



SOCIAL NETWORKS

Social Networks 29 (2007) 349-356

www.elsevier.com/locate/socnet

Editorial

The network is personal: Introduction to a special issue of *Social Networks*[☆]

1. A personal view of the network world

We practice personal network analysis every day. Each of us is the center of our own universe. We know who our friends are, how they are connected to each other, and what kinds of sociability, help, and information they might provide—from the 1–5 very strong ties that we feel closest with to the 200–2000 acquaintances whom we barely know (Boissevain, 1974; Wellman, 1979; Bernard et al., 1984; McCarty et al., 2001; McPherson et al., 2006). We reckon what network capital is available from people who can help us (Sik and Wellman, 1999; Kadushin, 2004). We even have some knowledge about the friends of our friends – that Kathy knows Wayne Gretzky. Although we do not have full maps, social networking software is making it easier to link us to friends of friends.

Personal network analysts usually want to know which types of people are in such network (are they composed mostly of kin or friends?), what kinds of relationships they contain (strong or weak ties; frequent or infrequent contact?), and what kinds of resources flow through different kinds of networks (do kin provide more emotional support than friends?). These research interests affect how analysts define populations, approach gathering data, and obtain information. Where whole network analysts typically concentrate on uncovering the structure and composition of one big network, personal network analysts usually study a sample of many smaller personal networks: the worlds according to Muhammad, Dick, and Harriet. Analysts want to identify ties wherever they lead, without being confined to groups, neighborhoods or organizations. ²

[★] My work on this article and the accompanying issue have been supported by the Social Sciences and Humanities Research Council of Canada, Intel, Microsoft Research, and the University of Toronto's Centre for Urban and Community Studies and Department of Sociology. Discussions with Jeffrey Boase, Wenhong Chen, Vincent Chua, Rochelle Côté, Caroline Haythornthwaite, Alexandra Marin, Lynn Smith-Lovin, Natalie Zinko, and especially Beverly Wellman have been helpful, as has been dialogue with all of the authors in this issue.

¹ Network analysts often use the term "egocentric network" because the Ego from whose standpoint the network is defined does not have to be a person. For similar reasons, analysts often label as "Alters" those who are connected to an Ego. For example, an egocentric network could be "IBM and its suppliers". As I am dealing here only with people (Egos) and their friends and relatives (Alters), I use the less jargon-y: "personal network" and "network member".

² Every whole network can be analyzed as a series of personal networks, just by viewing the network from the standpoint of specific persons in it: see Haythornthwaite and Wellman (1996) for a computational procedure. However, this approach

The personal networks studied are often small – typically the 2–30 of the people most strongly connected to the person at the center – and so numerous that analysts rarely use fancy network analytic techniques. Instead of *UCINet* or *Pajek*, personal network analysts often use the more prosaic and less structural *SPSS* (see Müller et al., 1999). Yet, personal network analysts use the essence of the network paradigm itself: a focus on relationships, wherever situated, rather than assuming that the world is built up on solidary, bounded groups (Wellman, 1988).

All of the articles in this issue use the network paradigm to analyze community and social support. This interest in supportive community became more than an academic interest in the last half of 2006 when the media frenzy about "social isolation in America" became a moral panic. Personal network analysts J. Miller McPherson, Lynn Smith-Lovin and Matthew Brashears (2006) used U.S. General Social Survey data to show that the mean number of people with whom adult Americans discuss important matters had shrunk 28% in two decades, from a mean of 2.9 (1985) to 2.1 (2004). Suddenly, North American jeremiahs lamented the supposed social isolation of the American public, a panic spurred by the decline in the mean number of confidants, the increase in the percentage of socially isolated people (without any confidents), and the apparent introversion of Americans turning more to their spouses and less to friends and relatives. The article's authors did more than 100 interviews with newspapers, magazines, television and radio: the journalists and the bloggers almost all believing that the findings revealed an American crisis. For example, *Washington Post* columnist Sebastian Mallaby (2006) proclaimed that "by some reckoning, social isolation is as big a risk factor for premature death as smoking". Yet, the panic was overstated – or at least misspecified – as none of the articles in this special issue show social isolation.

