Defining and measuring transnational fields/spaces

José Luis Molina[1], Sören Peterman[2] and Andreas Herz[3]

[1] egolab-GRAFO, *Departament d'Antropologia social i cultural, Universitat Autònoma de Barcelona.* joseluis.molina@uab.es, corresponding author; [2] *Max-Planck-Institut zur Erforschung multireligiöser und multiethnischer Gesellschaften, Göttingen.* petermann@mmg.mpg.de; [3] *Institut für Sozial- und Organisationspädagogik, Stiftung Universität Hildesheim.* herzand@uni-hildesheim.de

PREPRINT (Version 1) of the article Defining and Measuring Transnational Social Structures, Field Methods, DOI: 10.1177/1525822X14556254, published online 1 December 2014

Abstract

Transnational social *fields* and transnational social *spaces* are concepts used interchangeably in transnational literature. Both terms refer to the complex of connections and practices across borders. In this paper, it will be argued that though social network approaches are introduced by transnational studies, they inherit often a metaphorical understanding of social networks. As a result, the potential insights that the social network analysis might bring to transnational studies are hardly exploited. Therefore, the first part of the paper shows which relational or social network perspectives underlie the concepts of transnational social *fields* and transnational social *spaces*. The second part of the paper elaborates the potential benefit of social network analysis in researching cross-border social fields and spaces in reviewing case studies and offering different conceptualizations and measures (clustered graphs, diversity indices) to delineate transnational social formations. While clustered graphs allow assessing transnational embeddedness, the index of qualitative variation (IQV) can be used to show variation in transnationality in personal networks. The measures will be exemplified with the data collected in Barcelona from three groups (Chinese, Sikh and Filipino, N=25 in each group, 30 alters by ego). Finally, the pros and contras of the proposal will be discussed.

Acknowledgements

Part of this research was funded by the project *Perfiles del Empresariado Étnico en España. Una aproximación a las estrategias, dinámicas y espacios transnacionales del pequeño empresariado emigrante en la nueva situación económica (ITINERE). MICINN CSO2009-07057*. We would like to thank Steven Vertovec for his support in developing ideas presented in this paper and his invitation to the first author for visiting the Max Planck Institute for the Study of Religious and Ethnic Diversity. We thank specially Thomas Faist for his insightful and useful review of an earlier version of this paper. In any case, we are responsible of all errors that can be found in the text.

1. Introduction

After two decades, transnational studies have contributed to a better understanding of a wide range of emergent social phenomena that take place across borders. The transnational perspective, originated in the field of migration studies (Glick Schiller et al. 1992), has been adopted today by a wide variety of disciplines, covering issues as diverse as identity, social and economic remittances, ethnic businesses, religion, health, citizenship and politics (see Vertovec 2009). Possibly, one of the keys explaining this success is its *theoretical* potential. From the very beginning, the transnational perspective was intended not only to improve the understanding of the processes experienced by migrants and their social networks on the processes of integration in the host societies and for the development of sending countries (Portes 2001), but to advance in an analytical framework that was able to encompass the paradoxes of globalization (Featherstone and Robertson 1997, Eriksen 2007). One of these paradoxes is the coexistence of growing global processes with the reinforcement of nation-states and nationalisms as hegemonic frames of representation of cultural diversity and collective action (Szanton et al. 1995). This intellectual positioning between the *network society* (Castells 1996) which implies the decoupling of space and time in modern experience (Giddens 1984, Harvey 1990, Marcus 1995), and the *methodological nationalism* (Wimmer et al. 2002), produced new theoretical concepts such as *transnational social fields* (Glick-Schiller and Fouron 1999), and *transnational social spaces* (Faist 2000a, Pries 2001). Despite their widespread use and the efforts made by some authors to elaborate and refine these concepts, they are mostly used interchangeably, and in a metaphorical sense.

We argue that both concepts are alternative conceptualizations of transnational phenomena, but complementary perspectives of the same reality. While the *field* perspective has been developed by Nina Glick-Schiller and her colleagues (Glick-Schiller and Fouron 1999, Levitt and Glick-Schiller 2004, Glick-Schiller 2005) the

space perspective has been produced by several scholars (Faist 1999, 2000a, 2000b, 2004, 2010; Pries 2001, 2005, 2008; Voigt-Graf 2004, 2005).We suggest that both concepts adopt the relational paradigm to develop transnational theory by looking at *emergent structures* of cross-border formations.

In this paper we intend to further elaborate these cross-border social structures using social network analysis (SNA), especially personal network methods. Therefore, the remaining part of the article is divided into four sections. The next section presents a review of the literature on transnational fields and transnational spaces. Section three introduces a strategy for operationalising transnational fields/spaces using a personal network approach. The fourth section presents three case studies in which this proposal is exemplified and tested. Finally, we draw conclusions and discuss potentials of the suggested approaches for future studies of transnational fields/spaces.

2. Transnational fields and transnational spaces

The concept of a *transnational field* was developed out of the study of cross-border migration and was initially posed (Glick Schiller and Fouron 1999:344) as follows:

> They live within a ´transnational social field´ that includes the state from which they originated and the one in which they settled (…). A social field can be defined as an unbounded terrain of interlocking *egocentric* networks. (…) The concept of "transnational social field" allows us a conceptual and methodological entry point into the investigation of broader social, economic and political processes through which migrant populations are *embedded* in more than one society and to which they react. (…) The social relationships that form the substance of transnational social fields include egalitarian, unequal, and exploitative that *often encompass immigrants, persons born in the country of origin who never migrated, and persons born in the country of settlement of many different ethnic backgrounds*. (Italics added)

In focusing on movements of *people and their (potentially multiethnic) social connections,* Glick Schiller and Fouron (1999) address social relations which cross nation-state borders as constituting transnational social fields. They also point to the terms of egocentric networks and embeddedness widely used in social network analysis which will be discussed later. For the span of this article we use synonymously the terms egocentric networks and personal networks, although technically an egocentric

network is often seen as the subset of nodes connected to a given ego within a whole network (Burt 1992, Borgatti 1997).

