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Applying affiliation social network analysis to understand interfaith groups



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ABSTRACT

This study applies affiliation social network analysis to understand how interfaith groups provide resources to other community groups and link interfaith group members to resources for local community change. Based on a sample of 88 interfaith groups from across the U.S., affiliation social network analysis pictures show distinct patterns in how interfaith groups share resources with community groups and link members to community resources. Overall, results show how interfaith groups may be empowering community settings that provide resources and link members to other resources in the interest of community change. These findings imply that interfaith groups may be part of the social fabric within communities that hold potential to be partners and contributors of resources to promote community change efforts. Limitations and directions for future research also are discussed.

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Aplicación del análisis de redes sociales de afiliación para comprender los grupos interreligiosos

RESUMEN

Este estudio se basa en el análisis de redes de afiliación para comprender cómo los grupos interreligiosos proporcionan recursos a otros grupos comunitarios y vinculan a los miembros de los grupos interreligiosos con los recursos de cambio comunitario. Sobre la base de 88 grupos interreligiosos de Estados Unidos, las imágenes del análisis de redes sociales de afiliación muestran diferentes patrones en la manera en que los grupos interreligiosos comparten recursos con los grupos comunitarios y vinculan a sus miembros con los recursos comunitarios. En general, los resultados muestran cómo los grupos interreligiosos pueden empoderar los contextos comunitarios que proporcionan recursos y vinculan a los miembros con otros recursos a favor del cambio comunitario. Los resultados implican que los grupos interreligiosos pueden ser parte del tejido social en comunidad con potencial para ser socios y colaboradores en la promoción del cambio comunitario. También discutimos las limitaciones y las posibilidades de investigación futura.

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Palabras clave:

Grupos interreligiosos

Análisis de redes sociales de afiliación

Capital social de intermediación

Redes sociales

Scholars in community psychology, sociology, and organizational studies are keenly interested in how citizens and groups organize to address local community issues, inequality, and injustice. Whether through community organizing (Christens & Speer,

2011; Speer & Hughey, 1995), specific community-based organizations (Wandersman & Florin, 2000), or coalitions (Allen, 2005), there are many avenues for citizens to advocate for change. One specific area of study examines the role of religion and religious organizations in larger efforts for community change. For example, national organizations such as the Industrial Areas Foundation (Alinsky, 1989; Orenstein & Hercules, 2007) and the Pacific Institute for Community Organizing (Speer et al., 2003) recruit and train

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religious leaders in strategies for community organizing with the goal of returning these leaders to their local community to create networks of congregations to organize for influence and power (Wood & Warren, 2002). Other case study research focuses on grass-roots religious partnerships that form to address specific issues such as the environment (Feldman & Moseley, 2003), labor issues (Bobo, 2003), health disparities (Kaplan et al., 2009), education (Quezada, 2003; Todd, 2012), or multiple issues at the same time (McCormack, 2013). Many of these groups are interfaith in nature with representation across religious traditions and with the goals of promoting religious understanding while also working for community change (Fulton & Wood, 2012; Patel, 2007). Clearly, research is needed to better understand how interfaith groups may be one type of community-based organization involved in local change.

In the current study we draw from empowering community settings as a framework for understanding the positive potential of interfaith groups to be organizations involved in community change. Maton and colleagues (Maton, 2008; Maton & Brodsky, 2011; Maton & Salem, 1995) describe empowering community settings as those that both promote the process of individual empowerment and result in a tangible increase in desired resources or a decrease in societal marginalization for oppressed groups. Central to empowering community settings theory is the idea that settings may exert external influence in the local community, such as by partnering with or providing tangible resources to other community-based organizations (Maton, 2008). Thus, one way interfaith groups may be involved in change efforts is in sharing organizational resources with other community-based organizations focused on local change initiatives. Indeed, case study research with two interfaith groups showed how groups shared economic, knowledge, and volunteer resources with other community-based organizations to contribute to community service projects and larger efforts for systemic change (Todd, 2012). In the current study, we use affiliation social network analysis to examine patterns in how interfaith groups share resources with religious and non-religious community-based organizations, revealing how resource sharing may be one way in which interfaith groups contribute to efforts for local community change.

Maton (2008) also notes that empowering community settings may create a radiating impact if participation within the setting results in access to resources that individual group members can use for activism. From a social network perspective, interfaith groups may serve as hubs to network members to other resources for activism. For example, Todd (2012) showed that the primary function of one interfaith group was for formal and informal networking where people connected one another to specific resources for community activism such as political leaders, volunteers, and other local experts. Such connection to resources through participation in an interfaith group shows how groups may create bridging social capital that (a) connects people from different groups through the interfaith group and (b) helps members link one another to other resources outside of the group. Indeed, scholars define bridging capital as connections across heterogeneous groups, often that lead to increased access to desired resources (Brisson, 2009; Perkins, Hughey, & Speer, 2002; Putnam, 2000). Inherent in their composition (people coming together from different religious congregations and traditions), interfaith groups provide a setting to encourage bridging connections. Therefore, in the current study we examine how interfaith groups serve to connect members to other resources in the community to better understand how the group may help to foster this type of bridging social capital.

