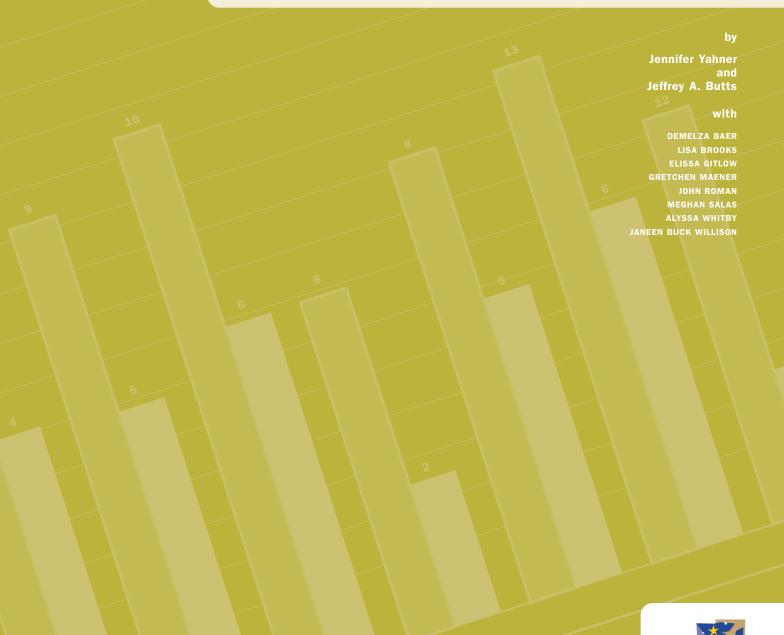
Agency Relations:

SOCIAL NETWORK DYNAMICS AND THE RWJF RECLAIMING FUTURES INITIATIVE





Communities helping teens

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Abstract

Reclaiming Futures, an initiative of the Robert Wood Johnson Foundation, is designed to improve substance abuse interventions for youthful offenders, in part by encouraging more effective communication and cooperation among the agencies making up the juvenile justice and substance abuse treatment systems. To assess the initiative's impact on agency relationships, social network questions were included in a series of expert informant surveys conducted bi-annually in each Reclaiming Futures community. Network analysis is a tool for investigating the complexity and strength of relationships. It can be used to investigate social interaction among individuals, groups, organizations, or states. The network analysis of Reclaiming Futures examined patterns of interaction among key agencies in eight communities working to implement system reform strategies and to improve services for drug-involved youthful offenders. Using measures such as network density, cohesion, and proximity, the analysis suggests that overall network strength increased in Reclaiming Futures communities.

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SECTION ONE

Introduction

The Robert Wood Johnson Foundation's (RWJF) Reclaiming Futures initiative is an effort to reinvent how communities respond to young people involved with drugs, alcohol, and crime. The RWJF initiative is founded on the assumption that positive youth outcomes are best achieved when interagency service delivery efforts are well-managed and closely coordinated. The first phase of Reclaiming Futures (2002–2007) focused on designing and implementing a model of organizational change and system reform to improve the quality and effectiveness of substance abuse interventions for youthful offenders.

Reclaiming Futures is about creating more effective systems of care that cross boundaries. Marquette had agency partnerships prior to the introduction of Reclaiming Futures, but our level of communication and collaboration has been enhanced.

JUDGE MICHAEL ANDEREGG MARQUETTE, MICHIGAN

To evaluate the initiative's success, a social network analysis was conducted in Reclaiming Futures communities by a national evaluation team from the Urban Institute in Washington, D.C., and Chapin Hall Center for Children at the University of Chicago. Data for the analysis were obtained from surveys of expert informants in each Reclaiming Futures community. Network analysis can be used to investigate the quantity and quality of social interaction among members of any network, whether those members are individuals, groups, organizations, or states. The Reclaiming Futures network analysis examined patterns of interaction among key agencies in eight communities.1 The results of the study suggest that overall network strength increased over time in communities that participated in the RWJF Reclaiming Futures initiative.

1 Two of the ten communities involved in the first phase of Reclaiming Futures (Chicago, Illinois and Rosebud, South Dakota) are not included here because their community networks contained relatively few organizations, which prohibited an analysis of network statistics.

About Reclaiming Futures

The Reclaiming Futures initiative began when the Robert Wood Johnson Foundation (RWJF) of Princeton. New Jersev. approved more than \$20 million in funding for an effort to develop new community-based solutions to juvenile drug use and delinquency. In its earliest correspondence about the initiative, RWJF described the purpose of Reclaiming Futures as a "collaborative partnership between juvenile justice practitioners, treatment providers, and communities," and as a project to develop "comprehensive, integrated community systems of care for substance abusing youth." In the original grant application instructions provided to potential sites, the Reclaiming Futures National Program Office encouraged applicant jurisdictions to develop collaborative partnerships with other key organizations and individuals in their communities. Applicants were instructed to describe how their projects would involve the following stakeholders: prosecutors, defense attorneys, probation and/or parole agencies, law enforcement, communication experts, substance abuse treatment professionals, mental health professionals, families, and family advocacy groups (National Program Office, 2001: 14).

The communities participating in the Reclaiming Futures initiative were expected to develop their own strategies for bringing various partner agencies together, but to do so within a set of defined objectives. The project sites were asked to pursue the following goals: "Improve the quality and quantity of habilitation services, especially substance abuse treatment, provided to youthful offenders; Increase the coordination and cooperation between social services and the juvenile justice system; Increase community involvement and investment in services addressing the problem area of substanceabusing youthful offenders; Decrease service gaps and barriers to services for youthful offenders and their families; Develop a seamless continuum of care that is efficient, appropriate, and provides evidence-based treatment; and Evaluate the delivery of care and the effectiveness of programming" (Robert Wood Johnson Foundation, 2001). For more information about Reclaiming Futures and the national evaluation, visit the initiative's Web site: http://www.reclaimingfutures.org.

SECTION TWO

Reclaiming Futures Strategies

The initial Reclaiming Futures communities included Anchorage, Alaska; Santa Cruz, California; an area of southeastern Kentucky; Marquette, Michigan; several areas in the state of New Hampshire; Dayton, Ohio; Portland, Oregon; and Seattle, Washington. The communities worked to identify policy and practice obstacles that were hindering the effectiveness of the juvenile justice system, and then to design and implement reforms that would address those obstacles. Each community began the initiative with a unique constellation of resources and challenges, and its own perspectives and past experiences with system reform. As a result, the target of the change efforts varied considerably. Some communities worked to settle longstanding turf battles and to resolve fundamental policy conflicts that prevented effective agency coordination and service delivery. Others addressed administrative procedures and created case management arrangements that were less volatile and more amenable to direct action. Each community, however, implemented a strategy that used systemic change to improve the coordination of its juvenile justice and substance abuse treatment system. The Reclaiming Futures project teams developed new methods for maximizing interorganizational collaboration in order to share responsibility for case management across agency boundaries and to create new data collection routines to generate the performance measures called for by the Reclaiming Futures model (see http://www.reclaimingfutures.org for more information about the Reclaiming Futures model).

