

Not in our Backyard: Solidarity, Social Networks, and the Ecology of Environmental Mobilization

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This paper explores the role of social networks in channeling individuals' involvement in local activism. A case study of a grassroots environmental group examines variation in members' levels of involvement, using three levels of explanation: individual attributes, strong and weak ties between members, and memberships in other organizations. After demonstrating that high- and low-level members are very similar in personal attributes, it focuses on social ties and organizational affiliations. As expected, the data suggest that an individual's level of involvement is increased by strong ties to other members, structural similarity to other high-level members, and fewer ties to nonmembers. Extramovement organizational affiliations are often assumed to diminish actors' structural availability, though empirical research in differential recruitment has generally revealed a positive effect on participation in social movements. This study addresses a microstructural explanation for the variation between competition and mutualism in a local multiorganizational field, as it shows how organizational goals condition the effect of outside affiliations on level of participation. Paradoxically, ties to other organizations with irrelevant goals appear to facilitate participation in this group, while ties to groups with congruent goals diminish participation.

Over the past two decades, the social movement literature has endured a rocky courtship with network analysis. Scholars exploring the common ground of network mobilization have credited personal and organizational ties with facilitating social movement participation on one page and blamed them for diverting energies and resources on the next. Twenty years of research have examined when, why, and how social ties may serve to promote or impede mobilization.

Most studies (e.g., Klandermans and Oegema 1987; Snow, Zurcher, and Eckland-Olson 1980; Stark and Bainbridge 1980) have examined how relational factors may influence who *joins* a social movement organization or campaign. They argue that this "differential recruitment" may be explained by whom people know, not by what they want or believe. Recent work applies this lens to later stages of the recruitment process. For example, McAdam's study of applicants to the Freedom Summer civil rights campaign (Fernandez and McAdam 1988, 1989; McAdam 1986, 1988a, 1988b; McAdam and Fernandez 1990; McAdam and Paulsen 1993) examines continued participation in movement activity among those who have already sought to participate. In this study I carry the analysis another step, examining the *level* of sustained movement participation.

This joins the above microstructural explanations of recruitment with empirical work addressing level of involvement in voluntary associations, which has focused primarily on actor-level variables that differentiate high-level and low-level members. For example, Oliver has examined differences between "paid" and "volunteer" participants (Oliver 1983) and between "active" and "token" participants (Oliver 1984) in neighborhood associations. Through a case study of a grassroots activist group in a rural Midwestern town, I will similarly compare highly involved members with marginal members. However, I will employ three levels of explanation: individual attributes—interests and biographical availability; in-group and out-group social ties—the structure of social influence; extramovement affiliations—the structure of local organizational competition.

According to the first explanation, variation in individual participation simply corresponds to varying attributes of members, either through differential interest in the group goals or differential availability for participation in the group. The second explanation, in line with recent social movement theory, focuses on strong and weak ties between individuals as conduits of social influence. The third posits that memberships in other groups may limit actors' structural availability, to the extent that those organizations compete for their budgeted resources.

I measure direct ("strong") ties between actors, indirect ("weak") ties between actors through shared organizational memberships, and also ties of actors to organizations ("affiliations"). I theorize actors as embedded in a field of social interaction that channels their available resources toward various organizations. This partial specification of micromobilization processes considers both the structure of interpersonal relations and an implicit ecology of organizations.

Individual Attributes—Interests and Biographical Availability

According to the most intuitive (and least sociologically interesting) explanation, differences in individual participation are simply due to differences in individuals. One obvious possibility is that some people become more involved because they are more interested in the formal goals of the organization. Though the literature has provided little consistent evidence that interests are sufficient predictors of participation in social movement organizations (e.g., Klandermans and Oegema 1987; McCarthy and Zald 1977; Oliver 1984), I will include this as an alternative hypothesis:

H1: The odds of being a high-level member will vary directly with individual interest in group goals.

Another obvious possibility is that participation is a function of varying levels of social constraint. McAdam (1986) proposes individual "biographical availability" as a proximate determinant of movement participation, including several

conditions that may impede participation (e.g., employment, marriage, children). Although certain constraints may directly prevent some kinds of activism or may serve to filter out a portion of a constituent population, researchers have often found little effect or even a positive effect for individual-level constraints among individuals who are already at the door to activism. For example, McAdam (1988b) finds that among applicants to the Freedom Summer campaign, married and employed individuals were *more* likely to participate than unattached and uncommitted individuals. If this holds across many types of movement organization, it may limit a constraint-based theory of mobilization. However, as no general alternative has been provided, and I am interested in the effect of extramovement commitments on level of involvement, I will predict a straightforward effect of biographical availability.

H2: The odds of being a high-level member will vary directly with the level of biographical availability.

In-Group and Out-Group Social Ties—The Structure of Social Influence

Perhaps the high-level and low-level members differ not in personal attributes, but in their position in local social networks. Many explanations see the structure of micro-interaction as a key to motivating involvement. Some assume that relations affect mobilization through activating collective identity (Ferec 1992; McAdam and Paulsen 1993) or providing social support (Gamson 1992). Fireman and Gamson (1979) theorize that various types of extramovement ties (e.g., friendship, family, professional) benefit group solidarity, which they assume will foster mobilization success. Indeed, numerous empirical studies have demonstrated the importance of pre-existing social ties to social movement participation (Snow et al. 1980; McAdam 1986; Gould 1991).

