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Integrating Network Mapping and Visualization within Migrants' Narratives

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Abstract

Past studies have recognized the crucial role network connections play in facilitating the movement of migrants and in serving as a resource both for the migrants settling in a new place (e.g., job and socialization opportunities) and for those they leave behind (e.g., remittances).

As noted by researchers, however, recalling relevant people, events, or experiences and evaluating the connections between those listed entail a heavy burden on the respondents and can result in inaccuracies in cases which are distant in time. It is therefore important to develop instruments and tools that could facilitate the respondents' recollection of events, practices, and relationships that are of considerable interest to migration researchers.

A tool explored here helps network mapping and visualization. In particular, a strategy of embedding visual tools within an in-depth interview is assessed using a study on the support networks of Filipino nurses, domestic workers, and care workers in London and New York. Embedding the elicitation of networks in participants' narratives helped remembering what they considered as relevant ties and provided a space for the interviewees to reflect and evaluate their social relationships. While employing such a strategy does not entirely eliminate the problem of forgetting, it is argued that it enhances the recall and enriches the data, thereby providing a better understanding of migrant networks and experiences. The design of the map (e.g. dividing by places and levels of importance) also shaped how participants constructed their networks. Future research could alter the layout of the sociograms to emphasize the information of interest (e.g. dividing by types of provided support).

Introduction

The significance of social networks for migrants moving and settling in places of destinations has been emphasized in various studies and recognized in migration scholarship (e.g. Boyd, 1989; Dominguez & Watkins, 2003; Faist, 2000; Gurak & Caces 1992; Massey et al., 1987; Palloni et al., 2001; Ryan, Sales, Tilki, & Siara, 2008). Migrant networks are crucial for geographical mobility, destination options, integration (and survival) in receiving societies, and transnational engagements (Faist, 2000; Gurak & Caces, 1992; Ryan, Erel, & D' Angelo, 2015). However, the systematic application of the concepts and tools of social network analysis is rather limited in migration research until recently (Bilecen, Gamper, & Lubbers, 2018; Ryan & D'Angelo, 2018). Often, migrant networks are taken for granted as a given instead of unpacking how “networks are composed and structured, how they evolve over time, which resources are exchanged through such networks, and how they are embedded in larger structures” (Bilecen et al., 2018: 2). Because of the lack of engagement between network analysis and migration research, developments and refinements in the field of network analysis are hardly applied in migration studies (Bashi, 2007; Boyd, 1989).

This paper discusses the application of a mapping and visualization tool used in social network analysis (SNA) in exploring the composition, function, and evolution of migrant support networks of Filipinos in New York and London. The instrument – a *sociogram* or network map – was employed in combination with in-depth interviews. The goal of this piece is to present the methodological reflections concerning the integration of network mapping and visualization within migrants' narratives, the design and administration of the instrument, the implications of using this tool in the quality of data collected, and its contributions to our further understanding of the processual and relational dimensions of migration. This paper is therefore an attempt at contributing to the emerging works that utilized social network methodology in migration studies.

The Research Project and the Instrument

The methodological reflections for this paper are derived from a doctoral research project that compared the pre- and post-migration experiences and support networks of Filipino nurses, domestics, and care workers in the London and New York metropolitan areas. Examined were the ego-centric networks of 134 respondents (58 in London and 76 in New York) in three migration phases: before coming to London or New York; initial period of adjustment; and the current network as a result of the subsequent process of settlement in the place of destination (in total, 402 network maps). Conceptually dividing the migration process in three phases provided the opportunity to study network dynamics and networking practices, albeit retrospectively. Capturing ‘change over time’ through these ‘migration phases’ (as re-constructed



from the biographies of the participants) thus highlights the dynamic nature of both migration and migrant networks.

The particular sociogram used in the study (*see* Figures 1 & 2) was composed of four concentric circles with the respondent represented as a dot in the middle. Each circle represented level of importance – the nearer the circle to the middle, the more important it is for the respondent. The last circle, however, was for problematic ties – those who are important but in a negative way. Among others, these were the recruitment agencies who facilitated their move but also swindled them, former employers who took them to London but exploited them, or relatives, acquaintances, or friends who helped them in some ways when they arrived but also took advantage of them. The diagram was also divided in terms of geographic location: neighborhood, London or New York, UK (outside London)/other US states, Philippines, and other countries.

