The Social Network Approach in Gerontological Research

THE SOCIAL NETWORK APPROACH IN GERONTOLOGICAL RESEARCH

This special issue is the outgrowth of a symposium on social networks and aging organized by Benjamin Cornwell and Christopher Marcum at the 2012 meeting of the Population Association of America. Our recognition of the great potential in marrying gerontology with social network analysis provided the impetus to solicit manuscripts on this topic. Among the 47 generally very good submissions to this issue we selected the eight papers that we considered the most innovative in using social network analysis to inform important concepts that lie at the heart of social gerontological inquiry. We also privileged articles that either directly or indirectly treated social networks as systems of interacting individuals over the more common ego-centered approach. Given the high quality of the submission pool, we wish that we could have published more papers, yet this surplus encouragingly suggests a healthy interest in social network application to gerontological themes.

The main motivation behind this special issue is to highlight how social network analysis is being, or can be, used to contribute to long-running social–gerontological dialogues about important phenomena relating to health, family, community, isolation and engagement, and change. As the reader will find, social network analysis offers fruitful and exciting avenues for this line of research, and breathes new life into long-standing social–gerontological dialogues. And, to an extent that we did not anticipate when we first conceived of this special issue, the late-life context—with its unique social processes and challenges—pushes social network analysis itself into new territory, suggesting new directions for further development of network methods and concepts.

It is difficult to think of an analytic framework that has had more of an impact, and in such short a time frame, throughout the social sciences as social network analysis. The social network approach (see Freeman, 2004; Scott, 1988; Wellman, 1983) brings with it a wide variety of powerful techniques and tools for studying key social phenomena that have concerned social scientists for over a century. Thanks to the widespread availability of easy-to-use computer programs, accessible reference works (e.g., Wasserman & Faust, 1994), and transdisciplinary training programs, the network approach is playing a major role in shaping the social sciences in the 21st century.

The power of the social network approach is found in its systematization of the study of existing social–structural concepts and processes, the discovery of new concepts, and its unparalleled opportunities for visualization. These developments have proven particularly useful in social gerontology. Indeed, one of the earliest explicit social network applications in any field was introduced by sociologists Wayne Thompson and Gordon Streib (Thompson & Streib, 1961), which appeared in an edited volume on aging that was compiled in 1961 by the gerontologist Robert Kleemeier. This is only appropriate, as social gerontologists’ level of concern over network-related phenomena has rivaled that of other fields. At least since Elaine Cumming and William Henry’s controversial but influential theory of social disengagement was published that same year (1961), social gerontologists have sought new ways to underscore the importance of the connection between social relations and late life. Social gerontologists understand that it is during periods when individuals face their most personal challenges that social networks seem to play their biggest role.

CONTRIBUTION OF PAPERS IN THIS ISSUE

One of the characteristics of network analysis that has fueled its rapid spread through the social sciences is its flexibility with respect to subject matter and its versatility as a method that can be used in conjunction with other analytic approaches. The topics addressed in this special issue, for example, range from the influence of perceived favoritism by mothers on older adults’ relationships with their siblings to the identification of previously unrecognized potential caregivers for dementia patients using multiple network informants. The methods used by contributors to this issue are just as diverse, ranging from the familiar—such as generalized linear models—to the novel—including exponential random graph models, dynamic models, three-level hierarchical linear models, and multilevel latent class analysis. The units of analysis are equally variable with studies representing a broad range of foci including network- or socio-centric, dyad- and triad-centric, and ego-centric samples. These articles suggest new lines of inquiry for social gerontologists and raise new and interesting questions about relevant network phenomena in late life.

Some social network concepts that are rarely examined in social gerontology take on new importance in the context of research on late life that does not come out in other contexts. These include tie multiplexity, network turnover and change, network core–periphery structure, network member clusters, and network assortativity and homophily. A good
example to discuss further is tie multiplexity. Multiplexity refers to the extent to which a network tie involves several different types of relating. For example, a tie with someone who is a confidant, a fellow participant in social activities, as well as a family member is a multiplex tie because it includes multiple ways of relating to that person. The article by Smith and colleagues uses egocentric network data to examine how age relates to network multiplexity, in addition to network size. They find that, in general, age is negatively related to tie multiplexity. The importance of this finding is the implication that individuals’ network ties become more specialized in later life. What effect this has on older adults’ access to resources like support, sense of belonging, and other outcomes deserves closer scrutiny. But the broader implication is that multiplexity is not just a technical measure of a network property—it has a social significance that may reflect previously unrecognized personal challenges in later life.