On the other hand, the concept of *transnational space* has been defined as "configurations of social practices, artifacts and symbol systems that span different geographic spaces in at least two nation-states without constituting a new 'deterritorialised' nation-state" (Pries 2001: 18). The introduction of the *geographical* dimension into the discussion shows that in social sciences "the corresponding spatial units of reference were traditionally considered as 'naturally given' by local, national and global geographic level" (Pries, 2008:5). Thus, the differentiation of the absolutist and relativist concept of space, "leads to fundamental revisions of the relation between the units of analysis and the spatial units of reference – the latter cannot be taken for granted as coherent and contiguous geographical 'containers', but have to be considered as potentially pluri-local and constructed by social practices, symbols and artefacts" (Pries, 2008:5). In the same vein, Faist (1999) proposed a typology of *transnational spaces* organized by the cross-relation between time and embeddedness in both the sending and receiving country.

We can summarize the theoretical implications of the transnational formation concept in the following way: *it describes the articulation of at least two nation-states through an asymmetrical emergent structure; this structure is constituted by the ensemble of social networks of migrants –and not migrants-- unequally embedded in it*. This asymmetrical emergent structure takes advantage of the differences between nation-states (which in fact explain the migration process) in order to produce new values through the reduction of transaction costs (Williamson 1975, Faist 2000a, 2000b) by the unequal embeddedness of actors. In this way, the new social formation allows the production and flow of resources among countries and creates new *capitals* (in Bourdieu's sense, 1977) that allow its reproduction and development.

In sum, transnational fields and transnational spaces can be conceptualized as two different perspectives of analysis of the same reality, the first focusing at the *egocentric level* (the ensemble of individual ties of migrants), and the second at the *sociocentric level* (transnational places and regions connected by social networks of people). In focusing on movements and practices by actors and phenomena which cross nation-state borders, both conceptualizations focus on border-crossing empirical relations. Nevertheless, transnational studies have only sparsely picked up the methods

of social network analysis for accomplishing this task (some exceptions are Dahinden 2005, 2009; Herz and Olivier 2012; Vertovec 2009, Vacca 2013), although other methods for dealing with transnational issues like multi-sited ethnography have been developed (Marcus, 1995; Köngeter and Wolff, 2012; Pries 2008).

In order to show the adequateness of a social network perspective for investigating transnational fields/spaces, we first shortly discuss central aspects of social network analysis and present some case studies. We then develop two specific measures to identify and measure the transnational structure of social formations out of the perspective of social networks: clustered graphs and diversity index.

3. Alternatives for identifying and measuring transnational social fields/spaces

The operationalisation of transnational formations suggested here implies a) the use of personal network methods and data, b) the selection of a focal place or places, and c) the assessment of the different levels of embeddedness. Let us now study each point separately.

3.1 Personal network analysis

The application of the personal networks analysis methodology enables us to collect, for a given set of focal individuals (egos), the corresponding sets of alters elicited with the aid of one or more *name generators*. Alters are people connected to ego. Typically, additional data is collected for every alter nominated by the use of *name interpreters.* In addition, the alter-alter pattern of relationships for each ego is also collected with a pair-tie definition. Finally, in order to collect the interpretations given by informants about their own personal networks, it is possible to conduct an interview using personal network visualizations (see Molina et al. 2013; see reflection on gathering personal network data in Herz and Olivier 2012).

The data collected following this methodology can be analyzed at the relational level or can be aggregated in different ways. Two sets of measures are obtained from this data: compositional and structural measures (*Cf.* Lazarsfeld and Menzel 1961). *Compositional* measures refer to the distribution for each ego of the variables collected with name interpreters. For instance, if we ask the gender and location of each alter, it is possible to obtain the percentage of men and women for every personal network, and their geographical distribution. *Structural* measures refer to the description of the alter-alter adjacency matrix, i.e., alters' centrality measures, extant subgroups, and density.

What distinguishes personal networks from whole networks is that the boundaries of the network members are *unconstrained* – that is, all types of relationships and institutional settings are allowed (whereas whole networks normally are restricted to explore a single institutional setting). This makes personal networks particularly interesting for eliciting transnational ties and levels and types of embeddedness since personal networks are intended to capture all settings and kinds of meaningful contacts for individuals.

3.2 Selection of a focal place

David Kyle, in his book *Transnational Peasants* (2000), studied four villages in Ecuador: two in the Otavalo region, and the other two next to the city of Cuenca, in the Azuay region. The two villages in Otavalo showed a pattern of circular migration for selling textile goods produced in the region along with other marketable products. This activity reached the astonishing figure of 23 countries visited within one year, mostly in Europe. In the case of the villages in Azuay he found a flow of irregular migrants to New York, who could only visit their families when the situation allowed it. This comparative study shows us that *every focal place* can have a *different* transnational space.

Drawing on the conceptual elaboration performed in the former section we could identify two transnational *spaces*: one connecting Cuenca to New York, and the other connecting Otavalo to cities in Europe (and other regions as well). These two spaces are not interconnected. The first one could be represented as a *tunnel* and the second one as a *funnel* (these metaphors are used by Kyle, accounting for the span of the transnational places). Of course, the way around also works, and New York could become the focal place, and villages in Otavalo or other places the "transnational" sites as well.