To examine study questions we use affiliation social network analysis. Such analysis uses affiliation data where *actors* report attendance, membership, or some type of relational tie with

an event (Borgatti & Halgin, 2011; Wasserman & Faust, 1994). Examples of affiliation data are as follows: (a) elite women's attendance at social events (Borgatti & Everett, 1997; Davis, Gardner, & Gardner, 1941), (b) membership on corporate boards (Lester & Cannella, 2006), and (c) community organizations that participate (or not) in different community projects (Mische & Pattison, 2000). Typically, affiliation data are analyzed to understand a system of social relations in a bounded community (Wasserman & Faust, 1994). For example, when two women report attending the same social event in their community, it often is assumed they had an opportunity to form a social tie (Borgatti & Halgin, 2011).

In contrast, the focus of affiliation analysis can be on the collection of events to understand how an actor identifies with a set of events (Wasserman & Faust, 1994). In the current study, we take the latter approach and focus on patterns of how interfaith groups report on how they (a) provide resources to other community groups and (b) connect members to community resources. We consider the interfaith groups as "actors" and other community organizations and community resources types of "events." Because there are likely a limited number of interfaith groups in a given community, this approach is not about social relations among interfaith groups in the same community, but rather shows the various ways interfaith groups may serve to (a) provide resources to other community organizations, and (b) bridge members to other community resources. For example, different interfaith groups may share resources with different sets of community partners. Moreover, if the interfaith group links members to other community resources, this may be a form of bridging capital where members are linked to resources due to their participation in the group. Thus, the use of affiliation analysis in this study is not to examine social relations within the same community, but instead is used to examine patterns in how interfaith groups provide resources to other community groups and furthermore how interfaith groups may help to bridge members to community resources.

Affiliation social network data may be analyzed in different ways. One direct and powerful analytic approach is to create a *social network picture* that displays all interfaith groups and shows links between the group and other community groups or other community resources (Borgatti & Everett, 1997; Borgatti & Halgin, 2011). Such a picture has potential to reveal different patterns of how interfaith groups share resources with other community groups (e.g., do interfaith groups only share resources with religious congregations or also with other secular and governmental organizations?) and how interfaith groups may link people to different patterns of resources (e.g., do some groups link to a broad set of resources or to certain types of resources?). This type of picture also shows both (a) interfaith groups and (b) other community groups or community resources in an integrated visual display. These pictures provide unique information beyond simple frequencies as they show distinct patterns across the entire set of links. In addition, pictures of *co-identification* may be examined to see if interfaith groups tend to provide resources to pairs of community organizations or to bridge members to pairs of community resources. This may be important to understand how interfaith groups share resources with certain sets of community organizations or may help to create bridging links for members to distinct sets of community resources. Together, these pictures provide an intuitive visual display of how interfaith groups share resources with other community organizations and link members to resources.

Present study

The current study applies affiliation social network analysis to understand how interfaith groups may provide resources to other community groups and link members to other community

resources for local community change. First, we present graphs to examine the general structure of how interfaith groups provide resources to community groups and link members to community resources. Second, we provide graphs of co-identification to show how interfaith groups may provide resources to certain pairs of community organizations or link to certain pairs of resources. To further enhance an understanding of affiliation social network analysis, we also describe the process of data analysis. In sum, the current study provides an innovative exploration of community interfaith groups to better understand how they may be empowering community settings that help bridge organizations and members to resources for local change.

Method

Participants and procedures

Interfaith groups from across the U.S. were identified through national lists of interfaith groups and Internet searches (using key search words such as interfaith, interreligious, and ecumenical group). In later stages of recruitment we contacted congregations in mid-sized cities in states where we did not have participating interfaith groups to ask if religious leaders knew of interfaith groups in their area. Overall, we used broad inclusion criteria and searched for groups that identified as religious groups where people from different religious congregations or backgrounds meet together on a regular basis around a common goal. Once groups were identified, we contacted groups by email or phone to determine interest in participation and if they fit criteria for the study. If a group desired to participate, we secured a contact person who distributed information about the study including the online link to the survey, or the researcher supplied paper surveys with postage-paid envelopes. The contact person was given \$10, which they could receive as a check, gift card, or could donate to a designated charity. We gave each group an identification code so that we could match participants to their group. To encourage multiple participants per group, we offered a group incentive such that if five or more in a group participated, we donated \$15 to a designated charity.

This recruitment strategy resulted in 88 groups from over 30 states where at least one person completed the survey about the group. This was a 19% response rate. Demographic questions revealed that groups met on average about once a month with meetings lasting on average about 2 h. On average, groups were relatively small with 11–20 people attending a given meeting. The average group worked on between 1 and 3 community issues at a time. The median group was predominately White (80% White) and almost majority Christian (42% Christian). Twenty-one groups (24%) were from the Midwest, 11 (13%) from the Northeast, 31 (35%) from the West, and 25 (28%) from the South. At the individual level, the total sample size was 284 because 55 groups had 2 or more participants. For individual participants, most were women (60%), around 60 years old ($M = 57.47$, $SD = 14.52$, $Range = 20–83$), and White (87%: with participants from other racial/ethnic groups comprising less than 4% of the sample).

Measures

To assess interfaith group involvement in providing and linking to resources we modified items from coordinating councils research (Allen et al., 2009) to create two sets of items focused on how the interfaith group (a) provided resources to community groups and (b) linked people to resources. Item content was based on theory, qualitative research, and research on congregational collaboration (Chaves, 2004; Todd, 2012; Todd & Houston, 2013; Todd & Rufa, 2013). For providing resources to community groups,

Table 1

Groups providing resources to community groups and linking people to resources.