2. Central issues

Although personal network analyses can be wide ranging, certain issues keep cropping up:

- (1) Reconceptualizing and documenting communities as networks rather than as neighborhoods. This has provided fresh light on allegations that community has declined. By only looking in neighborhoods and kinship groups, community researchers had overly focused on questions of social integration and stability rather than on social relationships and mobility. The shift to a network view has provided empirical evidence that communities have not declined—they have just spread out (see Bastani's, Hennig's, Grossetti's and Mok and Wellman's articles; McCarty et al., 2001).
- (2) Showing how social support flourishes in personal communities to provide important network capital through specialized ties. Those that provide emotional support may not provide material aid (Hennig's and Plickert, Côté and Wellman's articles; Espinoza, 1999; Lin, 2001).
- (3) Providing a means to reconcile agency with social network analysis, by studying how people capitalize on their circumstances to maintain their personal networks (Wellman and Frank, 2001; Carrasco et al., 2007).
- (4) Using multilevel analysis to disentangle the effects of ties and the networks in which they are embedded: is it the nature of dyadic ties (e.g., strong/weak; kin/friend) or of the networks (e.g., large/small; densely/sparsely knit; clustered/integrated) that affect the kind and quantity of resources that flow through these networks. For example, are individual immediate kin more

would be constrained to stay within the boundary of the original whole network: a study of the members of an organization could not trace personal networks beyond the organization.

- supportive when they are members of networks dominated by immediate kin (Van Duijn et al., 1999; Wellman and Frank, 2001; Mok and Wellman's article)?
- (5) Documenting homophily: the similarity of network members to each other (by some criteria) and to the person at the center of the network (Louch, 2000; Agneessens et al., 2006), and linking homophily to personal network structure. Are ties clumped into discrete clusters or broadly interwoven in a single component (Plickert, Côté and Wellman's article; McCarty, 2002; Carrasco et al., 2007)? Looking beyond consideration of the personal networks themselves, what are the implications of personal network composition and structure to integration and cleavages in larger social systems, and how do homophily and dense network structure affect social integration (Laumann, 1966; Ferrand et al., 1999)?
- (6) Tracing changes in personal networks over time, and linking them to the nature of life experiences and of the relationships (Martin and Yeung, 2006; Feld et al., 2007).
- (7) Recent work has expanded the network approach to thinking about community. For example, analysts have traced (and built tools to facilitate) communities of practice people obtaining information within organizations by studying who know whom, who knows what, and who knows who knows what (Swarbrick and Contractor, 2002). Other analysts have disproved the original notion of the Internet as a separate system by demonstrating the integration of online and offline relationships (Wellman and Hogan, 2006; Zhao, 2006).

3. Themes

3.1. Beyond America

This special issue builds on classical personal network research into community and social capital. Although the basic approach to personal network analysis was established in the 1960s and 1970s (Laumann, 1969; Wellman, 1979; Fischer, 1982; see also Boissevain's, 1974 observational work), research has continued to build on the original insights and new methods.³ The basis of this special issue are the three papers presented at a personal network session of the 2004 Sunbelt Social Network Conference, held in Portoroz, Slovenia: Michel Grossetti from France; Marina Hennig from Germany; and Diana Mok and myself from Canada. To this, we added two papers from authors who could not be there: Susan Bastani from Iran, and Gabriele Plickert, Rochelle Côté and myself—Canada again. The articles reflect the continuing personal network concern with the "community question" about the interrelationship between large-scale structural phenomena (such as urbanization and technological change) and the composition, structure and content of interpersonal relationships (see also Wellman, 1999). Although the authors did not research or write from the same template, their sensibility is similar, forming a serendipitously found set of personal network analyses in diverse societal contexts.

