"SOCIAL NETWORKS AND URBAN STRUCTURE IN SANTIAGO DE CHILE:

FROM LOCAL INTEGRATION TO METROPOLITAN ISOLATION"

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Abstract

In contemporary cities we can observe how new and different forms of sociability are developed among its inhabitants. The strength of weak ties is also expressed in how they build their everyday life in the city, and in coordinating different spaces in a metropolitan network of different relationships. From the idea of commutative solidarity from Francois Ascher, understood as the expanded field of social relations, and with decisive consequences on urban space, we try to understand how the relationship is between social networks and urban structure. However, there are major differences, conditioned by the social structure of metropolitan space. Today, not everyone is in the same position to build their own personal network that could help to manage the negative consequences of individualization processes in a neoliberal context. These processes are expressed in fragmented and unequal cities, such as in Santiago, Chile, which is an increasingly globalized metropolis and a good example of what we call the global south.

In this context, the article returns to the link between networks, class and space (Blokland and Savage, 2001), to analyse the structure of sociability of people in poor neighbourhoods of Santiago. The paper aims to test the hypothesis that the accumulation of risks and social disadvantages such as poverty, vulnerability and social exclusion, is associated with less diversity in personal networks. Therefore, it assumes that the form of sociability in the metropolitan space is strengthening and reinforcing the social isolation of the city´s poor through its relational homogeneity, where residential location is an important factor in this process.

The methodology approach uses the ego-centered social network analysis through the measure of network structure and it characterization. We analyse the results of interviews with residents in vulnerable areas of Santiago and contrast these results with the urban structure resulting from globalization processes there.

Keywords: Social Network Analysis, Urban Fragmentation, Social Capital

I. What is urban fragmentation?

The concept of urban fragmentation has been recurrently utilized in order to characterize and describe different socio-territorial processes associated with urban development. However, the significant differences between its applications transform it into an ambiguous and widespread concept with various definitions, which generally tends to complicate what the concept of fragmentation precisely seeks to clarify. Despite this, it is an interesting idea to systematize in order to perform valuable research on the contemporary city, as the concept reflects the present image of the city related to the transformation of the urban condition of the metropolitan city in the context of globalization. In the words of Mongin (2007), this contemplates a transformation that can be characterized as moving from a finite location that makes infinite practices possible, towards an urban condition that is territorially infinite, but results in segmented practices. The image of "fragmentation" that this document refers to is related to the idea put forth by Borsdorf (2007) on the evolution of the Latin American city, from colonial to modern times, as can be seen in the following graphic.
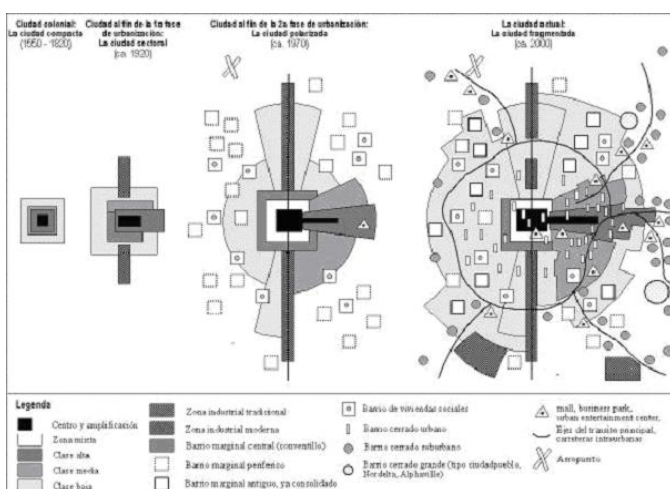

Figure 1: Borsdorf (2007): Evolution of the Latin American City

Without considering the specific symbols utilized in this graphic, what is of interest is if the attempt is to operationalize an image of fragmentation in the sense of varying forms of isolation and segmentation of the city, where it complicates the constitutive element of

what is generally considered as "urban". Such segmentation is represented, for example, in the possibility of encountering other people, as an element of urban social relations, defined by Simmel in 1907.

