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# Developing Conceptual and Methodological Foundations in Community Engagement

David P. Aday, Jr., Joanna K. Weeks, Christiana E. Sherman, Robert A. Marty, and Rebecca L. Silverstein

#### Abstract

We describe the efforts of two related undergraduate projects to promote lasting social change in marginalized communities in the Dominican Republic and Nicaragua. The projects represent a test of the premise that undergraduate projects can engage academically based strategies and transcend good intentions to achieve effective community partnerships to improve health and health care. The projects proceed from a perspective and theory of marginalization and its consequences. Specifically, marginalization undermines individual and collective capacity to meet basic needs and efforts to thrive. Through strengthening social infrastructure, communities can overcome the effects of marginalization. Project work begins with annual medical clinics and, with the permission of community residents, team members conduct ethnographic descriptions of the communities and their health and health care concerns and resources. We use social network analysis (SNA) and geographic information system (GIS) techniques to describe social infrastructure. Working from those foundations, both projects have enabled increased social infrastructure. To date, we have observed increased communication among community residents, facilitated the development of community-endorsed five-year plans, and established partnerships with regional and international groups.

## Community Engagement: Conceptual and Methodological Foundations

Introduction

Writing from a student perspective, Bessaw, Gerke, Hamilton, and Pulsipher (2012) sketch issues that dog those committed to community engagement and scholarship in higher education: constraints on time, energy, and talent; compressed time frames; community apathy; and issues of trust. Over the course of the semester, these ambitious graduate students in bioregional planning hosted five community meetings. They reported that a core of about 10 residents attended meetings regularly and that they struggled to communicate effectively with residents throughout the community. Some residents expressed concerns about sustainability and some recalled earlier failed attempts at organizing. Still, Bessaw and her colleagues report that none of the locals stepped into active roles of leadership and that residents remained discouraged about prospects for the future.

To be certain, community engaged scholarship in higher education faces challenges in addition to these, including institutional resources and academic values. Still, the issues identified by Bessaw et al. (2012) are sufficiently daunting and pervasive to warrant unpacking, closer examination, and some effort toward resolution.

Often, students and scholars are drawn to community engagement by their concerns for

inequities and injustices of various sorts, including those that involve health, the environment, employment, and human rights. For example, Bessaw et al. (2012) responded to issues of high unemployment in Priest River, Idaho. It is unlikely that these students expected to accomplish fundamental economic change. Instead, they articulated the following goals: (1) to establish a common vision; (2) to create a toolbox for the community to use in future projects; and (3) to identify leaders to ensure project sustainability. These students, and others who pursue community engagement research and action, share in common with contemporary students of international development certain philosophical predispositions (cf. Handler, 2013):

- Intentional social change or development can be progress toward a better life,
- Community-engaged work and development should entail cooperative, egalitarian social relationships.
- Good communications are central to community-engaged social change and development

#### **SOMOS and MANOS**

Undergraduate students at William & Mary combined these predispositions with concerns about health disparities in marginalized communities to

form two independent but closely related projects: the Student Organization for Medical Outreach and Sustainability (SOMOS, working in a barrio near Santo Domingo, Dominican Republic) and Medical Aid Nicaragua: Outreach Scholarship (MANOS, working in communities in the microregion of Cuje, Nicaragua). With the guidance of a faculty mentor (co-author Aday), students in the two projects confronted the challenge of figuring out what undergraduates could offer to those who lack even the most basic health services. Working with the communities, SOMOS and MANOS sought to respond to the health problems that confront people in countries around the world: water, flooding, nutrition, and non-communicable diseases, among others.

Over time, the projects have taken shape, emerging as variants of community-engaged scholarship. They are grounded in theories of marginalization, alienation and an evolving model of participatory development. The work proceeds through community-based research that is based in a developing partnership between the communities and the projects (Minkler & Wallerstein, 2011). Students at William & Mary compete for selection and remain with the project until they graduate. All team members take a required seminar each semester of their tenure, which has necessitated the creation of a pedagogy that takes into account the needs of both new and seasoned members. These arrangements answer some, but not all, of the issues raised by Bessaw and her co-authors. For example, the problem of constrained time is mitigated somewhat because team members work in the same communities (in each country) over years - now nearly a decade in both countries. Project teams travel each year for week-long trips (SOMOS during the semester break and MANOS during the spring break). Smaller teams do field research, project development and implementation during the summer and at one other time each year (i.e., semester break for MANOS and spring break for SOMOS). The summer work typically consists of several weeks to two months of continuous engagement. In total, project teams are in the communities in each country for seven to 10 weeks each year. In addition, we remain in phone or internet communication with our community partners throughout the year, in spite of the fact that both communities lack convenient access to even the most basic infrastructure (e.g., telephone lines or reliable electricity).