3.2. Survey based

All of the articles are based on surveying a fairly large sample of respondents and asking them about their ties with a subset of their network members. (It is almost always too expensive to survey each network member mentioned.) Because survey time and respondent attention are

³ A special issue of *Field Methods*, 19, 2 (May 2007) presents methods of collecting and visualizing personal network data.

limited, no article tries to analyze entire personal networks. Instead, they focus on socially close ties

The researchers all make the standard survey analytic assumption that each person's network is relatively independent from each other—a reasonable assumption when sampling respondents from large populations. Yet, the analyses do not necessarily assume that the characteristics of network members – and their ties with the person at the center – are independent from each other or from the person at the center. For example, women are more likely to be members of a woman's network, and networks tend to specialize in having relatively frequent (or infrequent) contact between the respondents and the members of their networks.

3.3. Name generators

All of the research reported here use *name generators* to elicit information about network members and their ties to the respondents. They either ask respondents a broad stimulus question – "who are you close with?" – and then ask about details (relationship to respondent, etc.), or they ask specifically about a supportive behavioral practice ("who gives you aid when you are emotionally distressed?") and then ask about details (relationship to respondent, etc.). The second (support) approach gives direct prompts for areas of interest (see Hennig's and Grossetti's articles), but the first (general closeness) approach provides information about important relationships even when they are not supportive (see Plickert, Côté and Wellman, and Mok and Wellman's articles; Marsden and Campbell, 1984; Strait, 2000; Marin, 2004; Marin and Hampton, 2007).

By asking about specific network members, the articles elicit more detail (and possible over-statements), then when respondents are asked to *estimate the size* of their networks (see the discussion by Carrasco et al., 2007). Other ways of understanding personal networks are also available that do not ask respondents to name specific network members: *Resource generators* ask if respondents can get different types of resources: "Do you know anyone who can provide you with emotional aid?" (Van Der Gaag and Snijders, 2005). *Position generators* inquire about whether respondents know someone in a number of different categories (usually occupations): "Do you know a carpenter? A physician?" (Lin et al., 2001; Erickson, 2004; Flap and Völker, 2007). Position generators provide useful estimates of a personal network's diversity and its access to network capital.

As using name generators takes a long time, size estimates, resource generators, and position generators are often useful in surveys, and they correlate with other social phenomena. Another technique, *contact diaries* (Fu, 2007), enumerates network members in a method that harks back to Boissevain's (1974) following people around. Such diaries may identify frequently contacted trivial ties, but not identify important, infrequently contacted ties, such as a parent living abroad.

3.4. Multiple types of ties

All of the articles use statistical techniques to study multiple types of ties: asking not just about social closeness, but differentiating among different types of social support, such as emotional aid and large-scale material aid. The ties themselves are mixtures of the specialized—giving only one type of support or sociability – or multiplex – using multiple means of communication to exchange several types of support (see Hennig's article).

The articles pay attention to variations in the composition of personal networks. For example, Mok and Wellman analyze if variations in residential distance of socially close network members affect contact and supportiveness. Bastani finds that kinship ("family") is the dominant

organizing principle of Iranian personal networks. All of the networks exhibit general tendencies to homophily: liking those who are like you. Age, gender and socioeconomic homophilies are widespread, less so among kin.

All of the articles report that the average personal network has between 10 and 27 socially close ties, a much higher number than the 2.1 discussion partners reported in the "social isolation" article (McPherson et al., 2006). This suggests that social isolation is not endemic, once the analytic focus is broadened to include multiple types of close ties.

One analytic absence is that the articles scarcely deal with the structure of these personal networks: they do not analyze patterns of which network members are connected to each other. Although obtaining this information can be time-consuming, it can yield powerful results. For example, one recent study finds that networks with large, diversified components tend to be more socially active (Carrasco et al., 2007).

4. What the articles say

Susan Bastani's "Family Comes First: Men's and Women's Personal Networks in Tehran" presents a picture which may be a revelation to western readers who learn only about theocratic and nuclear issues in Iran. Based on interviews with both wives and husbands, she shows that middle-class networks in Tehran are similar to western networks in their size. Yet their composition is different: immediate kin predominate, and with them, densely-knit networks. These networks are gender homogeneous: kin have some male–female ties but friends are of the same sex. Tehrani women are not hidden in the household, but, live active mobile lives, with a complex division of networking between husbands and wives.