Moreover, in order to identify the transnational formations in a selected *place* it is necessary to collect personal network data along with *geographical* information about alters' locations (Featherstone et al. 2007). The criteria for selecting individuals are not specified a priori. They can be people owning a souvenir shop in a tourist destination (migrants, former migrants or non-migrants), or people from a given nationality attending a church. The unit of analysis and the sample strategy has to be justified by the research itself. Once the population of interest has been sampled and their personal networks have been collected, the levels of embeddedness can be assessed, either in the focal place, in the transnational place(s) or in both at the same time. It is worth

mentioning that if this operation is repeated in the transnational place identified, let us say, in New York, the transnational field as a whole would not be the same, although a certain level of redundancy would be expected (see Mazzucato 2009 for a matching contact methodology in transnational fields). This happens because every place brings different local contacts to the transnational field which in turn can be connected with other fields.

3.3 Assessing embeddedness

The concept of embeddedness was initially posed by Polanyi in his work about the economy as an institutionalized process (1957), starting the *Substantivist* school of economic anthropology. The core argument is that economic action is an institutionalized process that cannot be decoupled from other institutions in the same society, as neoclassic economy claims. This approach to the study of economic institutions was later used by Granovetter (1985) to explain the role of economic action within social network structures, bringing the concept of embeddedness to the center of sociological debate once again. This theoretical concept has been used in a variety of fields and levels of analysis (see Zukin and DiMaggio 1990 for a review). In this paper we will use the term embeddedness as the complex of interdependencies of social entities within a network (Uzzi 1996). These interdependencies can be analyzed both at the horizontal and vertical levels (Portes 1993, Schweitzer 1997, Vertovec 2003). The horizontal level describes the ways in which economic or other types of actions are influenced by the consideration of other multiple simultaneous institutional ties connecting people (or organizations and places as well). The vertical level shows the articulation of ties within greater social or geographical structures.

In the case of transnational fields we could expect to find *different levels* of embeddedness of people in places. This variation would explain the existence of a certain degree of specialization, which would enable the flow of new values among extant structures and the emergent one. The *mixed embeddedness* of Islamic butchers in The Netherlands described by Kloosterman et al. (2002) is a clear example of this. Thanks to the simultaneous embeddedness in both the local Dutch institutions and the co-ethnic networks it is possible for them to run the businesses, taking advantage of both societal (i.e. participation in official organizations), and ethnic resources (flexible and cheap workforce). Another proxy for capturing different levels of embeddedness can be the pattern of mobility. In this vein, Dahinden (2010) distinguishes different

patterns of mobility among migrant groups in Switzerland -cabaret dancers, Albanian-speaking migrants and Armenians-, suggesting a typology of transnational spaces based on the combination of place and mobility. In order to allow the circulation of cabaret dancers, she argues, some people have to be *local*. The same phenomenon is described by Zhou (2004) regarding the Chinese transnational activities in Los Angeles, where deeper localization has fostered the businesses and contributed to strengthening the existing ethnic enclave. Finally, in the ethnic enclave of Lloret de Mar (Girona, Spain), the owners of souvenirs shops tend to be local whereas the employees tend to follow a pattern of circular migration (see Molina et al. 2014).

In this paper we focus on the Clustered Graph methodology (Brandes et al. 2008, Lerner et al. 2007, 2008), and furthermore, we suggest the application of a diversity index (Budescu and Budescu 2012) to transnational personal networks. This index is intended to capture individual and group variation in the proportions of alters different countries of residence. Let us now analyze the two proposals.

The *Clustered graph* consists of representing personal network data according to some relevant study variables, for instance *sending country* and *host country* (see Figure 1). The combination of these two variable form four classes or circles connected among them. With this fixed and simplified layout, the clustered graph methodology enables a comparison to be made between individual cases or groups.

--FIGURE 1 ABOUT HERE—

The size *n(A)* of a class *A* is the number of alters in it. The relative class-size is the class-size divided by the number of alters in the network. Let *m(A,B)* denote the number of ties between class *A* and class *B*. The weight *w(A,B)* of the tie between A and B is defined by

$$w(A,B) = \frac{m(A,B)}{\sqrt{[n(A) * n(B)]}} \qquad (1)$$

The area of the node representing a class is proportional to its relative size; the color-intensity (darkness) of the node representing a class *A* is proportional to the intra-class weight w(A,A), and the thickness and the darkness of the line connecting class *A* and class *B* is proportional to the weight *w(A,B)*.

The levels of embeddedness in the host country can be assessed by looking at the size, internal connections and number of ties with *nationals*, *co-ethnics* and *other* types of people living in the same country. The categories for grouping individuals are not fixed beforehand. In addition, transnational relations can be assessed by looking at the connections with co-ethnics in the sending country. Overall, the clustered graph of a selected group will give us a picture of the pattern and characteristic of both transnational relations and local embeddedness –the transnational field.

Another way to address the operationalisation of transnational formations is by taking into account not only the dichotomy of sending and host country but the distribution of alters living in countries different from the ego. This can be done by calculating the *diversity index* of transnational personal networks. The diversity index is conceived as follows (see Formula 2).

$$IQV = \frac{K}{K-1} * (1 - \sum_{i=1}^{K} p_i^2) \quad (2)$$

K represents the number of categories (i.e. number of countries)
p_i is the proportion of observations that fall into a given category I (i.e. proportion of alters residing in a given country)

Firstly, the diversity index raises the possibility that two randomly chosen network members (alters) reside in different countries. It ranges from 0, indicating no diversity at all (i.e. all alters reside in the same country – not necessarily the ego's country of residence), to a maximum value lower than 1, indicating highest diversity (i.e. all alters reside in equal shares in all countries). An advantage of the diversity index is that it can easily be interpreted as a proportion.

Secondly, the index is not standardized between 0 and 1 because the maximum value depends on the number of countries, which do not allow comparisons across cases if the number of countries is different. In order to avoid this pitfall we have developed an *index of qualitative variation* (IQV) which is a standardized derivative of the diversity index that ranges from 0 to 1, and can therefore be compared across different networks (although in this case the values themselves have no intuitive meaning).

With these two indices the *span* of the transnational field in terms of diversity of countries of residence of alters can be assessed. For instance, in the case of the Ecuadorian networks mentioned above, we could expect a lower value for the Cuenca-

New York case (most alters living in Ecuador and some others in New York), and a high value for the Otavalo-European countries case (alters living in different countries).

