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Neighbors and neighborhood. Effects of proximity, educational and economic status on personal networks in Argentina.

De Grande, Pablo.

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Neighbors and neighborhood. Personal networks and residential distance in Argentina

Pablo De Grande

Abstract

In this article we present results of a national (7 cities) personal network study carried out in Argentina during 2006. The relation between sociability and neighborhood is examined, stressing the idea that neighborhood unfolds as a complex, multidimensional phenomenon that spreads from past experience to present relations, creating new connections but also consolidating existing ones. Additionally, the interplay among economic status, educational status, personal ties and neighborhood sociability is explored, summarizing descriptive analysis of the information we gathered after our name generator based survey.

Introduction

While in theoretical terms, social network analysis and personal network studies are bound to the classical sociological concerns of Simmel's sociability (Simmel, 1949 [1910]), as well as the Durkheim's 'social tie' (Durkheim, 1967 [1893]:144), in practical terms personal network studies led interpersonal relations research to quantify and make explicit observation of ties and exchanges as never had been made before (Degenné y Forsé, 1999).

Personal network studies have focused on investigating everyday relations and interactions. However, even when personal networks and neighborhood have early been related, two restrictive patterns in most of these studies on the subject can be observed: firstly, the topic of neighborhood is assimilated to the problem of poverty, thus investigating from 'slum' to low-income neighborhoods but excluding middle class and high-income neighborhoods (for

comparison or specific research). Secondly, the neighborhood is defined as the social space of 'neighbors', excluding the relationships or experiences that occur nearby home with people not considered merely neighbors.

This article summarizes the information we obtained after a personal network module in 7 large cities of Argentina. In 2006, we designed and applied an additional module (questionnaire) for personal ties at the household survey *Encuesta de la Deuda Social Argentina* (ODSA, 2007). The goals regarding neighborhood and sociability that this module was designed to cover were:

1) Analyze the relationship between personal ties and neighborhood. Specifically, to estimate how relevant neighborhood was today for everyday's people sociability in large urban centers of Argentina.

2) Investigate the relevance of neighborhood through a multi-dimensional approach. That is, not only to consider part of the neighborhood the people identified as 'neighbors', but also look at geographical distance of other persons, as well as to current and past experiences relating neighborhood.

3) Explore the relationship between social structure elements (economic capital, educational capital, age and gender) and the pervasiveness of personal ties within the neighborhood. We were interested in verifying assumptions about the relationship between poverty and neighborhood and between residential isolation and poverty that were prevalent in the literature.

4) Following the separation of economic and cultural capital proposed by Pierre Bourdieu (Bourdieu, 1994), we wanted to test whether differences in the relation between personal networks and neighborhood could be identified for those type of capital.

The next sections present a literature review, the characteristics of the survey and the survey sample, the variables analyzed and the data results. Finally, we relate the initial goals to the evidence, discussing some theoretical and practical implications.

Neighborhood and personal networks

Since Chicago School concerns (Park et al., 1925; Wirth, 1928), but also before that (Engels, 1987 [1845]), neighborhood has been identified as a key concept for understanding everyday life in metropolitan landscapes. People inhabiting large cities often centralize many of their activities –from daily consumption to children's education– in the limits of their neighborhood, reproducing both neighborhood features and typical local profiles. However, even when the link between poverty and neighborhood was substantially sustained by empirical research (Wilson, 1987; Jenks & Mayer, 1990), Chicago school scholars has been often criticized for treating each neighborhood as a closed (independent) social space, omitting forces that may influence the local space at city, country and cross-country levels (Gravano, 2005).