Variable	N	% of groups
<i>Providing resources to community groups</i>		
1. Congregations	76	86.36%
2. Para-church	31	35.23%
3. Secular non-profits	31	35.23%
4. Government	16	18.18%
<i>Linking people to resources</i>		
1. Other religious groups	69	78.41%
2. Experts	46	52.27%
3. Social service agencies	44	50.00%
4. Volunteers	43	48.86%
5. Congregations	29	32.95%
6. Political leaders	28	31.82%
7. Money	19	21.59%

participants read the prompt, “In the last year, to what extent did your group provide time, money, volunteers, or other resources to:” and then responded on a 1 (*not at all*) to 6 (*to a great extent*) scale for each of the following four items: (a) other religious congregations to address local community issues, (b) government to address local community issues, (c) secular non-profits to address local community issues, and (d) para-church organizations to address local community issues. For clarification, the following definition of para-church was given next to the para-church item: “para-church organizations are religious organizations that sponsor programs, events, or services but are not associated with one congregation.” For linking people to resources, participants read the prompt, “Please indicate the extent to which your group helps to link people to:” and then responded on the same 1–6 scale for each of the following seven items: (a) money for projects and events, (b) volunteers for projects and events, (c) local experts who can help with projects and events, (d) local political leaders, (e) social service agencies, (f) people from other religious congregations, and (g) other religious organizations. Together these two sets of items represent how interfaith groups are involved in providing or linking members to resources.

Affiliation analysis requires binary items, thus for each of the 11 items we created a binary variable to indicate if the group was or was not involved in that resource sharing or linking activity. For example, groups were coded as either providing a resource to the specific community group or not; or linking people to the specific resource or not. To determine group involvement, we averaged all responses within a group. If only one person reported on the group (33 groups had a single participant) we used the single report as the average. We then examined the distribution of responses for items across groups and determined the mid-point of 3.5 on the scale (between the responses of *somewhat* and *quite a bit*) provided a natural place for all items to classify groups as involved (≥ 3.5) or not (< 3.5) for that particular item. See Table 1 for the number and percent of groups that endorsed each item.

Results

Visualization of interfaith groups, community groups, and community resources

We used NetDraw version 2.090 to create pictures of how interfaith groups provided resources to other groups (Fig. 1) and linked members to community resources (Fig. 2). In each picture, the small circle is the interfaith group and the square is the community group or the linking resource. A line between the interfaith group and the square indicates that the group provided resources to that community group or linked members to that resource. Larger squares indicate that more interfaith groups provided resources to that

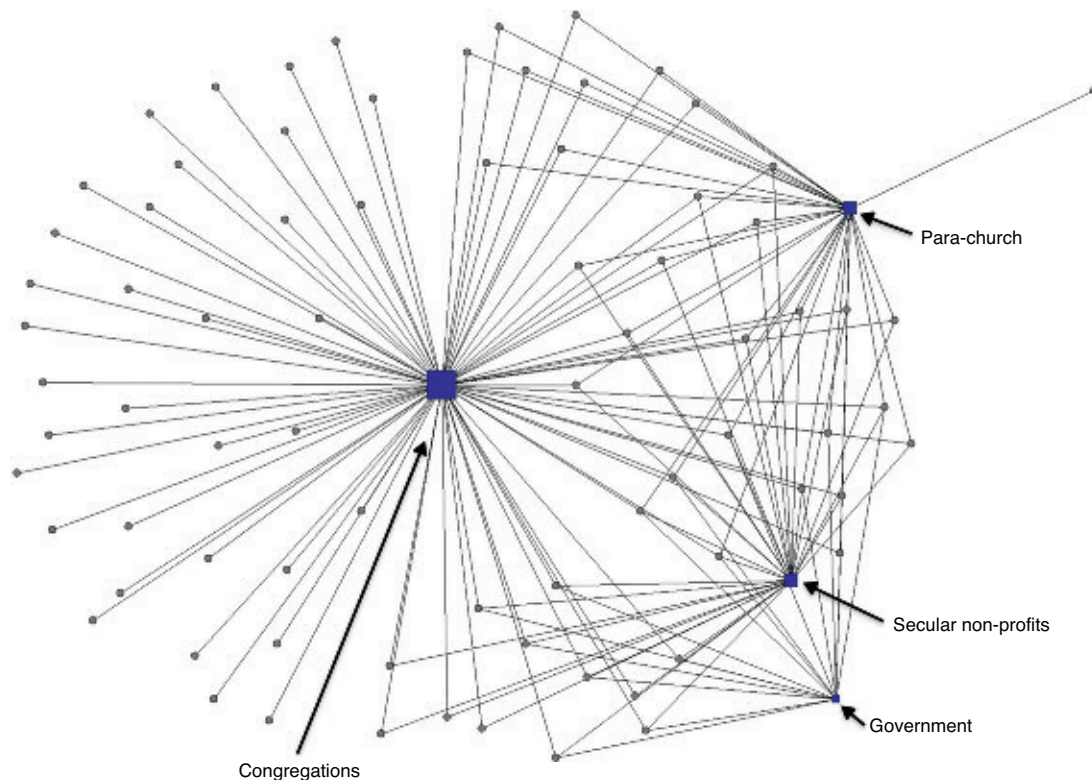


Fig. 1. A spring-embedded layout of providing resources to community groups. The node size of squares is based on the number of groups providing resources to the community group, with larger squares indicating providing more resources. Eleven groups did not provide resources and are not pictured.