Two articles in this issue add unique perspective to a separate aspect of network ties—namely, the presumed positive association between spatial proximity and social interaction. Smith and colleagues do this by examining the relationship between age and a focal actor’s residential distance to their network members in a large sample of the community-dwelling population. They find evidence consistent with the “dispersal” hypothesis of life-course migration: Age is positively associated with distance to network members but household tenure is negatively associated with distance. This finding appears to be robust to scaling down from the population-level to a single-skilled nursing home residence, as Schafer shows in his account of how relationships are attenuated by the physical distance between residents’ rooms. Aside from residential tenure, the key moderator on social interaction in this work is differential health status. Specifically, proximal residents with mismatched health statuses are less likely to have contact than distal residents. These studies are valuable for highlighting the often-overlooked fact that social network ties are multi-dimensional, and that the relationships among these dimensions (e.g., tie strength, physical distance) are often related to the characteristics of the social actors who comprise the network and, more importantly, to the larger social context in which networks exist.

Both Schafer and Leedahl, Chapin and Little situate their research within the settings of nursing homes and demonstrate how different aspects of those environments can shape social networks and health outcomes for residents. Leedahl and colleagues find that variation in cultural contexts between nursing homes leads to differences in residents’ network composition. These differences shape the extent to which residents are socially engaged, which ultimately impacts mental and functional health outcomes. Schafer shows that, within a single nursing home, health outcomes implicitly feed back into the social system. Residents in better health were less likely to choose close social partners that were in worse health than themselves. This positive homophily effect (the extent to which similar traits predict social interaction) was asymmetric, as residents in poorer health were not less likely to nominate residents in better health as close ties. Taken together, the two studies strongly suggest that greater concern for how the built, cultural, and social environments interact in the design and management of nursing homes may improve resident experiences.

Articles in this special issue show the particular value of social gerontology as a context for exploring network change (see Snijders & Doreian, 2010). This is one area where the concerns of general network researchers and social gerontologists over the years have dovetailed most clearly. Ever since Cumming and Henry’s (1961) statement on social disengagement, social gerontologists have been interested in over-time changes in older adults’ social connections, what causes these changes, and what their consequences are (e.g., Seeman et al., 2011; Shaw, Krause, Liang, & Bennett, 2007; Stevens & van Tilburg, 2011). Network change can signal different things, including unstable social environments, demographic forces, or shifting preferences. This is still one of the biggest debates in social gerontology (e.g., see Suanet, van Tilburg, & Broese van Groenou, 2013; Wrzus, Hänel, Wagner, & Neyer, 2013). And with evidence mounting that these changes have major consequences for individuals—for example, for their ability to reliably access social support—the need to understand these dynamics in the context of later life is clear.

Two papers in this issue track changes within individuals’ networks over a period of time. Both share the disturbing observation that network changes in later life are linked to social disadvantage, as well as other factors. One, by Fischer and Beresford, examines the extent of change in social support networks over a 10-year time span in mid-to-late life. In general, they find that the advantages some groups have in midlife with respect to their access to social support widen in later life. In terms of greater frequency of social contact, women’s advantages over men and college-educated individuals’ advantages over the less educated increased. College-educated people enjoyed higher expectations of all kinds of social support from nonkin ties relative to the less educated.

Focusing on the dynamics of network tie formation and dissolution, Cornwell also examined the role that social disadvantage plays in shaping the networks of older adults. He shows that older adults still experience network rebound by forming new relationships over time, but that this process is tempered by exposure to accumulated social disadvantages among blacks and members of lower socioeconomic strata in old age. For example, over a period of time, blacks lost more close confidants than whites, and also gained more new ties than whites although not to replacement level. This research poses a new challenge to social gerontologists studying networks and aging: whether equality of opportunity to forming new relationships as we age can be
improved with reduction in social–economic barriers over the life course.