However, while some social ties may expose an individual to recruitment, others may entail obligations or opportunities that diminish the attractiveness of participation. In their study of movement participants and free riders following the Three Mile Island (TMI) nuclear accident, Walsh and Warland (1983) discovered that “activists reported higher levels of general organizational affiliation, political solidarity, and specific anti-nuclear or anti-TMI ties, but the free riders indicated higher levels of neighborhood solidarity” (p. 22). Others show that indicators of integration into local neighborhoods are inversely related to political participation (Isaac, Mutran, and Stryker 1980) and action to resolve neighborhood grievances (Orbell and Uno 1972), and that “liking” for the neighborhood is negatively related to activism in neighborhood associations (Oliver 1984).

Not all relational explanations require that group members feel an intangible “sense” of solidarity, such as a shared identity. A number of choice-theoretic explanations (Chong 1991; Klandermans 1984; Opp, Finkel, Muller, Wolfsfeld,

Dietz, and Green 1995) posit that social ties may simply provide “solidary incentives” through elementary exchanges of social approval. If face-to-face encounters provide incentives to action or raise the cost of nonparticipation (Fernandez and McAdam 1989), the configuration of an individual’s ties will determine which local incentives he encounters. In fact, recent work (Opp 1989; Opp and Gern 1993) shows empirical support for this assumption of micro-level incentives, measuring activists’ expectations of criticism or rewards by peers and peer groups.

A third approach relies purely on structure, with minimal assumptions about the content of social interaction. For example, McPherson, Popielarz, and Drobnic (1992) do not assume either a group identity or an exchange of solidary incentives, but only a tendency for social ties to convey information about alternative options between socially proximate actors. Putnam (1966, p. 646) provides an illustrative description of social influence as a product of social structure. He notes,

To vote like an Elmiran, it is not necessary that one “feel” like an Elmiran, that is, that one “identify” with Elмира. One need only be involved in the pattern of social relations through which the contagion of partisan sentiment passes.

If we may assume that individuals who are located nearby in social space will behave similarly and also that ties to outsiders bring opportunities to participate in other groups (McPherson, Popielarz, and Drobnic 1992), then we can predict members’ participation by measuring their levels of embeddedness in the group. That is, if social ties direct flows of resources through members, then ties that extend beyond the boundaries of a given group should decrease individual participation in the group. In support of this hypothesis, McPherson et al. show that individuals’ tendency to leave a group is positively related to ties to the outside world and negatively related to ties within the group.

While I will adopt the exchange-theoretic approach based on solidary incentives, these data cannot differentiate the identity, incentive, and information explanations, as they all suggest the same hypotheses for in-group and out-group ties:

H3: The odds of being a high-level member will vary directly with the number of strong ties to other members.

H4: The odds of being a high-level member will vary inversely with the level of integration into extramovement informal networks.

Due to the inherent “duality” of affiliations (Breiger 1974), we can also use data representing memberships in other groups to examine relationships between *actors* via shared memberships and between *groups* via shared members (Aveni 1978; Rosenthal, Fingrudt, Ethier, Karant, and McDonald 1985). I will refer to

these indirect ties through shared memberships as "weak" ties (Granovetter 1973). This possibility for organizations to serve as conduits for social influence between actors suggests the following hypothesis:

H5: The odds of being a high-level member will vary directly with the number of weak ties to other members.

Perhaps an individual's level of involvement is not determined by the number of ties he or she shares but by his or her position in the network. Fernandez and McAdam predict participation in Freedom Summer using a measure of "prominence" (Knoke and Burt 1982), which weights each tie to a neighbor by the connectedness of that neighbor. They argue that this measure of centrality should serve as a proxy for social influence processes: "Because they are linked to many people, more central individuals are more likely to experience social influences (costs for possible nonparticipation and benefits for participation) on their decisions" (Fernandez and McAdam 1988, p. 365). They (McAdam and Fernandez 1990, p. 11) propose that this does not represent dyadic contagion, but influence of the entire group on each individual member. When all actors share a common norm, Ego's ties to *any* others will increase participation, even if those particular Alters do not themselves participate. Supporting this notion, Fernandez and McAdam (1988) show that, of twenty-three Freedom Summer applicants from Wisconsin, those who were most prominent in the co-membership matrix were most likely to participate in the campaign.

Even so, the same prominence measure failed to predict participation for a sample of forty applicants from Berkeley during the same year. Fernandez and McAdam (1988) attribute this inconsistency to different "recruitment contexts" of the two cities. Defining recruitment context as "residue of protest culture that is left by incidents of past activism" (McAdam and Fernandez 1990, p. 27), they argue that this effect of group structure is not general, but highly context-specific. They thus advise that their findings only illustrate those two activist communities in 1964. In contrast, I will explore *general* processes of micro-mobilization, which may subsume the prominence effect as a special case.

Prominence may have been uniquely appropriate for McAdam's Wisconsin sample, which consisted of a single clique of ten actors plus thirteen structural isolates, where all twenty-three actors ostensibly shared common norms in favor of participation. However, the relations within an organization may not always map onto a simple model of core (densely tied members) and periphery (isolates). In groups with multiple cliques, this measure of prominence becomes problematic. Indeed, Bonacich (1972a, pp. 116-17) notes that "the procedure based on weighting each choice by the number of choices received by the chooser gives a solution only for the largest clique and makes members of smaller cliques appear to be isolates."¹ As a solution, he recommends using a

multidimensional approach to derive centrality measures within each clique. Further, the very notion of in-group influence also becomes problematic for segmented networks, as in-group cliques may promote varying standards of behavior, often quite different from the optimal group norm (Kitts, Macy, and Flache 1999). Due to these problems, a one-dimensional measure of centrality may sometimes be a misleading indicator of the group's influence on a member.