Inadequate resources continue to nag but some partnering strategies are providing modest hope for progress. For example, both projects, in partnership with the communities, have submitted successful proposals for collaborating with Engineers Without Borders (EWB). Beginning with very limited engagement by residents and with widespread discouragement in both communities, our efforts have focused on nurturing collective capacity. The EWB proposals were advanced through community committees comprising elected or selected representatives from each of the block or focus groups in each community. The committees were selected by groups of residents, and these groups were identified through multiple rounds of social networks analysis, as described below. The committees are gaining status as standing arrangements to act on behalf of the communities on matters concerning access to water in Nicaragua)and flood mitigation in the Dominican Republic. EWB teams have visited the communities, collected data necessary to engineering proposals, and are working through community arrangements that have been nurtured through SOMOS and MANOS efforts in the communities.

What follows is an account of the framing theory, evolving model of development, and basic methods of research of the SOMOS and MANOS projects. An overarching hope of this work is that students, professionals, and, most of all, community residents will see that intentional social change is possible through effective partnerships that combine systematic knowledge and local wisdom.

#### From Philosophy to Perspective

SOMOS and MANOS began through the initiative of undergraduate students whose understandings of community engagement were enlightened by direct experience in service and humanitarian projects. In both cases, students returned from "health brigade/duffel bag medicine" (Roberts, 2006) trips with a strong sense of futility: "Like putting a Band Aid on cancer," observed a founding member of SOMOS. However, none of the original student members had clear notions about what could be done to satisfy their sense that good intentions are not sufficient, or to tap the power of knowledge and research of their university setting.

From the start, we agreed to some mantras:

- Good intentions are dangerous things
- Every helping act is a political decision
- Change is not sustainable unless it creates new resources

It was clear that improving health and health care would be the central focus of our work.

We began by hosting annual free clinics in both communities. SOMOS established a relationship with an alumnus physician, and he became the medical director in the Dominican Republic. The team partnered with a health foundation (Fundación Sol Naciente), whose founding director also is the director of Physicians for Peace for Latin America and the Caribbean. Medical providers are recruited annually and oftentimes more than half-a-dozen medical professionals accompany the project. In Nicaragua, MANOS contracted with a physician from Managua. In exchange for salary and travel expenses, this medical professional has provided clinical services and leadership from the beginning. More recently, American-trained medical professionals have joined the clinical staff and provide expertise for the clinical aspect of the project work.

The medical clinics do not yield the envisioned improvements in health and health care. Rather, they provide entrée to the communities: SOMOS and MANOS offer annual clinics and then ask residents if they may conduct research in order to find more continuous and sustainable strategies for improving health and health care. This practice of offering a concrete and needed resource provides initial credibility and encouragement about the prospects for change.<sup>1</sup>

In the first years, students approached the work with a variety of notions about the causes of observed problems of health, safety, and well-being, including the following:

- Lack of information and education
- Unemployment and limited job skills
- Discrimination on the basis of national (e.g., Haitian) and ethnic (e.g., Chorotega indigenous) status
- National and international economic exploitation
- Poverty

As the seminars continued, students expressed suspicions that these problems did not exist as

separate entities but instead represented recognizable symptoms of a greater and more systemic issue. In the course of studying literature on service, voluntarism, community, and social change, and through descriptive field research (ethnographic and GPS-based observations of the community), a perspective emerged that focused attention on marginalization.<sup>2</sup> To illustrate how the current theory and model developed from these initial hunches, early research findings are summarized below (2007–2009).