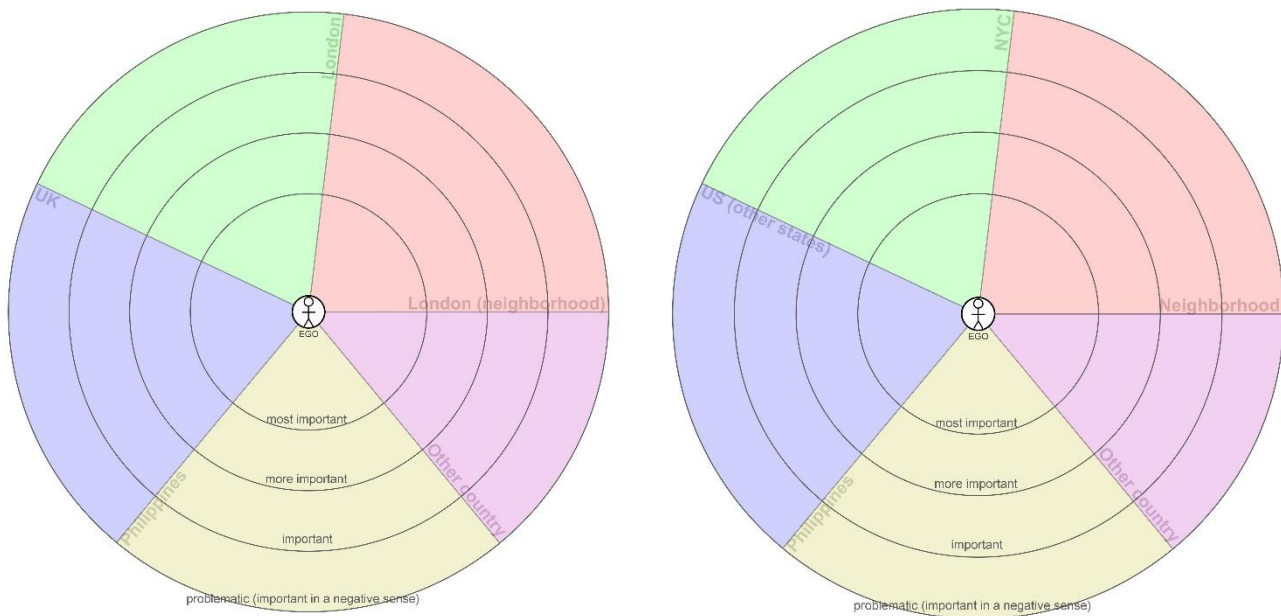


Figure 1. Network Maps for London and New York
(paper-and-pencil format)