In an attempt to relate the differences among neighborhoods, the study of segregation has been recurrently used to try to connect neighborhoods in terms of its urban integration (Duncan & Duncan, 1955; Cortese et al., 1976; Massey & Denton, 1988; Morgan, B. y Norbury, 1981; Goodman, 1985; Dawkins, 2004; White 1984; Wong 2002). Recent studies have updated the segregational map of many Latin American cities (Kaztman, 2001; Kaztman & Retamoso, 2005; Groisman & Suárez, 2005, 2006; Sabatini et al., 2001; Torres, 2000; Rodríguez & Arraigada, 2004; Salvia & De Grande, 2007; PNUD, 2009). as poverty and inequality levels raised rapidly after neoliberal policies in the region (Sabaté, 2000; Kaztman, 1999; Salvia, 2001; CEPAL, 2001; CEPAL/CELADE, 2002). Segregation studies usually calculate coefficients –like the Duncan's segregation index (Duncan & Duncan, 1955)– to estimate (after census data) the levels of diversity in a population's geographical distribution. As a problematic feature of segregation studies, it can be outlined that they mostly derive negative consequences of segregation for low-income districts, but are vague at analyzing implications (positive or negative) of segregation configurations for middle class or high income neighborhoods. A significant strength of this approach is that it provides comparable isolation measures for any city where census data is available to process at district, census track, block or similar small-sized geographical level. Along with this strength, a limitation of this type of information is that census data tend to monitor attribute data of the target population (occupational status, gender, age, and so on), thus making difficult to incorporate relational information in the segregation arguments (such as the dynamics of the ties with family members and friends, daily interaction outside neighborhood and so on).

Within social networks studies, the relevance of space (physical distance) has been outlined as a covariate, reinforce or modifier for social space forces (Latané et al. 1995; Molina et al. 2012; Doreian & Conti, 2012). The arguments for its relevance are similar to the ones held for neighborhood relevance (Ainsworth, 2002; Salvia & De Grande, 2007): physically close ties are more likely to be created (Preciado et al. 2012, Daraanova et al. 2012; Schaefer, 2012), they tend to be more influential and it is more common to enroll in activities in places that are well-known or where well-known people exist (Ioannides & Zabel, 2008).

Another concept that led to deepen into neighborhood and local understanding is social capital. After the search for social capital mechanisms, neighborhood and personal relations has been revisited since the 90's with diverse results (PNUD, 1998; Burt, 2000; Lin, 2001, Van der Gaag, 2005; Atria et. al., 2003; Forni y Nardone, 2005; Sabatini, 2008). Organizations like CEPAL and the World Bank have found at social capital a powerful concept to incorporate into their analysis the informal exchanges of goods and services that people mobilized to organize they daily needs in lack of economic resources (Grootaert, 1998; Lederman, 2001; Woolcock, 2001; Atria et al., 2003), sometimes overestimating the capacities of such 'capital' (De Filippis, 2001, ONS, 2001; Bagnasco et. al. 2004; Sabatini, 2003).

Close to the social capital motive of tracking the effects of socialization in everyday life are social support and personal networks studies. Both groups of studies investigate everyday

interactions, thus often informing about neighborhood and community dynamics. While social support studies (similar to social capital) stress on beneficial consequences of personal relations (House et al., 1988; Enriquez Rosas, 2000; Maya Jariego & Holgado, 2005; Mickelson & Kubzansky 2003; Agneessens et al., 2006; Lin et al., 1979; Lieber & Sandefur, 1998; Van der Poel, 1993), personal network studies investigate methodological and substantive topics about how people create, maintain and use personal relations (Fischer, 1982; McCarty et al., 1997; Espinoza, 1999; Wellman y Potter, 1999; Grossetti, 2005; Ferrand et al. 1999; Lee et al. 2005; Molina, 2005; De Grande & Eguia, 2008). Moreover, often social support and personal networks research relate sociability to substantive areas that do not rely on neighborhood (or where 'neighborhood' is replaced by 'networks') as a crucial dimension, such as when studying health (Lin et al., 1979; Castro et al., 1997), psychological well-being (Gencoz y Ozlale, 2004; Kenneth et al. 1978; Martínez García et al., 2002), friendship (Mcpherson et. al., 2001; De Federico de la Rúa, 2003; Stevens & Van Tilburg, 2011), access to labor markets (Granovetter, 1973; Feldman & Murmis, 2002) and political behavior (Zuckerman, 2005; Szwarcberg, 2012).

In terms of conceptual definitions for neighborhood, even if there is not a complete or unique definition available (Hipp et al., 2012), attempts to arrive to such definition converge in the idea that it stands as a multidimensional phenomenon (Schwirian, 1983; Gravano, 2003). While Schwirian groups existing literature into those whose studied (a) neighborhood as natural area, (b) neighborhood as a social area and as (c) neighborhood an as interaction system (Schwirian, 1983: 84), Gravano recognizes as the three main dimensions of neighborhood approaches (a) spatiality (neighborhood as a space, physical and administrative), (b) scenality (neighborhood as a scene) and (c) functionality (neighborhood as a functional element) (Gravano, 2003: 14).