ANCHORAGE, ALASKA

Reclaiming Futures in Anchorage was designed as a broad partnership of state juvenile justice leaders, the family court, substance abuse treatment

agencies, schools, and community organizations. The project emphasized the prompt delivery of effective interventions for drug-involved youth arrested two or more times and formally charged with delinquency in family court. The goals of the project were to ensure that youth are assessed for substance abuse and then promptly referred for whatever treatment level is appropriate, based on an assessment of their behavior and their use of alcohol and other drugs. Each case is monitored by a multidisciplinary team. In trying to reshape its juvenile justice process around the Reclaiming Futures model, the Alaska project team discovered that the absence of interagency data was a critical obstacle to building a more effective system. During the later years of the Reclaiming Futures initiative, the Alaska project devised new methods of data sharing by relying on Web-based, collaborative approaches. The resulting database generated more detailed performance measures about how the juvenile justice system responds to drug-involved youth.

SANTA CRUZ. CALIFORNIA

Reclaiming Futures in Santa Cruz was created and led by the county juvenile justice agency. The agency's strategy had to change dramatically within the first 2 years of the initiative. The early focus was on a relatively small number of youth handled in a residential program that was unexpectedly closed by Santa Cruz County shortly after the Reclaiming Futures initiative began. The strategy then shifted to building interagency, multidisciplinary, family-driven service teams that would be responsible for planning interventions for a larger number of drug-involved juvenile offenders. Service teams meet regularly and are supported by a Family

Engagement Work Group that includes members of other area families who have experience navigating the juvenile justice system.

SOUTHEASTERN KENTUCKY

The Reclaiming Futures initiative in southeastern Kentucky was led by one of the area's most prominent treatment providers, but it made special efforts to involve justice officials in the design and implementation of the project. Interagency committees worked collaboratively to analyze and reform the processes used to handle substance use among youth in local diversion programs as well as those under state supervision. Their efforts led to the adoption of new substance abuse screening requirements and to broader use of 90-day follow-up assessments for youth treatment programs. Due in part to the efforts of Reclaiming Futures, new policies were adopted that base youth interventions on validated risk levels. Youth at low risk for serious substance abuse are referred to drug education programs while moderate-risk youth receive the Cannabis Youth Treatment (CYT) curriculum, and high-risk youth receive CYT as well as the Seven Challenges program. Toward the end of the Reclaiming Futures initiative, the Kentucky Department of Mental Health received a federal grant to coordinate substance abuse treatment across the state and to provide training in support of evidence-based practices. The Department elected to incorporate the Reclaiming Futures Model in its efforts.

MARQUETTE, MICHIGAN

Reclaiming Futures in Marquette, known locally as Project Weave, adopted a broad, systemic reform strategy. The project worked to reform many aspects of the adjudication and court disposition process for drug-involved youth and to begin assessment and initiation of substance abuse services earlier in the process. Prior to Reclaiming Futures, substance abuse screenings were done inconsistently at best, often informally, and rarely by trained staff. Due largely to the efforts of the Reclaiming Futures project, Marquette began to screen youth soon after their initial contact with law enforcement. Screenings are done at juvenile court by properly trained staff. The Marquette

project invested much of its efforts in creating a diverse array of pro-social activities for youth. A Youth Advisory Committee (YAC) helped to create and sponsor a number of other activities, including town hall and community meetings. It arranged for three highway billboards in the Marquette region to display messages related to teen substance abuse, and it created youth-oriented public service announcements that aired in local film theaters. The project also helped to launch Marquette's Teen Tuesdays, a regular community event that provides thousands of youth with safe and pro-social activities. Dozens of youth were also involved in the Manoomin Project, a program that allows youth to complete court-ordered community service while helping local Native American communities in their traditional practice of planting wild rice. Youth from Marquette helped to plant over 1,400 pounds of wild rice in seven inland lakes throughout Marquette County.

STATE OF NEW HAMPSHIRE

Reclaiming Futures in New Hampshire focused on improving the quality and effectiveness of the state's juvenile drug courts. The project worked with court leaders, probation staff, treatment providers, and community-based organizations to change how the juvenile justice system responds to young offenders involved with alcohol and other drugs. The efforts of the project played a key role in the adoption of evidence-based substance abuse treatment across the state, and it helped to expand the use of valid screening and assessment tools for all justice-involved youth, not only those referred to juvenile drug courts. As the project evolved, it encouraged local jurisdictions to improve their use of coordinated case management and individualized case plans, and to promote youth involvement in pro-social activities.

DAYTON, OHIO

The Dayton project was managed by the Montgomery County Juvenile Court, which gave it broad support and access to key community institutions. The initiative relied on a team approach, both in its own management and in the intervention models it promoted for youth. Early in the project, juvenile justice officials in

Reclaiming Futures enabled our community to "come together and talk in one language, and to handle our problems together in a strengths-based way." It "made our coming together happen years earlier than it would have, and it allowed us to identify our weaknesses and to bring better treatment to our county."

ROMA STEPHENS DAYTON, OHIO

Dayton discovered that their existing methods for providing substance abuse interventions for young offenders were ineffective. Treatment referrals were not monitored, and many youth simply ignored them. Interventions were too often limited to clinical treatment models, whereas many youth involved in the juvenile justice system were appropriate for community-based approaches. The Reclaiming Futures initiative focused on creating closer ties to local businesses, schools, and the faith community, and to harnessing their energy to match drug-involved youth with "natural helpers," or mentors drawn from a youth's own family, school, neighborhood, etc. The natural helper program proved to be an effective strategy for providing young offenders with a connection to successful, pro-social adults. Each teen/helper pair worked with family members, probation officers, treatment providers, and others to plan a positive program of ongoing treatment and mentoring for each youth.

PORTLAND, OREGON

Oregon's Reclaiming Futures project was hosted by the Multnomah County Department of Community Justice in Portland. Known as Multnomah Embrace, the project focused on

improving the detection and response to substance abuse issues among all youth referred to the juvenile justice system. The goals of the project were: to screen and assess youth broadly and consistently for alcohol and drug treatment needs; to connect youthful offenders with treatment resources whenever appropriate; to share case-specific information routinely between juvenile justice staff and treatment providers; to build strong community partnerships that can engage youth with positive and pro-social activities, including school supports, employment opportunities, recreation, arts, volunteering, and adult mentors; and to improve the quality of all youth justice services by providing additional training to staff. As happened in Alaska, project staff in Portland realized early in their efforts that creating integrated, interagency case data would be a critical part of building a more effective system overall. The project's Web-based, firewall-protected database generated the detailed performance measures required by the Reclaiming Futures model.

SEATTLE, WASHINGTON

The Reclaiming Futures project in Seattle focused on a target population of youth involved in its juvenile drug court and treatment court programs. The project team worked to improve the identification of treatment needs among this population and to address their mental health problems along with substance abuse issues. The goals of the project were to improve the quality of alcohol and drug treatment services available to these youth and to create more effective alternatives for maintaining their ties to families and communities through the use of familydriven, interagency advocacy teams that were similar to wraparound service planning teams. The service delivery efforts of the Seattle project focused on a relatively small number of youth, but these efforts played a large role in the adoption of improved screening and assessment tools by agencies and programs serving youth throughout King County.