The idea of urban fragmentation is different from that of urban segregation, specifically in the sense that it involves different dimensions beyond the element of spatial distribution. In the words of Sabatini (2001: 279): "residential segregation corresponds to a spatial relation, one of territorial separation or proximity between people or families that belong to the same social group, however this is defined". On the other hand, urban fragmentation can include residential segregation (or not), as this is expressed both in physical-territorial dimensions as well as within symbolic and perception-based dimensions. As such, the idea of urban fragmentation appears to be more similar to the ideas behind network urbanism (Salingaros, 2005), which understands the city as a reticular structure that leaves "fragments" that can be connected or 'out-of-bounds'. As a whole, the concept of urban fragmentation is dynamic, multi-dimensional and must be coherently operationalized as such, in order to be useful as an analytical concept of the contemporary city.

II. Santiago, Chile as a Fragmented City

From previous research (De Mattos 2002; Sabatini, Cáceres y Cerda, 2003), we know that Santiago is a very segregated city in different dimensions, despite some recent tendencies of middle class growth or new patterns of localization of the elite because of sustained economic growth, more and better education, and the reduction of poverty from 40% in the 80's to 15% in 2009, etc. In general terms, Santiago still concentrates its poverty and opportunities. This process appears as urban fragmentation and strong segregation on a macro scale of analysis, as we can see in figure 2.
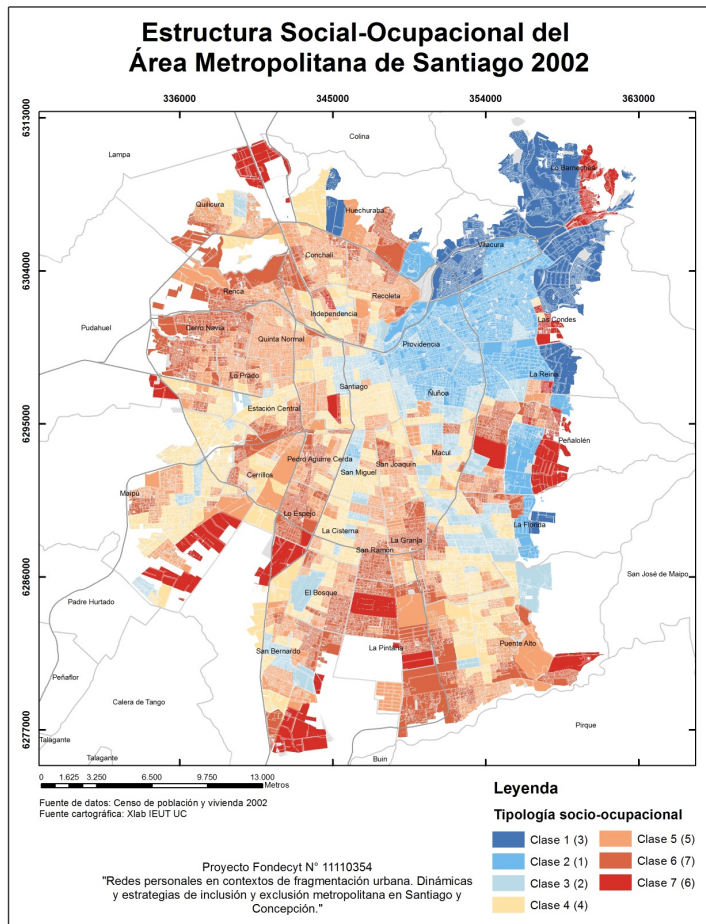
Figure 2. Metropolitan area of Santiago, Chile: Occupational distribution in 2002.

Specifically, the southern area of the city is where all the risks and disadvantages are concentrated, being isolated from the rest of the metropolitan area in terms of connectivity, public services, public spaces, work places, etc. In this context, everyday life for residents of these areas is spatially limited and doesn´t promote social diversity.

