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Linked In: Social Network Analysis as a Promising Practice in Assessing Organizational Equity and Diversity Policies

By: Raluca Bejan

ABSTRACT This paper argues for the methodological application of social network analysis (SNA), as an evaluation based approach in assessing organizational diversity and equity. Using concrete practice examples from a study exploring professional networks of settlement service providers, it walks the reader through the application of SNA measures to assess employment equity efforts and the distribution of organizational influence. Practice informed research implications and ethical concerns about organizational research are also discussed.

This theoretically framed paper advances the methodological application of social network analysis (SNA), as a novel evaluatory approach for measuring organizational diversity and equity. Making use of concrete practice based examples from a study assessing the professional networks of settlement service providers, it walks the reader through the nitty-gritty applications of several SNA measures, argumentatively supporting its integration as an evaluation method for conducting organizational research.

Minorities' representation is an important goal for social service agencies. Existent gaps among the diversity of client population and the uniformity of employed staff (Findler, Wind & Barak, 2007) have led to the development of organizational diversity initiatives (Findler, Wind & Barak, 2007), mainly aimed to attract employees from a variety of ethnic and racial backgrounds.

Workplace diversity was formerly assessed on its potentiality to increase organizational cohesion and performance (Christian, Porter & Moffitt, 2006) or to consolidate organizational culture, particularly in relation to employee outcomes - as measured by well being, job satisfaction and organizational commitment (Findler, Wind & Barak, 2007). Primarily concentrated on employment equity, also known as affirmative action, institutionalized diversity initiatives aimed to create proportional representation to equalize percentages of professional positions. For instance the ratio of men versus women (Christian, Porter & Moffitt, 2006) or white versus racialized employees (Kalev, Dobbin & Kelly, 2006). Research efforts rarely materialized into evaluation initiatives beyond proportionally based ratios. Influence based assessments and evaluations should be core elements in exploring the institutionalization of equity efforts within social service agencies. Building inclusiveness and organizational diversity should go beyond the implementation of ratio based proportions.

> *"Building inclusiveness and organizational diversity should go beyond the implementation of ratio based proportions."*

Theoretically distinguishing between surface and deep levels of institutionalized diversity (Christian, Porter & Moffitt, 2006), this paper argues that there is a lot more out there to be explored, rather than the simple organizational representation of group diversity. In other words, representation does not equal influence. We need to go beyond the numeric based representation, to assess the occupational influence/power held by the very same represented minority groups.

This paper starts from the premise that proportional representation is merely reflective of surface diversity level, while influence goes one layer underneath it. Aiming to bring into light a novel way of assessing

the so-called deep level of equity and diversity, it explores the influence associated with representation. The paper aims to weigh up equity initiatives, as they go beyond tokenism in levelling out power based workplace inequalities.

Practice based research implications are discussed, as they particularly relate to general study design, sampling, data collection and data analysis, to better support the methodological integration of SNA within organizational research.

SNA: WHAT IS IT AND WHY USE IT TO EVALUATE DIVERSITY AND EQUITY ORGANIZATIONAL PRACTICES?

Dually conceptualized as a theoretical and methodological approach, SNA visually weighs up networks of connections (Hoffer-Gittell & Weiss, 2004; Hope & Reinelt, 2010; Pope & Lewis, 2008). Theoretically branching from symbolic interactionism (De Nooy, 2003) SNA studies relationships, not as specific properties of agents, but rather as properties of systems of agents (Scott, 2000), as linkages and flows of social capital (Bellotti, 2011).

It circumstantially conceptualizes interactions as embedded into a web of social networks (Christakis & Fowler, 2007; Schultz-Jones & Cheung, 2008), as channels for transferring resources and information among actors, within communities, and through their net of social communication (Hoffer-Gittell & Weiss, 2004; Kim & Han, 2009; Tsai & Ghosal, 1998). Therefore, the unit of analysis is not the individual, nor the organization, but rather the relationships between individuals and such organizations (Scott, 2000).

There has been a recent explosion of interest in network research (Borgatti et al., 2009). Models are applied to a variety of topics and SNA applications are crossing many disciplinary fields, including social computing (Kim & Han, 2009; Roome, 2001), social sciences (Newman & Dale, 2004), economics (Borgatti, et al.,2009) business

(Newman & Dale, 2004), as well as information and technology (Berry, 2008).

Within the area of organizational studies, network research was used in executive consulting efforts (Borgatti et al., 2009), exploring managerial interconnectedness (Oehler, Sheppard, Benjamin & Dworkin, 2007), inter-organizational collaborative capacity (Bejan, 2013), decision making processes (Kapucu, 2006), coalitions' functioning (Foster-Fishman, Berkowitz, Lounsbury, Jacobson, & Allen, 2001), partnerships' effectiveness (Valente, Chou & Pentz, 2007) and workforce reduction changes (Bejan & Black, 2012; Shah, 2000).

