

Network embeddedness of migrants: Exploring variations across three neighbourhoods in Vienna

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Abstract:

This chapter analyses the local network embeddedness of migrants and their descendants in three different Viennese neighbourhoods and explores the impact it has on community cohesion. We argue that not only are individual characteristics key for the formation of migrants' networks, but also neighbourhood conditions, as they provide opportunity structures for establishing both bridging and bonding ties and therefore significantly shape access to resources. The three neighbourhood case studies were selected for the diversity they represent in terms of locality, structural features, and their socio-economic and ethnic composition. Using data gathered as part of the 2010 GEITONIES survey we offer an exploration of if, why and how migrants access, develop and maintain different types of local networks in different social and spatial contexts.

1. Introduction

In recent years, social network theory has become a well-established field in migration research (Scott and Carrington, 2011) and a substantial number of recent studies have focused on the functionality of social networks in migration flows or their role in the process of integration for migrants into the receiving society (Gurak and Caces, 1992; Haug, 2008; Poros, 2011). The concept of social networks is based on relationships between individuals and refers to an individual's social contacts, made through various personal relationships, including kinship, friendship and community (Boyd, 1989). Social networks typically involve issues of trust and norms or acceptable forms of activity and behaviour for how that network is organised. Social networks have a social and productive value, even for highly-skilled migrants (see Ryan and Mulholland in this volume) and particularly for female migrants (Ryan and Mulholland, 2014). Interest in social networks is further fuelled by the fact that migrants with larger networks have been shown to have greater socioeconomic success, better access to economic resources and increased ability to deal with everyday tasks. Their life outcomes in general seem to be positively shaped by access to social networks (Elsner et al., 2014; Hagan, 1998). Access to social networks and how their characteristics vary between the majority population and migrants might therefore be an important factor in ethnic inequalities.

What is less clear, however, is why different migrant groups and their members organise networks of different size and composition. As Ryan et al. argue in the introduction to this book, more analysis is needed about “why and how migrants access, develop and maintain different types of networks in different social locations and with different people” (Ryan et al., p. X). While previous studies have often highlighted the role that individual characteristics of migrants – such as gender or social class - have on their capacity to establish social ties (and to mobilise resources), more in-depth examinations of how and why migrants establish ties and access networks have not always examined how such differences come about in various, locally-based contexts. As Small argues, examinations of ethnic differences

in networks that “ignore neighbourhood conditions are missing an important part of the picture” (Small, 2007: 339). Some of the most important neighbourhood conditions that shape local social networks in general, and migrants’ ties in particular, are social and ethnic heterogeneity, population density, location, and social climate in the neighbourhood (Small, 2007; Sampson et al., 2002). Taken together, these neighbourhood characteristics provide important conditions that affect the way migrants access and develop “bonding” and “bridging” ties (Putnam 2000) on the local level. In this chapter we argue that, as well as the individual characteristics of migrants, these neighbourhood conditions are relevant to the explanation of why migrants rely heavily on ethnic-specific networks and are embedded within migrant enclaves in some locations, but not in others.

The contextualisation of social networks is of particular relevance when discussing aspects of ‘sociation’, such as trust or solidarity. Hipp and Perrin (2006) argued that the importance of local networks should by no means be underestimated when attempting to understand neighbourhood and community cohesion. A major shortcoming of these studies is that they pay little attention to migrants and the relevance of urban contexts in shaping their social networks, or the subsequent consequences for urban belonging and neighbourhood cohesion.

With this study we aim to at least partially redress this research gap with an empirical exploration of variations in the degree of network embeddedness of migrants across different types of neighbourhoods and its correlation with neighbourhood cohesion. We examine the effect of variations in the network embeddedness of migrants and their underlying mechanisms using a survey of three neighbourhoods in Austria’s capital, Vienna. These neighbourhoods are representative of typical neighbourhoods in Vienna, but differ greatly in terms of their locality, structural features, and their socio-economic and ethnic composition. As explained in greater detail below, we contrast two deprived living areas further from the city centre with a more affluent neighbourhood located in the inner city. We focus on personal

networks in order to explore embeddedness in locally organised relationships. We further examine the composition and relevance of migrants' social relationships in these three urban settings. Thus we contribute to a better understanding of networking strategies and the particular processes involved in building new social ties after a person migrates. In a second step we assess empirically how these network ties embedded within local relationships can act to drain or support neighbourhood attachment, feelings of belonging and as solidarity and trust amongst residents of the three Viennese neighbourhoods.