SOMOS students made early and thought-provoking observations about Paraiso, a region consisting of multiple barrios, or communities. For example, although Paraiso sits within a twenty-minute walk of a major metropolitan center with access to most parts of Santo Domingo, many parts of the area are rural. The transition from urban to rural occurs abruptly as the traveler leaves a major urban street (paved) and turns onto a rough and rutted dirt road that leads to the main sub-community of Altos de Paraiso. From these observations, SOMOS appropriated the term "para-urban" to describe the locality of the Paraiso region and to characterize aspects of Paraiso's physical and socio-economic location.<sup>3</sup>

Esfuerzo is one of the barrios that comprise the area known as Paraiso, and is the focus of our current research and development projects. It provides a micro example of social and geographic positioning of community.4 It is cut off from the rest of Paraiso by a flood control canal that either reduces or worsens the effects of flooding for members of the Paraiso community, depending on where they live. Those who benefit most from the canal live in the community of Altos, which means "high." Altos is adjacent to Esfuerzo, but as its name suggests, it enjoys both higher elevation and better access to basic resources, including water, electricity, and our own annual medical clinics, which are hosted in the Altos public school. In a significant sense, the SOMOS team discovered Esfuerzo as residents of Altos attempted to guide field research away from

<sup>1</sup>In the beginning, nearly all of the funds for the project work came from students, either directly or through modest fundraising efforts. Over time, the projects have been fortunate to attract donors who currently make annual gifts to support the ongoing work. We are particularly grateful to donors to the Patricia W. Sisson Fund and to a fund created by Luis Navas for their continuing support, without which our work would not be possible.

<sup>2</sup>We are about to undertake an analysis of student learning outcomes. We will examine and compare essays written by applicants and reflective papers written by the same students following at least one field research experience. The

scoring rubric will focus on key features of the SOMOS/ MANOS Model.

<sup>&</sup>lt;sup>3</sup> Para comes from the Greek preposition that means both "beside, next to, or near" and "against or contrary to," and urban, which refers to the pattern of development of greater Santo Domingo.

<sup>&</sup>lt;sup>4</sup> The concept and empirical realities of community are complicated and require careful specification. For a more fulsome examination of the concept and its relevance for "community engaged" efforts, see Aday et al. (under review).

the locality, expressing the opinion that the area is not part of the larger community (Paraiso). Over the next years, it was determined empirically that Esfuerzo actually was and is part of Paraiso. The municipal government identifies it as "Esfuerzo de Paraiso," though early on, residents of the local barrio were uncertain of its official designation, even referring to it by various derogatory names.

Most of the residents of Esfuerzo have lived in the community for about 10 years and were displaced from their earlier residences by the expansion of tourism (as part of larger, national economic shifts and changes in agricultural labor (especially increased employment of Haitian sugarcane workers; cf. Gregory, 2006). There are few extended family ties in the community and the residents are not able to find steady work with the low-level farm-labor skills that they have.

The MANOS team works in a micro-region called Cuje, which comprises eight remote and widely dispersed communities. Our research and development projects are centered currently in Chaguite. Some of the communities are geographically identifiable by proximity to a school that bears the community name. Otherwise, there are few local features to signify collective identity.

The historical, political, and economic sources of marginalization in Chaguite center on the clearcutting of the evergreen forests that characterized the region until the 1960s. At that time, residents of the micro-region mostly engaged in hunting and fishing for their livelihood. With accommodating national policies, foreign corporations purchased land resources rights<sup>5</sup> and proceeded to cut trees. With few remaining trees, the ponds and lakes dried up and the small game stocks were exhausted quickly. Within a decade, the region began to experience alternating flooding and drought and residents turned to subsistence farming without the knowledge or skills needed and with little arable land beyond the rapidly eroding hillsides (Manachon & Gonda, 2010).

The faculty advisor for both SOMOS and MANOS had the advantage of observing across the projects and noted important similarities in both clinical and research findings. For example, while the localities are disparate (para-urban vs.

extremely remote, rural, and sparsely populated), the communities share core health issues: flooding; lack of access to clean water for drinking, cooking, and cleaning; poor nutrition; and high rates of diabetes and hypertension.

Field research, consisting of house-to-house interviews and geo-coding in Esfuerzo and in Chaguite, yielded descriptions of housing, water resources, sanitation, flooding, and health resources and risks. The projects' goals were to: (1) learn about residents' health and health care concerns; (2) identify collectively shared priorities; and, (3) use the resulting understandings to encourage community engagement in collective efforts through a sense of commonality. Responding in part to conventional and common sense notions about social change and community organization, SOMOS and MANOS proceeded with efforts to identify leaders. More specifically we sought local residents who could help to communicate and to catalyze participation and engagement. Some of the early responses proved to be revealing. For example, in Esfuerzo, when we asked, "whom do you trust in the community," the most common response was "no one," followed by "God." Next, we piloted interviews to determine the appropriate form and construction of questions that might help to identify local informal leaders and opinion-makers. Based on that study, researchers asked, "Who fights on behalf of the community?" Residents identified locals who had been part of the junta de vecino (a neighborhood association sanctioned by the mayor's office, which is very far removed from the locality). However, probing further, interviewers learned that some of those same people had been discredited by allegations of graft. While these former junta members were identified as people "who fight for the community," many residents did not trust them to do so. The interviews revealed widely shared sentiments of discouragement: "people are lazy and will not work"; "people are selfish and do not help others"; "little can be done without help from the government, and worse, the government never helps" (Aday, Owning change ..., under review).