This article empirically explores the connections among these dimensions, linking distance to interactions, but also considering neighborhood as a functional (socially stratified) space and as a social scene for acquaintance and sociability.

Our study

The information used in this article comes from the *Encuesta de la Deuda Social Argentina* (ODSA, 2007). This survey is made annually since 2004 in a set of large urban centers of Argentina collecting information about human development indicators[1].

Households for the sample are selected using a stratified sampling procedure. Based on 2001's National Census demographic data and cartography a set of 250 sample points are randomly chosen. Then, field representatives visit each sample point and identifiy 6 addresses (houses / apartments) to look for respondents. Up to two visits are made if the respondent is not at home; replacement addresses are provided when there are no eligible respondents or when they are not

[1] In 2006, the survey was applied in greater Buenos Aires, greater Cordoba, greater Mendoza, Bahia Blanca, Neuquén-Plottier, greater Salta and greater Resistencia.

willing to answer the survey. Quotas of gender and age are followed to keep the sample proportional to each city's known distribution.

In 2006, a onetime module of personal networks was applied to all adults responding the survey (n=1500). Similar to Burt's General Social Survey module (Burt, 1984), this module was based on a single item name generator, with many items applied on each name enumerated. The name generator item was:

> "Often, people resort to friends, family, co-workers or acquaintances when they need advice or help for situations that without them would be difficult to resolve. Between acquaintances, not including those who live in your home, please, tell me only the first name of the people you would look for in such situations" (ODSA, 2006)[2].

The total number of names mentioned was registered, and then up to five names where investigated in terms of characteristics of the 'alter' and the tie. The attributes gathered for the alters were gender, age and education attainment. The attributes gathered for the tie were frequency of contact, duration, origin, type, distance from ego's house to alters' houses, content of the relationship (personal talk vs. non-personal talk) and level of knowledge among the alters[3].

During the study, a total of 1448 ties were collected and investigated (i.e. about one tie in average per person).

Variables

During the analysis, the following variables are used to group the personal relations gathered by the name generator previously described:

- Educational status: educational status is included both as a proxy for the position of the respondent in social stratification (cultural capital) and as an indicator of individual's path through formal institutions. It is expected from educational experiences to influence lifestyle preferences and goals, and also to provide specific opportunities to socialize with people involved (teachers, professors and students). Educational status is measured by the highest educational achievement of the respondent (ego). For data analysis, educational status has been grouped in three categories: Low, Medium and High.

[2] In Spanish in the original: "*Con frecuencia, la gente recurre a amigos, familiares, compañeros de trabajo o conocidos cuando necesitan un consejo o ayuda para situaciones que sin ellos serían difíciles de resolver. Entre sus conocidos, sin incluir a quienes viven en su hogar, dígame por favor, solamente el nombre de las personas a las que recurriría en este tipo de situaciones*"

[3] For a discussion on the technique of name generators and household surveys, see Burt, 1984.

- Low: up to 7 years of education (only elementary school or less)
- Medium: 8 to 12 years of education (i.e. high school studies)
- High: more than 12 years of education (i.e. university or tertiary studies).

- Economic status: economic status is relevant for the capabilities of people for creating and maintaining personal relations, not only because costs may exist at taking care of specific aspects of relations, but also because economic status is linked to lifestyles (consumer habits, clubs, entertainment, holiday places) that by themselves guide exchanges within certain sort of 'class boundaries'. To identify the category of economic status for each respondent, we calculated the total monthly income per equivalent adult in its household[4]. Then, we grouped respondents in tertiles, being at highest tertile those with income per equivalent adult above AR$610 (U$S 198) and at lowest tertile those with income per equivalent adult below AR$285 (U$S 93).

- Age: sociability is known to be largely dependent on the individual's life cycle. As age correlates to participation in typical states and spaces of interaction (e.g. school, workplace, retirement), it is used in the analysis to control its effects in the sociability outcomes described. The variable used is how old is the respondent, grouped into three categories: 18-35 years, 36 - 55 years, 56 years and more.

- Gender: whether the respondent (the 'ego') is classified as male or female. Even when women –during the XX century- have progressively acquired rights toward equal rights into educational institutions and labor market participation. In 2001, 42.3% of the economically active population were women, while 57% of people taking university education where women[5]. However, gender remains as major dimension in organizing domestic and public activities, end-consumer products, labor market profiles, entertainment and –much related to all of then– personal relations. As such, it is expected that gender may signal different behaviors regarding personal ties and neighborhood influence.