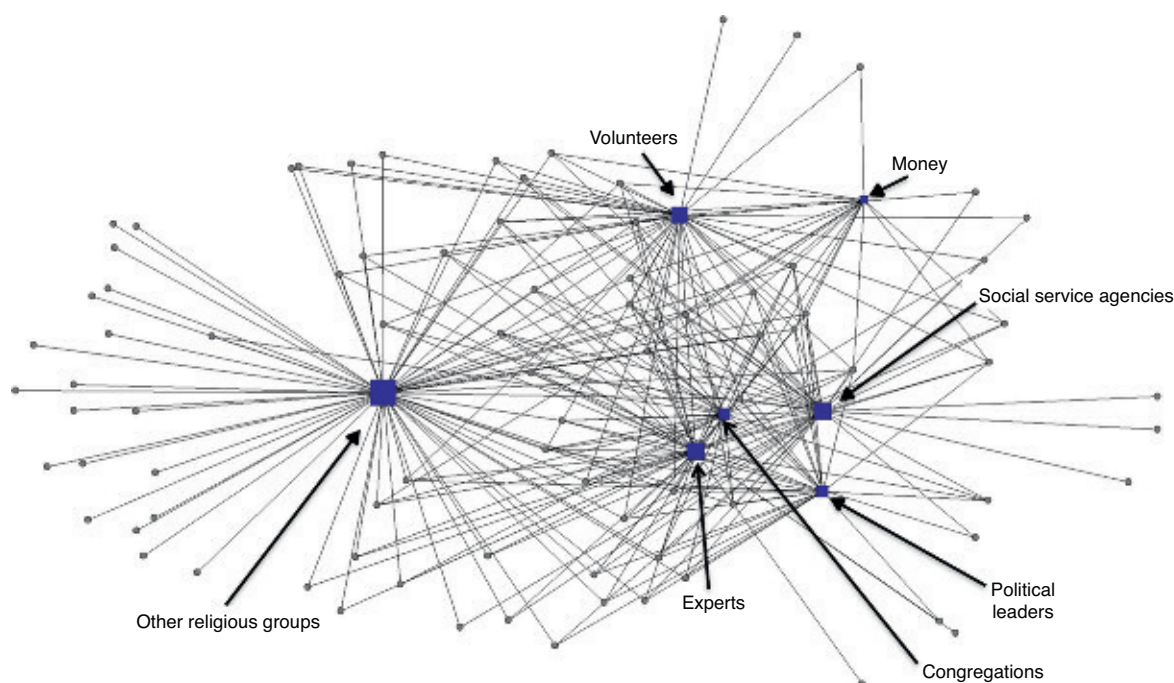


Fig. 2. A spring-embedded layout of linking people to resources. The node size of squares is based on the number of groups that link people to that particular resource, with larger squares indicating more groups linking people to that resource. Three groups did not link to resources and are not pictured.

group or linked to that resource. For example, in Fig. 1, interfaith groups were most likely to provide resources to congregations, so the square for congregations is the largest. Also, the graph uses an algorithm (i.e., spring-embedding, [Krempe, 2011](#)) to layout the graph in such a way that interfaith groups and the community partners or linking resources are closer to each other if they are

more similar. This means that (a) interfaith groups who have similar sets of ties to community groups or linking resources are closer together in space and (b) community groups or linking resources that have more interfaith groups in common are closer together. Finally, the algorithm balances the space between the interfaith groups and community groups or linking resources to improve the

readability of the graph (Borgatti & Everett, 1997). Combining all of these elements in one graph shows an intuitive picture of the ways interfaith groups provide resources to community groups (Fig. 1) or link members to certain types of community resources (Fig. 2).

Fig. 1 shows distinct patterns in how interfaith groups provide resources to other community groups. For example, the left side of the graph shows many single links such that some interfaith groups only provide resources to religious congregations, perhaps due to the religious mission of interfaith groups or the likely religious participation of members. The middle of the graph shows that some interfaith groups provide resources to congregations and one other type of community group, such as those in the top half of the graph that provide resources to congregations and para-church organizations. The right side of the graph shows very few single links, where interfaith groups who provide resources to para-church, government, or secular non-profit organizations are likely to provide resources to other types of groups as well. This may indicate a religious divide in how interfaith groups provide resources to groups such that many only provide resources to congregations whereas if they provide resources to secular organizations, they tend to provide resources to a wider set of organizations. In sum, this graph shows most groups share resources with other community organizations to address community issues and that there may be distinct patterns of who receives resources from interfaith groups.

Fig. 2 shows how interfaith groups link people to resources for projects to address local community issues. We consider this the bridging capacity of the group as groups may link or bridge people who participate in the group to various types of resources. The graph in Fig. 2 shows a rather dense pattern of linking, indicating that most groups link people to many different types of resources. Examining the pattern of links reveals three main ways that groups link people to resources. The first and most common way is by linking people to other religious groups. This may reflect an interfaith component of creating bridges across religious difference. Second, groups link people to volunteers and money, which may be viewed as links to human and economic capital. Third, groups may link people to experts, political leaders, and social service agencies, which may represent a connection to knowledge and community partners as a type of resource. Also, there are a number of groups located in the middle of the graph that link in multiple ways versus groups on the left that only link to other religious organizations, again showing that some groups may do more linking. This also shows that many interfaith groups link people to more than just religious resources to help with projects and events.