While organizational network research is quite common within the management field (Brass, Galaskiewicz, Greve & Tsai, 2004), the author is unaware of any existent efforts juxtaposing such analyses to the assessment of agency based employment equity. Several explanations are proposed in support:

- The institutionalization of employment equity is relatively new. After all, the Canadian Employment Equity Act was only introduced in 1986 (Graham, Swift, & Delaney, 2009)
- Affirmative action policies are assessed in terms of achieving institutional parity between advantaged and disadvantaged groups gbecause they were mainly developed to grant entry to educational and work settings (Garrison-Wade & Lewis, 2004)
- SNA approaches are not included in the undergraduate nor graduate levels of social work education (despite the fact that network based methodologies are used in a variety of similar professional fields). Many practitioners are unfamiliar withh such applications, despite their articulation of diversity specific concerns (Graham, Swift, & Delaney, 2009)

SNA has visually unique characteristics, allowing the visualization of actors' position

within a network. This is done by visually mapping the organizational relationships between people working together within one agency, firm or business.

Using various colours, sizes and shapes, SNA has the ability to visually draw the spatial position of actors within a network, particularly in relation to the existent connections among them (Heer & Boyd 2005). The network becomes visible in the form of nodes (i.e. actors) and links (i.e. connections) within a specified and delimited structure (Scott, 2000) and can directly shed light upon the diverse make-up of an organization.

Measuring both, representation and influence, it can easily draw attention to who is centrally located within the network, who is at the periphery and how network positionality or social location determines the acquisition of occupational capital.

"Measuring both, representation and influence...draw[s] attention to who is centrally located within the network."

PRACTICE BASED EXAMPLES: HOW TO USE SNA TO ASSESS DIVERSITY AND EQUITY?

Considering relationships as proxies for influence, SNA applications assess organizational distribution of power, as mediated by influence processes and based on actors' social and organizational locations (i.e. race; professional role) as places of advantages or disadvantages.

To demonstrate its methodological applicability, this paper uses empirically based examples from a study exploring professional networks within a partnership of settlement service providers. The Toronto East Local Immigration Partnership (TE-LIP). Funded by Citizenship and Immigration Canada (CIC), TE-LIP was established at the end of 2009, as a network of community stakeholders including settlement agencies, community organizations, language training providers, local associations, members of school boards and municipal government. Its main purpose was the development of strategies for the coordination and integration of settlement services within the geographically defined East region of the city.

Seventeen neighbourhood based LIPs had been operating across Toronto, until the end of March 2013, when the entire partnership model merged into a regional one (Bejan & Black, 2012). Under a formal academic-community agreement involving the Factor-Inwentah Faculty of Social Work at University of Toronto, Meta Strategies and WoodGreen Community Services, a pilot project was conducted between December 2011 and September 2012. The project assessed the network structure of professional relations within the TE -LIP. Using a network based methodology, the study was the first one to ever weigh up the professional collaborations within the newly formed partnerships.

The study sample consisted of 70 settlement service providers. Participants provided job details (geographic catchment areas, workgroups, affiliation to local networks, involvement in neighbouring LIPs), organizational information (type of organization, sector, length of time worked within the sector, professional role) and demographic data (racial background). Additionally participants identified the colleagues to whom they are professionally connected to, by selecting them from a list of names.

A final community report outlining preliminary findings was publically released in October 2012. Study data is used here to exemplify SNA's applicability in assessing organizational diversity. Two applications were well thought-out in relation to service providers' organizational influence:

- Professional/organizational role, as in front line or management/executive positions
- racial background, as in white or racialized