While some papers use network analysis to expose new challenges in late life, others use it to reveal new solutions to old problems. Several of the articles in this issue have potentially valuable practical applications, highlighting some of the most important benefits of adopting the social network perspective. Paramount among these is the piece by Koehly and colleagues, which demonstrates that social network analysis can yield actionable insights that can help older adults. This paper uses network methods to identify the people surrounding patients that have been stricken by Alzheimer’s disease and related dementia (ADRD) who are part of the person’s broader caregiving network. With multiple reports, researchers and practitioners can get a better sense of the scope and content of the larger support network apparatus that surrounds a given patient. The implications of implementing this approach for ADRD and other patients is a pressing issue for public health research.

Finally, we note several articles that take kinship networks as their main concern. The paper by Webster and colleagues applies social network analysis to older individuals within a familialistic culture in the Middle East. The authors find that older adults whose networks are comprised of a high proportion of close family members report better health than those whose networks are comprised of varying alternative types. Cultural context, though rarely considered in social network research, is brought to the forefront in this paper in terms of relating family embeddedness to quality of life in a society where filial ties take primacy. The paper by Sui tor and colleagues uses a triadic data structure consisting of an older mother and her two adult offspring to examine how mothers’ favoritism influences sibling relationships in midlife. Their results confirm the social network principle that a mutual third party—particularly one occupying a powerful position in a social organization such as the family—can influence dyadic relationships within that organization. Respondents tended to feel close to siblings whom they perceived their mothers favored, but only when they perceived themselves not to be favored. This finding confirms the expectation that status hierarchies in the family, as conferred by a parental favoritism, strengthen ties up the status ladder. Most important, the paper uses a social network approach to go beyond typical dyadic representations and take a systemic view of interconnections in the family.

SYNERGY BETWEEN SOCIAL NETWORK AND GERONTOLOGICAL SCHOLARSHIP

The articles in this special issue speak well to social network analysts concerned with issues related to aging. More importantly, though, we hope that this special issue is effective at highlighting new network concepts and techniques that may be unfamiliar to many social gerontologists and thus may prove useful in moving these concepts and

89 SOCIAL NETWORK APPROACH

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that social gerontology would benefit from more specific training of social gerontologists in social network analysis methods. Many of the concepts that we hoped to see addressed here—such as structural equivalence, network density, bridging potential, and network homogeneity—can be gleaned fairly easily from publicly available data sets such as the General Social Survey and the National Social Life, Health, and Aging Project. And time-stamped data on social contact and activities is available through the American Time Use Surveys and the Multinational Time Use Study (see Fisher, Gershuny, Altintas, & Gauthier, 2012) as well as an emerging core of sensor data from social media, which provide data records for hundreds of thousands of individuals. Most important, though, is training for the next generation of social gerontologists. It is evident that we need to introduce our students to not only the relevant theoretical paradigms, but also the most recent methodological tools for leveraging these emerging resources. This is the best way for social gerontologists to increase their scholarly audience.

As we hope these contributions show, the marriage between social gerontology and social network analysis is a natural and mutually beneficial one. Thus, we believe that the future of social gerontology will involve a greater focus on social networks, and likewise that the future of social gerontology will benefit from more specific training of social gerontologists in social network analysis. We hope that this special issue will address here—such as structural equivalence, network density, bridging potential, and network homogeneity—can be gleaned fairly easily from publicly available data sets such as the General Social Survey and the National Social Life, Health, and Aging Project. And time-stamped data on social contact and activities is available through the American Time Use Surveys and the Multinational Time Use Study (see Fisher, Gershuny, Altintas, & Gauthier, 2012) as well as an emerging core of sensor data from social media, which provide data records for hundreds of thousands of individuals. Most important, though, is training for the next generation of social gerontologists. It is evident that we need to introduce our students to not only the relevant theoretical paradigms, but also the most recent methodological tools for leveraging these emerging resources. This is the best way for social gerontologists to increase their scholarly audience.

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References

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