Perhaps the structure of social influence should be modeled simply as a process of contagion among group members. That is, the social tie may promote agreement in behavior between Ego and Alter and thus may only promote high involvement for Ego if Alter is also highly involved. This notion of influence within individual dyads suggests that actors who are near each other in the structure of local organizational memberships (share more weak ties) will tend to adopt the same behaviors, whether or not those behaviors happen to correspond to a group norm.

Of course, shared memberships entail *two* mechanisms fostering agreement among structurally similar actors. First, if two actors share memberships, they may influence each other through interaction in these outside arenas. Second, these other memberships will expose them to similar (unmeasured) influences. Both of these mechanisms suggest a final relational hypothesis:

H6: Individuals who have similar profiles of affiliations will have equivalent levels of involvement.

Extramovement Affiliations—The Structure of Local Organizational Competition

It seems obvious that a person who donates some time or money to one organization cannot, by definition, donate those same resources to another organization. This implies that organizations are competing for essential resources from a finite pool. On the other hand, much of the social movements literature either assumes or empirically observes that individuals' extramovement organizational affiliations promote participation in protest (McAdam 1986; Morris 1981; Orum 1972; Von Eschen, Kirk, and Pinard 1971), political campaigns (Pollock 1982), and social movement organizations (Walsh and Warland 1983). To account for this paradox, scholars often add that organizational involvement will enhance participation when it reinforces the *identity* relevant to movement efforts. Accordingly, some argue (Pinard 1975) that affiliation with other groups will augment participation most when these other groups have the same goals or interests as the one under study.

This contrasts with the position taken by organizational ecologists (McPherson 1983; Popielarz and McPherson 1995), who assume that organizations must ultimately compete for members and their resources. Further, competition

varies with the extent of niche or domain overlap (Baum and Singh 1994; Hannan and Freeman 1989; Haveman, Baum, and Keister 1997), representing the extent that two organizations depend on the same resources to survive. McPherson has elaborated on the niche in terms of "sociodemographic space" (McPherson et al. 1992), defined by fixed attributes of potential members (e.g., age, sex, education). This approach assumes that action is fundamentally or wholly constrained by social structure, and that this structure can be approximated by demographic attributes. Organizations compete for members in a multidimensional field of demographic traits, just as predators may compete for overlapping types of prey.

Alternatively, if we may assume that social actors are purposive and budget their resources toward subjective goals, we may define the niche in terms of goal space rather than sociodemographic space. Organizations that promote a given collective good will compete for resources from the population of actors who value that good and who budget resources toward its production. Of course, this distribution of values among actors may be highly correlated with the distribution of demographic attributes, so either may inform a simple model of niche structure. This notion of competition driven by complimentary goals corresponds to some work in resource mobilization theory on social movement organizations (Minkoff 1994, 1995; Zald and McCarthy 1980).² Klandermans (1989, p. 304) notes, "Paradoxically, then, we can expect greater competition among cognate movement organizations appealing to the same mobilization potential than among movement organizations with nonoverlapping mobilization potentials."

Further, these dynamics should vary with the relative scarcity of resources required for mobilization (Hathaway and Meyer 1993; Staggenborg 1986; Zald and McCarthy 1980). This corresponds to work on social movement coalitions, which sees coalitions as occurring at least partly for the purpose of "domain agreement" (Walsh 1981; Zald and McCarthy 1980) or "cooperative differentiation" (Hathaway and Meyer 1993). In this way, social movement organizations will specialize to certain resource, tactical, or issue domains, and thus carve up their niches to minimize competition.

If the niche is defined in terms of group goals, then groups with equivalent goals must compete for individuals' resources, but groups with irrelevant goals may be inconsequential, commensal, or even mutualistic (Emlen 1973, pp. 319-21). That is, copresence of two such organizations may help one or both, but harm neither. As a rough measure, I regard any other environmental organization as "parallel" (promoting equivalent goals) and all other organizations as "orthogonal" (promoting irrelevant goals) organizations.³ This assumption of goal-specific competition leads to the following hypothesis regarding the availability of individual resources for *this* group:

H7: Affiliations with parallel groups will have a negative effect on individual contributions to this group, relative to affiliations with orthogonal groups.

Methods

I provide a case study of a single voluntary association that was organized to oppose the siting of a hazardous waste disposal facility in a small Midwestern town. Though I use interviews, participant observation, and archival research to inform the interpretation, the core of this project involves analysis of responses to an anonymous questionnaire, administered in March of 1994.

Data and Measures

The dependent variable is "level of involvement" in organizational affairs. This represents the extent to which individuals donate their resources—primarily their time—to organizational tasks. I designate as "high-level members" any respondents who indicated that they held a position on the board of directors, steering committee, or an officer position in any of five other committees at the time of measurement (all others are coded as "low-level members"). This appears to be a reliable indicator of level of involvement as it correlates highly with alternative indicators: frequency of meeting attendance, number of committees joined, and attendance at relevant public events and demonstrations. This binary criterion splits the respondent population approximately in half (twelve high- and eleven low-level members).⁴

This study population is limited to "active" members of the organization, who attended meetings regularly during the time of the study. I administered a questionnaire at a general meeting, allowing members to identify others who regularly attended meetings but who were absent on that date. I thus obtained twenty-three completed questionnaires from a population of approximately twenty-nine active members. Of course, a comprehensive exploration of the dynamics of movement participation should include local residents who supported the organization's goals but who never became active members. This was infeasible here due to the difficulty of mapping the social and organizational ties of the many nonmember residents.⁵ In contrast to studies of recruitment, which should (but often do not) sample nonmember constituents, this study endeavors to explain only variation in level of involvement among active members of this organization.