In the following section we apply these two methods to three case studies.

4. Sikh, Chinese and Filipino people in Barcelona

The data presented in this section is drawn from a study designed to compare three collectives of people living in Barcelona from Sikh, Chinese, and Filipino origins (Molina and Pelissier 2010). The study was funded by the Council of Barcelona and the ACSAR Foundation in order to detect uncovered social needs. The fieldwork was conducted in the period November 2008 – April 2009 with a quota sample of 25 cases in each collective considering the age, sex and residence time in Spain. The interviews were conducted with the aid of EgoNet (http://sourceforge.net/projects/egonet/), and the anonymized dataset is publicly available (http://visone.info/wiki/index.php/Signos_%28data%29). In this section we do not provide the background information and the qualitative data collected during the project. We focus, instead, on the potentiality of personal networks analysis in a given place for eliciting transnational fields and their different levels and types of embeddedness.

Let us compare the clustered graphs of the three groups (Figure 2).

--FIGURE 2 ABOUT HERE--

The case of Sikhs shows a strong transnationalism taking into account the span of countries represented ("the funnel"). The case of Filipinos indicates a strong concentration of contacts among co-ethnics living in Barcelona, and few connections with the sending country ("the tunnel"). Finally, the Chinese group shows more *nationals* in their networks, and a moderate concentration of co-ethnics, basically kin working in family businesses.

This analysis can be performed at the individual level as well. For instance, for the Filipino case we can select women working in the domestic service sector and look

at their individual clustered graph in order to explore variation in embeddedness at the gender level (Figure 3).

--FIGURE 3 ABOUT HERE--

Figure 3 shows a similar pattern of adaptation for these women: a strong co-ethnic cluster, in this case structured by the local Filipino Catholic Church and informal organizations connected with it, and a few Spaniards/Catalans (from the houses in which they work), *not connected* with other Filipinos. In addition, relationships with the Philippines are very limited (some of them are not visible in this representation).

Clustered graphs are a powerful tool for assessing embeddedness both at the individual and group levels, and for comparing across cases. Nevertheless, as we have just mentioned, there are other dimensions of transnational fields that are not captured by this methodology. One of these is the geographical distribution of the personal networks.

Figure 4 shows the geographical distribution of alters for the Sikh case. Overall, the geographical distribution shows a remarkable geographical span of alters' places of residence.

--FIGURE 4 ABOUT HERE--

The Filipino case is totally different. As can be assessed in Figure 5, the pattern of distribution is mostly *dyadic* between Barcelona and Manila and other places in the Philippines. Also, the diversity of contacts is lower than in the Sikh case as we could expect.

--FIGURE 5 ABOUT HERE—

Finally, the Chinese group shows an interesting pattern of local and regional distribution (Spanish east-coast, and continental China and Taiwan), and a wide span of countries of residence (Figure 6).

--FIGURE 6 ABOUT HERE--

The *span* of transnational fields (the number of different countries in which alters live) can be captured with the diversity index explained above. In order to compare the three cases we can focus on the index of qualitative variation (IQV, see Table 1).

--TABLE 1 ABOUT HERE—

--FIGURE 7 ABOUT HERE--

The three index distributions show that IQV is highest for Sikhs (median=.5) and lowest for Filipinos (=.0) whereas the Chinese group (=.3) is in between. This index confirms the visual representation of the geographical span of the three transnational fields. It is worth pointing out that "diversity" means, in most cases, that alters belong to varying degrees to the host country (Spain) or the country of origin. To a lesser extent, diversity implies that alters reside in a broad range of countries. This is the case for some Sikhs and a few Chinese (Figure 7).

5. Conclusions and discussion

In this paper we have proposed alternative conceptualizations for transnational social fields/spaces as emergent network structures. We further suggest that identification and analysis of the transnational fields/spaces imply the application and use of social networks data and methods, and the development of a family of indices and strategies in order to capture variation in embeddedness , and transnational span, among other dimensions. These indices has been used here as measures of the articulation of emergent structures connecting societal spaces. In this vein we have shown how Clustered Graphs and an Index of Qualitative Variation developed here, are powerful ways of visualizing, analyzing and assessing embeddedness in transnational formations.

It is worth to mention that the two methods consistently show a different pattern of articulation of the three groups to both Barcelona and their transnational networks, which are rooted mainly in the Philippines (for the Barcelona-Filipino case), spread among many countries (for the Barcelona-Sikh case), and showing an intermediate

pattern (for the Barcelona-Chinese case). These insights complement the impressions gathered during the fieldwork of the existence of three different modes of adaptation (Molina and Pelissier 2010), but enriching enormously the perspective as far as specific transnational formations can only be partially observed. Only through a systematic social network approach these transnational formations can be measured and analyzed.

Among the advantages of these methods is their scalability. Both methods allow individual and group-level analysis and comparison. This helps researchers to combine ethnographic information, statistical data and individual-group description in a single, mixed method strategy (Creswell 2003, Holstein 2009).

We are well aware that collecting personal network data is an expensive and time-consuming research strategy, and that it is not always feasible depending on the place and the population under study. Nevertheless, the advantages of network data for transnational studies are undeniable because it provides an empirical approach to the identification of a myriad of transnational formations which, in turn, can be analyzed at a higher level in order to contribute to the theoretical development of the field. Possibly, the universal use of smartphones and the corresponding geolocalisation of alters will enable, in the future, the study of transnational fields in new and innovative ways. The authors do believe that an open science endeavor of this nature, concerned with ethics and reliability, will enable transnational studies to continue to contribute decisively to gaining a better understanding of our time.

References

Borgatti, S. P. 1997. 'Structural Holes: Unpacking Burt's Redundancy Measures', *Connections*, 20 (1), 35-38.