Results

Summary

In Figure 1 a description of the sample is shown. Given the name generator used, the number of ties enumerated was rather low compared to previous studies, with an average of 0.97 ties per

[4] The 'equivalent adult' is a coefficient that represents how many people leave in a household, weighting the people by gender and age after its nutritional expected needs. This coefficient takes a standard unit the nutritional needs of an adult male between 30 and 59 years (Salvia, 2001:258). The total number of members in each house was adjusted to this coefficient to normalize the income by the size of the household.

[5] Source: Author's calculations based on data from the *Censo Nacional de Población, Hogares y Viviendas* (INDEC, 2001).

respondent. From the overall sample (n=1500), 45% of the respondents declared having no ties to look for when in need of help of advice. For the purpose of this article, where characteristics of the personal ties are examined, only respondent declaring relations are considered in the analysis. The educational status, economic status and age variables have been grouped in order to ensure enough cases in all its categories, having similar size for all categories and yet retaining substantial meaning (i.e. low educational status means primary education or less).

Even when higher status is related to more personal ties available both for economic and educational status, in the case of educational status the number of personal ties per respondent show the lowest and highest levels in the table, ranging from 0.68 for the Low group to 1.33 for High group.

Regarding age, the number of personal ties decline as the persons grow older, starting at 1.23 ties per respondent in the youngest group, falling to 0.72 ties per respondent for group above 56 years.

Figure 1. Summary of personal networks sample by educational status, economic status, age and gender. Argentina, 2006 (selected cities).

	Respondents (n)	Respondents declaring no ties	Population (N)	Personal ties (count)	Personal ties (average)	Personal ties (standard deviation)
Educational status						
Low	560	302	3,956,622	383	0.68	0.93
Medium	543	237	3,831,772	537	0.99	1.15
High	397	139	2,803,596	528	1.33	1.37
Economic status						
Low	500	249	3,532,661	397	0.79	1.05
Medium	500	230	3,531,773	469	0.94	1.14
High	500	199	3,527,556	582	1.16	1.27
Age						
18-35	556	205	3,926,265	686	1.23	1.35
36-55	516	236	3,641,621	454	0.88	1.04
56+	428	237	3,024,103	309	0.72	0.98
Gender						
Male	773	381	5,461,879	690	0.89	1.16
Female	727	297	5,130,110	758	1.04	1.17
Total	*1500*	*678*	*10,591,990*	*1448*	*0.97*	*1.17*

Source: Author's calculations based on data from the Encuesta de la Deuda Social Argentina 2006.

Type of personal tie

The type of personal tie is related to the role structure established between the respondent (ego) and the persons she enumerated. It is expected that the role of a relationship (being friend, father, etc.) sets some guideline for the content, frequency and other characteristics of the relationship. The 'neighbor' category appears here as a tag for people that lives of lived close to

the respondent, not being signaled as friend, mate, coworker or kin. The questionnaire offered a list of 9 possible roles (plus an ‘other’ category), which has been grouped in 6 categories in Figure 2 (plus an ‘Other’ and a ‘Non-response’ columns).

Firstly, it’s worth pointing out that friendship is the more frequent type of tie declared, covering 60% of the personal ties enumerated. Under the figure of `friend', variations by educational status range from 54% to 63.8% and by economic status they range by 56.3% to 62.5% (Figure 2).

The greater changes by status are observed in the neighbor role, which raises to 11.1% in the lower educational stratum from 2.1% in the higher educational stratum (similar variations are observed by economic status). Also significant is the fall of kin participation when educational status increases, ranging from 30.7% to 21.2%, which is not replicated in the kin participation along economic status.

The evolution by age shows complex variations, with an increase of the family and neighborhood components as people grow older, increasing from 19.3% to 32% and from 2.1% to 10.1% respectively. At the same time, friends show a maximum of 70.2% at younger age, decreasing around 52% after age of 36.

Regarding gender differences, women exhibit relations more tied to their families, by opposition to men who look more connected beyond family spaces. Men show more friendship bonds (65.7% of friends between men and 56.2% between the women), and while 18.7% of the masculine ties are with relatives, women present 29.6% of their bonds reserved to the familiar interactions.

