: Westview Press.

Bullard, Robert. 1993. "Anatomy of Environmental Racism and the Environmental Justice Movement." Pp. 15–40 in *Confronting Environmental Racism: Voices from the Grassroots,* edited by R. Bullard and B. Chavis. Boston, MA: South End Press.

———. 1994. *People of Color Environmental Groups: 1994–95 Directory*. Flint, MI: C. S. Mott Foundation.

———. 1999. "Dismantling Environmental Racism in the USA." *Local Environment* 4:5–19.

———. 2000. *People of Color Environmental Groups: 2000 Directory*. Flint, MI: C.S. Mott Foundation.

Bullard, Robert and Glenn Johnson. 2000. "Environmental Justice: Grassroots Activism and Its Impact on Public Policy Decision-Making." *Journal of Social Issues* 56:555–78.

Burns, Ronald, Michael Lynch, and Paul Stretesky. 2008. *Environmental Law, Crime, and Justice*. New York: LFB Scholarly Publishing.

Cable, Sherry and Thomas Shriver. 1995. "The Production and Extrapolation of Meaning in the Environmental Justice Movement." *Sociological Spectrum* 15:419–42.

Carroll, Glenn. 1985. "Concentration and Specialization: Dynamics of Niche Width in Populations of Organizations." *American Journal of Sociology* 90:1262–83.

Carroll, Glenn and Michael Hannan. 1989. "Density Dependence in the Evolution of Populations of Newspaper Organizations." *American Sociological Review* 54:524–41.