Bourdieu, P. 1977. *Outline of a Theory of Practice*, New York: Cambridge University Press.

Brandes, U., J. Lerner, M. J. Lubbers, C. McCarty and J. L. Molina 2008. 'Visual Statistics for Collections of Clustered Graphs', *proceedings of the 2008 IEEE Pacific Visualization Symposium*, 5-7 March, Kyoto, Japan.

Budescu, D. V. and M. Budescu 2012. 'How to Measure Diversity When You Must', *Psychological Methods*, 17 (2), 215-227.

Burt, R. S. 1992. *Structural Holes: The Social Structure of Competition*, Cambridge: Harvard University Press.

Castells, M. 1996. *The Information Age: Economy, Society and Culture*, Cambridge: Blackwell.

Creswell, J. W. 2003. *Research Design. Qualitative, Quantitative and Mixed Methods Approaches*, London: Sage.

Dahinden, J. 2005. 'Contesting transnationalism? Lessons from the study of Albanian migration networks from former Yugoslavia', *Global Networks*, 5 (2), 191-208.

Dahinden, J. 2009. 'Are we all transnationals now? Network transnationalism and transnational subjectivity: the differing impacts of globalization on the inhabitants of a small Swiss city', *Ethnic and Racial Studies*, 32 (8), 1365-1386.

Dahinden, J. 2010. ''The dynamics of migrants' transnational formations: Betweeen mobility and locality', in R. Bauböck and T. Faist (eds) *Diaspora and Transnationalism: Concepts, Theories and Methods*, Amsterdam: Amsterdam University Press, 51-70.

Emirbayer, M. and J. Goodwin. 1994. 'Network Analysis, Culture, and the Problem of Agency', *American Journal of Sociology*, 99 (6), 1411-1454.

Eriksen, T. H. 2007. *Globalization: the key concepts*, New York: Berg.

Faist, T. 1999. 'Developing Transnational Social Spaces: The Turkish-German Example'. In: Pries (ed.) *Migration and transnational social spaces*, Aldershot: Ashgate, pp. 36-72.

Faist, T. 2000a. *The Volume and Dynamics of International Migration and Transnational Social Spaces*. Oxford: Oxford University Press.

Faist, T. 2000b. 'Transnationalization in international Emigration: implications for the study of citizenship and culture', *Ethnic and Racial Studies*, 23 (2), 189-222.

Faist, T. 2010. 'Diaspora and Transnationalism: Want Kind of Dance Partners', in R. Bauböck and T. Faist (eds) *Diaspora and Transnationalism: Concepts, Theories and Methods*, Amsterdam: Amsterdam University Press.

Faist, T. and E. Özveren .2004. *Transnational Social Spaces: Agents, Networks and Institutions*, Aldershot: Ashgate.

Featherstone, M., S. Lash and R. Robertson (eds) .1997. *Global Modernities*, London: Sage.

Featherstone, D., R. Phillips and J. Waters .2007. 'Introduction: Spatialities of transnational networks', *Global Networks*, 7, 383-391.

Giddens, Anthony .1984. *The Constitution of Society. Outline of the Theory of Structuration.* Cambridge: Polity Press. pp. 2.

Glick Schiller, N. 2005. 'Transnational social fields and imperialism Bringing a theory of power to Transnational Studies', *Anthropological Theory*, 5, 439-461.

Glick Schiller, N., L. Basch and C. Szanton Blanc .1992. 'Transnationalism: a new analytic framework for understanding migration', in N. Glick Schiller, L. Basch and C. Szanton Blanc (eds) *Towards a transnational perspective on migration: race, class, ethnicity and nationalism reconsidered*, New York: New York Academy of Science, 1-24.

Glick Schiller, N. and G. E. Fouron .1999. 'Terrains of blood and nation: Haitian transnational social fields', *Ethnic and Racial Studies*, 22 (2), 340-366.

Granovetter, Mark S. 1985. 'Economic Actions and Social Structure: The Problem of Embeddedness', *American Journal of Sociology* 91(3): 481-510.

Harvey, D. 1990. *The Condition of Postmodernity. An Enquiry into Cultural change*. Cambridge/Oxford: Blackwell.

Herz, A. and C. Olivier .2012. 'Transnational Social Network Analysis', *Transnational Social Review - A Social Work Journal*, 2 (1), 11-29.

Hollstein, B. 2009. 'Qualitative Approaches', in J. Scott and P. J. Carrington (eds) *Sage Handbook of Social Network Analysis*, London/New Delhi: Sage.

Kloosterman, R., J. van der Leun and J. Rath .2002. 'Mixed Embeddedness: (In)formal Economic Activities and Immigrant Businesses in the Netherlands', *International Journal of Urban and Regional Research*, 23 (2), 252 - 266.

Köngeter, S. and S. Wolff .2012. 'Doing Ethnographical Research on Transnationalism', *Transnational Social Review - A Social Work Journal*, 2 (1), 47-64.

Kyle, D. 2000. *Transnational Peasants. Migrations, Networks, and Ethnicity in Andean Ecuador*, Baltimore/London: The Johns Hopkins University Press.

Lazarsfeld, P. F. and H. Menzel .1961. ‘On the relation between individual and collective properties’, in A. Etzioni (ed.) *Complex organizations: A sociological reader*, London: Holt, Rhinehart & Winston, 499-516.

Lerner, J. and U. Brandes .2007. ‘Comparing Networks by their Group Structure with an application to acculturation networks’, XXVII Sunbelt’07 Corfu, Greece, 1–6 May, www.egoredes.net, [last accessed 18 January 2013].

Lerner, J., U. Brandes, M. J. Lubbers, J. L. Molina and C. McCarty .2008. ‘Visualizing Tendency and Dispersion in Collections of Attributed Networks’, XXVIII Sunbelt’08, Sant Pete, USA, 24-27 January, www.egoredes.net [last accessed 18 January 2013].