Visualization of co-affiliation

Following procedures outlined by Borgatti and Halgin (2011), we created graphs of co-affiliation to depict patterns regarding the tendency for interfaith groups to provide resources to pairs of community groups (Fig. 3) or to link people to pairs of resources (Fig. 4). To create the co-affiliation graph for providing resources to community groups, we first created a square community group-by-community group matrix of overlaps to quantify how many interfaith groups provided resources to each pair of community groups. For example, a co-affiliation would be present if the same interfaith group provided resources to both congregations and para-church organizations. We then computed the Jaccard coefficient for each pair of groups, which represents the proportion of interfaith groups in common across the two community groups (Borgatti & Halgin, 2011). The Jaccard coefficient may be interpreted like a correlation coefficient with higher values indicating a stronger tendency for co-affiliation. We then used the matrix of Jaccard coefficients to render a picture in NetDraw where a line between two issues corresponds to the Jaccard coefficient,

and a larger square indicates that more interfaith groups provided resources to that type of group. For providing resources to community groups, all of the co-affiliation lines are presented in panel (a) of Fig. 3. To ease interpretation and to reveal general patterns of co-affiliation, we then weighted each line so that thicker lines represented a stronger Jaccard coefficient (panel (b) of Fig. 3). We then systematically removed lines with weaker Jaccard coefficients so that the remaining lines between issues represented stronger patterns of co-affiliation. We gradually increased the criteria of the Jaccard needed to include a line until a graph with a clear interpretation emerged (i.e., we used Jaccard coefficients of .30, .35, .40, .45, and .50). For providing resources to community groups we found a relatively clear structure for the pattern of co-affiliation when lines with a Jaccard coefficient of .40 or greater are included, as displayed in panel (d) of Fig. 3. For comparison, we also included the graph with a Jaccard coefficient of .35 or greater. For linking people to resources, panel (a) in Fig. 4 shows all lines weighted by the Jaccard coefficient. We conducted the same procedure of increasing the criteria of the Jaccard needed to include a line. We found a relatively clear interpretation when the Jaccard was .45 or greater as shown in panel (d) of Fig. 4. For comparison we also included the graphs with a Jaccard coefficient of .35 and .40 or greater.

The co-affiliation for providing resources to community groups in Fig. 3 shows that if interfaith groups provided resources to secular non-profits they also were likely to share resources with all other organizations. Also, sharing resources with congregations reduced the likelihood that the interfaith group shared resources with other organizations, an observation that is further demonstrated in the affiliation picture in Fig. 1. Thus, it appears that groups tend to share resources more narrowly with religious congregations, or instead more broadly across the entire set of organizations. Second, as shown in Fig. 4, the co-affiliation for linking people to resources also shows distinct patterns. For example, linking to experts, social service agencies, and volunteers (and to some degree congregations) showed interconnections such that if linking was present to one of these resources, it was present to all resources. Linking to political leaders, experts, and social service agencies also appeared to occur in tandem which may show ways in which people link to those who have knowledge or may be key stakeholders (e.g., political leaders). Finally, although money and volunteers tended to occur together, it was less likely that interfaith groups linked people to money as a resource. This shows that interfaith groups may be more likely to provide bridging links to other forms of capital (e.g., human, knowledge) rather than economic. Together these results show the distinct ways that groups tended to provide resources to community groups and to link people to community resources.

Discussion

Study findings with a set of 88 interfaith groups from across the U.S. suggest that such groups may serve as empowering community settings by providing resources to community organizations and linking members to resources in the interest of local community change. However, there is diversity among interfaith groups in how much, if at all, they provide resources to community organizations or link members to resources. For example, many groups only share resources with congregations whereas those that share with more community organizations tend to share with a wider set of groups. Also, there are distinct ways that groups link members to human capital, expertise, and other resources or forms of capital. Together, the results indicate that groups may be part of the story in local community change, but that groups share and link to different patterns of religious and non-religious resources. Overall, the use of affiliation social network analysis deepens an understanding of interfaith groups as a type of local community organization that