SECTION THREE

Social Network Analysis

The RWJF Reclaiming Futures initiative was designed to affect the interactions of agencies in the juvenile justice system and substance abuse treatment system, as well as other service providers and community groups. The principal strategy of the initiative was to enhance communication and collaboration among the agencies that share responsibility for planning and implementing interventions for drug-involved youth.

Social network analysis is a useful tool for evaluating the extent and intensity of social relationships among the individuals and organizations making up a network. It can be used to describe the size and structure of networks, the positions and roles played by network members, and the communication and interaction patterns among members.

The statistical tools for network analysis emerged during the twentieth century (Wasserman and Galaskiewicz, 1993). By measuring the patterns of interaction and communication among members of a network, researchers can uncover the origins of behavior and decision making. An early predecessor of social network analysis-sociometry-was developed in the 1930s and included the use of sociograms to portray the connections and relationships between network actors. During the 1950s, social scientists used the techniques of sociometry to explore social interactions, cliques, and group structure, but the absence of a consistent terminology and an accepted set of techniques limited the impact of their efforts.

At the same time, psychologists who studied group dynamics began using terms that would later become fixtures of social network analysis, including centralization (a group property) and actor centrality (a property of individuals). In the 1970s, social scientists began to develop network analysis as a tool for formal investigations of social relationships, and the use of network methods expanded rapidly. In fields such as sociology, anthropology, and social psychology, social network analysis was used to analyze the strength and quality of social ties between people or organizations in terms of structures, roles, and patterns of communication. Researchers identified the most central members of networks versus those on the margin, and they mapped the configurations of cliques and subgroups that interacted outside formally recognized channels.

As an evaluation tool, social network analysis can be used to investigate how networks change over time and whether particular network dynamics affect individual or group outcomes. Social network analysis has been used to study everything from political power (Krackhardt, 1990) to the spread of viruses within a community (Neaigus, 1998), terrorism (Carley, Lee, and Krackhardt, 2002; Krebs, 2002), status attainment (Lin, 1999), and the diffusion of innovation (Valente and Rogers, 1995). There is also a lengthy record of descriptive research on interorganizational dynamics in business and nonprofit settings (Galaskiewicz and Shantin, 1981; Van De Ven and Walker, 1984; Cook, 1977), youth services (Hall et al., 1977), and health services (Harris and Clements, 2007).

Despite its versatility, researchers are just beginning to use social network analysis to assess the effects of interorganizational collaborations in justice settings. The few studies in this field include those by George Kelling and his colleagues (1998), who used network analysis to describe and compare communication networks in sites implementing the federally sponsored "compre-

hensive communities" program. More recently, a Pennsylvania-based study used social network analysis to assess the relationship between network dynamics and community "readiness" to engage in the organizational change processes required by the Communities That Care program (Feinberg, Riggs, and Greenberg, 2005). Network analysis has also been used to understand social relationships among youthful offenders (Pettersson, 2003), the structure of drug distribution rings (Natarajan, 2006), the organization of gangs (McGloin, 2005; Papachristos, 2006), organized crime (Lampe, 2006), and juvenile justice services (Spergel, 1976). On occasion, social network analysis has even been used to shape crime-reduction policies. For example, Kennedy (1997) used a form of network analysis to understand gang structures in Boston as a precursor to the Boston Gun Project that was credited with helping to reduce the scale of violence in the city during the early 2000s.

SECTION FOUR

Data Source

The social network analysis of Reclaiming Futures communities was made possible by including several items about social relationships in surveys administered to key system actors in each of the Reclaiming Futures demonstration communities. The network items appeared after the main questions in each survey. After answering more than sixty questions about the juvenile justice system in their community, respondents answered several questions about each of the other respondents in their area, including how often they interacted with the person and whether the interaction was helpful to them in doing their job or in performing their duties as a volunteer or youth advocate. These relatively simple questions generated the detailed data described in the remaining sections of this report.2

Surveys were administered six times between December 2003 and June 2006. The surveys were used as a repeated cross-sectional study (i.e., the same questions were asked of slightly differing samples from the same communities over time), rather than a panel study (i.e., where the same questions are asked of the same sample of respondents over time). For each survey, the respondents were the few dozen people in each community who were considered to be the most qualified to assess the overall effectiveness of the local juvenile justice and substance abuse treatment systems.

The Reclaiming Futures surveys relied on the best pool of expert informants available at the time of each survey, whether or not those particular respondents were likely to be respondents in subsequent surveys. Before each survey, the evaluation team asked the ten Reclaiming Futures project directors to nominate up to forty people who they would characterize as the most informed local experts in the design and delivery of juvenile justice services and substance abuse treatment in their communities. The individuals nominated to be respondents usually included judges, probation officers, educators, substance abuse and mental health treatment professionals, community activists and organizers, members of faith-based organizations, and youth advocates. The research team provided the Reclaiming Futures project directors with general guidance about how to create their respondent lists, but the lists were always generated by the project directors in the ten Reclaiming Futures communities.

Evaluators attempted to confirm that each expert list was a valid representation of the true expert population in a community by adding an extra component to the first two surveys. At the end of the survey, respondents were invited to review the list of other respondents and to nominate additional people who might be knowledgeable about the local juvenile justice and substance abuse treatment systems. The evaluators decided in advance that any person nominated by two or more respondents would be added to the respondent pool for the next survey administration. Across the ten communities, only four new respondents were added in this manner, suggesting that the lists supplied by the Reclaiming Futures project directors were sufficient and accurate.

2 A number of software applications are available for conducting social network analyses. The Reclaiming Futures evaluation relied on a program called Ucinet, which creates graphic depictions of networks and calculates a number of key network statistics (Borgatti, Everett, and Freeman, 2002).

Approximately 350 people were asked to respond to each administration of the survey, or about thirty-five people in each of the ten Reclaiming Futures communities. The total response rate averaged 70 percent, ranging from a low of 63 percent to a high of 73 percent across six waves of the survey.3 There was a steady rate of turnover among the respondent pool, but this was expected due to the nature of their occupations and roles. Some respondents were elected officials with limited terms (e.g., judges and prosecutors). Others occupied roles that always have high rates of turnover (e.g., youth advocates and community volunteers). In all, 456 unique respondents completed at least one survey across the six administrations. About half the respondents (47%) answered three or more surveys, while sixty-seven respondents (13%) answered all six surveys. Most respondents (about 80%) completed their surveys on the Internet, using a Web site provided by the Urban Institute. The remaining respondents completed paper surveys and returned them via U.S. mail to the Urban Institute, where their responses were entered into the survey Web site by staff from the evaluation project.

3 Response rates varied more widely within each community, but most response rates across the sixty survey administrations (i.e., 6 surveys in 10 sites) ranged between 50 and 90 percent. In only four instances of sixty did the response rate fall below 50 percent, and the lowest of these was 36 percent.