Levitt, P. and N. Glick Schiller .2004. ‘Conceptualizing Simultaneity: A Transnational Social Field Perspective on Society’, *International Migration Review*, 38 (3), Conceptual and Methodological Developments in the Study of International Migration, 1002-1039.

Marcus, G. E. 1995. ‘Ethnography in/of the World System: The Emergence of Multi-Sited Ethnography’, *Annual Review of Anthropology*, 24, 95-117.

Mazzucato, V. 2009. ‘Bridging Boundaries with a Transnational Research Approach: A Simultaneous Matched Sample Methodology’, in M.-A. Falzon (ed.) *Multi-sited Ethnography: Theory, Praxis and Locality in Contemporary Research*, Burlington: Ashgate.

Molina, J. L. and F. Pelissier (eds) .2010. *Les xarxes socials de sikhs, xinesos i filipins a Barcelona*, Barcelona: Fundació ACSAR.

Molina, J. L., I. Maya-Jariego and C. McCarty .2013. ‘Giving Meaning to Social Networks: Methodology for Conducting and Analyzing Interviews based on Personal Network Visualizations’, in B. Hollstein and S. Dominguez (eds.) *Mixing methods in social network research*, Cambridge University Press, in press.

Molina, J. L., H. Valenzuela-García, M. J. Lubbers, A. García-Macías and J. Pampalona .2014. ‘Looking inside the Ethnic Enclave: Diversity, Inequality, Social Capital and Transnationalism’, submitted to the book edited by Louise Ryan et al., Migrant Capital. Networks, Identities and Strategies. London: Palgrave Macmillan.

Polanyi, Karl .1957. ‘The economy as an institucionzalied process’. In: Polanyi et al. (eds.), *Trade and Market in the Early Empires.* New York: MacMillan. pp. 12.

Portes, A. 2001. ‘Introduction: The debates and significance of immigrant transnationalism’, *Global Networks*, 1, 181–193.

Portes, A. and J. Sensenbrenner. 1993. ‘Embeddedness and Immigration’, *The American Journal of Sociology*, 98 (6), 1320-1350.

Pries, L. 2001. ‘The approach of transnational social spaces: responding to new configurations of the social and the spatial’, in L. Pries (ed.) *New transnational social spaces*, London: Routledge.

Pries, L. 2005. ‘Configurations of geographic and societal spaces: a sociological proposal between ‘methodological nationalism’ and the ‘spaces of flows’’, *Global Networks*, 5 (2), 167-190.

Pries, L. 2008. ‘Transnational societal spaces. Which units of analysis, reference and measurement?’, in L. Pries (ed.) *Rethinking Transnationalism. The Meso-link of organisations*, London/New York: Routledge.

Schweizer, T. 1997. ‘Embeddedness of Etnographic Cases: A Social Networks Perspective’, *Current Anthropology*, 38 (5), 739-760.

Szanton Blanc, C., L. Basch and N. Glick Schiller .1995. ‘Transnationalism, Nation-States, and Culture’, *Current Anthropology*, 36 (4), 683-686 .

Uzzi, B. 1996. ‘The Sources and Consequences of Embeddedness for the Economic Performance of Organizations: The Network Effect’, *American Sociological Review*, 61 (4), 674-698.

Vacca, Raffaele .2013. *Bridging Across Nations. The social capital of diversity, brokerage and closure in transnational migrant networks: a study on assimilation patterns in Milan and Barcelona.* Dissertation defended at the Università degli Studi di Milano-Bicocca - Scuola di Dottorato in Scienze Sociali (SCISS).

Vertovec, S. 2003. ‘Migration and other modes of transnationalism: towards conceptual cross-fertilization’, *International Migration Review*, 37 (3), 641-665.

Vertovec, S. 2009. *Transnationalism*, London/New York: Routledge.

Voigt-Graf, C. 2004. ‘Towards a geography of transnational spaces: Indian transnational communities in Australia’, *Global Networks*, 4 (1), 25-49.

Voigt-Graf, C. 2005. ‘The construction of transnational spaces by Indian migrants in Australia’, *Journal of Ethnic and Migration Studies*, 31 (2), 365-384.

Williamson, O. E. 1975. *Markets and Hierarchies. Analysis and Antitrust Implications. A Study in the Economics of Internal Organization*, New York: The Free Press.

Wimmer, A. and N. Glick Schiller .2002. ‘Methodological nationalism and beyond: nation- state building, migration and the social sciences’, *Global Networks*, 2 (4), 301-334.

Zhou, M. .2004. ‘Revisiting Ethnic Entrepreneurship: Convergencies, Controversies, and Conceptual Advancements’, *International Migration Review*, 38 (3), 1040-1074.

Zukin, S. and P. DiMaggio .1990. *Structures of Capital: The Social Organization of the Economy*, New York: Cambridge University Press.