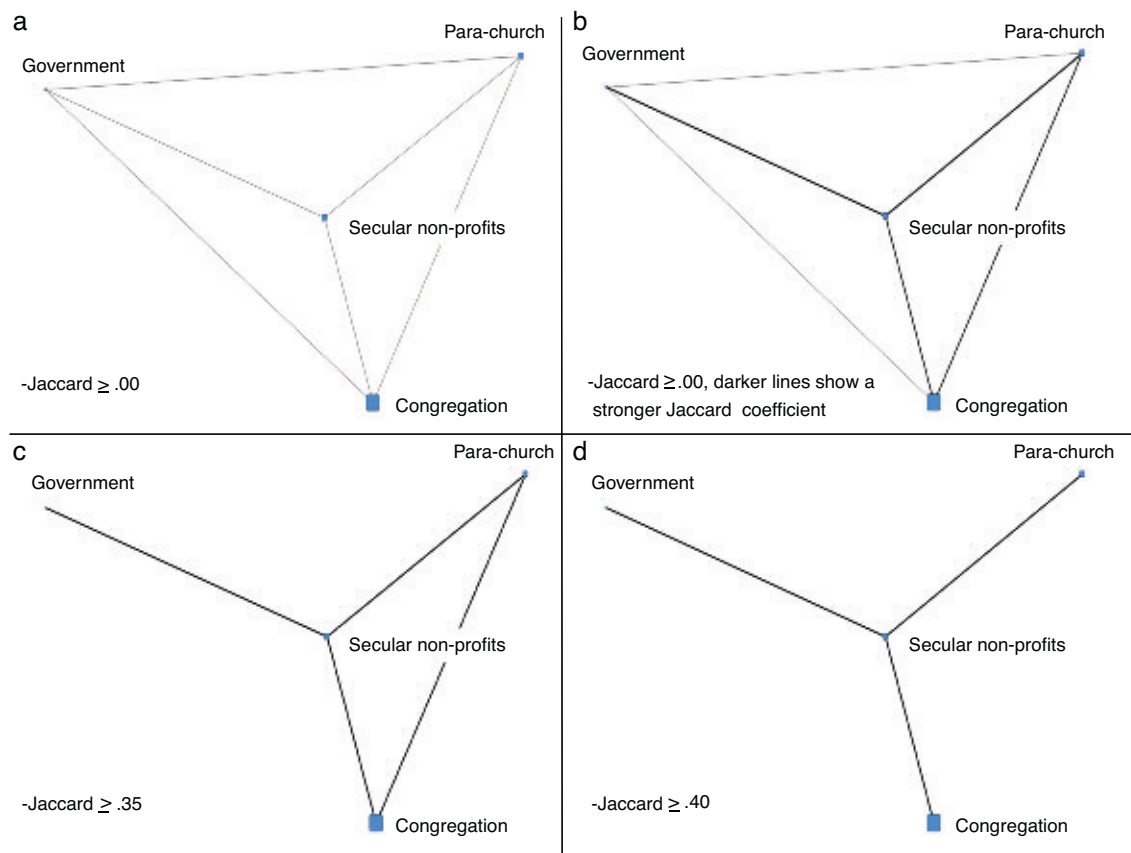


Fig. 3. Co-identification of providing resources to community groups. Graphs were created by manually placing squares to create a clear layout. Starting in panel b, darker lines indicate a stronger Jaccard coefficient. Lines indicating weaker Jaccard coefficients are progressively removed in panels c and d. Node size is based on number of groups providing resources to community groups.

may be part of an empowering process focused on local community change. Specific findings, with a focus on limitations and directions for future research are now discussed.

Affiliation analysis of interfaith groups

Study findings suggest that interfaith groups may serve as empowering community settings. First, empowering community settings theory asserts empowering settings themselves may provide resources to other community groups to aid in local community change efforts (Maton, 2008). In the current study, we found that most organizations provide resources to other community groups, but that there were different patterns of provision. For example, congregations were the most popular recipient of resources and many interfaith groups only shared with congregations. More information would be helpful to determine what types of resources were shared and to what end. For example, sharing different types of resources (e.g., money versus sending volunteers) may create a qualitatively different type of link between the interfaith group and community organization. Moreover, interfaith groups may interface with congregations for different ends. To illustrate, consider Todd (2012) who found one interfaith group partnered with congregations to solicit resources and volunteers for a community service event whereas another interfaith group helped network across multiple types of community organizations. This is similar to the current study where interfaith groups that shared resources with community groups other than congregations tended to share across a wider set of groups. Thus, interfaith groups may serve an empowering function in the community by sharing resources with groups for community projects, but organizations

differ in patterns of sharing. Overall, future research is needed to better understand these complexities and diversity in the *how* and *why* interfaith groups share resources with other organizations.

In addition, empowering community settings may have a radiating influence in the community to the degree to which organizations are able to connect members to resources (Maton, 2008). In this study, we found interfaith groups helped link individuals to resources in the community such as economic, human, knowledge, and expertise types of resources (Tseng & Seidman, 2007). This shows that although religious in nature, these organizations also linked members to non-religious types of resources and may serve a bridging function in their community. Future research is needed to more deeply understand how connections through interfaith groups increases different types of social capital for members (Perkins et al., 2002; Putnam, 2000) and furthermore how this capital increases capacity for community activism. Future research also may focus on the process of how organizations create bridging links and the tangible outcomes that result after these connections are made.

Limitations

Although findings have utility for describing interfaith groups, they are not without limitations. First, although groups were recruited from across the U.S., the sample is not random or representative and results should not be generalized beyond the current sample. In fact, the method of identifying groups through Internet searches likely resulted in a sample of more active or formalized groups and furthermore it is unclear whether the racial and religious representation of the groups in this sample reflect interfaith