The questionnaire first measured respondents' interests in organizational goals with four questions regarding their fears about consequences of a hazardous facility siting. These questions addressed anticipated impacts on respondents' *own health*, *family's health*, *town's health*, and *property values*. Responses to these four items are highly correlated. Using a principal components analysis, I extract a single factor ($\lambda = 3.50$) that represents 87.4% of the variance in all

four survey items. I use this factor, *Fear-of-Consequences*, in place of the raw survey scores for subsequent analyses. This provides a "subjective" indicator of members' interest in the goals of the organization. Assuming that actual danger of contamination and damaged property values would be a linear function of proximity to the hazardous facility, I also use the simple distance (in miles) between each member's home and the facility as an "objective" indicator of interest in outcome.⁶ To address biographical availability, I model level of involvement as a function of marital status, employment status, and number of children living at home.

To measure in-group social ties, I asked individuals to report the number of other members with whom they shared social visits (outside of meetings). While this should be a reasonable indicator of in-group strong ties, it unfortunately does not include the identities of individuals who are linked by these ties. (Of course, such a detailed measure of direct ties would be very difficult to construct within an anonymous survey.) To represent informal ties to nonmembers, I use a six-item index of *neighborhood solidarity*, following Walsh and Warland's (1983) study of antinuclear activists.⁷ Though it may be crude, I assume that this scale is a reasonable proxy for out-group ties, given that members tend to come from different neighborhoods. I aggregate these six ratings into a reliable ($\alpha = .888$) scale.⁸

To measure organizational participation, the questionnaire allowed members to report outside memberships as well as any other leadership positions held (thus allowing them to be coded as high- or low-level members in the other groups). The twenty-three respondents participated in a total of thirty-seven organizations, but only eight of these organizations contained multiple members of this group.

I then examine the structure of "weak" ties between members. While similar work (e.g., McAdam 1986) defines weak ties as an indirect relation between two actors who share strong ties to a third actor, this is not possible here due to the anonymity of the strong tie measure. I thus use shared organizational memberships to indicate weak ties. Following Breiger's (1974) method, I multiply the actor-by-group (23×37) matrix by its transpose to produce a symmetric (23×23) "co-membership" matrix (Wasserman and Faust 1995). An actor's number of shared memberships represents her degree centrality in this weak tie matrix. To examine the structure of shared affiliations, I first employ the measure of prominence used by Fernandez and McAdam (1988). However, as this group does not consist of a single clique surrounded by structural isolates, I have no reason to expect centrality in one clique to be related to participation.

To provide a more robust view of the structure of memberships, I use a multidimensional representation. Unlike the co-membership matrix above, this method uses all of the original affiliation data. It thus allows for a distinction

between actors within less central cliques, actors with only unique (unshared) affiliations, and actors with no affiliations at all. The prominence measure treats all of these cases equivalently as structural isolates and may thus provide a severely truncated view of the "multiorganizational field" (Curtis and Zurcher 1973).

Beginning with the original 23×37 affiliation matrix, I compute a symmetric (23×23) distance matrix (D), which represents membership discrepancies between all pairs of actors. Actor i 's affiliation with any group k (denoted a_{ik}) and actor j 's affiliation with group k (denoted a_{jk}) are each coded as 0 for "False" and 1 for "True." Each cell of D is the Euclidean distance between the two actors i and j , or the square root of the total membership discrepancies between i and j across all m groups:

$$d_{ij} = \sqrt{\sum_{k=1}^m (a_{ik} - a_{jk})^2}$$

In order to simplify this distance matrix for later analyses, I apply a non-metric multidimensional scaling routine (Davison 1992) to extract three dimensions that parsimoniously represent the variance in distances. This maps each member's position in the multiorganizational field, thus allowing comparisons of behavioral similarity for structurally similar actors.

To examine the independent effect of extramovement organizational involvement, I simply count each actor's organizational affiliations. I also divide the thirty-seven organizations into five substantive categories. These include *churches*, *civic clubs* (e.g., Kiwanis, Senior Citizen's Club), *environmental groups*, *recreational/family groups*, and *political/professional groups* (e.g., local government offices, parties, and professional associations). These categories correspond roughly to several of Popielarz and McPherson's (1995) "types" of organizations with one exception: I allow environmental groups to occupy a distinct category, as these groups are key to the question of goal overlap.

Results

For each of these explanations, I use logistic regression to model relationships between sets of covariates and the odds of being a high-level member. I use separate regressions rather than a combined model because the small sample provides a very limited pool of variance with which to estimate the coefficients and their significance.⁹

The analyses will begin with two models to examine hypothesized relationships between individual attributes and level of involvement. While I will use several variables to test the *Interest-in-Goals* and *Biographical Availability* explanations, these models will not include all the attributes that might be related to participation. To guard against spurious effects, I have also examined several other individual-level variables (age, gender, income, education, home owner-

Table 1
Logistic Regression of *Individual Attributes Models*

	Interest-in-Goals Model			Availability Model		
	B	SE	Wald χ^2	B	SE	Wald χ^2
Fear-of-Consequences	.9082	.6307	2.074			
Distance	-.0143	.0787	.033			
Marital Status				.9711	1.3896	.488
Children at Home				.9106	.6836	1.774
Employment				.5789	1.2148	.227
Constant	.1067	.6540	.027	-1.4091	1.3557	1.080
	Model $\chi^2 = 3.210$			Model $\chi^2 = 4.754$		
	df = 2			df = 3		
	$R^2_L = .174$			$R^2_L = .298$		

ship, and membership duration). Of this list, only one is substantively or statistically significant: *Age* has a marginally significant negative relationship with level of involvement. For this reason, I have replicated every regression while controlling for age and found that this does not change the conclusions from any of the models.¹⁰ I will thus assume that differences in participation are not largely determined by individual attributes exogenous to the models tested. Of course, while these various attributes clearly cannot differentiate high- from low-level members, these attributes may have selected people for membership this organization, as evidenced by a few atypical aspects of the sample. In particular, respondents are uniformly Caucasian, with much higher rates of college graduation and home ownership than the averages for the surrounding counties.