FIGURES

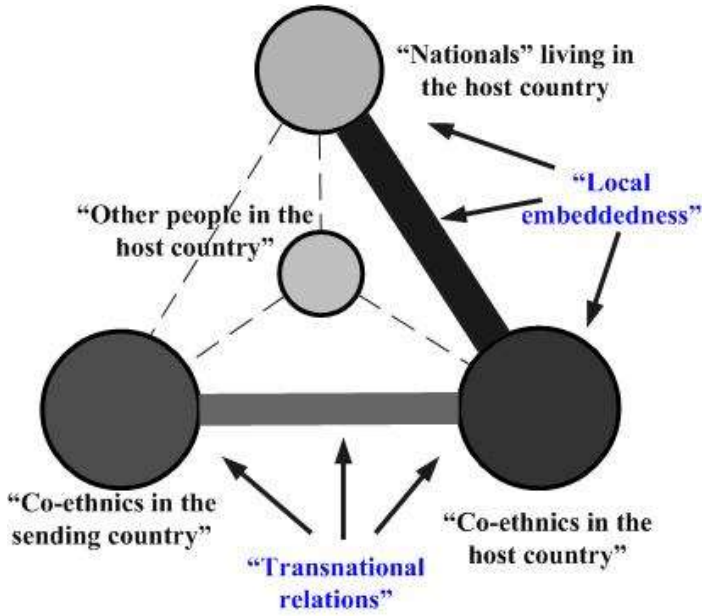
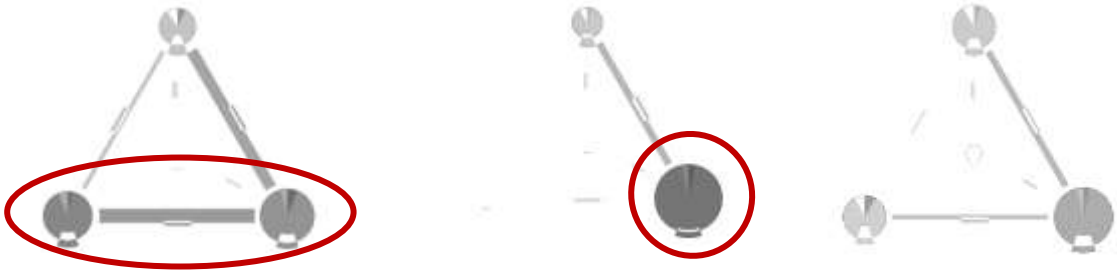
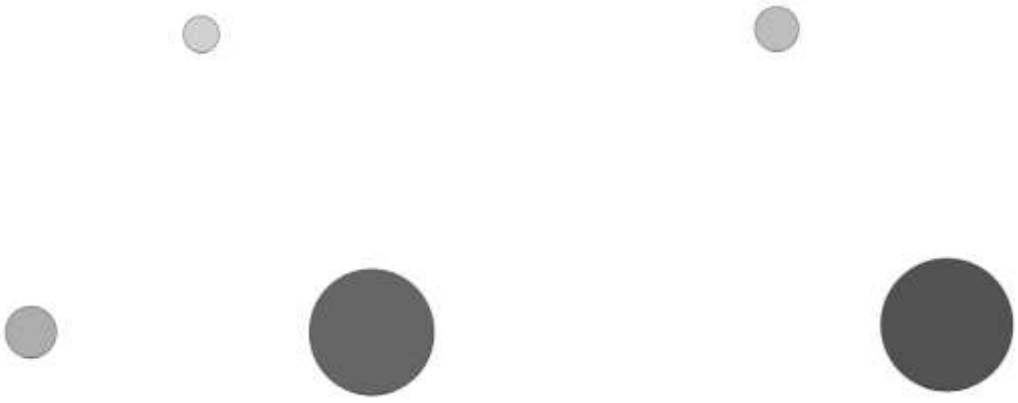


Figure 1. Clustered Graphs and the assessment of embeddedness.

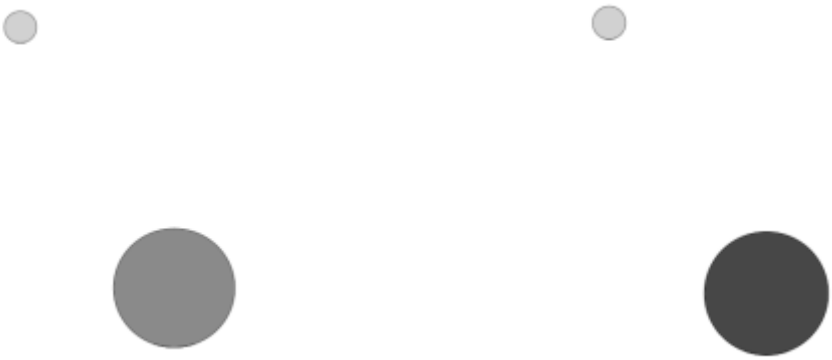


a	b	c
Sikhs	**Filipino**	**Chinese**
N=25. M=6.5 years of residence	N=25. M=8.3 years of residence	N=25. M=13 years of residence

Figure 2. The personal networks of Sikhs (a), Filipino (b) and Chinese (c) people in Barcelona. Size indicates the number of people in each class, darkness indicates density and its standard deviation is indicated by the grey scale.



a. 30 years old, 3 years of residence. b. 38 years old, 1 year of residence.



c. 45 years old, 9 years of residence. d. 28 years old, 9 years of residence.

Figure 3. Clustered graph of Filipino women working in the domestic service sector in Barcelona.

Figure 4. The geographical distribution of alters for the Sikh case in Barcelona.

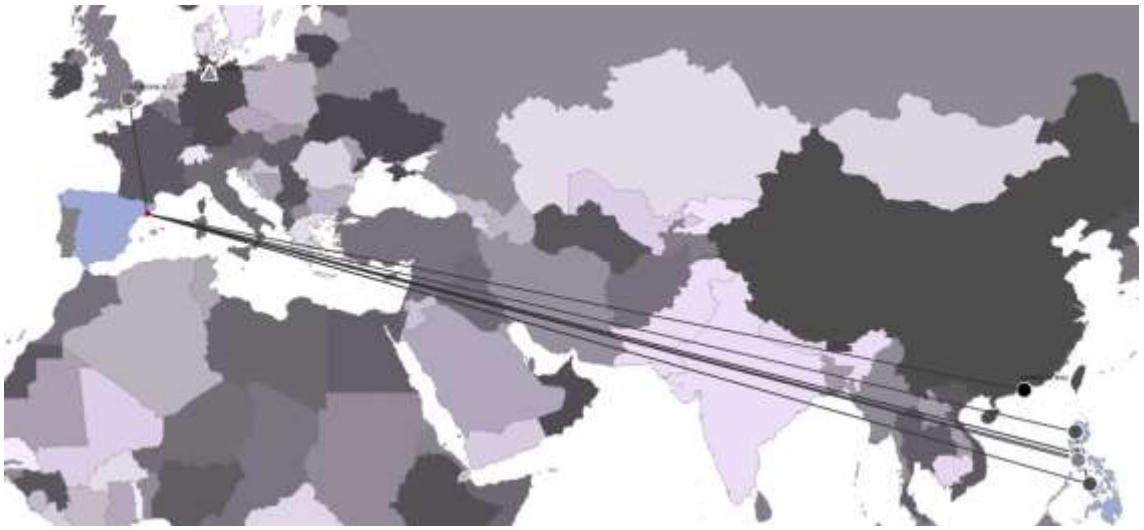


Figure 5. The geographical distribution of alters for the Filipino case in Barcelona.

