Social Interactions and Language Use in Multicultural Settings: An Exploratory Study of Personal Networks

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Abstract: This study tests the use of social network analysis in the diagnostics of personal communities as relational systems that affect how languages are learned.
The egocentric approach of this methodology was applied to identifying the personal networks of adult immigrants attending a literacy program. The study is an exploratory and descriptive analysis with EgoNet software based on five cases. The results show small networks with few significant "alters" (five to eight), without weak ties in areas of relationship with neighbours or other acquaintances, and in which the prevailing language of communication was the same as that of "ego" – with, in some cases, multicultural networks using different languages of communication.

Keywords: personal network, network analysis, immigration, language learning, intercultural relations.

1. Introduction

Social network analysis (SNA) is an extremely important and comprehensive diagnostic tool (Sanz 2003). With a broad interdisciplinary approach, it has developed methodological processes and created its own instruments to measure, analyse and describe the structures, patterns and forms of interaction that emerge from the ties between various social actors: individuals, organisations, nations, etc. (Molina 2001). This approach allows us to complement an *attribute-based analysis* (with variables such as age, sex, cultural group, etc.) with a more complex and systemic conception of the phenomena involved. An approach where the study of the structures and functions of the ties that people establish with other individuals, groups, associations, etc., is urgently necessary. This interaction between actors evolves into a social network that is generally the focal point of SNA studies. Recently, the novel and ever-increasing use of SNA approaches in the theoretical and methodical framework of studies on migration has led to a review of such key concepts as *social capital* (Eito 2005), *relational vulnerability* (Bonet 2006) and *community involvement* (Gracia & Herrero 2006, Villalba 2004).

Characteristics generally associated with immigrant status can lead to the development of ethnically homogeneous networks with few exogenous relations (redundant networks), modify the transactional content of the network and limit the generation of relational social capital that would foster integration and promote language use. Although the concept of social networks, both as metaphor and analytical method, has been used over the past few years in studies on migration (Barbeito 2008), how this might apply to the dynamics of intercultural relations and language learning has yet to be elucidated. Research on social networks and language use is a poorly developed field in international research. This article aims to contribute to research and methodology to further understand the relationships between social interactions, language learning and language use.

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1.1 Network theories: Concepts and principles

Social theory has a long tradition of resolving oppositions not easily overcome in the social sciences, such as the paired terms micro/macro, qualitative/quantitative and action/structure (Molina 2004). In the social field, network theories have emerged from endeavors to overcome these dichotomies and explain the meso-sociological forms that cannot be delineated either through macro-sociological approaches, limited by their large-scale explanatory structures; or micro-sociological methods, centered solely on individual motivations (Martins 2009). The notion of the social network has arisen, situated on a "meso" level that is indispensable for explaining systems of human relationships in the area of daily life, taking as its objects of study small and medium-sized groups such as social movement networks, student networks and networks of scientific collaboration.

A social network can be characterized as a well-defined set of actors (individuals, groups, organizations, communities, global societies, etc.) more or less linked through a social relationship or set of such relationships (Lozares 1996). The word "network" has been used in various fields, for example social psychology, where it indicates the person's relational universe (each individual's set of relationships and socio-affective support structures); and in sociology, where it studies social movement networks that bring together a range of actors uniting the local with the global, the particular with the universal. Networks can be seen as a midway point between individual needs and social fabric (Zimmermann 2004).

Many of the debates on the concept of social capital involve the idea that social ties contribute, first, to improving individuals' well-being; and, second, to a better functioning society. Coleman (1961, 1988) defines social capital as a useful and readily available source of resources for an actor through their social relationships, which is also a factor in social mobility. For Bourdieu (1986) social capital is the set of social assets an individual can mobilize to achieve specific objectives, acting as an important factor in social stratification. Putnam (2000) brings to the theory the important distinction between two basic forms of social capital: that which tends to move people closer to those of differing social positions (*bridging* capital) and that which tends to reinforce exclusive identities and maintain group homogeneity (*bonding* capital).

In studies of the properties of networks, three basic frameworks have demonstrated that the type of links in networks determine their usefulness for individuals: the theory of the strength of weak ties (Granovetter 1973), the theory of structural holes (Burt 1992) and social resources theory (Lin 1999). Granovetter found that it was not strong ties such as family, friendship or group relationships that in certain situations (social coordination and job hunting were the subjects of his classic works) helped a person deal successfully with a situation, but instead weak ties with infrequent, low-intensity relationships outside the core of the relationship system. Strong ties constitute bonding capital, creating relationships of trust and feelings of belonging; while weak ties are defined as bridging capital, allowing people to build bridges between heterogeneous networks, increasing the inclusiveness of relationships and giving access to resources. Burt's approach to social capital focuses on the pattern of relationships between individuals in the network. According to this theory, it is advantageous for a person to connect to many other people who are not united amongst themselves in their own network. These represent non-redundant contacts who can provide more benefits to the relationship system. The third main approach to networks in social capital was developed by Lin (1982) and focuses on the resources contained in the network, arguing that it is not the weakness of the tie in itself that confers benefits, nor by extension the bridging or articulating property of weak ties, but the fact that these relationships enable individuals to have access to the resources needed to achieve their objectives. Those people who embody or control useful resources for achieving "ego" objectives can be seen as a social resource.

The 1970s saw the biggest growth in the field of network analysis, aided by development of the mathematical basis of graph theory. The appearance in recent years of software such as EgoNet, UCINET, Visone, Pajek and many others enabling the setting out of networks in graphic form and their statistical analysis using network indicators has afforded the possibility to verify empirically the assumptions of social network theory across a wide range of fields: health, immigration, community development, organizational cultures, dissemination of innovation and public policy analysis.