First, I will examine the *Interest-in-Goals* model. If individuals choose their level of involvement principally by their extent of interest in the organization's goal, we should expect a positive relationship between fear of the consequences of a hazardous waste facility siting and level of involvement in the opposition. Similarly, we should expect the distance between their residence and the proposed hazardous waste site to be negatively related to their level of involvement.

The signs on the coefficients are as predicted, giving weak support to the interest-based explanation (*H1*). However, the "subjective" measure fails to reach significance at $p < .1$ and the "objective" measure has only a negligible effect. The model and both of its components do not explain a significant portion of the variance in participation.¹¹ These dispositional factors thus contribute little to our understanding of participation in this group.

The second model in Table 1 (the *Availability model*) assesses the Biographical Availability explanation for individual differences in participation, using marital status, number of children at home,¹² and full-time employment as indicators of constraints. The results provide little evidence that these competing commitments result in any reduced activity in this group and thus fail to support *H2*. In fact, all of these variables have mild *positive* relationships with the odds of being a high-level member. They also have little apparent effect on selection for this group, as the percentage of respondents who were married (82%), employed full-time (females = 58%; males = 76%), or parents with children at home (38%) was fairly typical for the local community.

The first two models thus indicate that differences in participation between members cannot be adequately explained by these individual-level variables, either through interest in organizational goals or through biographical availability. Now I will turn to models that posit a primary role for social networks in influencing participation.

The *Social Ties* model in Table 2 examines the effect of in-group strong ties (friendships), out-group ties (neighborhood solidarity), and in-group weak ties (shared memberships).

This model provides a superior fit to the data—just barely missing significance at the $p < .05$ level—though strong ties account for virtually all of the variance explained. Undeniably, members who see a greater number of other members socially are much more likely to be highly involved in the group.¹³ By alternative measures (not shown), high-level members also report that they have more *frequent* social visits and consider more other members to be "close friends." As hypothesized, neighborhood solidarity is negatively related to level of involvement, but this effect is negligible (perhaps due to the crudeness of the scale as an indicator of out-group social ties). The results thus provide some support for *H3*, but little support for *H4*.

Weak ties do not have the predicted effect, however, as they have a marginally nonsignificant negative relationship with level of participation in this group (regardless of whether strong ties are included in the model). Here it may be worth noting that controlling for respondent age slightly increases the magnitude of the negative effect of weak ties and slightly diminishes the positive effect of strong ties, so the former reaches significance at $p < .1$, and the latter fails to reach significance at $p < .1$. The difference is modest, however, and the overall pattern (negative for weak ties, positive for strong ties) remains identical. This provides little support for *H5* and suggests that shared affiliations with other members may not have a universally positive effect on participation. While weak ties to other members may have served to expose individuals to this organization (Coleman, Katz, and Menzel 1957; Granovetter 1973; McAdam and Fernandez 1989; McPherson et al. 1992), they do not appear to increase participation in it.

Table 2
Logistic Regression of *Social Interaction Models*

	Social Ties Model			Prominence Model		
	<i>B</i>	<i>SE</i>	Wald χ^2	<i>B</i>	<i>SE</i>	Wald χ^2
Out-Group Solidarity	-.2631	.6190	.181	-.2824	.6252	.204
In-Group Strong Ties	.6341	.3646	3.024*	.6344	.3686	2.963*
In-Group Weak Ties	-.2988	.2658	1.2635	-.2892	.2703	1.145
Prominence				-.6657	3.0907	.046
Constant	-1.1693	.9618	1.4782	-1.1581	.9631	1.4459
	Model $\chi^2 = 7.374^*$			Model $\chi^2 = 7.421$		
	df = 3			df = 4		
	$R^2_L = .413$			$R^2_L = .415$		

* $p < .1$.

Adding prominence to the model does not significantly improve fit or change the results. In this case, prominence simply identifies one small but densely connected clique that shares memberships in local environmental groups. By definition, all other cliques have zero prominence. Accordingly, I use a more robust representation of the structure of organizational memberships. Nonmetric multidimensional scaling derives three dimensions that represent the social space defined by actors' profiles of affiliations. Figure 1 maps the twenty-three members of this group in these three dimensions and marks each actor as a high- or low-level member.

The first and third dimensions differentiate actors who belong to one (or more) of five environmental groups from actors who belong to a local Methodist Church and/or Kiwanis club. The second dimension differentiates these actors from members of various other professional, recreational, and political clubs.

Supporting *H6*, low-level and high-level members appear to form homophilous clusters, showing that actors who have similar vectors of affiliations tend to occupy the same level of involvement in this group. This suggests that it is not the total number of weak ties or prominence in the co-membership matrix but structural similarity to other *high-level* members that predicts participation for this group.

