

METHODS BRIEFING 23

Social Capital and Social Networks: Promoting Network Analysis

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What is Social Network Analysis?

Most quantitative survey analysis focuses on individuals. The stress is on how outcomes, measured at the level of the individual, may be affected by their attributes, as well as various contextual features (neighbourhood, household, etc) in which that individual is located. Social network analysis (SNA) by contrast focuses on the nature of the ties between individuals, and is interested in the extent to which a given population is inter-connected.

Social network analysis is now a staple feature of social science research methods in North America and many parts of Europe. Its early development owed much to British endeavour, especially that associated with the social anthropology associated with the 'Manchester School'. However, when our project began in 2003, expertise in social network analysis in the UK was weak, with only a handful of individual academics having enthusiasm or possessing expertise. This is partly because SNA tends to be based on different sorts of data to the sample survey. Data is collected on a complete (sub-) population of interest, for instance, all the children in a school class, and then a comprehensive listing of the ties between them all makes it possible to assess the structure of the networks as a whole. Methods derived

from graph theory, and anchored in software packages such as UCINET and Pajek can then be used to unravel issues such as the nature of cliques and factionalism. At a simpler level, socio-grams can be developed which visually display all the links between the relevant individuals, so offering a 'picture' of social relations (see Figure 1 for an example from our own research). Over the past two decades the remarkable expansion of the social science research infrastructure has concentrated on the expansion of sample surveys, which are not readily amenable for SNA.

However, at the same time, there is a growing recognition that understanding the nature of networks, or connectivity, is of increasing importance. The recent interest in social capital has highlighted that a number of important outcomes, from good health to democratic participation is associated with the nature of people's networks. There is great interest in the importance of 'networking', as a means of gaining skills, maximising contacts, and optimising chances. New forms of IT are premised on network forms, and so make new kinds of connectivity possible. For these reasons, it is now

clear that network analysis is of vital importance for understanding the nature of contemporary social cohesion.

Our project was concerned to popularise the potential of SNA so that increasing numbers of social scientists are trained in it, and aware of its ability to contribute to our understanding of contemporary society.

Reviewing Applications of Network Analysis

One barrier to the use of SNA is lack of clarity about the sorts of data sets that are amenable to network analysis. We have reviewed which survey data sets are of potential use and placed details on our website: <http://www.cric.ac.uk/cric/projects/socialnetwork/default.htm>.

Although sample surveys by definition do not contain data on whole populations that are amenable to full scale SNA, they often contain questions which see summary indicators of the nature of people's networks, for instance about their friends, their support networks, or the range of people they know, which are of some use. We identified ten recent surveys with relevant questions of this kind (for instance the BHPS, the Citizens Audit, the GHS and the Time Use Survey), though in no case were the questions very systematic or comprehensive.

We were also able to innovate through our involvement in developing network questions on the 'Cultural Capital and Social Exclusion' survey (Tony Bennett, Mike Savage, Elizabeth Silva, Alan Warde) which has a 'position generator' question, the first to be used in the UK (see <http://www.open.ac.uk/socialsciences/sociology/research/ccse/>). Here, respondents are asked to identify if they know anyone from a range of different occupational positions. This question, widely used in North America, has not been deployed before in the UK, and Yaojun Li, Mike Savage and Alan Warde are completing a paper which shows how it can develop our understanding of social capital.

To make it easier for non specialists to appreciate the potential of social network analysis, we have also reviewed its theoretical and methodological underpinnings. Some writers position SNA as a form of structuralism, hostile to individualistic

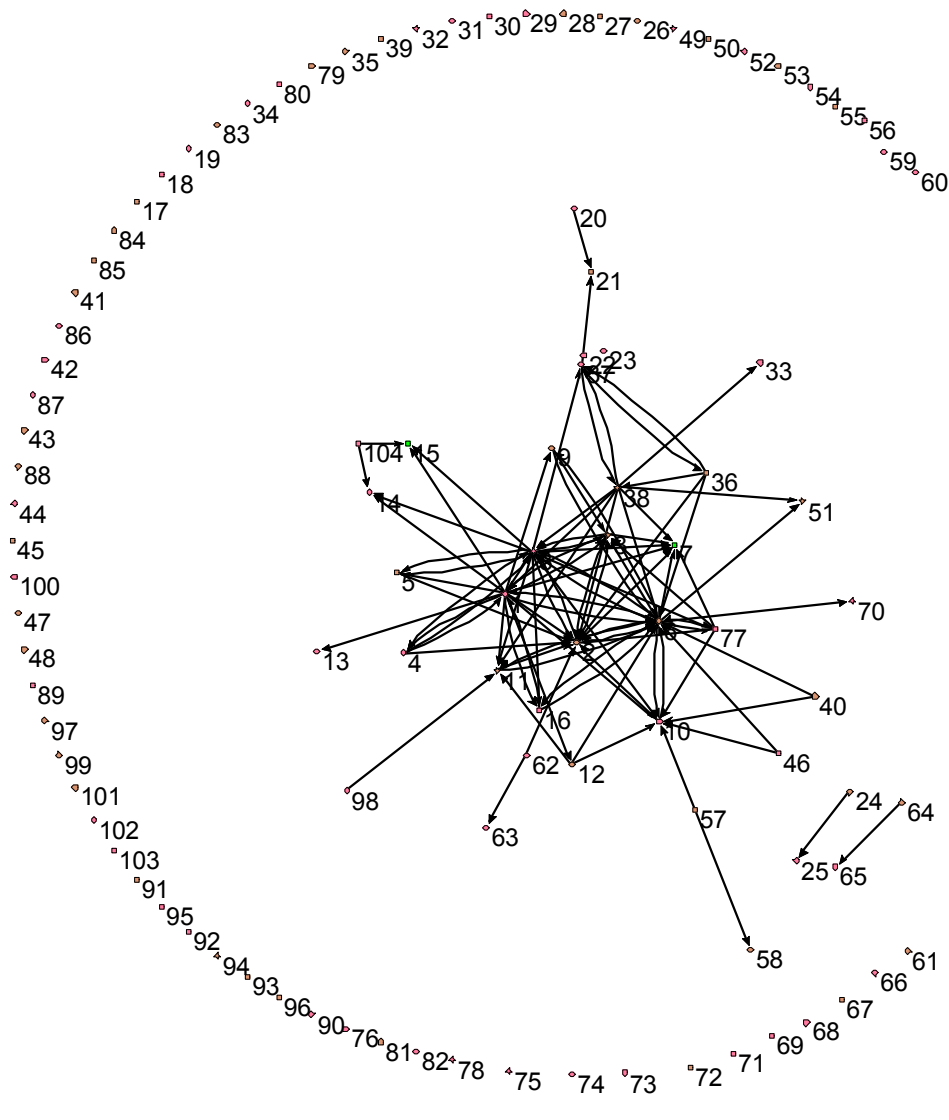
accounts of social relations (such as rational choice theory). By contrast, we have endeavoured to show the plural and diverse theoretical framings of social network analysis, so that researchers should not feel they need to be fully blown structuralists in order to use it. Of particular importance here are Crossley's review of popular network science (Crossley 2005), and Savage's collaboration with anthropologists Knox and Harvey (Knox et al 2005) which considers the different, and often opposing conceptions of networks in the social sciences. We argue for the potential for social network analysis to be related to ethnographic and cultural analysis which is attentive to the content and character of interactions between people.