SECTION FIVE

Methods

The raw data obtained from the Reclaiming Futures surveys were modified in three ways to facilitate network analysis. First, the relationships described in the analysis are between organizations, although the data were collected from individuals. The evaluation was designed to protect the identity and privacy of individual respondents. Survey data measured interactions among individual respondents, but their answers were aggregated into organizational groups for reporting purposes. Second, the data analyzed here were drawn from just three of the six Reclaiming Futures surveys—namely, those surveys conducted in 2004, 2005, and 2006. Focusing on three surveys simplifies the presentation of results and allows the analysis to examine the full time period during which Reclaiming Futures was implemented. Finally, the results of the social network analysis are reported for only eight of the ten Reclaiming Futures communities.

DATA ELEMENTS

Each respondent to the Reclaiming Futures surveys was provided with a list of all other respondents and asked to indicate the nature and quality of his or her relationship with those individuals. Each respondent answered two key questions about every other respondent:

In the past 3 months, how frequently did you interact with this person for work-related reasons (including meetings, e-mail, and phone calls)?

Responses = Very frequently, frequently, occasionally, rarely, or never.

How helpful is this person to you in doing your job?

Responses = Extremely helpful, somewhat helpful, not helpful, or not sure.

Using these two questions, researchers created a dichotomous measure of helpful interactions. A helpful interaction was defined as one that occurred at least occasionally and was at least somewhat helpful to the respondent. Each relationship, therefore, was either a helpful interaction or it was not.4 A helpful relationship represented an effective tie between two network members. The individual-level data from survey respondents was aggregated to represent their respective agencies. If a respondent from a particular agency reported having a helpful interaction with a survey participant from another agency, then one helpful interaction was said to exist between those two agencies and a network tie was created between the two agencies.

Survey respondents were grouped into five types of agencies:

Project. The Reclaiming Futures project grantees, including the local project director and any staff or administrative assistants employed directly by the Reclaiming Futures project.⁵

Court. Judges, prosecutors, defense attorneys, and other legal advocates, as well as the staff of treatment courts, such as drug courts and mental health courts.

Justice. Staff from all justice agencies except courts, including probation, law enforcement, and juvenile detention facilities.

- 4 Dichotomizing the questions simplified the analysis and the presentation of results while capturing a central focus of the Reclaiming Futures initiative—to increase helpful interactions among youth-serving agencies. Future analyses of these data may examine the full range of responses.
- 5 Some communities experienced significant changes in project leadership during the Reclaiming Futures initiative. In each administration of the survey, however, only one agency was coded as the current project leader.

Treatment. Staff from substance abuse and mental health treatment providers.

Community. Volunteers or staff from communitybased partners, schools, religious groups, and service clubs, as well as mentors, parents, and other youth advocates.

DEFINITIONS

Social network analysis generates several statistics that assess distinct network properties relating to the presence or absence of helpful interactions among network members (see Table 1). These properties indicate the size, density, and cohesiveness of a network, the power equity and instrumental equity among network members, and the relational proximity of agencies (measured as the average number of ties required to establish a connection path between agency members).

Network size refers to the total number of agencies in the network, whether each agency was represented by one individual respondent or several respondents. For the Reclaiming Futures analysis, the size of a network was primarily important as a control variable in interpreting the performance or strength of a network. Across all

surveys, the networks ranged in size from eleven to twenty-three agencies, with most having twelve to sixteen agency members. Network size was partly a function of the individual response rate in each survey (i.e., as the number of respondents increases, the number of agencies they represented is likely to increase as well).6

Proximity refers to the average minimum distance between agencies in a network, as measured by the number of ties (helpful interactions) required to connect any two agencies. A proximity score of one means that two agencies communicate directly with each other; in other words, there is a direct helpful interaction between them. If a justice agency has a proximity of two in relation to a Treatment agency, for example, this would mean that the shortest path of communication between the two agencies goes through, or is mediated by a third agency. Proximity is the only network statistic where smaller figures indicate greater performance.

Table 1 **DEFINITION OF NETWORK STATISTICS**

Statistic	Definition	Range
Size	Number of member agencies in the network.	N
Proximity	Average minimum number of ties needed to establish a relationship between any one member agency and another.	1 to (N-1)
Density	Network ties as a percentage of all possible ties.	0 to 100%
Cohesion	Reciprocal network ties as a percentage of all possible reciprocal ties.	0 to 100%
Power Equity	Equity in the distribution of <i>incoming</i> ties, where 0% indicates that just one agency is responsible for all of the helpful interactions reported by network members, and 100% indicates that credit for helpful interactions is spread equally among all agencies.	0 to 100%
Instrumental Equity	Equity in the distribution of <i>outgoing</i> ties, where 0% indicates only one agency reports having helpful interactions with other agencies, and 100% indicates that helpful interactions are reported equally by all agencies.	0 to 100%

⁶ In addition, some respondents in the first two survey administrations were not asked to answer all the network questions.

Density and cohesion are two similar network properties with one important difference. Density refers to the percent of all possible helpful interactions in a network that are present (regardless of direction). Cohesion refers to reciprocal ties, or helpful interactions that are reported by both parties. Cohesion is measured as the percentage of all possible reciprocal helpful interactions that are present in a network. For both density and cohesion, larger percentages indicate more extensive interaction among the agencies in a network.

Power equity and instrumental equity refer to incoming and outgoing interactions, respectively. An agency with many incoming ties (i.e., it is cited by other agencies as helpful) is said to be in a position of power, while an agency with many outgoing ties (i.e., it reports its own ties to other agencies as being helpful) is said to be highly instrumental in a network. Power equity in a network refers to how power is distributed across the network members. If a network scores low on power equity, this would suggest that relatively few agencies are responsible for all of the helpful interactions reported by network members, while a high score would indicate that credit for helpful interactions is spread more equally among network members. Instrumental equity refers to the distribution of instrumentality, or outgoing ties. If a network scores low on instrumental equity, this would suggest that very few agencies report having helpful interactions with other agencies, while a high score would indicate that helpful interactions are reported equally by all agencies. For both power equity and instrumental equity, higher percentages indicate greater equality in the distribution of ties.

ANALYSIS

The social network analysis generated two sociograms for each of the Reclaiming Futures communities. Each sociogram displays several types of information. Each symbol in the sociogram identifies a particular agency, with the shape and color of the symbol indicating whether it is a justice agency, treatment agency, court, etc. The location of each agency within the sociogram (in the middle or the periphery) suggests the extent of the agency's relationships with others. The

sociograms were constructed using a "spring embedding" algorithm that situates each agency according to the strength and quality of its relationships with other agencies in the network. An agency appears closest to the agencies with which it interacts most and farther away from agencies with which it interacts least. Agencies in the center of a sociogram tend to be those connected to the largest number of other network members, while agencies on the periphery are usually those least connected to others in the network.

Each arrow in a sociogram indicates a helpful tie between two agencies. Arrows point toward the agency described as helpful. If a justice respondent reports a helpful interaction with a treatment respondent, an arrow would be drawn *from* justice to treatment, from the receiver to the giver of help. A powerful agency is one with many incoming arrows, indicating that many other respondents report being helped by their interactions with the agency. A highly instrumental agency, on the other hand, is one with many outgoing arrows, as each suggests a relationship that helps the agency meet its own goals.