Figure 1 visually sheds light on the distributional dynamic of organizational capital, based on service providers' professional role. Actors' position is therefore indicative of network's structural composition. As seen below, there is an equal representation of individuals holding various organizational roles within the TE-LIP. Executives and front line service providers seem to both occupy central locations within the network, an even-handed situation from an equity perspective.
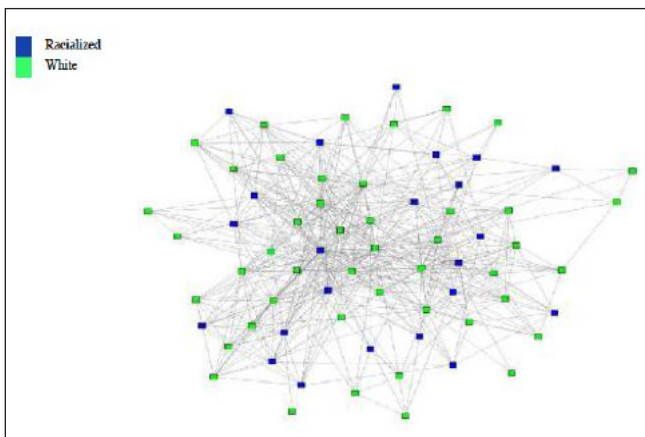
FIGURE 1: Positionality of Respondents by Roles
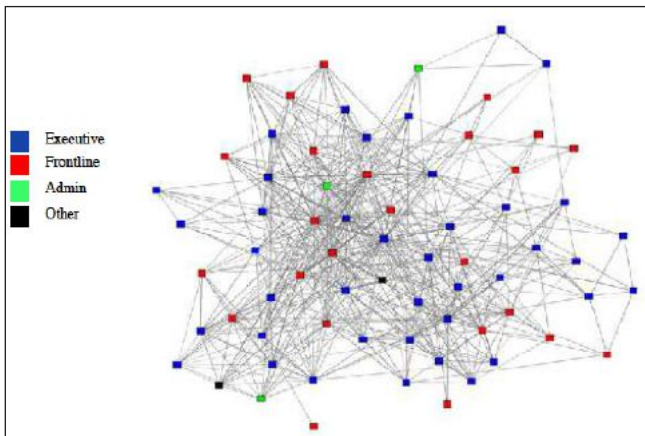
SOURCE: Raluca Bejan

In congruence with anti-oppressive approaches (Barnoff & Moffatt, 2007) SNA can also visually delineate nodes by actors' demographic characteristics.

FIGURE 2: Positionality of Respondents by Race

SOURCE: Raluca Bejan

Figure 2 portrays visualizations of respondents' positionality by their racialized background. Similarly with the former network by professional role, an equal visual representation exists among all actors within the TE-LIP network, as central and peripheral positions seem to be evenly distributed among both groups, white and racialized.

Although both examples visually reflect an equitable organizational representation, SNA analyses can go one layer down under, to explore the organizational influence associated with network based representational positions.

SNA MEASURES: REPRESENTATION AND INFLUENCE

Simple visualizations, although useful, are limited in thoroughly exploring the differential weight of influence associated with actors' networked positionality. SNA can further weigh up actors' location by making use of centrality metrics, and therefore, it can explore the layered dispersion of organizational influence. For instance, are racialized individuals merely in superficially representative, token positions, or do they actually hold influential roles? In other words, how much power do actors hold in relation to their differential roles or demographic characteristics?

By measuring up node centrality (Borgatti et al., 2009), SNA metrics mathematically calculate the importance of individuals within a network, comparing connections and generating position centered scores. Centrality metrics include:

- In- Degree Centrality – the number of directed ties/links to one participant from agents reporting relationships with other agents (Koku & Wellman, 2002)
- Out- Degree Centrality – the number of respondents' own links directed towards other actors in accessing resources and information (Koku & Wellman, 2002)
- Betweeness - agents' positionality as nodes in funneling connections among

others (Seierstad & Opsahl, 2010), for instance how many racialized or white service providers are identified by their peers as occupying influential positions between agents

Centrality measures have been previously tested as proxies for network based influence, and therefore they have robust standings in front of measurement type errors (Borgatti, Carley & Krackhardt, 2006). Calculating In Degree, Out Degree and Betweeness metrics for each node/actor within the network, and comparing actors' organizational or demographic characteristics help explore the second layer of organizational capital distribution.

RESEARCH-BASED PRACTICES

Network approaches mostly fit descriptive survey methodology. Recruitment should typically start from a list/data set of potential respondents, containing the names of those who should receive the survey about the network. The positional approach (Scott, 2000) is a sampling technique that uses saturated data identified by the target population (Wejnert, 2010) on what is considered significant within the research context (Scott, 2000).

The theoretical constructs that guide the questions become the natural boundaries framing the target population (i.e. settlement service providers). Previous SNA evaluations surveyed the entire target population (Bejan & Black, 2012), as the actual de facto sample, an uncomplicated process when the population is relatively small, perhaps a few hundred people.

The next step is to administer the network mapping survey to all individuals whose names are contained within the list. The survey generally contains both, demographic and 'network' specific questions. Network questions ask respondents to identify the people to whom they are connected to, following the initial list of names.

Psychometric testing may possibly assess the survey's content appropriateness, however, researchers may want to choose from standard network questions, formerly tested for validity and reliability. Each of these questions makes up a separate network. Examples of such network questions (layered on several network dimensions) could assess the following:

- Current working relations (i.e. Who do you currently work with? or With whom do you discuss work matters?
- Leadership (i.e. Who do you ask for support and advice?)
- Innovation (i.e. To whom do you look up to for new ideas, innovation and inspiration?')
- Desired collaborations (i.e. Who would you like to work with in the future?)