Early work in Chaguite revealed similar patterns. In the first round of interviews, residents identified mayor representatives as local leaders, but many made clear as well that the representatives only worked with people of their own political party (the party of the incumbent mayor). They reported that these representatives were in touch with the mayor's office only rarely and that the representatives would not likely be able to help much in any case. Residents identified brigadistas (health care volunteers) as

<sup>&</sup>lt;sup>5</sup> The residents of the region did not have developed understandings about property or property rights. Residents were told that they could claim such rights and then sell the rights to the American and Cuban companies that wanted to harvest forest resources. We learned about these events most directly through field interviews. Efforts to document the events historically have been difficult, but some reliable information is available in books published in Spanish (for example, Manachon and Gonda, 2010.)

leaders, but they were uncertain of the role and the responsibilities of those who were so designated – except in the case of acute medical emergencies (e.g., to help in summoning the ambulance from the municipal clinic). Many residents noted that they are not in communication with anyone and that they must rely on themselves and God.

#### **Emerging Perspective and Theory**

Thoughtful reading of the literature of international politics and economics, development, and public health reveals that the poor and underprivileged around the world share health problems similar to those in Chaguite and Esfuerzo, in addition to other issues such as limited access to education and high rates of unemployment, drug and alcohol use, and domestic violence. This systematic understanding of the literature combined with direct observations in two distinct countries and cultures suggest an over-arching and framing perspective that highlights marginalization, both geographically and social structurally. Drawing from Vasas (2005), we define marginalization as "a process that pushes people, groups, communities, regions, and nations to the edges of spaces (physical and social), resources, and efficacy (ability to affect and to effect activities necessary to survive and thrive" (Aday, under review). The concept served to sensitize subsequent research, but observations suggested a need for finer articulation. We drew from Seeman's (1959) analysis of alienation. He notes that alienation is a central theme in the classical works of Durkheim, Marx, and Weber and it continues to occupy the attention of contemporary sociologists. More importantly for current purposes, Seeman points to five distinguishable meanings that can be derived from work on the concept: powerlessness, meaninglessness, normlessness, isolation, and selfestrangement. Though we have not yet analyzed the data fully through this articulated framework, the concepts of marginalization and alienation form the basis of a general theory and an emerging model of participatory development (cf. Jennings, 2000; Chambers, 1995; Kapoor, 2002).6

Our general view is that marginalization produces alienation and that, together, these social, structural, and geographical forces undermine individual and collective capacities for meeting basic individual and collective needs and hinder individual

 $^6$  We will not explicate the theory fully here. The central insight was that we observed obstacles to individual and collective efforts to thrive and these obstacles were both structural and geographical.

ual and collective efforts to thrive.7 As noted, some residents of Esfuerzo have experienced marginalization as they have been pushed from agricultural settings (including sugar cane plantations) and from other localities with the development of the tourism economy. Many residents report that they will remain in the community only until they are able to find some more viable residence. The residents of Chaguite have experienced the effects of extractive economies, beginning most clearly in contemporary time with the exploitation of land resources (including timber), and clear-cutting of their evergreen forests by foreign logging companies. Marginalization of the Chorotega indigenous people of the region began many centuries earlier with the arrival of the Aztecs and Spanish conquistadors (Manachon & Gonda, 2010).

#### From Theory to Model and Strategy

Residents of Chaguite and Esfuerzo have experienced marginalization and live in communities that are marginalized. Geographically and social structurally, the communities are cut off from services enjoyed by other localities, including access to fresh water, sanitation, and electricity. They also do not enjoy effective representation in municipal decision-making and lack social infrastructure (social, political, and economic organization) that would enable collective and collaborative effort. From these observations, the projects moved towards embracing a role as partners with the communities with the goal of nurturing individual and collective capacities, defined initially as "the ability to achieve individually and collectively defined goals and objectives through sustainable infrastructure" (Aday, 2012, p. 1).