The network statistics associated with each sociogram provide numeric comparisons of the strength and performance of the networks. One limitation of network analysis is that direct comparisons of network statistics across networks of different size can be misleading. Small networks have fewer possible ties, and relationships between members may be more easily established and maintained. It would be unfair to expect large networks to have the same density and cohesion among partner agencies as reported by small networks. To accommodate this limitation, network statistics are analyzed only by comparing them to the average scores that would be expected for a network of equal size.

To compute averages, network statistics were regressed on network size across all sixty measurements in the series of Reclaiming Futures surveys (six sequential surveys in ten different communities). The analyses used ordinary least squares (OLS) regression to measure the relationship between network size (the independent variable) and each network statistic (the dependent vari-

ables). The results of these analyses were used to compute average values (based on the observed trend line) that would be expected for networks of a particular size. These predicted values were then used to judge where and when networks performed at or better than average during a particular survey administration. Each statistic measures a characteristic of a network at a specific point in time, and every statistic is compared with the average value (in parentheses) expected for a network of equal size. Network scores are divided into three groups: (1) strong scores (two asterisks) are 10 percent or more above the expected average; (2) positive scores (one asterisk) equal or exceed the expected average by up to 10 percent; and (3) scores that are less than positive (unmarked) because they fall below the expected average.

SECTION SIX

Results

As a group, the eight Reclaiming Futures communities improved their network performance during the Reclaiming Futures initiative. If all positive network statistics are added together, the eight communities generated nineteen positive statistics in 2004, twenty-four positive statistics in 2005, and twenty-six positive statistics in 2006 (Figure 1). This general trend, however, obscures many differences between communities.

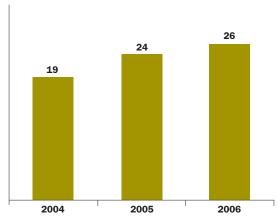
Several patterns are immediately apparent when looking at the sociograms across the eight communities (Figure 2). The first pattern involves the variation in the number of agencies participating in each network across time. In some communities (e.g., New Hampshire, Santa Cruz), the number of agencies represented by the survey respondents grew over time, while in others, the number of respondent agencies remained relatively unchanged (e.g., Alaska, Kentucky, Portland) or even declined (Seattle). A second pattern in the sociograms that is visible at once is the importance of the Reclaiming Futures project. The project clearly played a central role in the agency networks of Reclaiming Futures communities, with some variations occurring during the initiative.

A third pattern is related to the strong presence of nonjustice agencies (treatment providers and community partners) in virtually every network. Increasing the role of nonjustice partners in the juvenile justice system of each community was a central focus of Reclaiming Futures. The sociograms suggest that these efforts were effective.

Figure 1

NUMBER OF FAVORABLE NETWORK STATISTICS ACROSS EIGHT RF COMMUNITIES, BY SURVEY YEAR (40 MAXIMUM)

Number of Favorable Statistics



Note: Favorable network statistics are those where the value equals or is greater than the average expected for a network of the same size. Five statistics are analyzed in eight communities each year, for a total of forty possible statistics.

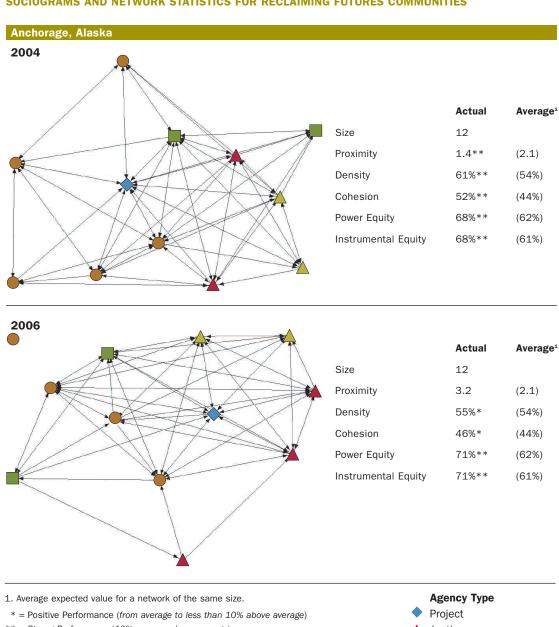
As might be expected, however, nonjustice agencies tended to be clustered at the outer edges of the sociograms, suggesting that nonjustice members of the networks were still less central and less powerful partners in the juvenile justice system. Local networks reported a wide range of strong relationships, but a number of isolated agencies are visible in the sociograms. When this did occur, the isolated agency was often either a community partner or a treatment agency.

NETWORK DYNAMICS IN ANCHORAGE

The agency network in Anchorage established itself early as one of the strongest Reclaiming Futures networks. The implementation of the Reclaiming Futures strategy began in 2003, and by 2004 all five network statistics in Anchorage

were at least 10 percent stronger than the average for a network of its size. The Reclaiming Futures project was clearly a central member of the network. Other prominent members included a treatment organization, a justice organization, and a community partner. The agencies from the

Figure 2 SOCIOGRAMS AND NETWORK STATISTICS FOR RECLAIMING FUTURES COMMUNITIES



^{** =} Strong Performance (10% or more above average)

Note: Direct comparisons of network statistics across networks of different size, even within the same community, are inappropriate. Each statistic should be compared to the average value (in parentheses) for a network of the same size.

court sector were less central members of the network, but communication and influence were distributed relatively equally throughout the network. One community partner occupied a powerful role in the network, as it was centrally located and the recipient of many incoming ties. By June 2006, the justice members of the network and two treatment members were located at the periphery of the sociogram, indicating less prominent roles. The Reclaiming Futures project in Alaska was even more central to the network in 2006. The justice members and court members remained powerful, but they were not as central as the project itself and two community partners. The network in Anchorage remained a highperforming network in 2006, but communication and interaction among the network members appeared to be less dense or cohesive than it had been 2 years earlier.

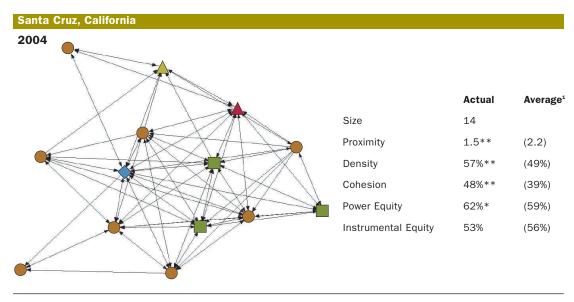
Since the study ended, we've seen even stronger network cohesiveness. We definitely went through some periods of struggle as we defined and then redefined our Reclaiming Futures collaboration. But we made great strides toward the end of the 5-year pilot as we led the development of a community-wide plan for substance abuse and delinquency prevention, developed strong evaluation measures showing our impact on improved treatment outcomes, and secured additional funding for our core elements.