The traditional way to observe all these phenomena is, on the one hand, through analysis and description of the residential distribution of static variables in urban territory. On the other hand, there are some approaches in qualitative research of urban experiences as in daily transportation or community participation. This research uses the personal network approach, to understand the relationship between social space and physical space.

III. Case and results

As we mentioned before, the research tries to characterize the relationship between structural processes of urban development – segregation and urban fragmentation – and particular dynamics of social integration, based on the analysis of personal networks. The case study was a complex of 4 neighbourhoods in the southern periphery of the city. Two of these neighbourhoods take part in public programming of housing and urban reconversion. The four neighbourhoods are shown in the next figure and photos.

- Villa San Francisco: apartments and blocks
- Villa Vicente Huidobro: apartments and blocks
- Población Santa Elena: individual houses
- Población Las Acacias: individual houses

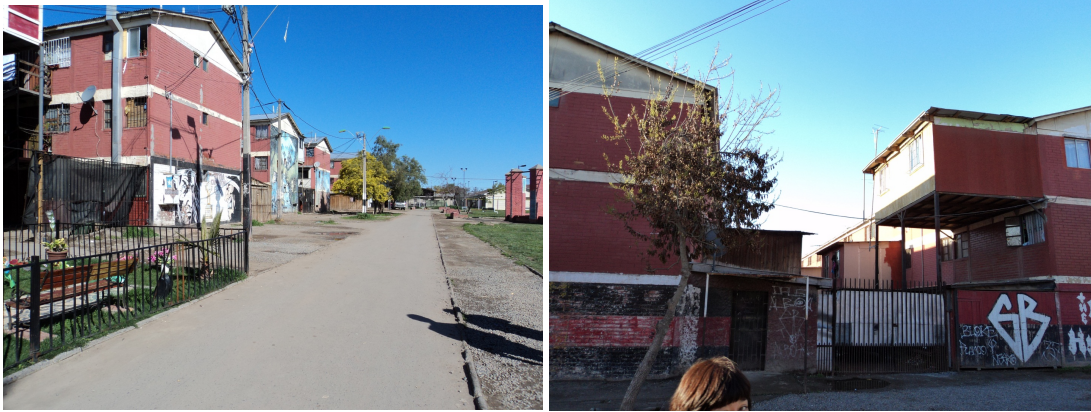Figure 3. Google Earth view of the neighbourhoods.

Figure 4: Photos of the apartments blocks in Vicente Huidobro.

We analysed 32 interviews, 8 in each neighbourhood, where we asked about: Personal contacts in different contexts (family-work-friends-social organizations); Importance of each contact; and the neighbourhood or residential location of each contact. Then we applied a matrix where we asked the respondent to identify who knows who in the whole list of contacts. The average of all interviews in terms of the density, centrality and network size is as follows:

	Average
Degree	16,00
Contacts	33,00
Density	0,608

In terms of these and other results of network analysis, we know that in these kinds of neighbourhoods there is major sociability in local form. The problem appears when we zoom in, in order to analyse the metropolitan area of Santiago. Then, social networks are highly isolated surrounding the southern part of the city, with a strong homogeneity in each characteristic and as a counterpart of what we are thinking in terms of metropolitan sociability (Ascher, 2003).

The analysis of interviews generates a few symbols that we are able to analyse, as is shown in the next figure:

	RED	ORANGE	BLUE	GREEN	
COLOR	POOR PERIPHERIC	POOR DOWNTOWN	MIDDLE-RICH AREA	DOWNTOWN	
SIZE	IMPORTANCE OF THE RELATION				
	CIRCLE	**SQUARE**	**TRIANGLE**	**CIRCLE IN BOX**	**THING**
FORM	FAMILY	COWORKERS	NEIGHBOR	FRIEND	SOCIAL PARTNER
NUMBER OF TIES	DENSITY OF THE NETWORK				

Figure 6. Symbols at each network.