Most striking is the presence of two bundles of structurally similar actors near the origin who also share common levels of involvement. The four low-level members are all structural isolates in the actor-by-group matrix (they have no organizational affiliations), thus leading them to be trivially equivalent. The four high-level members are only structurally similar in that each has a different

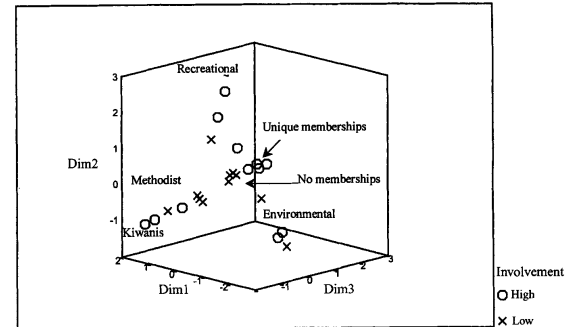


Fig. 1. Map of Members' Positions in the Multiorganizational Field

vector of unique (nonshared) affiliations. However, the co-membership matrix represents these two clusters of actors identically as structural isolates. Note that while these eight actors at the center of the graph also support *H6*, we clearly cannot explain this as a product of dyadic influence. In the case of these two types of isolates, where structural similarity is most highly related to common levels of involvement, structural similarity does not entail increased social contact between actors at all. Further work should explore alternative mechanisms for structural similarity to encourage similar levels of involvement.

Now I will examine extramovement organizational affiliations as potentially constraining influences on contribution to this organization. If participation in a given group is principally determined by the extent of resources available, we should expect memberships in other groups—and particularly the more demanding high-level memberships—to be detrimental to participation in this group. We can address this question by comparing the number of members who are highly involved in this group across different numbers of extramovement affiliations.

As Figure 2 shows, high-level members generally have many more affiliations. I also regress level of involvement in this organization on the number of outside affiliations and the number of high-level outside affiliations. This model demonstrates that the number of outside commitments is positively related to level of involvement in this group, just as for the measures of biographical availability.¹⁴ As we see in Table 3, even with the total count of outside memberships held constant, the count of high-level outside memberships is positively associated

Table 3
Logistic Regression of Organizational Competition Models

	Universal Competition			Goal-Specific Competition		
	B	SE	Wald χ^2	B	SE	Wald χ^2
Other Affiliations	.4568	.3428	1.776	1.2863	.5591	5.294**
Other High-Level Affiliations	.8728	.6580	1.760			
Other Parallel Affiliations				-.9062	.5107	3.148*
Constant	-1.6840	.9097	3.427*	-2.1392	1.064	4.042**
	Model $\chi^2 = 8.834^{**}$ df = 2 $R^2_L = .425$			Model $\chi^2 = 10.679^{***}$ df = 2 $R^2_L = .496$		

* $p < .1$; ** $p < .05$; *** $p < .01$.

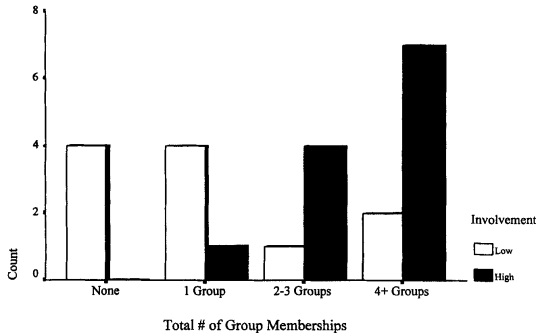


Fig. 2. Level of Involvement by Number of Outside Affiliations

with level of participation in this group, though this fails to reach significance due to collinearity (taken independently, each of these effects is highly significant). This is consistent with the many previous studies that found outside organizational affiliations to be strongly predictive of participation (e.g., Curtis and Zurcher 1973; Rosenthal et al. 1985; McAdam 1986).¹⁵

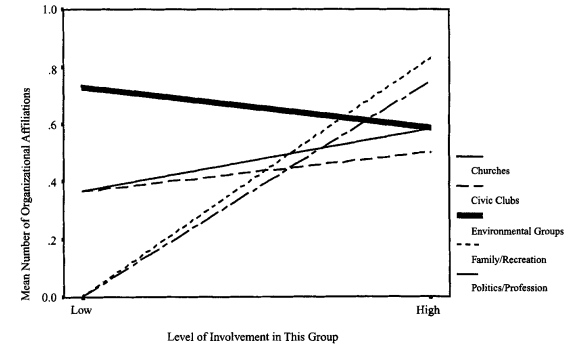


Fig. 3. Organizational Affiliations by Level of Involvement and Type of Organization

While this result undermines the strong ecological assumption that involvement in one organization is always reduced by involvement in other organizations, it does not address my prediction that parallel organizations will have a negative effect relative to orthogonal organizations. Accordingly, the *Goal-Specific Competition* model in Table 3 estimates this effect of parallel affiliations, while holding the absolute number of affiliations constant.

This model supports the goal-specific ecological explanation. The absolute number of affiliations with other groups is positively and significantly related to participation in this group, but the partial effect of parallel affiliations is negative. Although this fails to reach significance by the Wald statistic (likely due to collinearity and small sample size), it is substantively significant.¹⁶ Further, this goal-specific ecological model provides a strong improvement in fit, as indicated by the model χ^2 and R^2_L .

To further elaborate this effect (and to guard against spuriousness due to pooling a diverse set of orthogonal organizations), I examine the five types of voluntary associations separately, while predicting a competitive effect only for environmental organizations. Figure 3 presents the average number of memberships in each type of outside organization, among low- and high-level members of this group.