1.2 Language acquisition and integration: A focus on relationships

Since approval in 2004 by the European Council of the Common Basic Principles for an immigrant integration policy in the European Union, emphasis has been placed on the importance of a "basic knowledge of the host society's language, history and institutions" for successful integration (*Comité Económico y Social Europeo* 2010). Studies on the importance of language to immigrants have been conducted primarily from an economic, although also sociological, perspective – providing insight into the relationship between linguistic characteristics and labor-market achievements. These studies explore how native or acquired command of the language of the host country benefits immigrants by facilitating better social integration into the host society (Gutiérrez 2007). In the field of education, Vilà et al. (2013) validated the results of previous studies pointing to language knowledge as the most advantageous element for integration of foreign students and necessary for social cohesion.

Acquiring the language of the host country is unquestionably an essential and widely recognized tool (Villareal 2009) for the integration of immigrant communities. That said, the seventh principle of the above-mentioned European Committee document also refers to the need to activate and promote stimulating relational systems in which immigrants can develop and widen their contexts (*Comité Económico y Social Europeo* 2010: 20; *emphasis added*):

> *Frequent interaction* between immigrants and Member State citizens is a fundamental mechanism for integration. Shared forums, intercultural dialogue, education about immigrants and immigrant cultures, and *stimulating living conditions* in urban environments enhance the interactions between immigrants and Member States citizens.

It is not only language acquisition that is important, but also with whom and where language is acquired – and, even more importantly, what contexts facilitate this. This principle is consistent with immigrant language-learning models that embrace social and community factors such as language exposure (Chiswick & Miller 2007) while alluding to both formal and informal learning opportunities. These may include the linguistic proximity of the first language, length of residence in the host country, commitment to language learning and density of compatriots in the host country (Alonso & Gutiérrez 2010). From the moment a person undertakes a migration process, social networks play a decisive role, both at the point of departure and arrival (Ávila 2008). Seeing immigrants' areas of interaction as potential language-learning environments involves learning about relational systems that come into play on a daily basis (*Comité Económico y Social Europeo* 2010: 63):

> Immigrants have to "reinvent" new social networks in the host society.... These may vary in composition to include fellow nationals, host country citizens and immigrants of other nationalities.... The structure and composition of these new networks provide valuable information on integration.

1.3 Personal networks: Immigration learning environments
Viewing personal networks as interactive areas for intercultural relations, integration and language learning for people of foreign origin in the context of this study, the following questions are put forward:

- What are the linguistic characteristics of the people involved in these networks?
- To what extent are one or several languages used in the relationships?
- Does the first language take priority? In what contexts are the different languages used?
- How often and with whom is a language activated or used?
- What kind of ties would enhance the use of a language as a means of social integration? In short, what are the personal networks like?

Social personal network analysis (Scott & Carrington 2011) should enable us to identify the characteristics that Wellman, Carrington, and Hall (1988) refer to as the "personal community": that small world through which the individual becomes integrated into the greater structure of society. With migration processes, fractures can occur in this community and ties can be rearranged, which can lead to relational vulnerability, fragmentation or social exclusion (Bonet 2006). Longitudinal studies analyzing personal networks among immigrants explore the process of how these networks might be rebuilt, how ties are reorganized and new members added, how the social network influences things, and what the crucial role is of the social support that flows throughout the relational systems – all for the success of the migration project and the individual's integration (Lubbers & Molina 2013). Personal networks are seen as protective structures that promote health, subjective well-being, academic success and community involvement, amongst other things (Eito 2005; Martínez García, García Ramírez & Maya 2001; Maya 2002; Sánchez & Sandín 2013).

One of the most fruitful approaches in the study of personal communities is known as the egocentric approach. Both the anchor and departure point for this type of analysis is the individual and the perception that they have of the relational ties within their personal environment. Individual people (egos) are interviewed and information elicited about their relational systems at a given time (personal networks) and about those people (*alters*) listed as their network members. The structure, composition and function of the ties are examined.

Methodological approaches and data-collection tools for egocentric studies (Bernard et al. 1990, Hogan 2007, McCarty 2002, Molina *et al.* 2007) are widely discussed in specialized international reference journals such as the social network analysis journal in Spanish *REDES* (http://revistes.uab.cat/redes); and the journal *Social Networks* in English (http://ees.elsevier.com/son/default.asp), published by the International Network for Social Network Analysis (INSNA). The product that the researcher obtains from a personal network questionnaire is a graphic representation of the set of social relationships surrounding an individual, stemming from different contexts: family, work, neighborhood, associations, religious community, school, on-line community, etc.

The following sections describe an SNA study conducted using an egocentric approach. It explores the possibilities that this method can offer in the analysis and characterization of relational environments in a group of immigrants in a basic literacy program.

2. Study of personal networks of adult immigrants in a basic literacy program

2.1 Methodology
This is a descriptive type study based on the hypothesis that personal networks mediate the foreign language-learning process. Networks are understood as potential contexts for social relations that can either promote or limit opportunities for interaction with other subjects in

various languages. SNA was used for this exploratory study, focusing on five immigrants attending a Spanish literacy program. In other, established research fields, this would be a small sample and can be mentioned as a limitation of this study; but SNA research on communication between people of diverse cultures is not a highly developed field. The study, through focusing on a limited number of cases, aims to exemplify how the study of personal networks can be applied and contribute to the use of these methodologies, to better understand personal relationship systems, communication and use of language.

