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Comment on Nick Crossley/1

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Essays

Comment on Nick Crossley/1

by Elisa Bellotti

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I found the article written by Nick Crossley very interesting and inspiring. The author calls for an *integrated approach* that merges qualitative and quantitative methodological tools in the study of social networks. In doing so, Crossley poses the matter in methodological terms, exploring the *complementary strengths and weakness* of each method, where social network analysis plays the part of the quantitative tool.

I would like to shift the argument from the methodological frame to the theoretical and epistemological one. My claim is that, from a theoretical point of view, network analysis is the methodological tool of social network theory, whose foundation lies in the continuum between qualitative and quantitative approaches. From an epistemological point of view, instead of focusing on *how* we collect data and which tool to use, I want to explore the issue of *what* we look at when we analyze social networks. In fact, the object of knowledge in a social network perspective is closer to the qualitative counterpart, as I will show in my comment.

Network analysis has a set of tools which are used to measure and analyze any kind networks. These tools make use of numbers, therefore they aim to abstract from concrete events and capture the pattern of interconnections and describe its properties. The theoretical perspective specific to social networks have been summarized by Borgatti *et al.* [2009]: the authors explain that when we explore *social* networks, we have access to a full set of theoretical concepts and mathematical procedures which are distinctive to network analysis specifically applied in the social sciences. Thus networks become social when we select human beings (as single actors, orga-

nizations, and the like) as units of analysis, and in doing so we need to place them in a sociological frame.

The debate on qualitative versus quantitative methods is typical of sociological disciplines, and it is normally intended as the opposition between the use of statistical tools (descriptive and/or predictive) versus the use of textual, narrative accounts. The two methods serve different purposes, and as Crossley nicely points out, *the same tools may be used by researchers holding different epistemological, ontological and more general theoretical assumptions, and that the same researcher may use a combination of quite different tools within the same project without necessarily risking theoretical inconsistency*.

In general terms we can say that quantitative methods search for patterns of regularities, while qualitative methods explore nuances and details. Given the focus on an aggregate level, quantitative methods are more suitable to analyze phenomenon at a macro level: their object of analysis is not a single case study, as they aim to observe the structure of covariance among different phenomena. Quantitative methods belong to the holistic tradition, where they take groups as the starting point of analysis in order to gain an understanding of the normal range of human behaviour.

Qualitative methods, on the other hand, have been largely employed to observe phenomenon at a micro level, as they account for idiosyncratic events whose value lies in their singularity. They developed within the individualistic tradition, where, in Weber terms, the reality is perceived from a particular point of view. This entails flexible and adaptable concepts when observing a social phenomenon. A subjective perspective claims the importance of the singularity of individual experiences, therefore challenging the possibility of statistical generalization of human behaviours.

If we go back to the historical roots of social network perspective, we can see that it was firstly applied to social science in order to counteract the dominance of structural functionalism and the holistic perspective. The goal of the anthropologists like Mitchell, Barnes, Kapferer, Bott, and the formal Manchester group linked to the Rhodesian Insitute [Mitchell 1969] who observed patterns of relationships between actors, was to bring agents back in the unit of analysis [Boissevain 1974].

Therefore, social networks select, as objects of study, concrete cases of interactions, and observe the content of such interactions. Crossley's examples illustrate this point very well: the author observes and formalises the ties that exist in specific social settings. In the case of the private health club the account is synchronic, as it measures the structure of relationship at a given time. In the case of the Manchester punk scene, the account is diachronic, as it observes the network in different times. But in both cases the analysis focuses on a concrete network, with a

unique structure which can resemble other similar networks, but whose content is idiosyncratic.

This is the reason why, for example, Bourdieu criticises the SNA approach. Bourdieu conceptualises structures in terms of objective relations between positions, where positions are defined by deviations between results observed and results expected through random distribution, and are "visually represented in factorial planes which weight them according to their distance from χ^2" [Bourdieu 1988, 69].[1] From his point of view, "in network analysis, the study of these underlying structures has been sacrificed to the analysis of particular linkages (between agents and institutions) and flows (of information, resources, services, etc.) through which they become visible" [Bourdieu 2004, 114].

Therefore, if we refer to the classic sociological micro-macro dialectic, social network analysis object is more similar to the ones of qualitative studies, as it focuses on single cases and does not claim for generalization. But social network tools aim to abstract from the single relationship and give an account of the pattern of interconnections. It is one step further compared to qualitative methods, as it tries to establish a connection between an actor's position and his/her own behaviour. The principal benefit of combining network analysis with qualitative methods lies in the fact that when we observe a whole set of relationship we can take into account not only dyads, as in the symbolic interactionist tradition (especially in the work of Mead), but also the secondary effects that interactions between alters play on single relationships. This is true both for complete networks, where we are able to represent all the ties that are potentially active within a defined context, and for egonetworks, which are, in principle, analytical subsets of the formers. The implications of shifting the focus of research from dyads to triads and larger networks have been firstly described by Simmel [1983].

In other words, following Crossley examples, when mapping a network we are able to see that the relationship between John and Jane might be significant in finding a job. This is not only because of the meaning of their tie, but also because of the structure and the properties of their personal networks as well as the entire network the two actors are embedded in. This might include structural effects like homophily, influence and leveraging processes, mechanisms of adaptation, and the like [Borgatti *et. al.* 2009].

[1] It is interesting to note that SNA itself makes uses of comparison between values in empirical networks and values generated from random networks in order to test if there is a possibility that relationships happen by chance. I addressed the similarities, differences and possible complementarities between Bourdieu's field theory and Social Network Analysis somewhere else [Bellotti forth.].