For four of the five types, high-level members of this group are affiliated with many more outside groups. They participate in 38% more civic clubs and 60% more churches, and are overwhelmingly more likely to take part in recreational/family groups and political/professional groups. Consistent with *H7*, the only type of voluntary association that is more common to low-level members than high-level members is the *environmental* type.

Discussion

Though the analyses show that measures of individuals' interest in the group goal cannot account for much variation in level of involvement for this case. This need not imply that interests in the group goal were not necessary to promote recruitment to the group. Observing a larger sample—including non-participants, token participants, and active participants—Oliver (1984, p. 607) notes, "interest in the collective good seems to move people from doing nothing to doing something, but interests do not seem to be critical for moving people from doing less to doing more." Indeed, the modest mobilization against the proposed hazardous waste facility despite nearly universal local opposition¹⁷ indicates that interests in organizational goals are certainly not sufficient to promote participation.

Contrary to predictions based on biographical availability, external obligations such as family and full-time employment have a weak positive effect on participation in this case. Perhaps these obligations exert a moderate constraining effect but simultaneously serve to increase social contacts throughout the organizational field. As anecdotal evidence, we might note that involvement in social organizations such as family/recreational groups was most strongly related to high-level participation in this group, and we may assume that having a job and family will increase participation in these types of sympathetic-yet-orthogonal organizations. While it is also tempting to posit that having a local job and family may engender a greater desire to oppose local environmental hazards, Table 1 shows that respondents' descriptions of their motives (including "fear for my family's safety") did not predict involvement.

The analyses have provided qualified support for a relational explanation with a focus on direct social influence through strong ties. While centrality in the weak tie matrix (both total number of weak ties and prominence) shows a non-significant negative relationship with level of participation, individuals with similar profiles of affiliations tend to have the same level of involvement in this organization. That is, organizational ties to high-level members appear to promote high involvement and organizational ties to low-level members appear to promote low involvement.¹⁸ However, this tendency for similar profiles of affiliations to predict similar levels of involvement also obtains among actors who share no weak ties at all, suggesting that some factors other than dyadic social

influence may be operating. In particular, the effect of proximity in the multi-organizational field may be an artifact of the influences of organizations upon their members' behavior. Indeed, most of these results provide evidence that actors are profoundly influenced by their organizational involvements. A respondent illustratively remarked: "Who and what I do is an accumulation of the various groups I have belonged to."

We can begin to examine this effect of organizations on their members through analyzing the relationship between extramovement affiliation and participation. This provides qualified support for an ecological argument that defines the niche in a space of organizational goals: Groups oriented toward promoting the same collective good are in direct competition. However, in this case, groups oriented toward different goals seemed to ignore or even promote involvement in this group. For example, many local organizations provided resources for this group, including meeting rooms, promotional efforts, and fundraising drives. Apparently, extracting resources from individuals is not a zero-sum game for organizations but can lead to mutualistic effects, particularly when organizational goals are irrelevant.

I did not predict the strong positive effect for involvement in *all* other organizations on level of involvement in this organization, though that appears to be true for this group and for much of the microstructural work in social movement participation. I can offer two post hoc explanations for this case study. Members who were highly involved in other organizations (many of whom were leaders in this organization) often claimed that this outside involvement increased their sense of efficacy in neighborhood politics and also that this involvement gave them skills that enhanced their participation in this group. These effects are exogenous to my explanation, but exploratory regressions showed no significant effect on involvement for either enhanced skills or perceived efficacy in local affairs.

This positive effect for all outside involvement is so strong that it apparently overcomes any effect of competition between groups. That is, without controlling for total memberships, the number of parallel affiliations has a *positive* effect on participation. This effect is unpredicted, but unsurprising. I have made the simplifying assumption that these environmental organizations (local chapters of the Green Party, Greenpeace, and the Sierra Club, as well as a grassroots Ecology Center and only one other local organization specifically created to fight the hazardous waste facility) are in perfect competition. In fact, four of these five other organizations have multiple goals and are not entirely focused on the same effort as this organization.¹⁹ In that sense, we may expect the relationship between these organizations to lie somewhere between mutualism and pure competition. However, these organizations will lie much closer to competition with this group than will churches, civic clubs, and other orthogonal organizations.

Conclusion

I have examined differences in ongoing level of involvement for a neighborhood activist organization at three levels of explanation: the individual actor, the structure of informal relations, and the structure of organizational affiliations. Though measures of interest in outcome weakly showed the predicted relationships, no dispositional or availability model provided predictions for this group that were significantly better than random choice. As in much empirical work on recruitment, this implies that individual attributes are hardly the general linchpins of sustained movement participation.

The second explanation—that social ties affect participation by structuring social influence—is only partially supported by the findings. While out-group solidarity shows a nonsignificant negative relationship to participation, in-group strong ties have a much more notable positive relationship. While one-dimensional measures of centrality in the weak tie matrix (degree and prominence) show paradoxical relationships with level of involvement, we can uncover apparent effects of extramovement participation by mapping the actors in a multidimensional field of affiliations. By comparing behaviors of structurally similar actors, we see that members are more likely to share the level of involvement of others who are located *nearby* in this field.

Although an assumption of universal zero-sum competition fails to account for the observed levels of participation in organizations, a modified form that recognizes variation in organizational goals fits the data very well. Contrary to some strong ecological assumptions, low-level and high-level involvement in a large number of other organizations is associated with high-level involvement in this organization. As predicted, the relative detrimental effect appears for *parallel* groups: other local environmental organizations.