An egocentric approach was adopted, using an *ad hoc* network questionnaire administered in an individual interview. To determine the characteristics of the actors participating in the personal network of immigrants in their host context, attributive questions were asked, along with questions investigating the network. When the questionnaire was administered, not only was information gathered on the interviewee (*ego*) and the people they identified in their networks (*alters*), but they were also asked about the main characteristics of the people mentioned in relation to their perception of the type of tie established.

2.2 Study objectives

The overall objective of this study was to explore the personal networks of adult immigrants participating in a literacy program. The aim was to identify the most relevant characteristics of the relational systems of the cases under study and investigate possible correlations with Spanish language use or other variables. The main procedures associated with this general objective were…

- establishing a personal network diagnostic tool,
- visualizing the structure, composition and functionality of the network using specific network visualization programs,
- describing the various types of personal networks according to the attributive variables of *alters*, and
- evaluating the level of social capital in the networks for language learning.

2.3 Context and participants

The fieldwork was conducted at EICA[2], a non-profit institution that promotes the social and labor integration of socially disadvantaged adults and young people through four main lines of action, including education. All those included in the sample were immigrants with linguistic needs contacted at EICA, where they attended its literacy programs.

The sample was selected following a purposive sampling method based on the following criteria: (a) legal age; (b) regular attendance in the literacy program; and (c) resident in Spain for less than one year or over five years (to observe newly established networks and those laid down in the country over a longer period). The study was formalized with five people from different countries. Participation was voluntary, and the study was conducted ethically following good research practice guidelines (*Universitat de Barcelona* 2010). The names appearing in the text and tables are pseudonyms.

Table 1 shows each case at the time of the study according to age, sex, country of origin, length of time in Catalonia or Spain, level of education in country of origin, first language, length of time studying at EICA, other languages spoken and assessment of Spanish language skills: oral, written and comprehension on a scale of 1-10. Hamza from the Ivory Coast was a 35-year-old male with primary education only; Shula from Senegal was a 53-year-old woman with no formal education; Ibrahima from Ghana was a 21-year-old male with

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[2] *Espacio de Inclusión y Formación del Casco Antiguo* is located in Barcelona, Catalonia, Spain, a multilingual city where 34.6% of inhabitants speak Catalan as their normal language and 51.5% Spanish (data from the survey of linguistic uses by IDESCAT, Statistical Institute of Catalonia, 2013). EICA gave permission to be mentioned in this publication.

primary education only; Mohammed from India was a 46-year-old male with no formal education; and Nazma from Bangladesh was a 25-year-old female with no formal education. In addition to their first language, Hamza and Ibrahima spoke some French and English respectively. Hamza and Shula had been attending EICA programs longest: a little over two years. All had some level of Spanish, with oral and written proficiency generally being lower; Mohammed, who had lived in Spain for over eight years, had the greatest learning difficulties.

Table 1: Characterization of study participants.

Name	Age	Sex	Country of origin	Years in Catalonia or Spain	Education	First language	Start date at EICA	Other languages	Spanish skills: Oral, written, comprehension		
Hamza	35	M	Ivory Coast	1.5	primary only	Fula	September 2011	French, Spanish	7	6	7
Shula	53	F	Senegal	8	none	Wolof	September 2011	Spanish	6	5	7
Ibrahima	21	M	Ghana	1	primary only	Twi	September 2012	Spanish English	5	5	6
Mohammed	46	M	India	8	none	Punjabi	September 2012	Spanish	5	5	7
Nazma	25	F	Bangladesh	1	none	Bengali	January 2013	Spanish	6	5	6

2.4 Instruments and procedure

Data were collected using a personal-network questionnaire created specifically for this study and administered in a personal interview. The questionnaire consisted of four modules in order: (1) questions about the respondent (*ego*); (2) a name generator to configure the personal network; (3) questions about the attributes of each network member (*alters*); and (4) a question repeated for each pair of network members to establish whether they were linked or not for the purpose of determining the network structure.

Table 2 shows the questionnaire modules with the dimensions and indicators of each. As both strong and weak ties were of interest for identification of the personal network, we opted for an open name generator, which elicits both types of ties (McCarty 2002, Molina 2007): "write down the names of the people who are important for you and with whom you have interacted during the past year. You can list as many people as you want; it can be anyone: family, friends, acquaintances, co-workers, students at EICA, neighbors, etc. It may help if you think about the different areas of your life".

Table 2: Personal-networks questionnaire.

Module	Dimension	Indicator	Description
e*go*	*ego*'s attributes	sex, age, origin, time resident in Spain, level of education, languages spoken	socio-demographic variables of the interviewee collected
name generator	personal network	people from the different social contexts of the subject with whom they maintain ties perceived as meaningful	enabled us to identify the people (*alters*) occupying one or more subsets of the interviewee's personal network; this is one of the instrument's most important questions for establishing the subject's personal community

alters	alter's attributes	sex, age, origin of *alter,* knowledge of Spanish, relationship with *ego* (family, neighbor, teacher, classmate at center, shared residence)	compiled variables to facilitate characterization of people named in *ego's* network insofar as they were relevant to the study	
	relationship between *alter* and *ego*	characterization of relationship with *alter* (general)	nature of relationship: scope, mode (in person, phone), frequency, strength	allowed the ties with each of the people in the personal network to be characterized
		languages	language normally used to communicate with *alters*	explored use of Spanish and other languages in the flow of relationships
		strength and type of relationship	spends free time with *alter*, personal support, strength of tie	provided information about the strength of the relationship, affective resources from the interaction and promotion of well-being
network structure	relationships between *alters*	relationships between *alters* other than with *ego*	enabled us to determine whether the people with whom the *ego* had ties interacted with each other	

The questionnaire was administered individually following a structured interview method. Data were collected *in situ* with the open-source software EgoNet (Egocentric Network Study) designed by Christopher McCarty at the University of Florida.