The SOMOS and MANOS teams worked independently (but collaboratively) to articulate a community-based strategy to promote improved health and health care. We drew from the developing literature on participatory development (cf. Chambers, 1995; Kapoor, 2002; and Jennings, 2000) to conceptualize a role and a relationship to fit the theoretical view. Our goal was not to impose a paradigm based in American middle-class notions of success or achievement, but to foster a relationship that would allow the communities to articulate their own goals and develop their own methods for pursuing those goals.

<sup>&</sup>lt;sup>7</sup> In general, residents of Paraiso and Cuje are not at risk of not surviving. Most will manage subsistence and some will do better than that. However, most will not thrive and will not succeed in getting the education, health care, or employment opportunities to fundamentally improve their lives beyond subsistence (cf. O'Leary and Ickovics, 1995).

Working through annual medical clinics in both communities, we made clear our apprehensions about the limited efficacy of these episodic clinical efforts. Researchers engaged residents in discussions about their health and health care issues and concerns. Residents expressed appreciation for the clinics and agreed that there are certain fundamental issues that undermine health: access to clean water, nutritional deficiencies, and long-term effects of environmental degradation and flooding. They must have wondered — as we did initially — what student groups from an American college could offer by way of partnering to solve these crucial problems.

Residents expressed appreciation for the careful efforts we made to get to know them. Early ethnographic studies communicated interest, concern, compassion, and attention to detail. Project students eagerly embraced basic training in field research methods and pursued fieldwork diligently. We incorporated Global Positioning System (GPS) and Geographic Information Systems (GIS) techniques because of the theoretical (geographic) perspective on marginalization and to facilitate systematic description. The field research provided opportunities for building interpersonal relationships. Residents of both communities have great capacity for hospitality, but they are not automatically welcoming to strangers. They have reasons for suspicion and even fear, but project team members express authentic interest in learning from residents and listening carefully to their issues and ideas for finding solutions.

Summarizing, the SOMOS/MANOS model, as described to this point, includes the following elements:

- A preconception of the possibility of positive social change through cooperative and egalitarian relationships and effective communication
- A theory of marginalization and alienation and their consequences
- A focus on community as the unit of analysis and the source for sustainable change
- An unconditional contribution to the community that provides a service valued by the community (annual clinics)
- Social science and geographic-spatial research methods (a) to describe the community and its resources and risks, (b) to identify and document shared concerns as part of a process for constructing social

problems, and, (c) to map interpersonal relationships as part of a process for promoting organized collective action.

Beginning in the summer of 2008 (in Esfuerzo, Dominican Republic) and in March 2009 (in Chaguite, Nicaragua,) project team members built from previous field-work and began to conduct interviews focused more specifically on identifying community leaders: residents who might help to organize collective efforts to achieve goals related to health and health care priorities. Drawing from sociological theory on how personal troubles become public issues and emerge as collectively defined social problems (cf. C. Wright Mills, 1959; Hilgartner & Bosk, 1988) team members sought to both identify household-level health concerns and, subsequently, to communicate information that revealed the extent to which these concerns were shared within the community. The projects adopted the analytical techniques of SNA (see Tichy & Fombrun, 1979; Marsden, 1990; Haythornthwaite, 1996; Hanneman & Riddle, 2005), interviewing residents within their homes and asking them to identify people who work on behalf of or for the good of their community.8

The goal of the social networks studies was to identify organic interpersonal networks of communications, collaboration, and leadership. Interviews generated information about how residents relate to one another. Based in matrix algebra, SNA techniques allow researchers to see patterns of interpersonal ties among individuals, identified as nodes. Our ethnographic research had suggested that there was little communication or collaboration in either of the communities and that geography played a central role in interpersonal connections in both communities. Our first efforts focused on leadership relationships ("who works or 'fights' on behalf of the community?"). Our later efforts attended to the possibility that there are geographic locations where people communicate more regularly (intersecting footpaths or small markets, for example).