In terms of data analysis, survey answers should be downloaded into Excel, although descriptive statistics might be additionally conducted in SPSS. Following data cleaning, two separated Excel files, one for the nodes (i.e. participants) and one for the links (i.e. relationships between them) are to be imported into researchers' software of choice. Examples include UCINET, Pajek, Smart Network Analyzer, or In Flow. All have the capability of providing visualizations of actors' networked positions and calculating centrality metrics.

POTENTIAL LIMITATIONS

It is important for practitioners to have an understanding of research challenges and anticipate them in order to effectively conduct evaluation efforts from start to end. This paper walks the reader through some of these foreseen concerns, while offering a range of possible options for solving them.

Feasibility concerns may arise, as sociometric research usually requires higher response rates than traditional survey research. With a clearly identified/known

population, a 40% to 50% response rate is considered acceptable. However, in cases with unknown population, a target of 70% response rate is desirable for the creation of meaningful maps and network visualizations. If survey rates prove low, several steps can be taken to overcome this challenge:

- Extending the survey completion deadline
- Conducting follow - up outreach efforts (i.e. emails and phone calls) to increase participation.

Ethical concerns represent additional challenges when conducting SNA research. Anonymous data cannot be collected, since participants need to provide the names of individuals they are collaborating with, and therefore, privacy and confidentiality risks most likely will arise. Regardless of investigators' efforts to safeguard participants' confidentiality and privacy, respondents may be deductively identified by their fellow colleagues, due to the visual characteristics of the network maps.

As the information collected is related to workplace environments, occupational risks are associated with participation, if, presumably, respondents' identity is speculated. It is recommended that any sensitive findings and final network maps are presented in general terms, as de-identified, in order to minimize and manage inherent occupational risks. Information should be handled with caution and treated as confidential in relation to report writing, paper writing, and dissemination of network maps.

> *"Information should be handled with caution and treated as confidential."*

Lastly, as methodological instruments reproduce "presuppositions inscribed in the social condition of their construction" (Bourdieu, 1998 p. 133), SNA may involuntarily reinforce the very same unequal structural arrangements it aims to measure. For instance, categorizing actors' racialized status as in white and racialized (i.e. by labelling the variable as such) involuntarily maintains and reinforces the white categorization as the benchmark to be compared against.

On such an argument, SNA can be viewed as to limitedly explore and somehow decontextualize agents' situational agency (Fram, 2004) and their networked influence, without questioning how actors got this influence to begin with. Networks do not contain social capital per se, but they rather mirror the distribution of such capital. SNA's main conceptual limitation is that it cannot explore the structuring rules of social capital but rather the distribution or the representation of already structured forms of capital.

CONCLUSIONS

Integrating current interdisciplinary knowledge, this paper extends the field of applied research on organizational diversity and equity. SNA is a fit methodological tool for exploring employment equity initiatives, as they extend beyond token representations in levelling out workplace inequalities.

Benefits from SNA research are drawn at many levels of practice. For instance, study participants have the opportunity to increase their awareness about the way work is conducted within their organization, which by extension, may translate into future collaborative developments.

Most benefits, however, are to be drawn at the management level, by organizations and/ or partnerships themselves. Maps, visualizations of working relationships and centrality metrics are guiding tools for the planning, development and coordination of specific equity based initiatives within social service agencies.

Developing the theory and practice of organizational diversity and equity, this methodological exercise adds to current evaluation approaches and hopes to assist service providers, community workers and social

service work practitioners with the development, application and implementation of network based research approaches.

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ABOUT THE AUTHOR

Raluca Bejan is a PhD student at Factor-Inwentash Faculty of Social Work, University of Toronto. Her proposed plan of doctoral study, funded by SSHRC's Joseph-Armand Bombardier Canada Graduate Scholarship, aims to explore how scholarly discourses of newcomers' labour market integration are conceptually produced and epistemologically positioned within the knowledge production field.

She has published in the *Canadian Ethnic Studies*, *Canadian Journal for Social Research* and the *Transnational Social Review – A Social Work Journal*.

What is Regional Diversity Roundtable?

The Regional Diversity Roundtable (of Peel) is a charitable not-for-profit committed to building inclusion and diversity competence that results in the institutionalization of equity in member organizations' core values, structures, workforce, policies and services.

We are a group of individuals representing organizations with a commitment to inclusion, equity and diversity competence. Employed within the Human Services and public sector in Peel, we are interested in increasing the capacity of individuals and organizations to meet the needs of diverse stakeholders in providing appropriate services to people from various social and cultural backgrounds.

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