3. Results

This section provides a general description of the networks of the cases studied in terms of basic elements such as:

- number of nodes
- origin of *alters* (to identify cultural heterogeneity or homogeneity)
- context and frequency of communication
- level of Spanish in nodes
- language of interaction between *alter* and *ego*

Subsequently the structure of the relational system of all cases is presented, and finally we take a closer look at two cases.

3.1 General nature of personal networks

3.1.1 Number of *alters* and their origins

One of the most noteworthy features in the networks of all the cases analyzed is that the total number of *alters* or nodes is extremely low, ranging from five to eight; see Table 3. The presence of Spanish *alters* varied greatly from case to case. Nazma indicated that half the meaningful people in her relational environment were Spanish; while, at the other extreme, Mohammed's and Ibrahima's networks did not include any Spanish people in their relational environment of strong relationships. Contact with others from the same country of origin was obviously much higher. Mohammed had a completely homogeneous network in terms of cultural background, made up entirely of people from India, his country of origin.

Table 3: Country of origin of alters.

Case	No. of *alters*	Spain	Same country as e*go*	Country other than *ego's* country of origin or Spain
Hamza	7	28%	42%	28%
Shula	7	42%	57%	0%
Ibrahima	6	0%	66%	33%
Mohammed	5	0%	100%	0%
Nazma	8	50%	42%	37%

Several case studies included relationships with people coming from countries other than *ego*'s country of origin or the host country, in some cases reaching a third or more of the nodes in the total personal network. This is highly significant as it means that with each *alter,* there is a potential increase of relational social capital for language learning and use, as well as for the mobilization of other social-support resources.

3.1.2 Contexts and frequency of communication

For each person listed in the network, respondents were asked to identify the type of relationship with the *alter* (family, partner, neighbor, classmate at EICA, teacher at EICA, acquaintance or other). The results were very diverse, but the trend was toward concentration of nodes around the family environment.

In some cases, the EICA learning center was where a major number of meaningful ties were established. Over 50% of people in Hamza's network were fellow students and teachers from her literacy program. Acquaintances and neighbors were practically non-existent in the networks. Nazma stood out from the others, with only one family member among her *alters* and a network consisting almost entirely of nodes she described as neighbors.

Frequency of contact varied from 30% to 70% of people in the network with whom interaction was daily or a few times a week. Again, Nazma stood out as having daily communication with all those in her environment. Hamza, Ibrahima and Mohammed, on the other hand, indicated that – with some of their contacts – communication was less than once a month. Communication was mainly in person, occasionally by phone and never by Internet or other means.

3.1.3 Languages of personal networks

The language generally used with the respective *alters* was a variable that enabled us to ascertain the vitality of the network regarding use of languages other than the person's first language. The results indicated that, except for Nazma, all participants consistently used their first language with over half the people in their network. Spanish appeared as the language

generally used to communicate with certain *alters*, but less so. Although some people spoke some English or French, they did not use these languages.
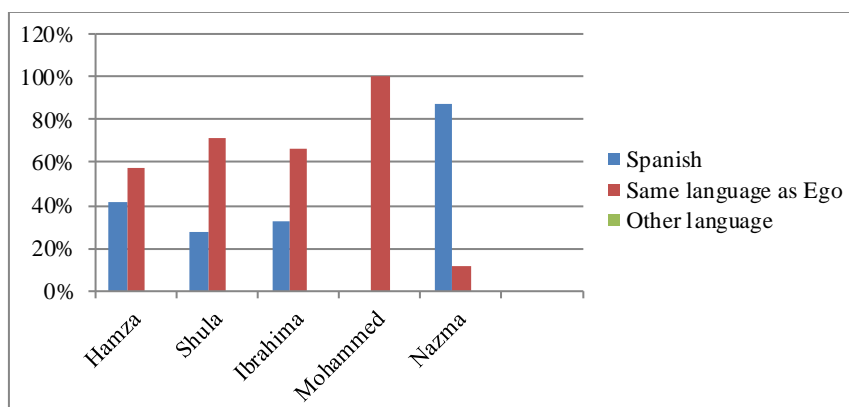

Figure 1: Languages used by *ego* to communicate with alters in their network.

Regarding the level of Spanish of network members, *ego* was asked about their perception of the level of Spanish of the *alters*. The knowledge of Spanish of *alters* varied greatly: in Mohamed's case, no one spoke Spanish, while for Nazma and Shula, a large number of people in their group of more meaningful relationships had a good level of Spanish. Shula stated that 14% of her *alters* had no knowledge of Spanish while all others had some knowledge, up to 58% with a high level. Hamza responded that people in his network had "very good" (42%) or "no" (58%) knowledge of Spanish. Ibrahima, on the other hand, indicated that over half his *alters* had a poor command of Spanish.