———. 2000. *The Demography of Corporations and Industries.* Princeton, NJ: Princeton University Press.
Chavis, Benjamin F., Jr. 1993. "Foreword." Pp. 3–6 in *Confronting Environmental Racism: Voices from the Grassroots*, edited by R. Bullard. Boston, MA: South End Press.
Checker, Melissa. 2004. "We All Have Identity at the Table: Negotiating Difference in a Southern African American Environmental Justice Network." *Identities: Global Studies in Culture and Power* 11:171–94.
Clemens, Elisabeth. 1997. *The People's Lobby: Organizational Innovation and the Rise of Interest Group Politics in the United States, 1890–1925*. Chicago: University of Chicago Press.
Cole, Luke and Sheila Foster. 2001. *From the Ground Up: Environmental Racism and the Rise of the Environmental Justice Movement*. New York: New York University Press.
Corbin, John. 1999. "A Study of Factors Influencing the Growth of Nonprofits in Social Services." *Nonprofit and Voluntary Sector Quarterly* 28:296–314.
Davis, Gerald, Doug McAdam, Richard Scott, and Mayer Zald. 2005. *Social Movements and Organization Theory*. Cambridge, UK: Cambridge University Press.
Della Porta, Donatella and Mario Diani. 2006. *Social Movements: An Introduction.* Hoboken, NJ: Wiley-Blackwell.
Diani, Mario. 1992. "The Concept of Social Movement." *American Sociological Review* 40:1–25.
DiMaggio, Paul and Walter Powell. 1983. "The Iron Cage Revisited: Institutional Isomorphism and Collective Rationality in Organizational Fields." *American Sociological Review* 48:147–60.
Downey, Liam. 2007. "U.S. Metropolitan-Area Variation in Environmental Inequality Outcomes." *Urban Studies* 44:953–77.
Edwards, Bob. 1995. "With Liberty and Environmental Justice for All: The Emergence and Challenge of Grassroots Environmentalism in the United States." Pp. 35–55 in *Ecological Resistance Movements*, edited by B. Taylor. Albany, NY: State University New York Press.
Environmental Information Limited. 1995. *Environmental Services Directory*. Vols. 1–5. Minneapolis, MN: Environmental Information Limited.
Faber, Daniel and Deborah McCarthy. 2001. *Green of Another Color: Building Effective Partnerships Between Foundations and the Environmental Justice Movement*. Philanthropy and Environmental Justice Research Project, Northeastern University. Retrieved April 20, 2009 (www.precaution.org/lib/05/green_of_another_color.pdf).
Finke, Roger and Christopher Scheitle. 2005. "Accounting for the Uncounted: Computing Correctives for the 2000 RCMS Data." *Review of Religious Research* 47:5–22.
Fitzgerald, Scott and Ryan Spohn. 2005. "Pulpits and Platforms: The Role of the Church in Determining Protest among Black Americans." *Social Forces*, 84:1016–48.
Fox, John. 1991. *Regression Diagnostics: An Introduction*. Newbury Park, CA: Sage.
Gamson, William. 1992. *Talking Politics*. New York: Cambridge University Press.
Gronbjerg, Kirsten and Laurie Paarlberg. 2001. "Community Variations in the Size and Scope of the Nonprofit Sector: Theory and Preliminary Findings." *Nonprofit and Voluntary Sector Quarterly* 30:684–706.
Guidestar. 2009. *Guidestar Nonprofit Database*. Retrieved May 15, 2009 (www2.guidestar.org/Home.aspx).
Gusfield, Joseph. 1970. *Protest, Reform, and Revolt*. New York: John Wiley and Sons.
Hannan, Michael and Glenn Carroll. 1992. *Dynamics of Organizational Populations: Density, Legitimation, and Competition*. New York: Oxford University Press.
Hannan, Michael, Glenn Carroll, Elizabeth Dundon, and John Torres. 1995. "Organizational Evolution in a Multinational Context: Entries of Automobile Manufactures in Belgium, Britain, France, Germany, and Italy." *American Sociological Review* 60:509–28.
Hannan, Michael and John Freeman. 1977. "The Population Ecology of Organizations." *American Journal of Sociology* 82:929–64.
Haveman, Heather, Hayagreeva Rao, and Srikanth Paruchuri. 2007. "The Winds of Change: The Progressive Movement and the Bureaucratization of Thrift." *American Sociological Review* 72:117–42.
Horton, David and Ce Shen. 2002. "The Roots of Civil Society: A Model of Voluntary Association Prevalence Applied to Data on Larger Contemporary Nations." *Nonprofit and Voluntary Sector Quarterly* 43:93–133.
Internal Revenue Service (IRS). 2008. *SOI-Tax States—Exempt Organizations IRS Master File Data*. Retrieved May 3, 2008 (www.irs.gov/taxstats/charitablestats/index.html).
Jenkins, Craig. 1983. "Resource Mobilization Theory and the Study of Social Movements." *Annual Review of Sociology* 9:527–53.
Jordan, Charles and Donald Snow. 1992. "Diversification, Minorities, and the Mainstream Environmental Movement." Pp. 71–109 in *Voices from the Environmental Movement: Perspectives for a New Era*, edited by D. Snow. Washington, DC: Island Press.