Because of the limits of this paper, we show a few examples of personal networks in poor urban contexts in Santiago de Chile.

Rosalía is a 61 year old woman. She is a householder and she works at home in different jobs during the week. She declares 17 personal contacts. All of them are poor, and most of them are relatives. The personal network of Rosalía in a graphical view is as follows in figure 7.
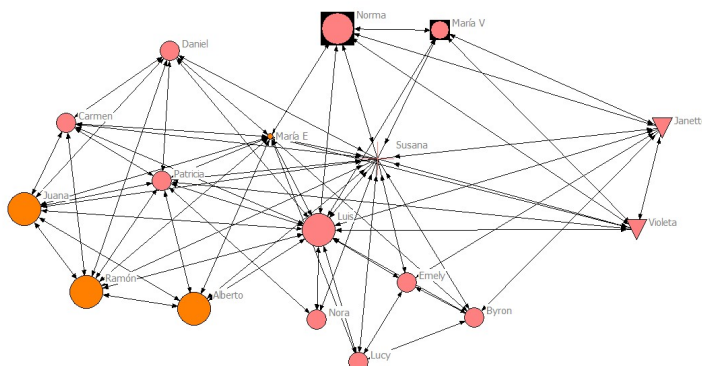

Figure 7: Rosalía personal network.

The next examples are Rosa, Pascual and Karen. Rosa is a 22 year-old householder. She works at the supermarket. She declares 21 personal contacts. Pascual is a 44 year-old householder. He works in different jobs during the week. He declares 47 personal contacts. Finally, Karen is a 32 year-old householder and she works as a manager of the public internet café in the same neighbourhood. In other words, these are different inhabitants of the same part of the city. With more or less social contacts, and all of them share the same structure in terms of metropolitan isolation, with very strong local integration. Each graph shows the internal diversity of personal networks, but also shows in a metropolitan view, what their similarities are.
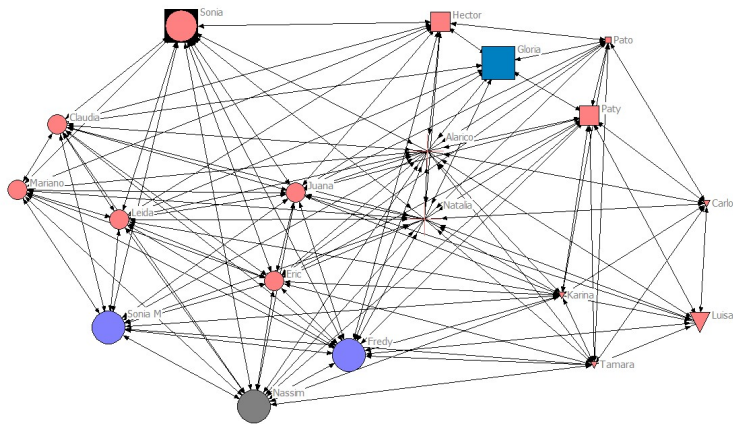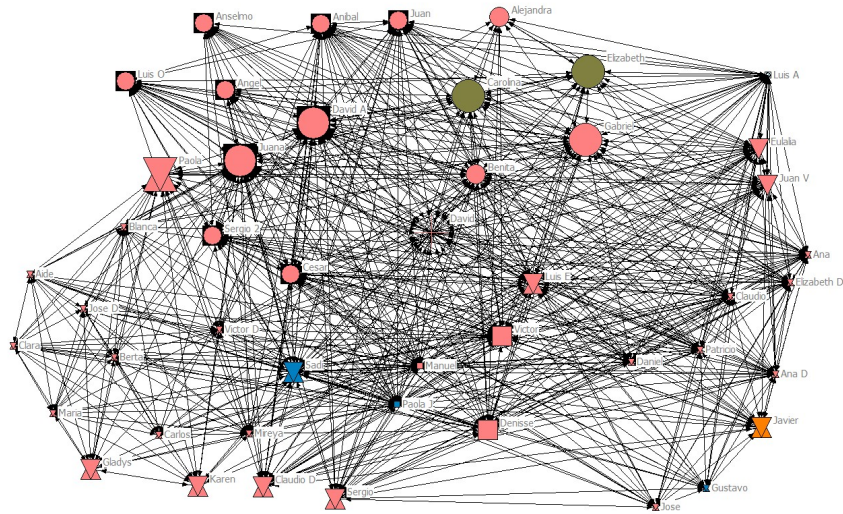