Table 4: Alters' level of Spanish

Case	Good / quite good	Poor / none
Hamza	42%	57%
Shula	71%	29%
Ibrahima	33%	67%
Mohammed	0%	100%
Nazma	62%	38%

3.2 Structure of personal networks
In the preceding sections, we commented on some of the indicators yielding data on the structural characteristics of networks, such as the number of nodes or cultural homogeneity and heterogeneity. Using EgoNet allowed us to visually analyze other relevant SNA variables such as density (the percentage of ties existing in a network out of all possible ties, indicating the strength of relationships in the network as a whole) or the presence of subgroups or substructures (e.g., cliques, defined as a set of *alters* all directly tied to each other). The following plots (Figure 2) show the structures of our case studies' personal networks.
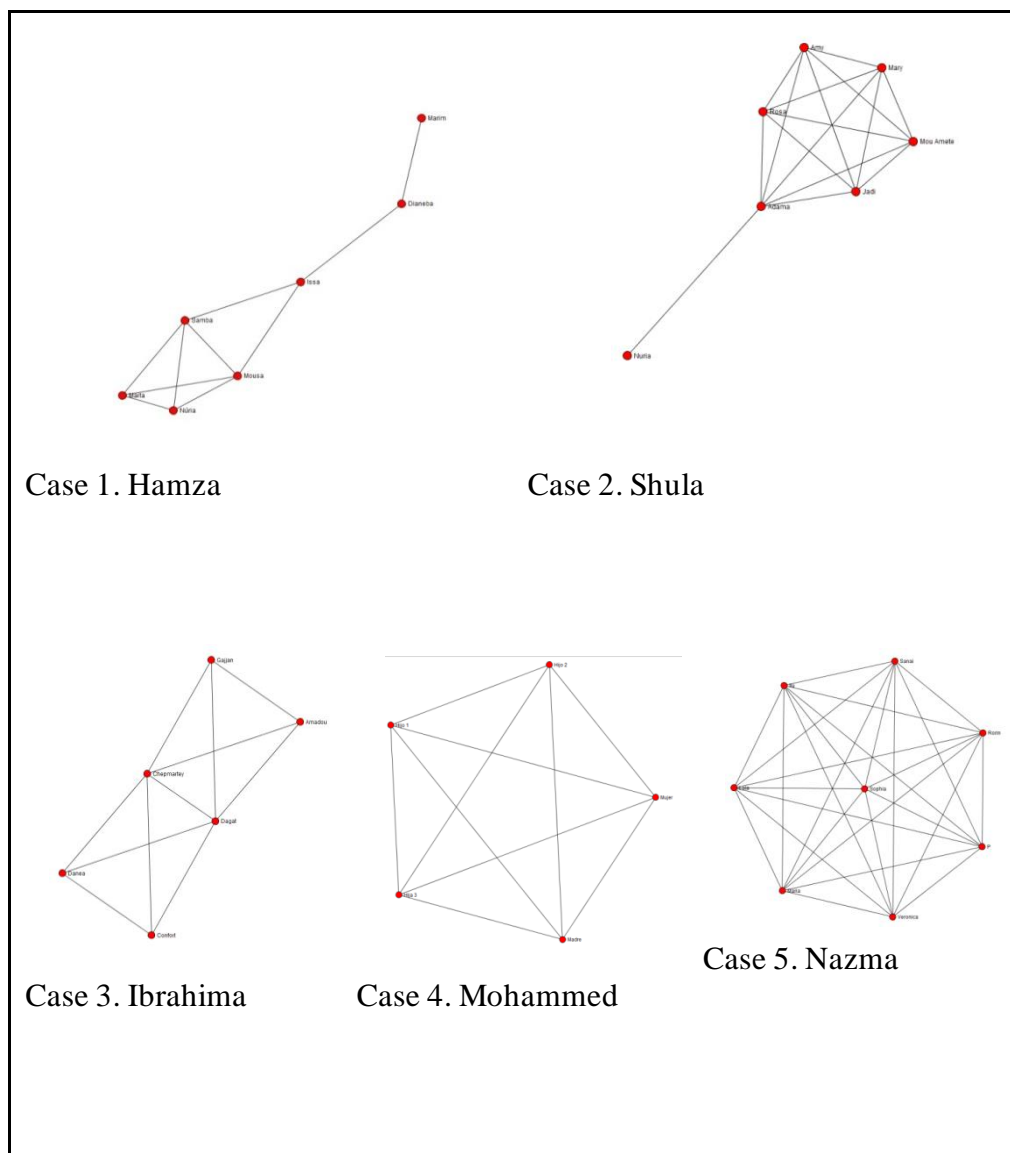
Figure 2: Personal networks of cases studied.

Generally, the networks revealed relational structures clustered around a single plot, with a degree centrality close to zero. This means that all *alters* had the same or similar number of ties, and that they had high density levels. These were somewhat lower in the case of Hamza or Ibrahima, who had established some ties with people outside the main plot. The network structures were flat and dense with interdependent relationships in cohesive cliques, reinforced by dyadic redundancy.

3.3 Two examples: Ibrahima and Nazma

EgoNet enables variables in interview-generated personal networks to be illustrated graphically using various colors, sizes and shapes for the nodes and ties. This visualization is a powerful tool for exploring cases in terms of the variables of interest, establishing hypotheses, examining relationships, etc. Below we take a closer look at two example cases, Ibrahima and Nazma, including in each case graphs representing the most relevant variables.

3.3.1 Ibrahima's personal network

Born in Ghana 21 years ago, he had a wife and daughter still living in Ghana. He had arrived in Spain one year previously with the hope of finding work to support his family. He had experienced great difficulties during the past year but always had the support of his older brother, who had accompanied him on his journey. His brother had dropped out of the EICA literacy classes but Ibrahima had continued, realizing the advantages of learning the language of the country. In Ghana, he had received only primary education. He read and wrote Spanish with difficulty, but his comprehension was good.