In addition to describing patterns of association, communication, and leadership, we wanted to test our understandings about marginalization and alienation: To what extent do people help one another, collaborate for mutual aid, or support efforts

<sup>8</sup> See Aday, et al. (under review) for a more detailed description of the beginning efforts in social networks analysis. This paper provides a more extended examination of the use of the technique for understanding community and for developing partnerships to promote individual and community capacity. to meet collective needs? Our emerging theory was that residents are able to engage collective efforts in part dependent on the extent to which they are connected through communications, collaboration, and leadership. We saw measures of network density as one promising empirical indicator of this possibility. Network density refers to the the proportion of interpersonal connections that respondents report as compared to the total of all possible dyadic relationships in a community (Hawe, Webster, & Shiell, 2004; Hanneman & Riddle, 2005; Scott, 2011; Wasserman & Faust, 1994). Logically, socio-centric density (the proportion of interpersonal ties for a community) has a maximum value of 1.00 - or, 100%; that is, all possible dyadic pairs are connected. There is not sufficient descriptive research in this field to allow characterization of variations in density, but conceptually and practically, density should be related to communication flow, collaboration, and prospects for organized efforts: the more interpersonal ties, the better the flow of information across a network, and the greater the prospects for collaboration and organization.. In both Esfuerzo and Chaguite, reported ties constituted less than three percent of the possible relationships. It is important to note that there are methodological problems with the data that ground this conclusion. To date, a population survey of the communities (for example, all households within each community or all adults within each community) has not been completed, but studies have included almost the entire population of households in both communities. Still, it seems almost certain that these low levels of

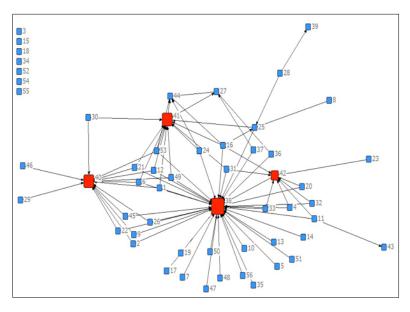
density in communities that are relatively stable (low transience) and geographically bounded (about 90 occupied dwellings in Esfuerzo and fewer than 50 in Chaguite) support the projects' conception of marginalization.

Findings from early SNA explorative studies coupled with the evolving perspective, theory, and model suggested a focused strategy: nurture awareness of shared understandings of health concerns and promote increased communications to enhance individual and collective capacities. Drawing from SNA subsequently studies done (2008-2010),project teams identified subgroups within each community that involved

central "nodes" (individuals within a network analysis) who are connected to others via reported interpersonal ties.

Figure 1 is a representation of network ties in Chaguite in 2010. The seven blue squares in the upper left corner of the figure are respondents who named no one and were not named by anyone in interviews in which we attempted to identify patterns of communication and collaboration. In network terms, they are isolates. Recognizing that there were 53 respondents representing the same number of households, the analysis suggests that 13% of the population (of households) is not connected to others in the community. The larger red squares identify those residents named most frequently as people who work on behalf of the community and with whom they discuss matters of community concern, and the size of the squares reflects the relative number of ties, or interpersonal connections associated with each. Cleary, resident #38, was identified most frequently. Four other residents constitute network nodes with high reachability scores; that is, these individuals connect either directly or indirectly to a relatively large number of others within the community. Examining those subgroups and displaying the results spatially using GPS and GIS techniques helps identify clusters of households that optimize existing ties. In follow-up interviews, researchers asked residents if they thought it would be useful for them to meet in the identified groupings for the purpose of discussing common concerns about health and health care. In Chaguite, the residents not only endorsed the groupings,

Figure 1. Network Structure in Chaguite, 2010



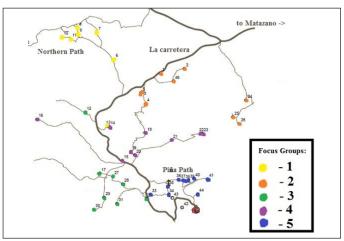
they proceeded almost immediately to discussions about electing leaders for the groups. Figure 2 provides a geographic and social network characterization of the resulting organizing arrangement.

It is clear that the networks and the pathways are related. This is not surprising, given the remoteness of the area, the absence of transportation, the reliance on footpaths, and the difficulty of traveling in any straight line between points within the region. Those who share a common path are more likely to know one another, to share a water source, and to communicate with one another.