To sum up, even when neighbors were the 3rd most mentioned type of tie, its participation of 5.3% over the total number of ties would suggest a low relevance of neighborhood in the urban scenarios investigated. However, as introduced before, sociability in the neighborhood can range from present to past experiences, and be related as well with many relational contents. In order to evaluate these connections, we will next examine the role of neighborhood in the creation of personal ties.

Figure 2. Personal ties distribution for type of relation by educational status, economic status, age and gender. Argentina, 2006 (selected cities).

Type of relation (% per row)	Friend	Kin	Neighbor	Boyfriend /Girlfriend	Coworker/ classmate	Professiona l services	Other	NR
Educational status								
Low	54.0$^{\times\triangledown}$	30.7$^{\times+}$	11.1$^{\times+}$	1.2	1.9	0.0	0.4	0.7
Medium	62.4$^{\triangledown}$	23.1$^{\times}$	4.2$^{\times\triangledown}$	2.5	6.7	0.3	0.4	0.5
High	63.8$^{\times}$	21.2^{+}	2.1$^{+\triangledown}$	3.6	5.6	2.0	0.7	1.0
Economic status								
Low	56.3	25.1	9.0$^{\times+}$	2.1	4.6	0.9	0.4	1.6
Medium	62.2	25.9	3.7$^{\times}$	1.6	4.7	0.4	0.9	0.5
High	62.5	22.7	3.9^{+}	3.6	5.6	1.1	0.2	0.3
Age								
18-35	70.2$^{\times+}$	19.3$^{\times+}$	2.1$^{\times+}$	3.3	3.7	0.7	0.6	0.0
36-55	51.7$^{\times}$	26.9$^{\times}$	6.7$^{\times}$	2.0	9.0	1.6	0.5	1.6
56+	52.8^{+}	32.0^{+}	10.1^{+}	1.7	2.0	0.2	0.3	0.9
Gender								
Male	65.7$^{\times}$	18.7$^{\times}$	5.2	3.2	5.6	0.6	0.8	0.4
Female	56.2$^{\times}$	29.6$^{\times}$	5.4	2.0	4.5	1.1	0.3	1.0
Total	*60.7*	*24.4*	*5.3*	*2.6*	*5.0*	*0.9*	*0.5*	*0.7*

T-test for each column (e.g. Friend) within variables (e.g. Educational status) between marked categories (e.g. Low vs. High):

$^{\times,+}$: Sig. < 0.01; $^{\triangledown}$: Sig. < 0.05.

Source: Author's calculations based on data from the *Encuesta de la Deuda Social Argentina 2006*.

Origin

The Origin of personal ties was examined by asking the respondents how did they meet the person they had mentioned. A total of 8 possible ways were offered (plus an 'other' category), which has been grouped in 5 categories in Figure 3 (plus an 'Other/Non-response' column).

Social spaces -or social circles- are the most usual source of personal ties declared in the sample. People known 'in the neighborhood', workplaces or educational institution summarize 56.4%, while 14.3% of the personal ties of the sample correspond to contacts through well-known people.

When observed by educational and economic status, higher status corresponds to higher participation of educational sociability in the origin of personal ties, in spite of socialization through the neighborhood. While socialization happened in about 40% of the ties 'in the neighborhood' for the lower status strata, only about 20% of the ties declare this origin in the higher status strata.

As it is expectable, this relation is stronger in the increase of the educational status, as it implies more exposure to direct forms of educative institutionalization: sociability by educational spaces is as little as 1.1% in the lower stratum, while it reaches 35.2% in the higher stratum (Figure 3).

With regard to the relation between age and neighborhood ties, the participation of such ties remains stable around 26% between the two first categories (18 to 35 years and 36 to 55 years), and shows an increase of almost 10 percentage points in the category 56 years and more.

The distributions by gender are different in ties originated at the family and at the neighborhood. Whereas for men the personal ties obtained in the neighborhood reach 32.8%, for women they occur in smaller proportion (24.6%). This difference seems compensated by a greater level of participation of women in family circles as a source for relations (Figure 3).

Figure 3. Personal ties distribution for origin by educational status, economic status, age and gender. Argentina, 2006 (selected cities).