Figure 3 shows that nobody in his personal network was born in Spain. His relations revolved around his family (wife, daughter and brother), a fellow citizen living with him (node identified as "neighborhood") and two friends from the EICA center who came from other countries. Ibrahima used Spanish "a lot" with these two friends and occasionally with his flatmate.
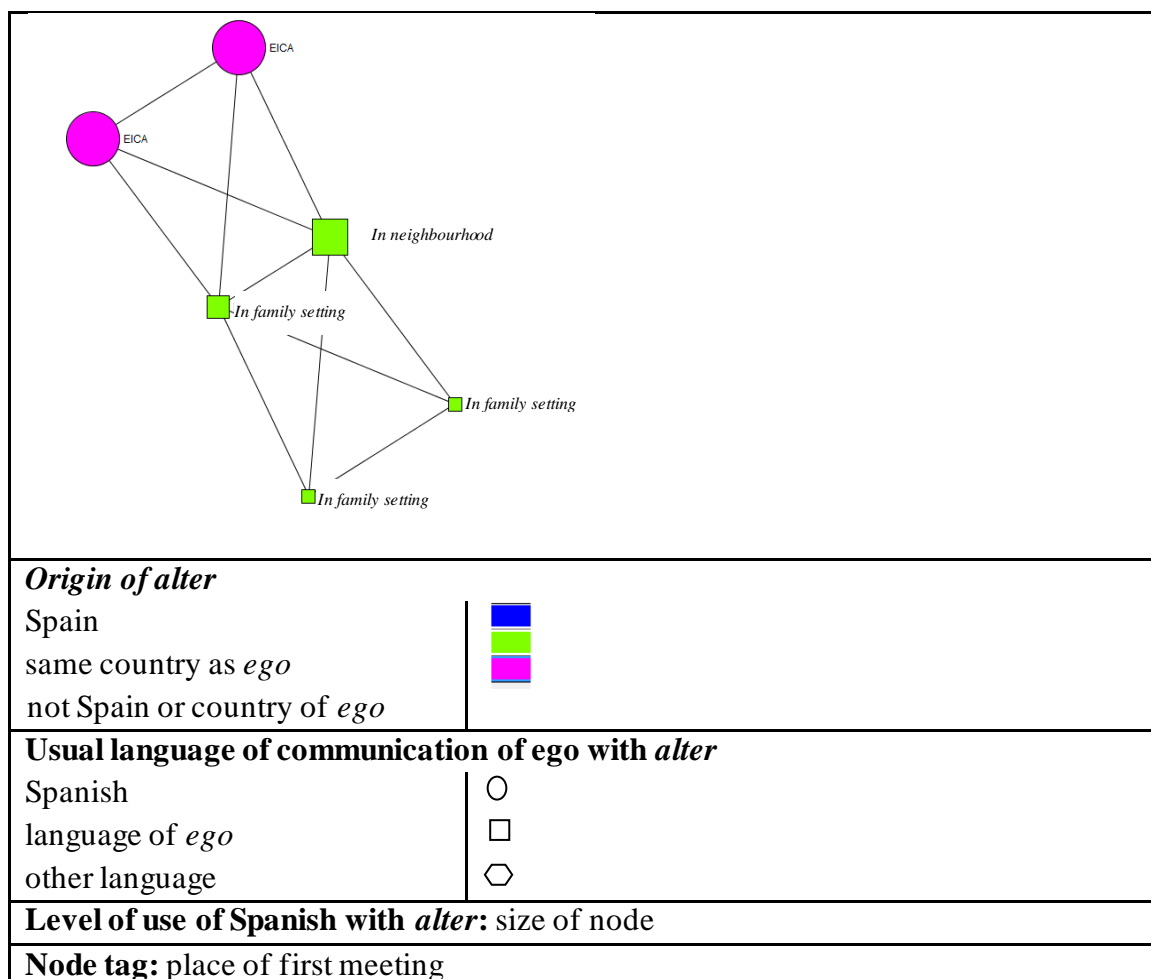

Origin of alter	
Spain	🟦
same country as *ego*	🟩
not Spain or country of *ego*	🟪
Usual language of communication of ego with *alter*	
Spanish	○
language of *ego*	□
other language	⬡
Level of use of Spanish with *alter*: size of node	
Node tag: place of first meeting	

Figure 3: Ibrahima's personal network (from Ghana, Twi-speaking).

Ibrahima described the knowledge of Spanish of his two friends at EICA as "poor" and "regular". He did not spend his free time with them but with his brother and flatmate who spoke Spanish well. As Ibrahima's network was so small, it was most likely that his flatmate, with whom he spent his free time and who had a good command of Spanish, was a potential and effective tie that could steer him towards contexts and situations that could promote his use of Spanish, thus constituting a learning support.