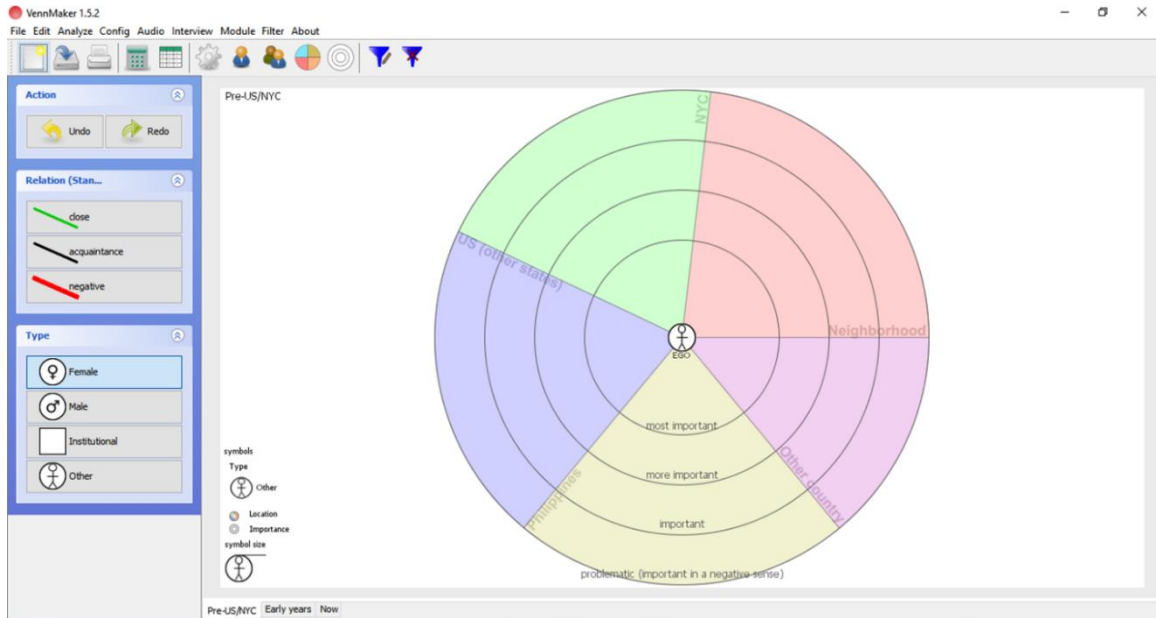


Figure 2. Network Maps for New York
(digitized format, VennMaker)

The network map was first explained to the participants and they were given the following instructions:

Imagine yourself as the dot in the middle of the circles, kindly place these people around you depending on how important they are in your decision to move to NYC/US. The closest they are to you, the more important they are. You can place those who you consider as important in a negative sense (problematic). Kindly place them also depending on where they are currently located.

For each migration phase, the following name-generating questions are used:

- ‘Pre- London/NYC’: Looking back, I will now ask you who influenced you the most, both positively and negatively, in your decision to move to NYC? Who helped you or facilitated your move? Whom will you consider instrumental? These can be your family members, your friends, colleagues, acquaintances, or even agencies or organizations.
- ‘Initial Adjustment’: At that time, who are the people and/or organizations that you know or have come to know whom you consider important and made a great impact in your life then (positively and negatively)? Prompt: These could be those who helped you with housing, job, papers/documents, showed you around, taught you the things you needed to know, gave you emotional and material support.
- ‘Further Settlement’: Whom do you consider important and influential in your life now?



Respondents were also asked the following information concerning the people/organizations they named: (1) age; (2) gender; (3) educational attainment; (4) occupation; (5) religion; (6) relationship with the respondent; (7) still in contact/frequency of contact; and (8) why they are important. Respondents were also asked if those they listed know each other (alter-to-alter ties).

The network diagrams were both in paper-and-pencil and digitized formats. While there are studies that advocate for the traditional paper diagrams (e.g. Hogan, Carrasco, & Wellman, 2007; Ryan, Mulholland, & Agoston, 2014) and those that utilized the digitized format (e.g. Tubaro, Casilli, & Mounier, 2014), I chose to employ both formats depending on the interview situation. There were interviews done in park benches or cafes, and there are those in homes and work places. In the same manner, there were respondents who were comfortable with the digitized version and there were those who feel that it was threatening. There were also Skype interviews that require the digitized version of the sociogram.

Integrating Network Visualization and In-depth Interviewing

Visualization can be considered as part and parcel of network studies; Moreno's sociogram and graph theory is a testament to that. In social sciences, however, utilizing network visualization for data collection is still not that widespread (Molina, Maya-Jariego, & McCarty, 2014; Tubaro, Ryan, D'Angelo, 2016). Even in social network analysis, in general, visualizations often happen only after the data has been collected (Hogan et al., 2007).

The importance of visualization while collecting data becomes apparent in the case of eliciting personal networks. Problems and challenges concerning elicitation of personal network data have been well acknowledged. For instance, researchers noted that collecting personal network data entails a heavy burden to the respondent (Golinelli et al., 2010; McCarty, Killworth, & Rennell, 2007). Asking compositional (alter characteristics) and structural (alter-to-alter ties) questions to the respondent involves considerable time and effort. More crucial is that the respondents may not be able to accurately recall relevant alters (Wellman, 2007) hence, it is rather important "to develop tools that aid the memory of the individual as much as possible" (Bidart and Charbonneau, 2011: 276). Network visualization is one of such tools that can help in memory recall and ease respondent burden (Hogan et al., 2007; McCarty et al., 2007; Molina et al., 2014; Tubaro et al., 2016).

But it is also the case that employing visuals during data collection takes varied forms. In this study, visualization is used in conjunction with in-depth interview. Furthermore, network mapping happens within (and not after) the interview (e.g., Bellotti, 2016). This follows the studies conducted by Hogan et al. (2007) and Ryan et al., (2014), among others.