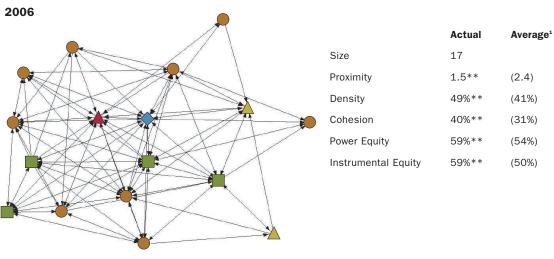
TOM BEGICH, ANCHORAGE, ALASKA

NETWORK DYNAMICS IN SANTA CRUZ

The network in Santa Cruz began Reclaiming Futures with relatively strong statistical scores for density and cohesion. The central positions in the network were occupied by the Reclaiming Futures project, a treatment agency, and a community partner. The Santa Cruz network involved seven distinct community partner agencies, but most

were not central members of the network. Performance increased substantially, however, between 2005 and 2006. All five network statistics were at least 10 percent stronger than average. The Reclaiming Futures project remained a central and powerful figure in the network, but other partners were nearly as strong, including the principal justice partner, two treatment





- 1. Average expected value for a network of the same size.
- * = Positive Performance (from average to less than 10% above average)
- ** = Strong Performance (10% or more above average)

Note: Direct comparisons of network statistics across networks of different size, even within the same community, are inappropriate. Each statistic should be compared to the average value (in parentheses) for a network of the same size.

Agency Type Project Justice Court Treatment Community

partners, and several community partners. Partners from the court sector in Santa Cruz had become more powerful actors, with multiple reciprocal ties to other organizations in the local network. Overall, the analysis in Santa Cruz suggests that the network started out relatively strong in 2004, but it had become even stronger and more balanced by 2006.

NETWORK DYNAMICS IN KENTUCKY

As one of the smaller agency networks in Reclaiming Futures, the southeastern Kentucky project started out with relatively weak network statistics. None of the network measures for Kentucky were stronger than average in 2004. The Reclaiming Futures project and the primary treatment partner were the most central members

* = Positive Performance (from average to less than 10% above average)

Note: Direct comparisons of network statistics across networks of different size,

compared to the average value (in parentheses) for a network of the same size.

even within the same community, are inappropriate. Each statistic should be

** = Strong Performance (10% or more above average)

of the Kentucky network, but the network as a whole did not score very high in terms of structure, density, and cohesion. By 2005, the network had become slightly more balanced in terms of proximity, and the dominance of the Reclaiming Futures project had declined somewhat, partially replaced by an increasingly central agency from the court sector. A year later

Southeastern Kentucky 2004 Actual Average¹ Size 12 Proximity 6.0 (2.1)Density 28% (54%)Cohesion 11% (44%)Power Equity 51% (62%)Instrumental Equity 51% (61%)2006 Actual Average¹ Size 11 1.6** Proximity (2.0)Density 47% (57%)Cohesion 42% (47%)Power Equity 53% (63%)53% Instrumental Equity (63%)**Agency Type** 1. Average expected value for a network of the same size.

Project

Justice

Treatment

Community

Court

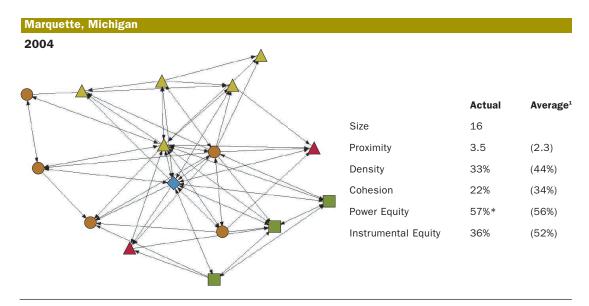
in 2006, the court had moved closer to the periphery of the network while two treatment partners appeared to be the most powerful members of the network along with the Reclaiming Futures project. Community partners remained on the periphery of the Kentucky network throughout the initiative. In 2006, just one network statistic in Kentucky was at least 10 percent stronger than average: proximity. The Kentucky network appeared to be loosely affiliated, with agencies from the treatment sector playing a dominant role.

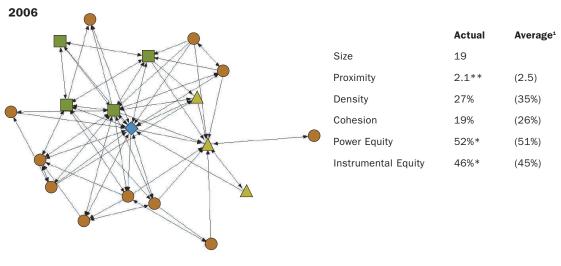
It doesn't surprise me that our network appeared less connected in this study. While Reclaiming Futures focused on change in four eastern Kentucky counties, our core group of survey respondents was spread out, including people at the local, regional, and state level. We integrated Reclaiming Futures into a preexisting interagency collaborative—and this ensured strong interagency relationships—but our group covered a wide area.

KARI COLLINS, KENTUCKY

NETWORK DYNAMICS IN MARQUETTE

The organizational network in Marquette was one of the most diverse networks in the Reclaiming Futures initiative. The members included several treatment partners, a large number of community partners, and multiple partners from the justice and court sectors. In 2004, the most central members of the network included the Reclaiming Futures project, one court member, and one community partner. In terms of network statistics, however, the Marquette network was not performing especially well in 2004. The network was barely above average on the measure of power equity, while all other network statistics were considerably below average. The sociogram for 2006, on the





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- ** = Strong Performance (10% or more above average)

Note: Direct comparisons of network statistics across networks of different size, even within the same community, are inappropriate. Each statistic should be compared to the average value (in parentheses) for a network of the same size.

Agency Type Project Justice Court Treatment Community

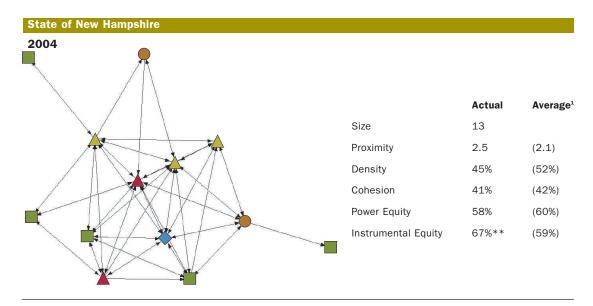
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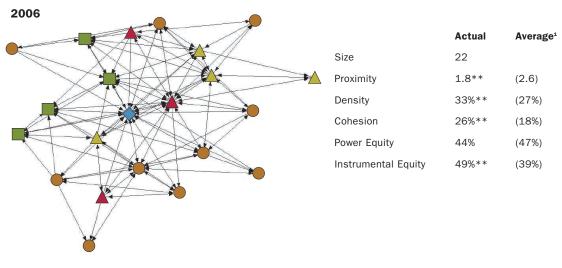
other hand, shows a tightly clustered network with several central members, including the Reclaiming Futures project, powerful network members from the treatment sector, and strong members from the court sector. Community partners in Marquette continued to reside at the periphery of the sociogram, including one community partner that remained in an isolated position. The network scored well on the network measure for proximity, and both power equity and instrumental equity were above average. The pattern of findings in Marquette suggested that the local services network had been effectively reorganized by 2006. Power and communication had become concentrated in a new constellation of actors, with more participation by community partners and agencies in the treatment sector playing a stronger central role.