Training in Network Methods

Recognising that there was little provision for training in SNA, which is a particular problem because SNA is not possible within standard software packages such as SAS or SPSS, we have run seven training courses. These were designed to show absolute beginners how to conduct basic SNA analysis using Pajek software. The strong attendance at these events indicates a remarkable increase in demand for training in SNA and Dr Tampubolon is now one of the leading teachers in this area. Professor Crossley and Dr Tampubolon have developed a three day short course run by the Cathie Marsh Centre for Census and Survey Research on Social Network Methods. This course, which started in January 2007, is available to all-comers and designed to be the first in a regular sequence ensuring that training for beginners is available routinely for the UK social science community. It will be repeated in the future (<http://www.ccsr.ac.uk/courses/external/2006-2007/index.html>), and those teaching it are now part of a new Social Network Analysis Group in the School of Social Sciences at Manchester University which is developing research and training for the future.

A conference has been held with the ESRC Real Life Methods node which explores the potential of social network analysis for the analysis of family relations: <http://www.socialsciences.manchester.ac.uk/morgancentre/events/friends-acquaintances/>. Crossley has also set up a study group of the British Sociological Association which now has

Figure 1 Communication networks within the Labour Party



Every member of one ward branch of the Labour Party was interviewed, and they were asked to identify ‘with whom do you discuss things to do with the organisation (for example, activities, issues, strategy)’. All those who they identified are linked with arrows in this socio-gram. Those numbers with no arrows do not connect with anyone. No 77, by contrast talks with numerous others. .

thirty active members: <http://www.britsoc.co.uk/specialisms/SNAG.htm>.

Research exemplars

When we designed our project, we argued that a major barrier to the use of network methods was that many British social scientists did not have ready examples of the substantive pay-off that

could be gained by their adoption. We therefore planned to show how network methods could enrich lively research topics.

We applied multi-level modelling to the study of the leisure practices and consumption of the members of three case study organisations in the North West of England (data collected by Savage, Tampubolon and Warde in an earlier

ESRC study) This paper (Warde et al 2005) showed that network structure had considerable impact on the leisure practices of organisational members, though these were less linked to the 'strong ties' of close friendship and were more due to the weak ties of acquaintanceship and companionship. This work has been supplemented in Tampubolon's study of the structure and longitudinal dynamics of friendships, one of the first sustained attempts to explore the BHPS's friendship questions and which shows the possibilities of using network approaches on sample surveys: <http://www.ccsr.ac.uk/methods/publications/documents/WP25.pdf>.

Crossley has also conducted an original ethnographic study of the social networks of members of a gym, which shows how forms of brokerage and closure generate distinctive forms of small scale solidarity in one, increasingly popular, arena for leisure. Savage, Tampubolon and Warde have examined the implications of network structures for understanding the dynamics of social capital (Savage et al 2007a, 2007b). Using their case study of three organisations in North West England, they show that activism and engagement is facilitated where there are cleavages and tensions, rather than where there is clear consensus about the organisation of the group, in which case the authority of local leaders seems to dissuade members from involvement. These studies shed light on the kinds of networks within organisations that are likely to give rise to solidarity and activism: rather surprisingly, the local Labour Party, which was more factionalised, had higher levels of involvement, perhaps because people learnt to overcome their differences, compared to other organisations where there were one or two dominant individuals in the network structure (see Figure 1).

In conclusion.....

We think we have kick started interest in social network analysis in the UK, and are keen to hear from anyone who is interested in developing their skills and expertise in this area. Please contact Mike.Savage@manchester.ac.uk .

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