The main advantage of embedding network maps within the interview process is that participants' narratives (that come out of the in-depth interview) help in 'setting the stage' for network mapping. Since the migrant networks are tied with each migration phase, talking about that phase before eliciting the network facilitates the process of taking the respondents back at that point in time (before coming to London/New York or when they just arrived in the city) and, therefore, sensitizes them for the subsequent network visualization task. As they narrated how they were able to get to London/New York, what kind of lives were they leading upon arrival, and what were the challenges and difficulties that they encountered, the relevant alters that the participants mentioned were usually also listed in the network maps. At any moment in the interview process, the respondent could go back and revise any of their network maps. In instances that they would not list someone they mentioned, they were asked and prompted whether they would consider including those actors in the map. In most instances, the participants would apologize for forgetting but there were also cases wherein the participant would refuse to include that person. These instances allowed further discussion on the respondents' notions of relevant and important relations.

When asked about those who were able to help them in specific instances (e.g. accompanying them to the hospital or borrowing money), they were also able to remember relevant people or groups of people. Visualization and embedding therefore enhanced the ease of recall of relevant ties. This is essential as the project involved retrospection as a way of reconstructing changes in migrant networks. While memory 'decays' over time, those events that were deemed important ('saliency of events') to the respondents were more likely to be accurately and easily recalled (van der Vaart & Glasner, 2011; as applied to retrospective migration histories, *see* Carling, 2012 and Smith & Thomas, 2003). It could also be argued that moving from one place to another and the ensuing period of adjustment were salient events that could be easily remembered given that these 'moves' taken by the participants required relocation to the other side of the globe.

Notes on Eliciting 'Supportive' and 'Problematic' Ties

The network maps were designed to generate both supportive and problematic ties, mitigating the possibility of omitting 'disappointing' connections. I found that since positive and negative experiences are both emotionally charged, supportive and problematic ties in particular phases of the migration process were recalled with relative ease. Embedding the network maps within the interviews further allowed the simultaneous evaluation of the generated networks vis-à-vis the narratives of the respondents.

The notion of 'importance' was not given a particular definition and was not delineated. This means that the respondents decided which ties were relevant in relation to their perceived needs for each migration phase. Participants were then asked why the ties they listed were important, specifying not only the support



and assistance they generated from these ties but also the quality of their relations and connections. As Ryan & Mulholland (2014: 152) suggested, “there is a need to understand the content of ties in terms of not only the flow of resources but also of the nature of the interpersonal relationships and relative social location of the actors involved.” It is also for this reason that the network maps were embedded within the in-depth interviews – so that both the interviewer and interviewees could also have the space to discuss and expound on meanings of ties, apart from support generated from them.

Not a Neutral Instrument

Similar to the experience of Ryan et al. (2014), utilizing network maps and visualization tool during data collection provided a space for interviewees to reflect and evaluate their relations. The design of the map (e.g. dividing by places and levels of importance, as well as incorporating ‘problematic’ ties) also shaped how participants constructed their networks. Future research could alter the layout of the *sociograms* to emphasize the information and topic of interest (e.g. dividing by types of support instead of places). Integrating the maps within the interviews also created space for dialogues between the interviewer and interviewee – making network elicitation interactive.

Comparing migrant networks in different phases highlights not only the types of support that migrants received (or not received), but also how they form and maintain relationships in various places – mitigating the tendency for networks to be conceptualized as static. However, future studies can benefit from re-interviewing the respondents to collect additional data points and to continue tracking the development of their networks since their circumstances will also continue to change over time. Furthermore, data for this study had been collected prior to important events that may shape and influence the lives (and networks) of the research participants: *Brexit*, the 2016 US presidential elections, and the 2016 Philippine presidential elections.

Another strategy that could enrich the findings is to also interview and map the networks of the alters that the respondents listed (both in the place of destination and country of origin). In this way, we could further examine the flow and exchange of support in both directions. And indeed, with virtual social networks that allow people to cross oceans in seconds came a rather exciting prospect of exploring online behaviors of uprooted individuals.

Social network analysis provides both the perspective and tools for studying not only the links that connect migrants and non-migrants alike in different locations, but also the processual and relational nature of migration. This study is but another attempt at reinterpretation of how people construct and reconstruct the world that they inhabit and the relations that they forge and maintain.



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