Origin of the personal tie (% per row)	Places			Referred	Direct	Other, NR
	Elementary school, high school or university	Workplace	Neighborhood	Through a friend, girlfriend, boyfriend or kin	It's kin	
Educational status						
Low	1,1$^{\times +}$	7,2	41,5$^{\times +}$	13,8	32,0$^{\times +}$	4,5
Medium	13,9$^{\times *}$	11,7	33,8$^{\times *}$	13,9	21,2$^{\times}$	5,6
High	35,2^{+*}	9,2	13,7^{+*}	15,2	20,7^{+}	5,9
Economic status						
Low	10,3$^{\times}$	7,7	40,0$^{\times +}$	10,9	26,3	4,8
Medium	14,3^{+}	9,0	31,5$^{\times *}$	15,3	23,8	6,1
High	27,0$^{\times +}$	11,5	18,1^{+*}	15,8	22,3	5,3
Age						
18-35	28,9	6,0	26,8$^{\times}$	15,0	18,5$^{\times}$	4,9
36-55	10,2	14,9	26,3$^{\times +}$	15,5	26,9$^{\times}$	6,1
56+	6,7	10,0	35,4^{+}	11,2	31,4	5,4
Gender						
Male	19,1	11,2	32,8$^{\times}$	12,9	18,4$^{\times}$	5,6
Female	17,5	8,2	24,6$^{\times}$	15,6	28,9$^{\times}$	5,2
Total	*18,3*	*9,6*	*28,5*	*14,3*	*23,9*	*5,4*

T-test for each column (e.g. Neighborhood) within variables (e.g. Educational status) between marked categories (e.g. Low vs. High):

$^{\times,+,*}$: Sig. < 0.01; $^{\triangledown}$: Sig. < 0.05.

Source: Author's calculations based on data from the *Encuesta de la Deuda Social Argentina 2006*.

Geographical distance

In addition to past experiences that led to the creation of personal ties (the previous way we introduced to track the relevance of neighborhood) we investigated the distance between the house of the respondent and the enumerated persons.

As the exact separation could not be easily calculated during the interview, and as its meaning could vary from city to city (cities have different transportation facilities) we evaluated the

possibility of recording the amount of time it takes to go to the enumerated person's house. However, there was no guaranty for the distance to be cover systematically by the same transportation means (as it is more common on distance to work), thus producing more confusing on how to respond to the item. Finally we decided to state a metric scale, trying to determine whether both persons lived close enough to go by walk in a few minutes (up to 2km[6]), to take a bus or train, or whether they lived in different cities (more than 50km[7] away). The resulting scale is shown in Figure 4, and its results can be described as follows.

As we have expected, higher levels of economic or educational status are associated to higher chances of keeping personal ties at greater distance. Relations are the product of past experiences, and it is not uncommon that remote experiences requires economic resources and are often related to going someplace to be educated (e.g. high school, university).

In the case of the economic status, the personal ties that are located within the same city but at more than 20 blocks (2km) go from 25.4% to 43.4% as the status increases (Figure 4). For the educational status, the variation is still larger, ranging from 19.4% to 45%.

Nevertheless, it is possible to indicate that even in the lower strata, the level of people outside the neighborhood and in the same city never falls below almost one fifth part of the total of ties (19.4%). This argues against the thesis of total isolation of the people of fewer resources by effect of the neighborhood.

The variables of age and gender show smaller variations in the patterns of geographic location in comparison to the differences by status. In terms of age, the maximum of personal ties outside the neighborhood (more than 2km and less than 50km) is registered in the population between 36 and 55 years, and the minimum appears in the category of 56 years and more (38% and 24.5% respectively).

According to gender, the differences for relations within the same city are smaller but yet significant, showing men 35.6% of its personal ties outside the 2km range and women 29.3%.

[6] 2km = 1.25 miles.

[7] 50km = 31.25 miles.

Figure 4. Personal ties distribution for geographical distance to the *alters'* house by educational status, economic status, age and gender. Argentina, 2006 (selected cities).