Marina Hennig analyzes the nature of families (with children) in contemporary urban Germany. Her "Re-Evaluating the Community Question from a German Perspective" focuses on testing theory about the nature of personal community. Using complex indicators of social support, she finds heterogeneous networks of kin, neighbors, friends, and acquaintances, with each role type tending to provide different kinds of support. Kinship is the most important. Hennig suggests that "it may be the *low* percentage of kin in North America that requires more explanation than the *high* percentages found in Europe and Iran" (this issue). Several types of structures are apparent, especially densely knit network cores (often composed of kin) surrounded by more sparsely knit peripheries (often friends, neighbors and workmates: see also Wellman and Wortley, 1990).

Michel Grossetti asks, "Are French Networks Different?" in Toulouse from those studied by Fischer (1982) a generation ago in northern California. He finds more residential proximity than Fischer, Toronto (Mok and Wellman) or Tehran (Bastani), and higher levels of social support than in California. The French report having large networks, with a mean of 27 members, but as Grossetti notes, differences in the wording of name generators affect comparative analyses of personal network size and composition. Otherwise, the overall message is of similarity with Fischer's study.

The two articles that conclude this issue use data from the second East York (Toronto) study. Mok and Wellman use multilevel analysis and distance modeling to ask how much contact and support declines with distance. The decline is neither linear nor smooth, with substantial decreases in contact at about 50 (face-to-face) and 100 miles (both face-to-face and phone). Distance also affects obtaining some forms of social support: not only borrowing small household items and small amounts of money, but also getting major emotional support. Their data were collected in 1978 before the advent of the Internet when contact was by expressways, airplanes, and telephones. It is a baseline for contemporary studies of the Internet age.

Plickert, Côté and Wellman use these same Toronto data to investigate the circumstances under which network members reciprocally exchange support. Their basic finding is relational: the key predictor of reciprocity is the one-way provision of support. Giving and getting are closely associated, especially for exchanges of the same kind of thing—such as a hug for a hug. By contrast, multilevel analysis does not show much effect of either personal network structure or the personal characteristics of either the respondents or the members of their network.

5. Inside personal networks

Similarity and variety is often in the eye of the beholder, but to this reader/editor, the articles show more similarities than differences. None of the networks are hyper-local; none of the networks are role homogeneous; none are very sparsely knit or densely knit. And most importantly, all of the networks exist: the respondents – or their families – are not floating free in unsociable and supportive space, contrary to the fears of Beck (1986/1992), Bellah et al. (1996), and 2006's social isolationist pundits. Grossetti remarks, "I did not expect to discover such marked convergences between the personal networks of the Toulousains in 2001 and the Californians in 1977–1978" [this issue]. He further argues that "network structures have hardly changed at all since the 1970s, in a variety of semi-industrialized, industrialized and post-industrialized milieus. . . . Despite the evolution in communication methods and in our way of life, the part of social life constituted by social networks has remained remarkably stable" [this issue].

Taken together, the articles depict a world suffused with differentiated sociability. People have many ties, with different types of ties providing different kinds of supportive resources. Kin dominate personal networks in Iran and Germany, while North Americans and the French have ties to mixtures of kin, friends and (to a lesser extent) neighbors, workmates and fellow members of organizations. Within these foci, people often have some choice, connecting with network members who are like them and whom they like. The more voluntary the focus (e.g., friends as compared to kin), the more homophilous the tie.

In the 20th century, the household has been the key operator of personal networks, with wives arranging sociable get-togethers and in-laws exchanging support as much as blood relatives. This was true in Toronto a generation ago (Wellman and Wortley, 1989, 1990), and in contemporary Iran and Germany. Yet, in some societies, there may be a turn away from the household to the individual as the basic personal networking unit. Instead of stay-at-home housewives, family cars, and household phones, there are trends to women working outside of the home, individual mobile phones, personal Internet logons and individual automobile use. Although there is little social isolation, the village, organization, group or the household may have diminished roles as the key organizers of personal communities.