3.3.2 Nazma's personal network

Nazma was 25 years old and had a seven-year-old daughter. Both were Bangladeshi and their first language was Bengali. They had been living in an association for women who were victims of domestic violence or homeless for over a year. Neither her husband nor her family knew that she was in the country. Her personal network included her daughter and companions at the association: all women. She attended EICA regularly and participated actively in the activities there. She had received no education in Bangladesh, but this had not prevented her from advancing quickly in her acquisition of Spanish. She had a good level of comprehension and could maintain simple conversations. What did her personal network say about the level of the Spanish language within her system of relationships?
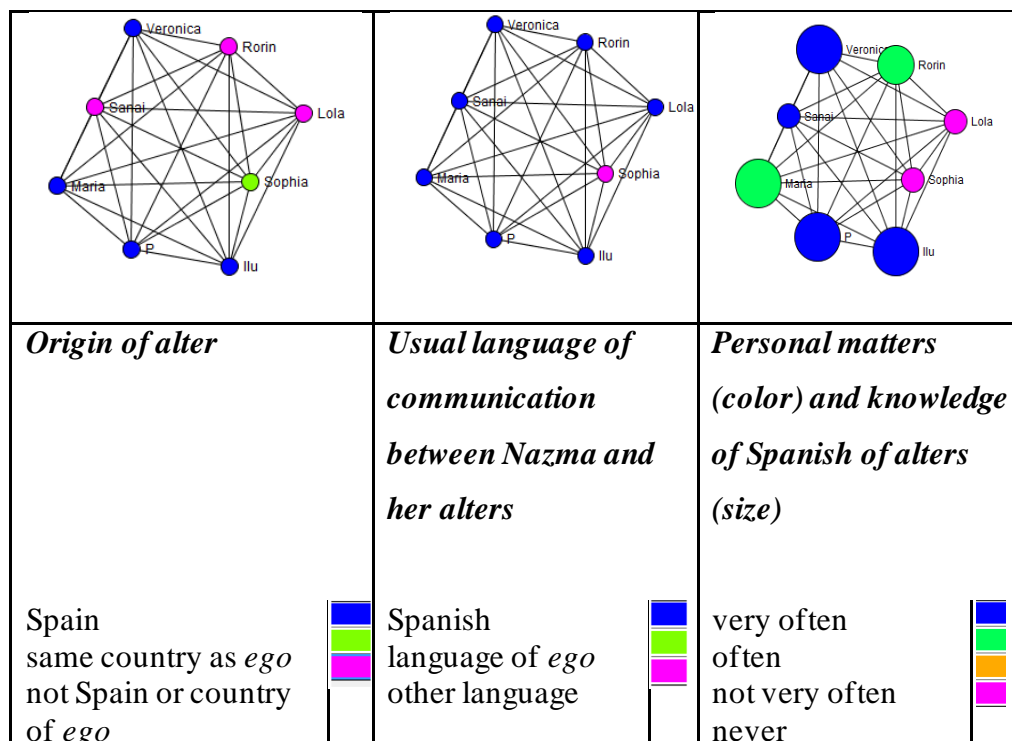

Origin of alter	Usual language of communication between Nazma and her alters	Personal matters (color) and knowledge of Spanish of alters (size)
Spain same country as *ego* not Spain or country of *ego*	Spanish language of *ego* other language	very often often not very often never

Figure 4. Nazma's personal network (from Bangladesh, Bengali-speaking).

First, it revealed that Nazma had a personal network with the highest number of nodes (eight) in the sample. Figure 4 depicts the cultural diversity of her network (*alters* of diverse origins) in which only her daughter Sophia was from the same country. The origin of her *alters* was diverse, with four from Spain and three from countries other than her country of origin. What language did Nazma normally use to communicate with her network members? Except with her daughter, she generally used Spanish, making this language a meeting point for all these women. We explored the function of social support expressed as sharing personal matters with *alters*. Nazma revealed that she maintained strong ties with various people in this respect, interacting with them "very often" or "often" (color), and that these were the people in her network who had the best knowledge of Spanish (node size), as they were Spanish.

4. Discussion

The use of SNA and the visual representation of relationships have great descriptive power. SNA allows a network measurement approach to social capital (Borgatti 1998) while affording a potent means of exploring "relational social capital" (Massey et al. 1987). This study adopted an egocentric approach to SNA in which the departure point and anchor was the person interviewed. During the interview, respondents gave their views on the set of relations they perceived as meaningful and which made up their personal community. Our

case studies permitted an exploration of the networks of five immigrants attending a literacy program, including to what extent these networks might constitute social capital for the use and development of Spanish. Network elements taken into consideration were size and shape, attributes of network members (country of origin, language used to communicate with *ego*, knowledge of Spanish, etc.), contexts to which people belonged, and the functionality and strength of their ties.

Vila (1999) argues that the possibility for immigrants to acquire a language depends not so much on didactic and other devices, but more on active participation in the social relations of the host country. Researchers concur in pointing to the importance of learning the daily life relations of the various cultural groups (Aparicio & Tornos 2005); they have found that relational fractures in immigrant populations are reflected in the contextual, functional and structural variables of personal networks, especially in their bonding and bridging capital (*Institut de Govern i Polítiques Públiques* 2006). From the point of view of professional intervention, bearing in mind that personal networks are an expression of integrative processes, coexistence and opportunities for social participation (Sandín & Pavón 2011) – it would appear important to implement, alongside language-learning activities, other activities that expand relational spaces and facilitate inclusive ties to promote insertion into the associative and community fabric.

What is apparent from our case studies is the lack of valued weak ties (bridging capital): those that broaden the network of contacts and acquaintances beyond the group to which the person belongs, extending other horizons such as labor or cultural exchange (Granovetter 1973). It should be stressed that the underlying theory should be qualified in the context of poverty and socio-economically disadvantaged groups (including immigrant populations) because – in these situations – weak ties, if they exist, represent friends of friends or relatives who are in similarly disadvantaged situations or otherwise do not entail social or cultural distance (Granovetter 2003). Network analysis has revealed that, in general, networks evolve around the nuclear family (bonding capital) and lack of *alters* (neighbors, friends and acquaintances) who represent a community relational level.