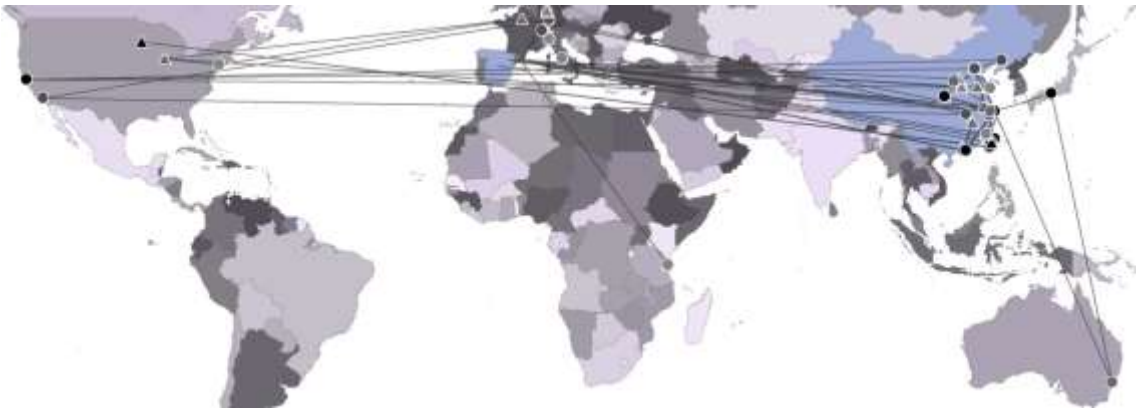


Figure 6. The geographical distribution of alters for the Chinese case in Barcelona.

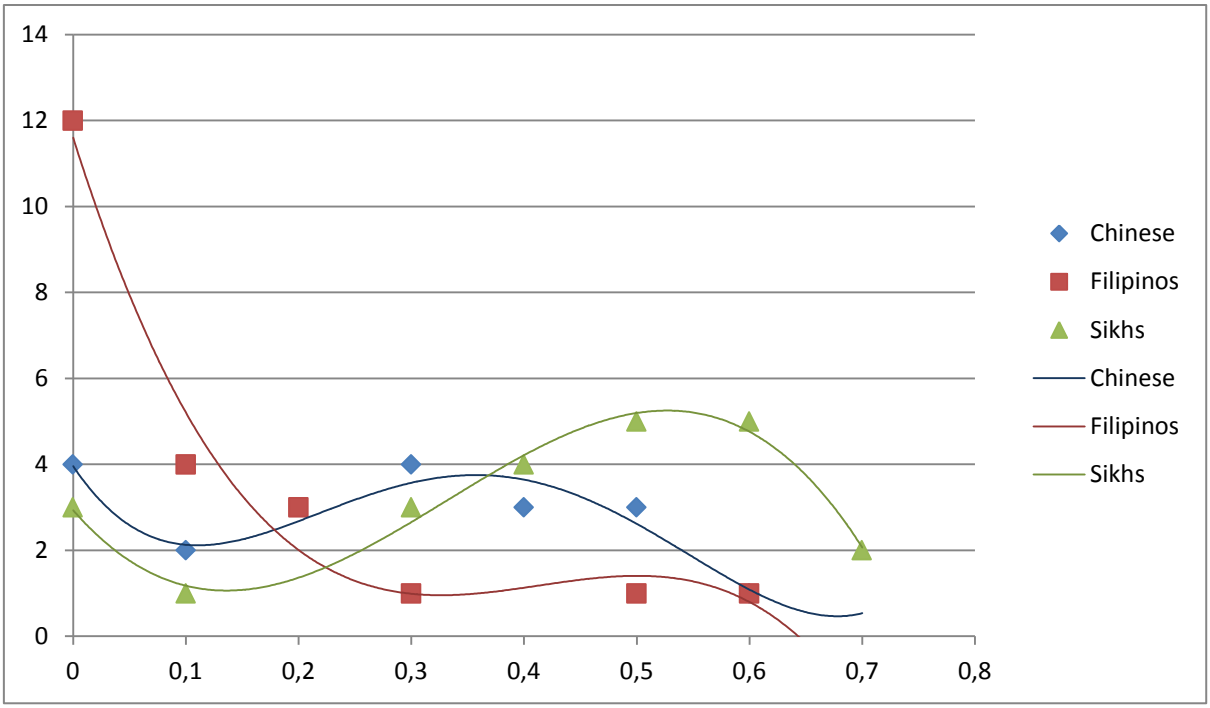


Figure 7. Diversity of alters' countries of residence (frequencies of IQV).

TABLES

Statistic	Filipinos	Chinese	Sikhs
min	0.000	0.000	0.000
p25	0.000	0.070	0.252
median	0.000	0.301	0.485
p75	0.156	0.441	0.553
max	0.556	0.626	0.691
mean	0.101	0.280	0.408
standard deviation	0.161	0.207	0.210
skewness	1.825	-0.057	-0.865
kurtosis	5.307	1.682	2.528
N	660	510	690

Table 1. Descriptive statistics of the Index of Qualitative Variation (diversity of alters' countries of residence).