Figure 8. Rosa. Personal network.
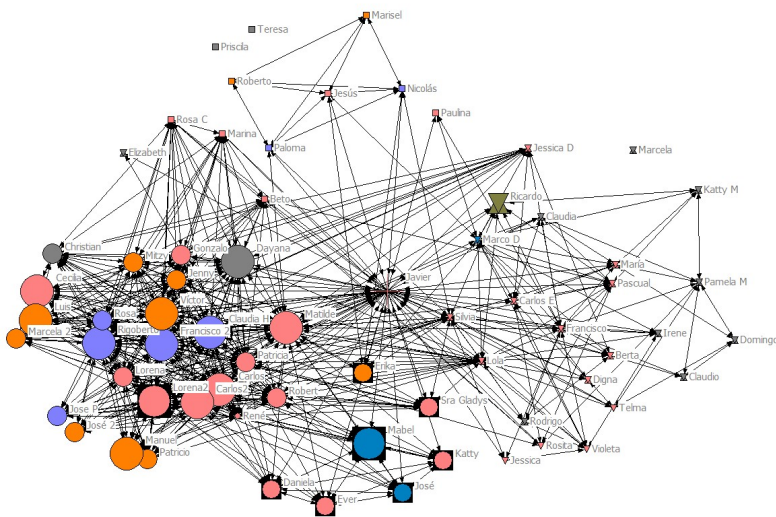
Figure 9. Pascual. Personal network.

Figure 10. Karen. Personal network.

As was discussed earlier, the representation of these social networks in the image of the city is as follows: On the one hand, we can see the location of Karen's contacts as the major network, and on the other hand, we can see the location of Rosalia´s few contacts.

Both are located in the same area, which reinforces the idea that we are living in a contemporary fragmented city.
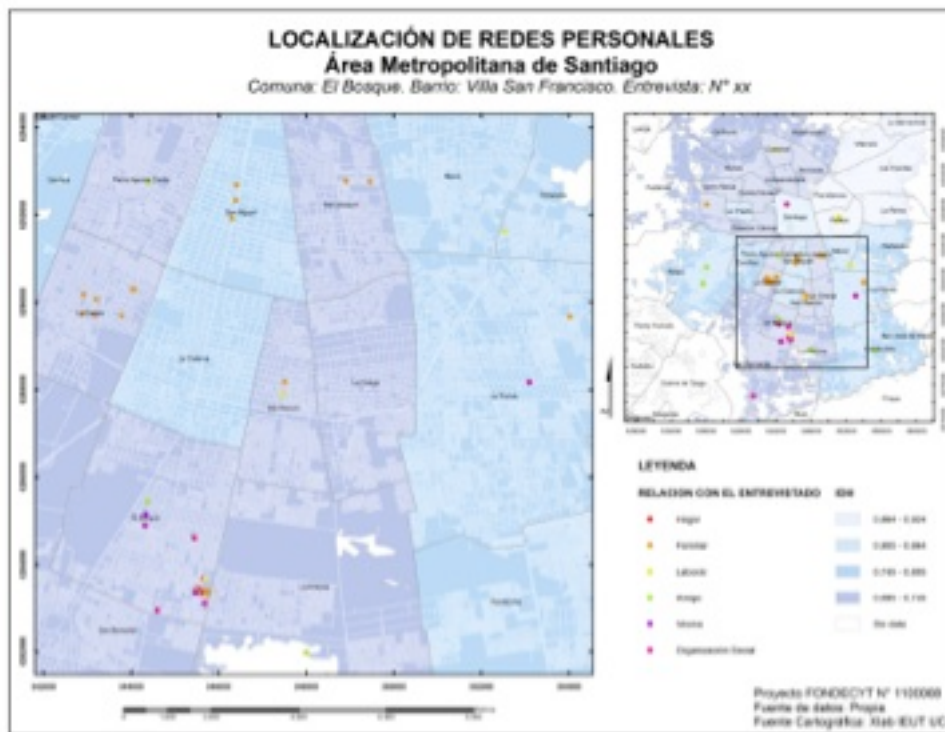