The size of the networks analyzed was very small; between five and eight *alters* with meaningful ties. These results coincide with other studies in the field of migration, such as Aparicio & Tornos' (2005) on the networks of the immigrant population in Spain, in which it was found that recently arrived foreigners tend to enclose themselves in a small world made up only of their compatriots and a few friends, with the result that the institutions set up to help them solve work or housing problems have serious difficulties contacting them. Pascual (2007) had similar findings on the most frequent networks in the initial period (three to four months) after foreign nationals' arrival in Spain. The networks show the major importance of close ties, among which family and friends are highly significant, with scarce contact outside the close private circle. This lack of interaction with people outside the closest circles can act to the detriment of recent arrivals' rapid insertion into their new context. According to these researchers, while migrants may feel psychologically more sheltered, their lack of access to the wider variety of resources normally provided by ties with actors from different contexts limits their freedom of choice and action in the medium term.

Since lack of knowledge of the language is the norm, considerably reducing chances of interaction with Spanish people or foreigners of other nationalities, educational initiatives for learning the language should be strengthened. We strongly recommend approaching the most isolated groups, among which Africans stand out, especially Moroccan women working in isolation on farms in the countryside.
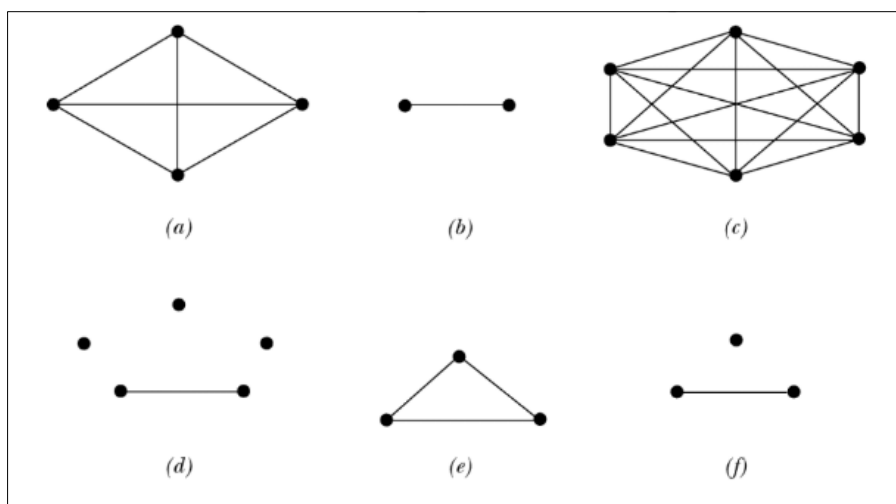
Figure 5. Main networks of strong ties in the first 3-4 months in Spain (Pascual 2007: 79).

Although our study focused on interactions between *ego* and *alters* to investigate communication and language use, the instrument included some questions enabling us to gauge the intensity of relationships and to what extent they shared personal subjects or those otherwise of interest to *ego*; this in turn allowed us to estimate the strength of participants' support systems. In the psychosocial view of social capital (Gracia, Herrero & Musitu 2002; Lin 1986; Maya-Jariego, Martínez & García 1999) "support" is understood as a set of emotional and instrumental resources obtained from interaction with others (therefore from the relationships in social networks) that help individuals adjust to their environment, improving their well-being. Although the number of *alters* in the networks studied was very low, the presence of some with whom subjects of interest for *ego* were shared was often mentioned – normally with relation to family, but also *alters* who were friends or acquaintances, classmates from the adult school where they were studying Spanish, or even teachers, sometimes referred to as the most important person with whom personal subjects were shared. The presence of *alters* with this type of tie is indicative of a similar level of emotional support to that found in Martínez García (*et al.* 2001) on the cushioning effect of social support on depression in immigrant groups, as well as on types of networks and psychological adaptation (Maya 2002). On some occasions, communication between *ego* and *alter* is in a language that is native neither to *ego* nor *alter*, so that Spanish is the *lingua franca*.

We believe that the approach presented here, as a tool for promoting integration and social support, should be the focal point in discussions of training and community planning interventions, particularly those designed to combat isolated and dispersed networks. One of the main objectives of social and educational interventions should be to guide immigrants, and in general the population at risk of social vulnerability, while at the same time generating social capital. Researchers in this field should not only consider personal network characteristics (size, density, function and cultural perception), but also the type of social capital that a person has access to and how this translates into potential or actual support in their personal and professional development – always with the intention of making changes to optimize this development. The social and personal networks of immigrant populations can be the starting point for promoting relational spaces and activating inclusive participatory links and dynamics for the management of integration processes in educational environments and the community. Actions such as mentoring programs (MBF 2010, Rhodes & Lowe 2008) or service learning (Luna 2012) may contribute to broadening networks and relationship contexts.

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Appendix: Glossary of terms

actors*:* social units of discrete individuals, corporations or groups.

attribute*:* characteristic of a node measured independently of the network.

alter: node or person related to *ego* (normally used to describe networks centered on *ego*).

ego: focal node on the basis of which a network is constructed.

weak ties*:* expression popularized by Granovetter referring to specialized relationships between two social actors.

strong ties*:* in contrast to weak ties, these are strong, close social relationships.

social network: a finite set of actors and the relationship or relationships among them. Relational information is crucial and is what really defines the social network. The actors are the social bodies whose ties we wish to study. These may be organizations, nations, people, etc. Actors are united by ties, which in turn represent the type of relationship analyzed.

*ego***-centered** or **personal network**: this includes a focal actor, or *ego*; a set of *alters* that have ties with the *ego*; and measures of the ties between these *alters*. In this type of network, the interviewee is usually named *ego* and the *alters* are the actors about whose existence and characteristics *ego* offers information: those directly related or positioned closely to them.