Distance to the house (% per row)	Up to 20 blocks (2km)				20 blocks to 50 km	More than 50 km
	Less than 5 blocks	5 to 10 blocks	11 to 20 blocks	Total		
Educational status						
Low	48,8×+	17,7▽	7,4×▽	*74,0*×+	19,4×+	6,6
Medium	35,3×*	18,4×	12,4▽	*66,1*×*	29,1×*	4,8
High	22,0+*	12,5×▽	14,7×	*49,2*+*	45,0+*	5,8
Economic status						
Low	48,6▽	13,0▽	9,1▽	*70,7*×	25,4×	3,9▽
Medium	38,0×▽	17,5▼	12,3	*67,8*+	24,4+	7,8▽
High	21,2×	17,0▽▼	13,5▽	*51,6*×+	43,4×+	5,0
Age						
18-35	35,2▽	14,9▽	12,0	*62,2*▽×	32,1▽	5,7
36-55	28,3×▽	15,0▼	12,4	*55,6*▽+	38,0×	6,3
56+	39,9×	20,2▽▼	11,1	*71,1*×+	24,5×▽	4,4
Gender						
Male	31,1▽	17,1	11,1	*59,2*▽	35,6×	5,2
Female	36,8▽	15,2	12,7	*64,7*▽	29,3×	6,1
Total	*34,1*	*16,1*	*11,9*	*62,1*	*32,3*	*5,6*

T-test for each column (e.g. Less than 5 blocks) within variables (e.g. Educational status) between marked categories (e.g. Low vs. High):

×,+, *: Sig. < 0.01; ▽,▼: Sig. < 0.05.

Source: Author's calculations based on data from the *Encuesta de la Deuda Social Argentina 2006*.

Altogether

In Figure 5, a combination of geographical distance, origin and type of relation is shown. In the first column of every origin category (workplace, neighborhood, etc.) the number of personal ties for the category is shown, normalized to the total number of personal ties (% of total table). Next, the percentage of personal ties within the category that corresponds to someone living at less than 2km is calculated ('< 2km %').

We will first examine relations between geographical distance and type of relation, then between geographical distance and origin of the personal tie, and lastly between type of relation and origin.

About distance and type of relation (last column, named 'total') it's worth noting that friend and boyfriend/girlfriend are the categories with higher values (excluding the neighbor category) for 'less than 2km distance': 68% of all boyfriend/girlfriend lived within the 2km perimeter, and 64.66% of friends were in similar situation. Family has about half of the personal ties declared within this distance (51.58%).

Regarding distance and origin of the personal tie (last row, named 'total'), indirect relations (people you have met through someone you knew) is the category (excluding neighborhood) with more ties within 2km (60.56%). This express some level of transitivity of proximity when creating ties through well-known people: not only people you know live close to your house, but they also introduce you to people who live nearby. Family and educationally created ties are less locally distributed, but about 50% of them are anyhow located at less than 2km.

The combination of type of relation and origin of the personal tie enlightens about the composition of specific categories: while in the case of friendship the origin more usual for relations is neighborhood (23.58% of total number of ties), boyfriend and girlfriends are more usually met in educational institutions (0.46% of total ties).

Figure 5. Origin of personal tie and participation of ties within 2km by type of relation. Argentina, 2006 (selected cities).

Origin of the personal tie (% of total table) / less than 2km (% of cell)	Places						Referred		Direct		Other, NR		*Total*	
	Elementary school, high school or university		Workplace		Neighborhood		Through a friend, girlfriend, boyfriend or kin		It's kin					
	total %	< 2km %	total %	< 2km %	total %	< 2km %	total %	< 2km %	total %	< 2km %	total %	< 2km %	*total %*	*< 2km %*
Type of relation														
Friend	15.92	48.71	6.27	40.47	23.58	86.65	10.35	60.55	0.85	73.90	3.72	43.67	*60.69*	*64.66*
Kin	0.33	46.26	0.05		0.22	10	1.59	54.04	22.16	51.02	0.04	10	*24.38*	*51.58*
Neighbor					4.16	97.73	0.57	10	0.10	10	0.37	10	*5.26*	*98.21*
Boyfriend/ Girlfriend	0.46	78.39	0.10	10	0.31	36.50	1.29	71.93	0.23	64.71	0.17	53.97	*2.56*	*68.00*
Coworker/ classmate	1.56	45.91	2.85	40.30	0.17				0.14		0.30	10	*5.02*	*43.15*
Professional services			0.14				0.41	7.86			0.29	40.67	*0.85*	*19.03*
Other			0.04				0.12	21.49	0.06	10	0.27	16.32	*0.52*	*29.18*
NR			0.15						0.33	72.01	0.24		*0.72*	*32.98*
Total	*18.30*	*49.28*	*9.63*	*39.61*	*28.48*	*87.31*	*14.33*	*60.56*	*23.87*	*52.29*	*5.40*	*47.86*	*100*	*61.44*

Source: Author's calculations based on data from the *Encuesta de la Deuda Social Argentina 2006*.