2. The Vienna GEITONIES study

This study makes use of the Viennese sample of the *Generating Interethnic Tolerance and Neighbourhood Integration in European Urban Spaces* (GEITONIES) survey¹, conducted in 2010 (Kohlbacher et al., 2012). It is a representative sample of people aged 25 or older and resident in three selected Viennese neighbourhoods. In each of the three neighbourhoods, stratified random sampling was used based on an inventory of residential addresses generated for the purpose of this project (Górny and Torunczyk-Ruiz, 2013, p. 5). In each of the neighbourhoods, 100 face-to-face questionnaire-based interviews were carried out with migrants who had lived in the neighbourhood for at least one year (leading to a total N of 300 respondents). The GEITONIES project defined migrants as individuals with at least one

¹ The GEITONIES project was part of the 7th Framework Programme of the European Commission. The core element of this project was a common survey conducted in 18 neighbourhoods within six European cities. Please visit <http://geitonies.fl.ul.pt/> for further information.

parent born abroad² and is a unique source of data due to the range and depth of questions about subjective and perceived neighbourhood attitudes, as well as a wide range of information on concrete contacts and social ties within the neighbourhood. Checks on the socio-demographic characteristics of the sample against other surveys indicated that the findings from our sample were comparable. The neighbourhoods in our study were selected based on the size of the residential population, differences in ethnic concentration levels and a clear structure without internal barriers. They can be considered as typical neighbourhood types for Vienna.

The first neighbourhood ‘Laudongasse’ is an attractive inner city location dominated by 19th century housing stock (Founders’ period) and predominantly in good condition. Rentals clearly dominate over owner-occupied housing, while social housing is reasonably rare. Residents have access to all necessary facilities, including public transport within the area. In 2010, the total population numbered about 3,930 persons and roughly 31 per cent of the local population had a migration background³. As shown in Table 1, our data reveal that the majority of migrants residing in Laudongasse come from countries belonging to the European Union. More precisely, the majority (49 per cent) come from EU-15 member states, such as Germany, France or the Netherlands, followed by migrants from Eastern European countries (EU-12) who constitute around 28 per cent of the local migrant population. Other migrant groups commonly found in Vienna, such as former guest worker migrants from the

² This definition allowed us to differentiate between first and later generations. Among the first generation, all persons migrated themselves (consequently, all their parents were born abroad). The intermarriage rate in the first generation was below 2 per cent in our sample.

³ Migration background is defined by Statistics Austria as people either born abroad or a person whose parents were both born abroad. The Viennese average for people with a migration background in Vienna was 33 per cent in 2010.

Western Balkan regions (overwhelmingly from the former Yugoslavia) or the Middle East (predominantly Turkey), are scarce within this neighbourhood (not exceeding eight per cent of the local population).

Table 1: Migrant groups per neighbourhood according to region of origin (per cent)

	Am Schöpfwerk	Laudongasse	Ludo-Hartmann-Platz
Middle East	28.0	7.0	23.0
Western Balkan	24.0	8.0	19.0
EU-15	3.0	49.0	16.0
EU-12	16.0	28.0	26.0
Maghreb/Africa	19.0	0.0	5.0
Other	10.0	8.0	11.0
N	100	100	100

Source: Geitonies Survey (2010). Notes: Bold numbers indicate the largest migrant communities in the respective neighbourhoods.

In keeping with the high proportion of migrants from European Union member states, the average educational level and occupational position, of the local migrant population can be considered relatively high (compare Table 2 below). Slightly more than every second migrant has a post-secondary education and consequently higher labour market positions

– as indicated by the high share of residents active in professional occupations⁴.

The second neighbourhood ‘Ludo-Hartmann-Platz’ is a typical working class area bordering the inner city with a larger migrant population. As with ‘Laudongasse’, most of the housing stock was built in the 19th century during the Founders’ period, and at that time too catering for migrants and blue-collar workers, rather than the bourgeoisie. The area is close to the ‘Gürtel’, a noisy and air-polluted main road with three lanes of traffic in each direction and public transportation. Many blocks of flats are in a bad state of repair, consisting of small, badly equipped housing units and inhabited by a mixture of socially marginalised Austrians and migrants. Nevertheless, the infrastructure is sufficient. Of the 3,900 inhabitants, 63 per cent have a migration background, almost twice the city average. Former labour migrants, originating from Turkey and the former Yugoslavia are the largest migrant origin groups within this neighbourhood. Both groups have been grouped together in our data with migrants from similar geographic regions and are shown as migrants from Middle East (23 per cent) and Western Balkans (19 per cent). The third largest group of migrants is those who come from states that joined the European Union in 2007 (EU-12: 26 per cent). The average educational level of the local migrant population is much lower, whilst the share of blue collar workers is almost twice that of the inner city neighbourhood ‘Laudongasse’ (compare Table 2).

⁴ In keeping with previous research we have distinguished economically inactive or unemployed from (self) employed persons. The latter are then subdivided into broad occupational classes using the categories of ‘salaried’ (professional and managerial occupations), ‘intermediate’ (skilled non-manual and manual occupations as well as self-employed) and ‘working class’ (semi- and unskilled manual occupations) (Heath and Cheung, 2007).