The emerging picture is of "networked individuals" operating connecting somewhat autonomously out of "networked households" (Wellman, 2001; Kennedy and Wellman, 2007). But how do such network individuals operate? Fortunately, at least two groups are working now to develop efficient software for analyzing the structure and dynamics of large batches of personal networks.

References

Agneessens, F., Waege, H., Lievens, J., 2006. Diversity in social support by role relations. Social Networks 28 (4), 437–441.

Beck, U., 1992. Risk Society. Sage, Thousand Oaks, CA.

- Bellah, R., Madsen, R., Sullivan, W., Swidler, A., Tipton, S., 1996. Habits of the Heart: Individualism and Commitment in American Life (updated ed.). University of California Press, Berkeley.
- Bernard, H.R., Killworth, P.D., Kronenfeld, D., Sailer, L., 1984. The problem of informant accuracy. Annual Review of Anthropology 13, 495–517.
- Boissevain, J., 1974. Friends of Friends. Blackwell, Oxford.
- Carrasco, J-A., Hogan, B., Wellman, B., 2007. Agency in interactions: the role of social networks in time and space. Working paper, Toronto: NetLab, http://www.chass.utoronto.ca/~wellman/publications/index.html.
- Erickson, B.H., 2004. The distribution of gendered social capital in Canada. In: Flap, H., Volker, B. (Eds.), Creation and Returns of Social Capital. Routledge, London, pp. 27–50.
- Espinoza, V., 1999. Social networks among the urban poor: inequality and integration in a Latin American city. In: Wellman, B. (Ed.), Networks in the Global Village B. Westview, Boulder, CO, pp. 147–184.
- Feld, S., Suitor, J.J., Hoegh, J.G., 2007. Describing changes in personal networks over time. Field Methods, 19, 2, in press.
- Ferrand, A., Mounier, L., Degenne, A., 1999. The diversity of personal networks in France: social stratification and relational structures. In: Wellman, B. (Ed.), Networks in the Global Village. Westview Press, Boulder, CO, pp. 185–224.
- Fischer, C., 1982. To Dwell Among Friends. University of California Press, Berkeley.
- Flap, H, Völker, B., 2007. Social, cultural and economic capital and job attainment: the position generator as a measure of cultural and economic resources. In: Lin, N., Erickson, B.H. (Eds.), Social Capital: Advances in Research. Oxford: Oxford University Press, in press.
- Fu, Y.-C., 2007. Contact diaries: building archives of actual and comprehensive personal networks. Field Methods 19, 2, in press.
- Haythornthwaite, C., Wellman, B., 1996. Using SAS to convert ego-centered networks to whole networks. Bulletin de Methode Sociologique 50, 71–84.
- Kadushin, C., 2004. Too much investment in social capital. Social Networks 26 (1), 75–90.
- Kennedy, T., Wellman, B., 2007. The Networked Household. Information, Communication & Society, 10, in press.
- Laumann, E., 1966. Prestige and Association in an Urban Community. Bobbs-Merrill, Indianapolis.
- Laumann, E., 1969. Friends of urban men: an assessment of accuracy in reporting their socioeconomic attributes, mutual choice, and attitude agreement. Sociometry 32, 54–69.
- Lin, N., 2001. Social Capital: A Theory of Social Structure and Action. Cambridge University Press, Cambridge.
- Lin, N., Fu, Y.-C., Hsung, R.-M., 2001. The position generator: measurement techniques or investigations of social capital. In: Lin, N., Cook, K., Burt, R.S. (Eds.), Social Capital: Theory and Research. Aldine De Gruyter, New York, pp. 57–81.
- Louch, H., 2000. Personal network integration: transitivity and homophily in strong-tie relations. Social Networks 22 (1), 45–64.
- Mallaby, S., 2006. Why so lonesome? Washington Post 26, A21.
- Marin, A., 2004. Are respondents more likely to list alters with certain characteristics? Implications for name generator data. Social Networks 26, 289–307.
- Marin, A., Hampton, K., 2007. Simplifying the personal network name generator: an alternative to traditional multiple and single name generators. Field Methods, 19, 2, in press.
- Martin, J.L., Yeung, K.-T., 2006. Persistence of close personal ties over a 12-year period. Social Networks 28 (4), 331–362. Marsden, P., Campbell, K.E., 1984. Measuring tie strength. Social Forces 63, 482–501.
- McCarty, C., 2002. Structure in personal networks. Journal of Social Structure 3, 1. http://www.cmu.edu/joss/content/articles/volume3/McCarty.html.
- McCarty, C., Killworth, P.D., Bernard, H.R., Johnsen, E.C., Shelley, G.A., 2001. Comparing two methods for estimating social network size. Human Organization 60 (1), 28–39.
- McPherson, J.M., Smith-Lovin, L., Brashears, M., 2006. Social isolation in America. American Sociological Review 71 (3), 353–375.
- Müller, C., Wellman, B., Marin, A., 1999. How to use SPSS to study ego-centered networks. Bulletin de Methode Sociologique 69, 83–100.
- Sik, E., Wellman, B., 1999. Network capital in capitalist, communist and post-communist societies. In: Wellman, B. (Ed.), Networks in the Global Village. Westview Press, Boulder, CO, pp. 225–254.
- Strait, B., 2000. Ego's important discussants or significant people: an experiment in varying the wording of personal network name generators. Social Networks 22 (2), 123–140.
- Swarbrick, A., Contractor, N., 2002. Technologies to support communities of practice: network analysis with I-Know. In: Richards, G. (Ed.), Proceedings of the World Conference on E-Learning in Corporate, Government, Healthcare, and Higher Education. Association for the Advancement of Computing in Education, Chesapeake, VA, pp. 24–74.