NETWORK DYNAMICS IN NEW HAMPSHIRE

The agency network in New Hampshire began Reclaiming Futures with relatively low network statistics. The most central members of the network were the agencies from the court and justice sectors, and the network involved just two community partners. Treatment partners in New Hampshire's network were largely peripheral,

including two isolated members with ties to only one agency each. The performance of the network increased substantially by 2006, scoring at least 10 percent above average for proximity, density, cohesion, and instrumental equity. The statistic for proximity was more than 10 percent stronger than average in 2005. The influence of the Reclaiming Futures project grew between





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- ** = Strong Performance (10% or more above average)

Note: Direct comparisons of network statistics across networks of different size, even within the same community, are inappropriate. Each statistic should be compared to the average value (in parentheses) for a network of the same size.

Agency Type Project Justice Court Treatment Community

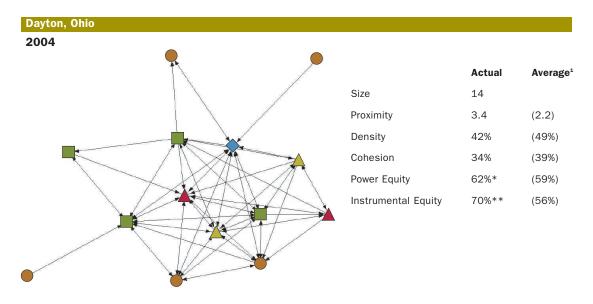
2004 and 2006, with the project appearing in a more central area of the sociogram. The sociogram became visibly denser, with relationships among network members becoming stronger and more interconnected. Several agencies from the treatment sector became more central to the network, and the number of community partners had increased markedly. Between 2004 and 2006, the agency network in New Hampshire had become significantly stronger.

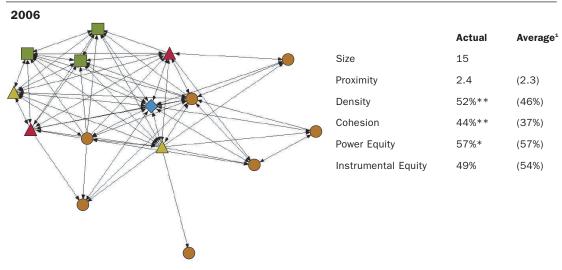
We tried to engage key decision makers throughout the project by leveraging the convening power and credibility of the courts and operating as a statewide initiative. Project leaders were highly committed, visible, and well connected across and within several communities. Our state's relatively small size and its tradition of collegial relationships allowed for frequent contact among our partners and stakeholders.

RAY GOODMAN, NEW HAMPSHIRE

NETWORK DYNAMICS IN DAYTON

The organizational network in Dayton began the Reclaiming Futures initiative with just one network statistic that was at least 10 percent above average: instrumental equity. In 2004, the network's most central members were agencies from the justice, court, and treatment sectors. Three of five community partner agencies were relatively isolated, having ties with only one or two other organizations each. Dayton's sociogram for 2006 revealed a more densely organized network. The Reclaiming Futures project in Dayton occupied a central position, and one community partner assumed a more central role. Between 2004 and 2006, Dayton moved from being a relatively low-performing and dispersed





- 1. Average expected value for a network of the same size.
- * = Positive Performance (from average to less than 10% above average)
- ** = Strong Performance (10% or more above average)

Note: Direct comparisons of network statistics across networks of different size, even within the same community, are inappropriate. Each statistic should be compared to the average value (in parentheses) for a network of the same size.

Agency Type Project Justice Court Treatment Community

network to becoming a stronger network with increasingly dense and cohesive interaction patterns.

Dayton's history of interagency collaboration was enhanced by our experience with Reclaiming Futures. Our aim was to strengthen and expand existing relationships and to increase community involvement. Our project leaders—including judges, justice officials and treatment experts—welcomed and embraced their community partners. Together, we increased and improved treatment options for court-involved youth. We also focused on including new "Natural Helpers" as volunteers (many recruited from the faith community) to give youth and families an extra degree of support for making positive life changes.

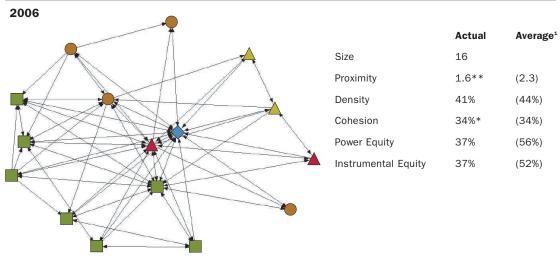
CHARLOTTE MCGUIRE DAYTON, OHIO

NETWORK DYNAMICS IN PORTLAND

The agency network in Portland began its Reclaiming Futures efforts with relatively low statistical scores. The central positions in the network were occupied by the Reclaiming Futures project, a justice agency, and a community partner that scored high on instrumentality (outgoing ties), but low on power (incoming

ties). Treatment agencies were largely peripheral in the Portland network in 2004. By 2006 it was apparent that the Reclaiming Futures project itself had become a far more powerful member of the network, as it occupied a more central role and was the focus of many incoming ties. One principal agency from the justice sector remained a strong, central member of the network. One

Portland, Oregon 2004 Actual Average¹ Size 16 Proximity 4.2 (2.3)Density 29% (44%)Cohesion 18% (34%)Power Equity 52% (56%)52%* Instrumental Equity (52%)



- 1. Average expected value for a network of the same size.
- * = Positive Performance (from average to less than 10% above average)
- ** = Strong Performance (10% or more above average)

Note: Direct comparisons of network statistics across networks of different size, even within the same community, are inappropriate. Each statistic should be compared to the average value (in parentheses) for a network of the same size.

Agency Type Project Justice Court Treatment Community

member from the treatment sector had also moved to a central location in the sociogram, suggesting that the treatment sector in Portland was becoming a stronger hub of network communication. By 2006, the network as a whole became somewhat more cohesive, scoring at least average in cohesion and 10 percent or more above average in proximity. The central actors in the network were the Reclaiming Futures project, a key justice agency, a key treatment agency, and a relatively central community partner.

Though implementation of Reclaiming Futures in Portland was dogged by early setbacks and may have been less focused compared to what other communities were doing, we experienced slow but steady improvement in the cooperation of our key partners. And we saw real improvements in communication among our justice and treatment agencies.