In this study, I have extended the recent emphasis (Fernandez and McAdam 1988; Opp et al. 1995) on elementary processes of social influence as a theoretical explanation for the relationship between network ties and movement participation. I have also argued that these influence processes provide a plausible causal mechanism by which mutualistic effects can emerge in (noncompetitive) populations of organizations. Organizations may serve as structural conduits for the exchange of solidary incentives by gathering the relevant actors into a common space. Elementary social interaction may thus serve as a microfoundation for dynamics of organizational ecology, just as the ecological perspective may provide a coherent explanation for the fickle relationship between network ties and participation.

This case study of one small organization has served to generate hypotheses and illustrate means of addressing them, but must leave an adequate test of these hypotheses to later work. Examining both the microstructure of interaction

and the effect of goal orientation on organizational competition will provide a fruitful next step in the exploration of network ties as conduits for resource mobilization.

ENDNOTES

¹ Actually, the prominence measure indicates the clique loading on the first eigenvector (with the largest eigenvalue), which is not always the largest clique. Discussion of this point is beyond the scope of this paper, so I refer interested readers to Bonacich (1972b) for a more detailed explanation.

² When resource mobilization theorists have studied relationships between social ties and participation, they have usually emphasized the *facilitating* role played by shared memberships with cognate organizations. However, most have examined the relationship between organizational involvement and participation in protest or other temporary campaigns. Clearly, a competition model may be less relevant in short-lived cases than for long-term coexistence of organizations within overlapping domains.

³ In the interest of parsimony, I assume that actors will not simultaneously participate in two social movement organizations with mutually exclusive goals.

⁴ While these high-level members are nominally "leaders," this mostly means that they invest more time in organizational tasks. In observing their elections, I noted that any willing member could apparently adopt an officer position and thus take charge of a task area without contest. Note that over half of the members surveyed have at least one officer position. I thus interpret this variable as a choice to become more highly involved, not as an aspiration to a prestigious position.

⁵ Given that active members resided in several different towns (often over ten miles from the proposed facility) and that some residents were indifferent to the proposed facility, it would be difficult to define the boundaries of the relevant nonmember beneficiary population. I will note, however, that approximately 8,500 people lived within ten miles of the facility and over 1,500 people were dues-paying (but "inactive") members of this organization during my study.

⁶ I had planned to use home-ownership as another "objective" indicator of interest in organizational goals, as did Oliver (1984). Unfortunately, only one respondent was not a homeowner, leaving insufficient variance to predict participation.

⁷ This scale asks respondents to evaluate the truth/falsity of the following statements: *Most of the people in my neighborhood . . . know each other's names; participate in clubs or organizations together; keep up-to-date on events in each other's lives; invite each other over for meals and parties; have conversations about current events; lend each other household goods (recipes, lawnmowers, etc.).* Note that this scale provides concrete behavioral measures, while Walsh and Warland asked respondents to report how much they "felt in common with" most of their neighbors. Of course, in order to interpret this as a measure of out-group informal ties, I must assume that any respondent who reports living in a highly solidary neighborhood also participates in those named activities herself.

⁸ Cronbach's α measures internal consistency by the average inter-item correlation. We can also interpret α as the correlation of this scale with the universe of all possible six-item scales measuring the same concept.

⁹ For this limited data set, I expected (and found) that running an expanded model often resulted in a perfect fit to the observed data. As a result, neither coefficients nor statistical significance could be assessed.

¹⁰ Even so, I note a very modest difference due to controlling for age in the *Social Ties* model in Table 2.

¹¹For all covariates, I use the Wald statistic to assess significance. Analogous to the t statistic in ordinary linear regression, this statistic is the squared ratio of the coefficient to its standard error. As a test of the significance of each covariate, the Wald statistic follows a χ^2 distribution with one degree of freedom. To test model fit, I perform a likelihood-ratio test, using twice the improvement in the log likelihood function as a Model χ^2 with k degrees of freedom (where k is the number of parameters estimated). I also compute R^2_L , which is simply the Model χ^2 divided by the $-2 \times \log$ likelihood function for a model with only the intercept. For details on the procedure, see Menard (1995).

¹²I also replicate the analysis using a dummy variable for the presence of children at home and find no substantive change in results.

¹³Admittedly, there is nothing to indicate a firm causal order, as being highly involved in the organization may also cause individuals to see other members socially more often (Walsh 1981).

¹⁴We might say that the ecological explanation is a special case of biographical availability, but I separate them to distinguish organizational competition from individual lifestyles or attributes.

¹⁵Admittedly, this could be a spurious relationship, showing only that some *individuals* happen to invest themselves heavily in many groups, while other individuals do not. However, the unimportance of individual level variables in predicting participation implies that—at least to some tipping point—involvement in voluntary associations tends to generally breed *more* involvement.

¹⁶If we apply likelihood ratio tests to nested models (including and excluding the variable of interest) as a less intuitive but more robust test of significance, the effect of parallel affiliations becomes significant at $p < .1$ and barely misses significance at $p < .05$.

¹⁷A concomitant study of this land-use conflict (Correia, Feagans, Kitts, Lillie, and Price 1994) used a telephone survey to measure local opinions regarding the proposed hazardous waste facility. Of fifty-nine residents randomly selected, 70% were *definitively opposed* to the placement of a hazardous facility and the remaining respondents were *undecided* or *qualifiedly opposed* to the facility.

¹⁸I would predict a similar double-edged effect for strong ties, but cannot test this prediction with these data. However, McAdam (1986) found these effects for both strong and weak ties, implying a dyadic influence process in recruitment to Freedom Summer.

¹⁹Interestingly, this organization was in the process of absorbing the last (redundant) group during my fieldwork.

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