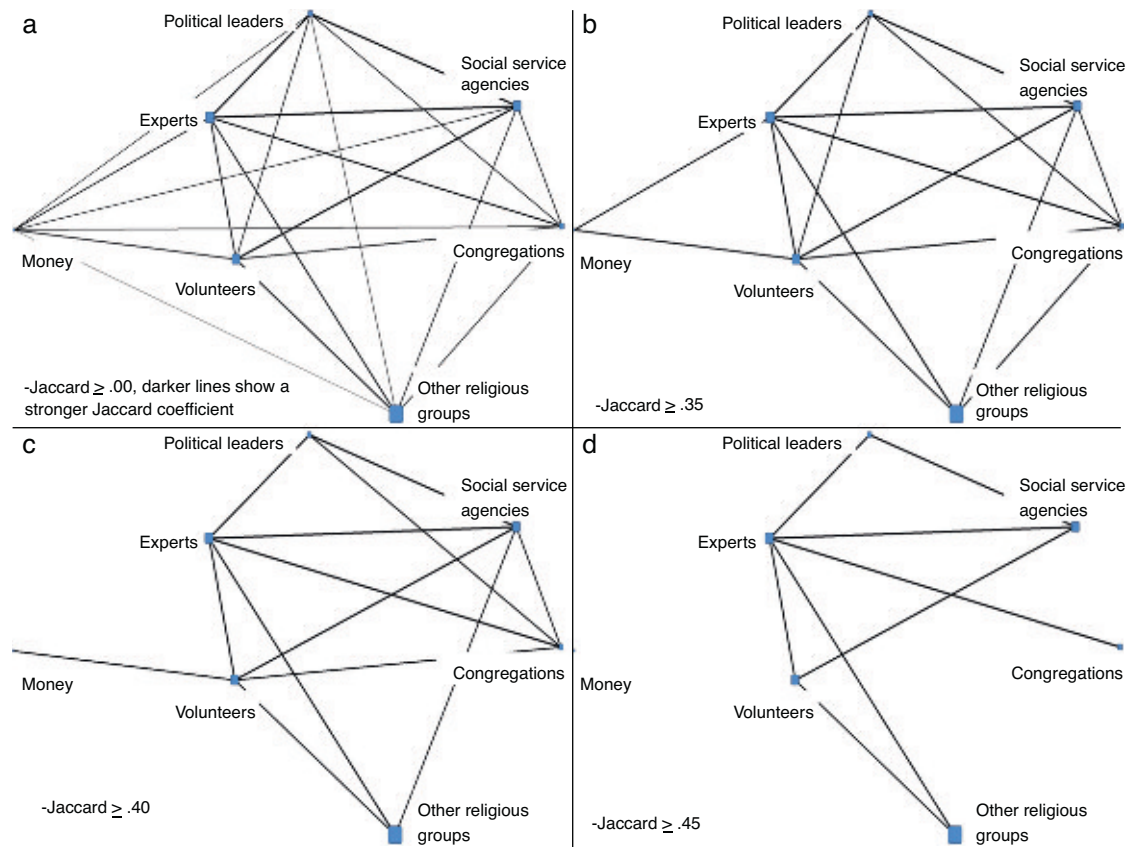


Fig. 4. Co-affiliation of linking people to resources. Graphs were created by manually placing squares to create a clear layout. Darker lines indicate a stronger Jaccard coefficient. Lines indicating weaker Jaccard coefficients are progressively removed in panels b–d. Node size is based on number of groups providing resources to community groups.

groups more broadly. Also, the broad inclusion criteria reduced clarity regarding the type of interfaith groups in the sample. A more narrow criteria, and more contextual information, was needed about the interfaith groups, such as how and why they formed. Future research should gather more in-depth information about groups to further contextualize not only their origins, but the strategies used to address the community issues (e.g., as a hub for networking, collaborating with other community organizations). Second, we defined the content of all items and may have missed other types of community organizations that receive resources from community groups or other forms of community resources they help link people to but were not explicitly asked about in this study. Also, more or different patterns may have emerged with a different set of items. Third, dichotomizing responses for the affiliation analysis may have lost important information. Fourth, we used a less common application of affiliation social network analysis that looked at interfaith groups across different communities rather than social relations within the same community. Thus, findings need to be interpreted using this specific application. Finally, although interesting, results show general patterns through visual displays. Future research should extend this work to test more specific hypotheses to better understand what shapes patterns of providing and linking to resources.

Future applications of affiliation analysis for interfaith group research

The current study provides only a beginning for creative application of affiliation social network analysis to understand interfaith groups as a type of community-based organization involved in community change. For example, the size, color, or shape of

interfaith group nodes could be altered in the affiliation pictures to reflect a characteristic of the group such as racial or religious composition. Such a visual depiction may help to reveal general patterns. Also, affiliation analysis could be used within a single community to understand the social connections of interfaith groups and other community organizations. For example, interfaith groups and other community organizations could report on the local issues they work on, if they attend similar meetings, or share other community collaborators to understand how interfaith and other community organizations may create a tie by working together on certain issues. Moreover, collecting data within one community also may allow for whole social network analysis (e.g., asking all interfaith groups in a single community how they connect to each other, religious congregations, and other community groups; Scott & Carrington, 2011); moreover, integrating affiliation with whole social network data may strengthen the design and ability to address nuanced research questions. For example, if whole and affiliation data are gathered longitudinally, methods exist to examine how ties between groups form, are maintained, or desist due to working on similar issues (Snijders, Lomi, & Torló, 2013). Indeed, these methods hold promise to enhance future interfaith research.

In conclusion, we found that interfaith groups exhibit different patterns in how they share resources with other community organizations to promote change and also may link members to different types of community resources. Although future research is needed for a more in-depth examination to understand what may drive these patterns and the more specific ways these groups operate as empowering community settings, the current study shows diversity among interfaith groups and lays a foundation for future research. Moreover, the study demonstrates affiliation social network analysis to understand how interfaith groups may be part

of the story of providing and linking people to resources for community change. We hope this contribution will encourage the use of creative network methods such as affiliation analysis to better understand the nuanced and complex ways interfaith groups engage with issues in their local communities.

Conflict of interest

The authors of this article declare no conflict of interest.