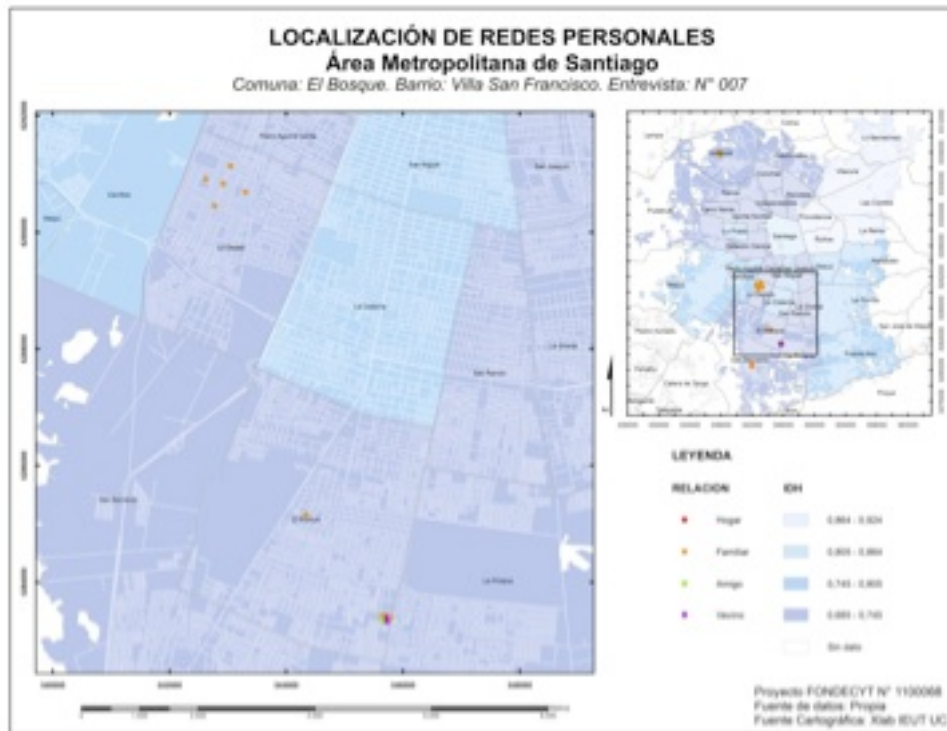Figure 11. Residential location of each contact. Karen.

Figure 12. Residential location of each contact. Rosalía.

IV. Final remarks

Through the characteristics of each network, we can maintain the idea that cumulative risk and structural disadvantages contribute to the reproduction of homogeneous social relations and therefore to social and spatial isolation. Additionally, these processes have consequences on different aspects of everyday life, such as the idea of neighbourhoods and their boundaries, which also contribute to a symbolic isolation of space. While it is not possible to propose a causal relationship between socio spatial characteristics and the structure of personal networks, we found some examples that point in this direction. The structure of personal networks, in terms of its homogeneity and density of the networks is probably contributing to social isolation. The next step is to compare networks in another

context and try to evaluate the impact of this structure within the possibility of meeting strangers in the city.

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