- Van Der Gaag, M.P.J., Snijders, T.A.B., 2005. The resource generator: social capital quantification with concrete items. Social Networks 27 (1), 1–29.
- Van Duijn, M.A.J., van Busschbach, J.T., Snijders, T.A.B., 1999. Multilevel analysis of personal networks as dependent variables. Social Networks 21 (2), 187–210.
- Wellman, B., 1979. The community question. American Journal of Sociology 84, 1201–1231.
- Wellman, B., 1988. Structural analysis: from method and metaphor to theory and substance. In: Wellman, B., Berkowitz, S.D. (Eds.), Social Structures: A Network Approach. Cambridge University Press, Cambridge, pp. 19–61.
- Wellman, B. (Ed.), 1999. Networks in the Global Village. Westview Press, Boulder, CO.
- Wellman, B., 2001. Physical place and cyberspace: the rise of personalized networks. International Urban and Regional Research 25 (2), 227–252.
- Wellman, B., Frank, K.A., 2001. Network capital in a multilevel world. In: Lin, N., Burt, R.S., Cook, K. (Eds.), Social Capital. Aldine De Gruyter, Hawthorne, NY, pp. 233–273.
- Wellman, B., Hogan, B., Berg, K., Boase, J., Carrasco, J-A., Côté, R., Kayahara, J., Kennedy, T., Tran, P., 2006. Connected lives: the project. In: Purcell, P. (Ed.) Networked Neighbourhoods. Springer, Guilford, UK, pp. 157–211.
- Wellman, B., Wortley, S., 1989. Brothers' keepers: situating kinship relations in broader networks of social support. Sociological Perspectives 32, 273–306.
- Wellman, B., Wortley, S., 1990. Different strokes from different folks: community ties and social support. American Journal of Sociology 96, 558–588.
- Zhao, S.Y., 2006. Do internet users have more social ties? Journal of Computer Mediated Communication 11, 3. http://jcmc.indiana.edu/vol11/issue3/zhao.html.

Barry Wellman* NetLab, Centre for Urban & Community Studies, University of Toronto, 455, Spadina Avenue, Toronto, Canada M5S 2G8

> *Fax: +1 416 978 7162. E-mail address: wellman@chass.utoronto.ca