King, Gary and Langche Zeng. 2001. "Logistic Regression in Rare Event Data." *Political Analysis* 9:137–63.
Klandermans, Bert and Suzanne Staggenborg. 2002. "Introduction." Pp. 3–32 in *Methods of Social Movement Research*, edited by B. Klandermans and S. Staggenborg. Minneapolis: University of Minnesota Press.
Kornhauser, William. 1959. *The Politics of Mass Society*. New York: Free Press.
Kovacs, Balazs and Glenn Carroll. 2010. "Niche Width and Scale in Organizational Competition: A Computational Approach." *Computational and Mathematical Organizational Theory* 16:29–60.
Lincoln, James. 1977. "The Urban Distribution of Voluntary Organizations." *Social Science Quarterly* 58:472–80.
Liu, Feng. 2001. *Environmental Justice Analysis: Theories, Methods, and Practice*. Boca Raton, FL: CRC Press.
Lofland, John. 1996. *Social Movement Organizations: A Guide to Research on Insurgent Realities*. New York: Walter de Gruyter Press.
Luksetich, William. 2008. "Government Funding and Nonprofit Organizations." *Nonprofit and Voluntary Sector Quarterly* 37:434–42.
Matsunaga, Yoshiho and Naoto Yamauchi. 2004. "Is the Government Failure Theory Still Relevant? A Panel Analysis Using US State Level Data." *Annals of Public and Cooperative Economics* 75:227–63.
McAdam, Doug. 1982. *Political Process and the Development of Black Insurgency 1930–1970*. Chicago: University of Chicago Press.
McAdam, Doug, John McCarthy, and Mayer Zald. 1996. *Comparative Perspectives on Social Movements: Political Opportunities, Mobilizing Structures, and Cultural Framings*. Cambridge, UK: Cambridge University Press.
McAdam, Doug and Richard Scott. 2005. "Organizations and Movements." Pp. 4–40 in *Social Movements and Organization Theory,* edited by G. Davis, D. McAdam, R. Scott, and M. Zald. Cambridge: UK: Cambridge University Press.
McCarthy, John, David Baker, and Elaine Mosakowski. 1988. "The Founding of Social Movement Organizations: Local Citizens' Groups Opposing Drunken Driving." Pp. 71–84 in *Ecological Models of Organization*, edited by G. Carroll. Cambridge, MA: Ballinger.
McCarthy, John and Mayer Zald. 2003. "Social Movement Organizations." Pp. 170–86 in *The Social Movements Reader: Cases and Concepts*, edited by J. Goodwin and J. Jasper. Malden, MA: Blackwell.
McGurty, Eileen. 2000. "Warren County, NC, and the Emergence of the Environmental Justice Movement: Unlikely Coalitions and Shared Meanings in Local Collective Action." *Society and Natural Resources* 13:373–87.
Minkoff, Debra. 1994. "From Service Provision to Institutional Advocacy: The Shifting Legitimacy of Organizational Forms." *Social Forces* 4:943–69.
———. 1995. *Organizing for Equality: The Evolution of Women's and Racial-Ethnic Organizations in America, 1955–1985*. New Brunswick, NJ: Rutgers University Press.
———. 1997. "The Sequencing of Social Movements." *American Sociological Review* 62:779–99.
National Center for Charitable Statistics (NCCS). 2008. *1990 Core Files.* Retrieved May 3, 2008 (http://nccs.urban.org/database/index.cfm).
National Wildlife Federation. 1990–1999. *Conservation Directory.* Washington, DC: National Wildlife Federation.
Nownes, Anthony. 2010. "Density Dependent Dynamics in the Population of Transgender Interest Groups in the United States, 1964–2005." *Social Science Quarterly* 91:689–703.
Pellow, David and Robert Brulle. 2005. *Power, Justice, and Environment: A Critical Appraisal of the Environmental Justice Movement*. Cambridge, MA: MIT Press.
Pichardo, Nelson. 1997. "New Social Movements: A Critical Review." *Annual Review of Sociology* 23: 411–30.
Popielarz, Pamela and Zachary Neal. 2007. "The Niche as a Theoretical Tool." *Annual Review of Sociology* 34:65–84.
Ringquist, Evan. 2005. "Assessing Evidence of Environmental Inequities: A Meta-Analysis." *Journal of Policy Analysis and Management* 24:223–47.
Rios, Jo Marie. 2000. "Environmental Justice Groups: Grass-Roots Movement or NGO Networks? Some Policy Implications." *Policy Studies Review* 17:179–211.
Saha, Robin and Paul Mohai. 2005. "Historical Context and Hazardous Waste Facility Siting: Understanding Temporal Patterns in Michigan." *Social Problems* 52:618–48.
Salamon, Lester and Helmut Anheier. 1998. "Social Origins of Civil Society: Explaining the Nonprofit Sector Cross-Nationally." *Voluntas: International Journal of Voluntary and Nonprofit Organizations* 9:213–48.

Saxton, Gregory and Michelle Benson. 2005. "Social Capital and the Growth of the Nonprofit Sector." *Social Science Quarterly* 86:16–35.