Conclusions

First, it is important to stress that all findings in this article are derived from the single name generator we used. I.e., when we say that the 'personal ties' or the 'personal networks' of our sample exhibits a certain trend or correlation, we are only informing about the behavior of the specific type of relations our name generator could obtain. Networks of highly trusted relations can be selective by income while networks of occasional contacts may not; educational status may play a role in this type of ties while for family only contacts it may not play it, and so on.

Such name generator elicited long-standing relations (more than 5 years) and where people would share conversations about 'important personal matters' (two independent questions we asked about the relation).

Secondly, not only educational status and economic status had shown to be effective at discriminating sociability behavior towards neighborhood, but also age and gender appeared as powerful explanation variables on the phenomena. The personal relations of woman were more associated to family and nearby persons than men relations. Likewise, the measurement of personal ties allowed quantifying this gender trends, indicating its currency but also stating its limited force. I.e. even when women show more personal ties at neighborhood and family, they are far from being excluded from other circles of sociability. Many geographical distances and sources of personal ties are observed both for men and woman.

The analysis by age groups shown that the relevance of neighborhood increases as people grow older, suggesting that neighborhood relations –people declared as neighbors, ties originated in the neighborhood as well as people who lives nearby– are more available or desirable for the elderly than other kind of relations. It is unclear, however, whether this prevalence of neighborhood relations is better explained in the basis of durability or availability. That is to say, whether this kind of ties are stronger and better preserved over time than other ties, or rather that it is easier to create such kind of ties for older people, or a combination of both effects.

Regarding educational status and economic status, they showed similar trends all along the analysis, in terms of more relevance of neighborhood and more relevance of geographically close relations when approaching to lower strata. However, educational status consistently exhibited stronger differences of neighborhood significance between its lower and higher strata compared to economic status in all of the variables considered. It is possible that the specificity of educational status can be rooted in at least two factors. Firstly, its experience based nature. I.e. that educational status is usually attained by long term learning processed that imply per se spending time with others (teachers, professors, students) thus having more impact in specific ways of establishing bonds. Secondly, educational status differs from economic status in that it implies more consistently the assimilation of symbolic elements that may affect the ability and interest to relate with certain people (e.g. people in the neighborhood). Education is directly related to the incorporation of manners, values and others' past experiences. Furthermore, in the case of tertiary and university education, education is responsible for professional specialization, with all the social and personal singularities that such an experience may imply or promote.

Consequently, the effects related to try to keep in touch with people or places farther from the residence area (such as affording higher transportation costs, gaining access to more diverse educational contents, develop more complex professional careers) associate the possibility of doing it with higher levels of social status (greater availability of capital). This process can work

in both directions as it does in canonical examples of benefits of social capital diversity: higher economic status allows staying in touch with people outside the neighbor, and those personal connections become relevant ant job search thus impacting on future income levels. Similar reasoning can be developed for feedback between educational status and extra-neighborhood personal ties.

Nevertheless, the data presented in this article is far from identifying social closures (high segregation) between neighborhoods (such as ghettos), as even at the lowest strata about one fifth of the ties are kept outside the 2km range. This fact leads to assert –for the set of cities investigated in Argentina– that it is both reasonable to recognize neighborhood as a key social space for sociability but also to visualize the relative freedom all people has shown to mobilize, create and maintain relations within the city but outside its neighborhood.

Finally, the thesis that the term 'neighbor' should not be used as the only way to map the neighborhood (i.e. my neighborhood is more than the set of my neighbors) has been confirmed and extended. Moreover, geographical distance to ties seemed also insufficient for characterizing the role of neighborhood in sociability. Many previous research in the literature review were concerned about the relation between social distance and geographical distance, and quite often they tried to understand how both levels relate to measure neighborhood personal ties by a combination or an addition of neighbor's qualities. Our study, however, does not focus primarily in that direction. Even when the relation of personal ties and geographical distance can be examined (there is more proximity of ties on lower strata and at the same time smaller personal networks), we wanted to focus on demonstrating that past experiences, valuation of tie (through type of tie classification) and physical distance were no redundant levels of information. On the contrary, they only partially overlap, and the relevance of neighborhood should not be restricted to those overlapping features: neighborhood can be recognized at many levels, all legitimate and expressive fields of local, urban experiences.

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