In a sense symbolic interactionists, one of the main perspective that have made use of qualitative methods, has always been fully aware of the power of networks, even if it did not refer directly to them and has not made use of network tools. Amused by the formal sociology of Simmel, and his geometry of the social space as a system of interaction, scholars like Blumer and Goffman recognize the importance of the social structure. Their main concern is about the way in which holistic sociology interprets the units of these structures in terms of roles and statuses: like early network analysts, they claim the need for bringing back agents in social science studies, and accounting for concrete processes of interactions (the interaction roles) rather than abstract formalizations of hierarchies.

When Blumer talks about "joint actions" he describes them as "the larger collective form of action that is constituted by the fitting together of the lines of behaviour of the separate participants" [Blumer 1969, 70]: he is aware that every symbolic interaction is partially shaped by all the others around it. Goffman's dramaturgic theory also implies some reference to the structure of interactions: when he talks about performances, for example, he introduces the concepts of team and explains that "the definition of the situation projected by a particular participant is an integral part of a projection that is fostered and sustained by the intimate cooperation of more than one participant" [Goffman 1959, 83]. In network terms, this might be described as a dense network of supportive and reciprocal ties. Also, when describing discrepant roles, like informers or mediators, Goffman defines them in terms of privileged position from which actors have power over the flow of information between teams and audiences [*ibidem*, 143], which resemble the concept of brokerage and its various interpretations. But it is probably in Beckers's work on art production that interactionism comes nearer to network theory: as Crossley points out, Becker talks about social worlds and the work of artists "in the center of a network of cooperating people, all of whose work is essential to the final outcome" [Becker 1982, 25].

Thus, from a theoretical point of view, it makes sense to combine the network perspective with an interactionist one, the two observing the same objects from different points of view, whose outcome is complementary. Social networks formalise the structure, interactionism explain the content, but they both analyse in depth specific sets of interactions. In other words, social networks enrich the individualistic perspective with the holistic one, as they offer a better understanding of the social environment people are embedded into [Molina *et. al.* 2008]. But this holistic perspective is far from the classic one, à la Durkheim and, later on, à la Parsons, as it does not take as the unit of analysis an unspecified group. It does, instead, open the black box of such a group, accounting for its internal structure.

It is true, as Crossley said, that developments of network analysis have been focused on mathematical and statistical tools, leaving the qualitative methods aside. Much of contemporary work is devoted to statistical analysis of networks, with some exceptions [see for example Uehara 1994; Lazega 1997; Dominguez and Watkins 2003; Bidart and Lavenu 2005; Bidart and Degenne 2005; Hollstein and Strauss 2006; Bellotti 2008]. However, I do believe that even when quantitative tools are applied to networks, the object of analysis is often micro: in stochastic actor-based models for network dynamics, for example, "the empirical data consist of two, but preferably more, repeated observations of a social network on a given set of actors" [Snijders, van de Bunt, and Steglich 2010]. In these cases networks consist of an entire population: the main problem, here, is how to set the boundaries of natural networks. But once they are defined, results are valid only for those specific networks, even if they can still be useful to formulate structural hypothesis to be tested in further studies.

The case of egonetwork studies is different. Here, data can be collected for a representative sample of a population, and network variables correlated with egos characteristics and/or within each others. This is the case, for example, of the classic studies of Fischer [1982] and Wellman [1979], where data can be generalised to the population producing interesting and reliable results. Another example is the network items included in the US General Social Survey [Burt 1984]. In such studies, network data (like density, composition, efficiency, number of structural holes, ego betweenness, and the like) are associated to individuals characteristics, therefore they resemble normal survey data. However, it has to be noted that even when the sample is randomly selected, ego's ties violate the condition of independence necessary for statistical generalization. So we can run correlation or regression between ego's properties and egonetwork properties, or between egonetwork properties together, but we cannot run the same statistical analysis for ties properties. In other words, we cannot say, for example, that ties with higher edge betweeness tend to be stronger or weaker. Moreover, it is exceedingly difficult to infer wider network properties from egonetwork ones.

Other problems arise in case of studies that select a very small number of cases, for example in panel studies of ego networks across time, where data collection is difficult and demanding. Here the statistical analysis of variances remains at an exploratory level, given the fact they sample such a small number that any generalization cannot be possible. For a significant discussion about problems in generalise personal network data, see Feld, Suitor and Gartner Hoegh [2007].

In summary, we can see that:

a) from a theoretical point of view, when network analysis is applied in social science its foundations lies in the continuum between the individualistic tradition

and the holistic one. This because network tools were used (and still are) to bring the focus back on agents and their (sets of) relationships. They stand opposite to classic and contemporary holistic theories, as they focus on ties rather than on individuals.

b) from an epistemological point of view, the research objects of social network analysis are micro, as they consist of specific and contextualised networks.

c) therefore, from a methodological point of view: when data are collected for a whole network, they are valid only for that specific network; when they are collected for egonetworks, they can be representative of egonetworks properties only if egos are statistically representative of a specific population. They cannot be representative of larger networks nor of ego's ties properties.

In conclusion, I think that shifting the debate from a pure methodological discussion to a theoretical and epistemological one will add great insight in the study of social networks. We need to develop a proper theoretical foundation for mixed methods approach, in which we fully understand the epistemological implications of the tools we use when observing social settings.

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Comment on Nick Crossley/1

Abstract: The comment to Crossley article is intended to shift the debate on mixing social network analysis with qualitative methods from the methodological perspective to the theoretical and epistemological one. It is argued that social network theory observes concrete sets of interaction, therefore its object of research is more similar to qualitative studies rather than quantitative ones. The power of formalization and abstraction of the mathematical tools applied in social network analysis places this perspective aside from the classic qualitative/quantitative debate.

Keywords: social network analysis, qualitative methods, epistemological foundations, symbolic interactionism, social network theory.

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