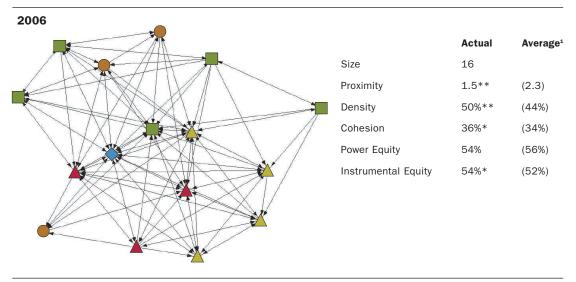
BENJAMIN CHAMBERS, PORTLAND, OREGON

NETWORK DYNAMICS IN SEATTLE

Network strength in Seattle declined slightly during the initiative. In part, this was because Seattle began the initiative in such a strong position. Four of the five network statistics in Seattle were at least 10 percent stronger than average in 2004, and the network was visibly dense and complex, suggesting the presence of

many ties between network members. The most central members of the network in 2004 were the Reclaiming Futures project itself, an agency from the court sector, one key treatment partner, and a powerful community partner. By 2006, the Reclaiming Futures project had moved slightly further away from the center of the sociogram, and the most central actors were

Seattle, Washington 2004 Actual Average¹ Size 23 Proximity 1.6** (2.7)39%** Density (25%)Cohesion 29%** (16%)Power Equity 56%** (46%)Instrumental Equity 37%* (36%)



- 1. Average expected value for a network of the same size.
- * = Positive Performance (from average to less than 10% above average)
- ** = Strong Performance (10% or more above average)

Note: Direct comparisons of network statistics across networks of different size, even within the same community, are inappropriate. Each statistic should be compared to the average value (in parentheses) for a network of the same size.

Agency Type Project Justice Court Treatment

Community

agencies from the treatment and court sectors. The role of community partners became even less central in the Seattle network. Two network statistics remained at least 10 percent stronger than average, a decrease from four statistics in 2004. In general, the Seattle network became weaker between 2004 and 2006, perhaps due to the centralization of network power in the treatment and court sectors.

We now have judges and managers within the juvenile justice system who understand what we need to do to improve the lives of those coming into the system. . . . As youth come into the courtroom, there's a better understanding of their treatment needs and of our [available services]. There's a more consistent understanding—with all those players in the courtroom—of what kids need.

MARK WIRSCHEM SEATTLE, WASHINGTON

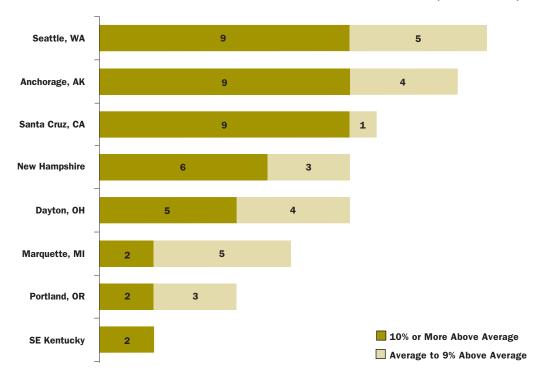
SECTION SEVEN

Discussion

When viewed across all 3 years of network measurements (2004, 2005 and 2006), the topperforming networks in the Reclaiming Futures initiative were those in Seattle and Anchorage. In both communities, the majority of network statistics were at or above average across 3 years of network measures. In Seattle, fourteen of the fifteen statistics

(5 per year) were at or above average throughout the 3 years of surveys. The statistics in Anchorage were almost as strong, with thirteen of the fifteen statistics being at least equal to or greater than average. These two sites outperformed all others in terms of network performance from the beginning to the end of the study period.

Figure 3 TOTAL NUMBER OF FAVORABLE NETWORK STATISTICS ACROSS THREE YEARS (15 MAXIMUM)



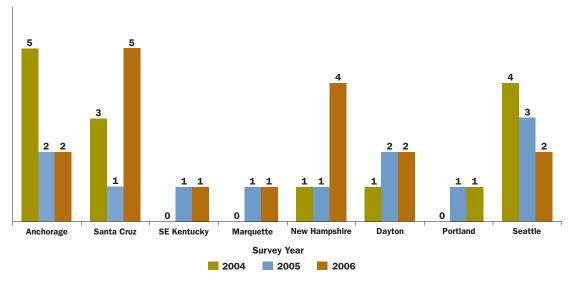
NOTE: Favorable network statistics include those where the actual value is equal to or greater than the average for a network of the same size. Five network statistics are analyzed across three surveys (2004, 2005, and 2006) for a total of fifteen possible statistics in each community.

With regard to density (the proportion of helpful interactions in any direction) and cohesion (the percentage of reciprocal interactions), the top-performing communities overall were Anchorage, Seattle, Santa Cruz, and Dayton. Each of these sites had density and cohesion at or above average levels in at least two of the three surveys. In addition, New Hampshire had cohesion levels at or above average during two of three surveys. With regard to power equity (incoming interactions) and instrumental equity (outgoing interactions), Anchorage, Seattle, and Dayton had values that met or exceeded the average during at least two of three surveys. Marquette's score on power equity was at or above average in all three surveys, while New Hampshire scored at or above average on instrumental equity in all three surveys. Santa Cruz had a power equity score that was above average in two of three surveys, while Portland's score for instrumental equity was at least equal to average two of three times. Considering proximity scores alone, Seattle, Santa Cruz, New Hampshire, southeastern Kentucky, and Portland consistently performed at or above expectations given their network size.

The two communities experiencing the fewest strength indicators overall were Portland and southeastern Kentucky, whose networks met or exceeded average levels for only five and two statistics, respectively. Portland's fairly large network did show some success with regard to instrumental equity and proximity. Southeastern Kentucky had a relatively average-sized network, but its agencies were spread out across a large rural area. Thus, it may not be surprising that the Kentucky network experienced lower-than-expected levels of density and cohesion.

The picture changes somewhat if the analysis considers the pattern of statistics between years rather than all years at once, and if it focuses only on the strongest network statistics—those at least 10 percent stronger than average. Using this approach (Figure 4), it is apparent that the performance of the agency networks in Anchorage and Seattle declined over time while that of other networks increased. The network in Anchorage began the Reclaiming Futures initiative in 2004 with all five of its statistics scoring at least 10 percent stronger than average, but only two of its statistics were equally strong in 2005 and 2006.

Figure 4
NUMBER OF STRONG NETWORK STATISTICS (5 MAXIMUM PER YEAR)



NOTE: Strong network statistics are those where the actual value is 10 percent or more above the average for a network of the same size. Five statistics are analyzed each year, including proximity, density, cohesion, power equity, and instrumental equity.

Similarly, the number of strong performance indicators in Seattle dropped from four to three to two between 2004 and 2006.

On the other hand, some networks showed their greatest strength during the last year of the study—particularly Santa Cruz and New Hampshire. Santa Cruz began strong and faltered slightly during the middle of the study period, before gaining strength by 2006 when it exceeded the average value on every statistic by at least 10 percent. The network in New Hampshire scored 10 percent above average in just one statistic in 2004 (instrumental equity) and 2005 (proximity). By 2006, however, four of the five statistics scored 10 percent above average (proximity, density, cohesion, and instrumental equity.

Reclaiming Futures helped facilitate relationships among our various funders, resulting in a more centralized funding pool and a common plan for how we utilize resources. Funds from the court, the state, the city, and the county can now be pooled to assist our efforts.

DEAN BRAXTON SEATTLE, WASHINGTON

SECTION EIGHT

Conclusion

The results of this social network analysis suggest that Reclaiming Futures communities improved their network performance during the RWJF initiative. Relying on measures such as density, cohesion, and power equity, the study found many positive indicators of network performance in the communities participating in Reclaiming Futures, and these indicators improved over time across the communities as a whole.

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