Schneiberg, Marc, Marissa King, and Thomas Smith. 2008. "Social Movement and Organizational Form: Cooperative Alternatives to Corporations in the American Insurance, Dairy, and Grain Industries." *American Sociological Review* 73:635–67.

Schock, Kurt. 1999. "People Power and Political Opportunities: Social Movement Mobilization and Outcomes in the Philippines and Burma." *Social Problems* 46:355–75.

Shefner, Jon. 1995. "Review: Moving in the Wrong Direction in Social Movement Theory." *Theory and Society* 24:595–612.

Singh, Jitendra and Charles Lumsden. 1990. "Theory and Research in Organizational Ecology." *Annual Review of Sociology* 16:161–95.

Soule, Sarah and Brayden King. 2008. "Competition and Resource Partitioning in Three Social Movement Industries." *American Journal of Sociology* 113:1568–1610.

Stepan-Norris, Judith and Caleb Southworth. 2007. "Churches as Organizational Resources: A Case Study in the Geography of Religion and Political Voting in Postwar Detroit." *Social Science History* 31:343–80.

Sternberg, Rolf and Timo Litzenberger. 2004. "Regional Clusters in Germany—Their Geography and Their Relevance for Entrepreneurial Activities." *European Planning Studies* 12:767–91.

Stretesky, Paul and Michael Hogan. 1998. "Environmental Justice: An Analysis of Superfund Sites in Florida." *Social Problems* 45:268–87.

Taylor, Dorceta. 2000. "The Rise of the Environmental Justice Paradigm." *American Behavioral Scientist* 43:508–80.

U.S. Bureau of the Census. 1992. *Census of Population and Housing, 1990 [United States]: Summary Tape File 3A* [computer file]. Washington, DC: U.S. Dept. of Commerce, Bureau of the Census [producer]. Ann Arbor, MI: Inter-University Consortium for Political and Social Research [distributor].

———. 2004. *Census of Population and Housing, 2000 [United States]: Selected Subsets from Summary File 3* [computer file]. Washington, DC: U.S. Dept. of Commerce, Bureau of the Census, and Ann Arbor, MI: Inter-University Consortium for Political and Social Research [producers]. Ann Arbor, MI: Inter-University Consortium for Political and Social Research [distributor].

U.S. Environmental Protection Agency (EPA). 2008. *TRI 1990 Public Data Release*. Retrieved May 17, 2008 (www.epa.gov/triexplorer).

———. *Superfund Site Information*. Retrieved February 2, 2010 (www.epa.gov/superfund/sites/siteinfo.htm).

Vig, Norman and Michael Kraft. 2000. "Environmental Policy From the 1970s to 2000: An Overview." Pp. 1–31 in *Environmental Policy: New Directions for the Twenty-First Century*, edited by N. Vig and M. Kraft. Washington, DC: CQ Press.

Walker, Edward and John McCarthy. 2010. "Legitimacy, Strategy, and Resources in the Survival of Community-Based Organizations." *Social Problems* 57:315–40.

Wikle, Thomas. 1995. "Geographical Patterns of Membership in U.S. Environmental Organizations." *The Professional Geographer* 47:41–48.

Wissen, Leo. 2004. "A Spatial Interpretation of the Density Dependence Model in Industrial Demography." *Small Business Economics* 22:253–364.

Wollebaek, Dag. 2009. "Age, Size and Change in Local Voluntary Associations." *Acta Sociologica* 52: 365–84.

Zald, Mayer and Roberta Ash. 1966. "Social Movement Organizations: Growth, Decay, and Change." *Social Forces* 44:327–40.

Zald, Mayer and John McCarthy. 1994. "Resource Mobilization and Social Movements: A Partial Theory." Pp. 15–48 in *Social Movements in an Organizational Society*, edited by M. Zald and J. McCarthy. New Brunswick, NJ: Transaction Press.

Zucker, Lynne. 1989. "Combining Institutional Theory and Population Ecology: No Legitimacy, No History." *American Sociological Review* 54:542–48.