References

- Alinsky, S. D. (1989). *Rules for radicals: A practical primer for realistic radicals*. New York: Vintage Books.
- Allen, N. (2005). A multi-level analysis of community coordinating councils. *American Journal of Community Psychology*, 35, 49–63.
- Allen, N. E., Anderson, C. J., Newman, D., Lehrner, A., Larson, S., Javdani, S., et al. (2009). *Coordinating the criminal justice response to intimate partner violence: The effectiveness of councils in producing systems change* Technical report submitted to National Institute of Justice. National Institute of Justice.
- Bobo, K. (2003). Religion-labor partnerships: Alive and growing in the new millennium. *Working USA*, 6(4), 71–83.
- Borgatti, S. P., & Everett, M. G. (1997). Network analysis of 2-mode data. *Social Networks*, 19, 243–269.
- Borgatti, S. P., & Halgin, D. S. (2011). Analyzing affiliation networks. In J. Scott, & P. J. Carrington (Eds.), *The SAGE handbook of social network analysis* (pp. 417–433). Thousand Oaks, CA: Sage.
- Brisson, D. (2009). Testing the relationship of formal bonding, informal bonding, and formal bridging social capital on key outcomes for families in low-income neighborhoods. *Journal of Sociology and Social Welfare*, 36, 167–183.
- Chaves, M. (2004). *Congregations in America*. Cambridge, MA: Harvard University Press.
- Christens, B. D., & Speer, P. W. (2011). Contextual influences on participation in community organizing: A multilevel longitudinal study. *American Journal of Community Psychology*, 47, 253–263.
- Davis, A., Gardner, B. B., & Gardner, M. R. (1941). *Deep south: A social anthropological study of caste and class*. Chicago: University of Chicago Press.
- Feldman, D. L., & Moseley, L. (2003). Faith-based environmental initiatives in Appalachia: Connecting faith, environment concern and reform. *Worldviews: Environment, Culture, Religion*, 7, 227–252.
- Fulton, B., & Wood, R. L. (2012). Interfaith community organizing: Emerging theological and organizational challenges. *International Journal of Public Theology*, 6, 398–420.
- Kaplan, S. A., Ruddock, C., Golub, M., Davis, J., Foley, R., Sr., Devia, C., et al. (2009). Stirring up the mud: Using a community-based participatory approach to address health disparities through a faith-based initiative. *Journal of Health Care for the Poor and Underserved*, 20, 1111–1123.
- Krempel, L. (2011). Network visualization. In J. Scott, & P. J. Carrington (Eds.), *The SAGE handbook of social network analysis* (pp. 558–577). Los Angeles, CA: Sage.
- Lester, R., & Cannella, A. (2006). Interorganizational familiness: How firms use interlocking directorates to build community-level social capital. *Entrepreneurship: Theory and Practice*, 30, 755–775.
- Maton, K. I. (2008). Empowering community settings: Agents of individual development, community betterment, and positive social change. *American Journal of Community Psychology*, 41, 4–21.
- Maton, K. I., & Brodsky, A. E. (2011). Empowering community settings: Theory, research, and action. In M. S. Aber, K. I. Maton, & E. Seidman (Eds.), *Empowering settings and voices for social change* (pp. 38–64). New York: Oxford University Press.
- Maton, K. I., & Salem, D. (1995). Organizational characteristics of empowering community settings: A multiple case study approach. *American Journal of Community Psychology*, 23, 631–656.
- McCormack, M. M. (2013). Interfaith relations in the United States: Toward a multilevel community psychology approach. *Journal of Community & Applied Social Psychology*, 23, 171–186.
- Mische, A., & Pattison, P. (2000). Composing a civic arena: Publics, projects, and social settings. *Poetics*, 27, 163–194.
- Orenstein, B. (Producer), & Hercules, B. (Director). (2007). *The democratic promise: Saul Alinsky and his legacy*. USA: Chicago Video Project.
- Patel, E. (2007). *Acts of faith*. Boston: Beacon Press.
- Perkins, D. D., Hughey, J., & Speer, P. W. (2002). Community psychology perspectives on social capital theory and community development practice. *Journal of the Community Development Society*, 33, 34–52.
- Putnam, R. D. (2000). *Bowling alone: The collapse and revival of American community*. New York: Simon & Schuster Paperbacks.
- Quezada, T. (2003). Faith-based organizing for school improvement in the Texas borderlands: A case study of the Texas Alliance School Initiative. *School Community Journal*, 14, 7–38.
- Scott, J., & Carrington, P. J. (Eds.). (2011). *The SAGE handbook of social network analysis*. Los Angeles, CA: Sage Publications.
- Snijders, T. A. B., Lomi, A., & Torló, V. J. (2013). A model for the multiplex dynamics of two-mode and one-mode networks, with an application to employment preference, friendship, and advice. *Social Networks*, 35, 265–276.
- Speer, P. W., & Hughey, J. (1995). Community organizing: An ecological route to empowerment and power. *American Journal of Community Psychology*, 23, 729–748.
- Speer, P. W., Ontkush, M., Schmitt, B., Raman, P., Jackson, C., Rengert, K. M., et al. (2003). Praxis – the intentional exercise of power: Community organizing in Camden, New Jersey. *Journal of Community and Applied Social Psychology*, 13, 399–408.
- Todd, N. R. (2012). Religious networking organizations and social justice: An ethnographic case study. *American Journal of Community Psychology*, 50, 229–245.
- Todd, N. R., & Houston, J. D. (2013). Examining patterns of political, social service, and collaborative involvement of religious congregations: A latent class and transition analysis. *American Journal of Community Psychology*, 51, 422–438.
- Todd, N. R., & Rufa, A. K. (2013). Social justice and religious participation: A qualitative investigation of Christian perspectives. *American Journal of Community Psychology*, 51, 315–331.
- Tseng, V., & Seidman, E. (2007). A systems framework for understanding social settings. *American Journal of Community Psychology*, 39, 217–228.
- Wandersman, A., & Florin, P. (2000). Citizen participation and community organizations. In J. Rappaport, & E. Seidman (Eds.), *Handbook of community psychology* (pp. 247–272). New York: Kluwer Academic/Plenum Publishers.
- Wasserman, S., & Faust, K. (1994). *Social network analysis: Methods and applications*. New York: Cambridge University Press.
- Wood, R. L., & Warren, M. R. (2002). A different face of faith-based politics: Social capital and community organizing in the public arena. *International Journal of Sociology and Social Policy*, 22, 6–54.