

Chapter 11

Bringing Qualitative and Quantitative Data Together: Collecting Network Data with the Help of the Software Tool VennMaker

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ABSTRACT

In this chapter, the authors investigate the issue of gathering network-related social data by means of both qualitative and quantitative methodology. An overview of the most relevant visual approaches such as network pictures and different kinds of network maps (“paper and pencil”, “paper, pen, and tokens,” and “digital network maps”) will be given, including an example of a migration study in which a network survey was carried out with the aid of the software program VennMaker. Finally, the authors discuss the advantages and disadvantages of data collection based on digital network maps and make suggestions for future research.

INTRODUCTION

Being part of a “social network” is in vogue. It seems as if being embedded in social structures and relationships (Granovetter, 1973) has virtually become the key for the individual to gain

access to postmodern forms of sociation in an era where institutional ties are becoming more and more diversified. For example, the numbers of users of social networking sites like Facebook or Twitter has increased from about 770 million (July 2009) to 945 million (July 2010) all over the world (Comscore, 2010).

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There is no denying that networks provide ample scope for action by paving the way to information, emotional support or material resources. On the other hand, networks constrain one's room for manoeuvre, entailing obligations or conflict with others in the network (Kapferer, 1969; Emirbayer & Goodwin, 1994). For studying structures and social relations, two different approaches have been developed in the field. Collecting and analyzing network data (density, centrality measures) has so far been predominantly carried out by means of a highly standardized methodology requiring considerable effort and qualified research staff (Wasserman & Faust, 1994). Qualitative network analysis, on the other hand, has its roots in psychology (Moreno, 1934; Bott, 1957; Kahn & Antonucci, 1980) as well as in cultural anthropology (Davis et al., 1941; Barnes, 1954). In contrast to the quantitative approach, this methodology is more open, descriptive and flexible.

Despite the rapid development of mathematical and user-friendly computer programs for calculating and visualizing large data files (Freeman, 2004; Gamper & Reschke, 2010), the quantitative method suffers from limitations in terms of analysis and heuristic value. Fowler and Christakis (2008), for example, emphasize in their large-scale medical longitudinal "Framingham Heart Study", that people who know each other are equally happy. At the same time, they notice that they do not have a significant explanation for the relationship between these two factors. In their own words the "[...] data do not allow us to identify the actual causal mechanisms of the spread of happiness, but [that] various mechanisms are possible" (Fowler & Christakis, 2008, p. 8). One reason is that there is no qualitative data that might give a deeper and qualitative explanation about the correlation between the two factors. Conversely, Padgett and Ansell in their famous network study would not have found any substantial evidence for the rise of the Medici in Florence after the failed weaver-revolt in the 15th century, if their study had only

focussed on the description of relation and not on the structure as a whole (Padgett & Ansell 1993). Because of their simple structure and the selective way in which the data are collected, the models of qualitative data collection are limited in terms of informative value and empirical validity and are therefore not without controversy (Diaz-Bone, 2007). Against this background, there is a growing methodological debate about triangulation (Denzin, 1970) in social network analysis (Coviello, 2005; Edwards, 2010). New studies are trying to take advantage of combining qualitative and quantitative approaches. So far, most researchers have combined the two approaches in succession (Crossley, 2008; Bidart & Lavenu, 2005).

In addition to the trend of triangulation, there is also a tendency to digitally collect data. Much of the data in social network analysis, qualitative and quantitative, is still collected by "traditional methods" such as participant observation (Moreno, 1934; Roethlisberger & Dickson, 1939; Davis et al., 1941; Barnes, 1954), qualitative interviews (Bott, 1957; Kahn & Antonucci, 1980) and standardized questionnaires (Laumann, 1973; Fischer et al., 1977; Wellmann, 1979), but for both methods, a trend towards computer-assisted data collection can be observed (Vehovar & Manfreda, 2008; Vehovar et al., 2008; Herz & Gamper, 2011).

In a joint interdisciplinary project, the authors of this study together with a team of historians, sociologists, anthropologists and software specialists have tried to bridge this gap by combining qualitative and quantitative approaches with the help of the new developed Software VennMaker.¹ This software enables the user to interactively collect network relationship data from an actor's point of view and render them comparable and quantitatively analyzable by means of a graphical user interface that can be operated intuitively.² Where complex questionnaire procedures or intense employment of staff have dominated so far, VennMaker allows users to draw actors and their relationships in an intuitive way on the computer. It is the act of drawing and comment-

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