The SOMOS project followed similar methods map Esfuerzo to both geographically and using SNA. The resulting groups, based in organic ties, have become the organizing frameworks for community collaboration. Issues are discussed within these regional groups to increase opportunities for everyone to participate and to express individual opinions. Agreements reached in these groups are brought forward to community meetings. Through these arrangements, SOMOS and MANOS have built partnerships with the communities and collaborated to craft and gain community approval for five-year plans to improve health and health care. The plans include priorities, goals, objectives, and methods. They have formed the foundation for a community/MANOS partnership with Nicaraguan universities to improve access to clean water for some households. In both Chaguite and Esfuerzo, the project teams have facilitated the development of proposals for partnerships with Engineers Without Borders (EWB) and those proposals have been approved by EWB. The Chaguite project has been adopted by athe EWB chapter at California State Polytechnic University, Pomona, School of Engineering.

Stated simply, the strategy is to understand community issues of marginalization as expressed in low-density scores (limited interpersonal ties across the community), to identify organic networks of interpersonal ties, and to nurture those as organizing elements. These organic networks have become the locus for discussing community health concerns. With some encouragement from the project team members, the groups engage practices of discussion and collaboration that result in increased capacity for collective action at the community level.

Figure 2. Chaguite 2010 Paths, Households, and Groups



#### **Conclusions**

Bessaw et al. (2012) raise significant questions about the impact of student-organized community engagement, questions about the sufficiency of time and other resources and about engaging community members in ways that yield sustainable solutions. Their brief article does not provide details about their approach, and we do not presume their orientation, perspective, or methods. Rather, we use the questions as a starting point for describing two projects in different countries, asking how we have fared, and more generically, whether it is possible for students to pursue community engagement beyond well-intentioned voluntarism. Are the challenges and roadblocks necessarily beyond the scope of students?

We believe that the theory of marginalization and alienation help us to better understand the context in which we find the observed problems of health and health care. This theoretical understanding prepares us to ask better, more focused questions about our own role in the communities in which we work. Seeing manifestations of marginalization and alienation, we did not embrace common sense strategies such as collaboration and endorsement of formal leaders. If these leaders are not trusted or if they do not participate in effective communications arrangements, their role may contribute little to reducing marginalization or increasing capacity. The use of GPS and GIS techniques to develop descriptions of the community and the arrangement of interpersonal networks provided important clues

<sup>&</sup>lt;sup>9</sup> There is not space in the current paper to describe the practices that are yet another part of the evolving model. The projects are drawing from a developing literature on cultural leadership practices that provide a foundation for approaching community engagement in ways that are both inclusive and promise to be effective in achieving identified outcomes. See, for example, Kirk and Shutte, 2004, Crevani, Lindgren, and Packendorff, 2010, and Bolden and Kirk, 2009.

about how to encourage inclusive communications and discussions at regional levels. SNA studies provided empirical indicators of community organization (and, by inference, marginalization) and helped us to identify meaningful organic interpersonal and communications networks.

Our projects have faced challenging moments, including poorly attended meetings, failed communications, and momentum lost due to efforts that were poorly organized (by us and by various project partners). We continue to have too few material resources and fewer dollars than we need. We have worked self-consciously to articulate our theory, our methods, and our role in the community, and new students enter projects that are complicated. We face the significant challenge of ensuring that new students come up to speed and understand the foundations and history of the work — and that they feel empowered to question, challenge, and bring new ideas and perspectives.

To date, we have measured project success in the following observed outcomes: (1) improved communications;(2)emerging regional organizations that promote inclusive conversations about health and health care issues; (3) the development and ratification of five-year development plans in each community; (4) the development of successful proposals for partnerships with Engineers Without Borders; and (5) the implementation of community committees to undertake specific projects, including health and health care planning and flood mitigation. In the near future, we will undertake, with our community partners, projects that are intended to improve directly the health and health care in the communities. If our theory is correct, our efforts to increase community capacity should produce strategies and tactics that reflect local wisdom and that benefit from the investments of those who are expected to benefit.

Throughout, we have been determined to stay focused through the best of systematic research and theory. We hear residents' expressions of hopelessness and dependency and we understand them through the structure and consequences of marginalization. These concerns challenge us to find strategies that will promote individual and collective capacities and to avoid those that will nurture dependence. We see signs of enhanced engagement in residents' willingness to take on collective responsibilities, in attendance at community meetings, and in inclusive and reliable communications.

SOMOS and MANOS are testing the proposition that students can pursue community engaged scholarship through academic and

disciplinary foundations, exceed the limitations of good intentions, and participate authentically with community partners in fostering positive social change.

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