‘Am Schöpfwerk’, the third urban setting in our study, located on the outskirts of the city and made up almost entirely of social housing. Built between 1976 and 1980, the area has roughly 2,100 flats housing 5,900 residents. It is an example of the large community housing blocks that were built from the early 1960s onwards at the urban periphery to address a deficit of housing in Vienna. The infrastructure within this residential area is well developed and the neighbourhood is also well connected with Vienna’s public transport system. Social housing was not generally accessible for foreign citizens prior to 1st January 2006 and so migrants formed a minority amongst the tenants of social housing before that date. Since the social housing market was opened to non-Austrians, the numbers of migrant residents has increased continually. The proportion of people with a migration background in ‘Am Schöpfwerk’ reached 36 per cent in 2010. As shown in Table 1, former labour migrants from the Middle East (28 per cent) and Western Balkans (24 per cent) – and to a lesser extent migrants from Maghreb/African regions – form the largest groups within the local population. Migrants from EU-15 countries are almost completely absent in ‘Am Schöpfwerk’. Of the three neighbourhoods used in this study, residents in this urban fringe neighbourhood have the lowest educational levels and the highest share of working class and economically inactive migrants.

Table 2: Selected characteristics of the migrant population within each neighbourhood (per cent)

	Am Schöpfwerk	Laudongasse	Ludo-Hartmann- Platz
<i>Gender</i>			
Female	55.0	53.0	46.0
<i>Generation^a</i>			
1st generation	79.0	56.0	76.0
2nd generation	21.0	44.0	24.0
<i>Age groups</i>			
Below 35 years	23.0	31.0	41.0
36-45 years	35.0	21.0	30.0
46-55 years	22.0	17.0	15.0
56-65 years	17.0	12.0	8.0
Above 65 years	3.0	19.0	6.0
<i>Educational level</i>			
Secondary or below	69.0	45.0	65.6
Post-secondary	31.0	55.0	34.3
<i>Social class position</i>			
Salariat	9.0	26.3	17.5
Intermediate class	20.0	19.0	19.6
Working class	17.0	7.4	14.4
Not Working	54.0	47.4	48.5
<i>Length of residence</i>			
Moved in between 1 and 5 years ago	30.0	34.0	39.0
Moved in between 6 and 10 years ago	32.0	17.0	28.0
Moved in more than 10 years ago	31.0	36.0	24.0
Have always lived in neighbourhood	7.0	13.0	9.0
<i>Has children</i>	87.0	43.0	57.0
N	100	100	100

Source: Geitonies Survey (2010). Notes: a=Second-generation are descendants of migrants who have at least one parent born abroad but were themselves born in Austria.

3. Local network embeddedness at a glance

Network size and composition

We start our empirical analysis by examining differences in the size and density of migrants' local networks across the three selected neighbourhoods. 'Local network' is defined via the number of closest friends living in the same neighbourhood and considered to be of particular importance to our respondents. In more analytical terms, we consider what Granovetter (1973) has called 'strong ties' to measure local social networks. We begin by assessing how many of their most important contacts live in the same neighbourhood, initially divided into three answer categories ranging from *none* over *some* to *almost all/all*. The top section of Table 3 shows the distribution of the answer category *almost all/all* across the three Viennese neighbourhoods under study. Figures are displayed for all migrants, as well as divided into the most prevalent migrant groups residing in the respective neighbourhoods.

Only about two per cent of the migrants residing in the inner-city neighbourhood 'Laudongasse' have their closest friends living nearby. Many of the better-educated, middle class migrants living there are well integrated into the Viennese labour market and maintain social networks, which are less locally bound. A finding that has been found to be typical among more skilled migrants (Ryan and Mulholland, 2013). Conversely, the share of migrants with almost all their closest friends living in the same neighbourhood is 11.2 and 12.4 per cent in the two more deprived districts, 'Ludo-Hartmann-Platz' and 'Am Schöpfwerk' respectively. Numbers broken down by migrant groups reveal further that migrants from the Middle East especially (predominantly from Turkey), the Western Balkans and migrants from Maghrebian/African countries have a relatively high number of close contacts living in the same neighbourhood.

Table 3: Classification of migrants: Number of close contacts living in the same neighbourhood (per cent)

	Am Schöpfwerk	Laudongasse	Ludo-Hartmann- Platz
<i>Almost all/all close contacts live in the neighbourhood</i>			
Migrants (all groups)	12.4	2.0	11.2
<i>Maghreb/Africa</i>	16.7	-	-
<i>Middle East</i>	15.4	-	21.7
<i>Western Balkan</i>	8.3	-	15.8
<i>EU-15</i>	-	4.1	-
<i>EU-12</i>	-	0.0	3.4
<i>50% or more of all close contacts in the neighbourhood are relatives</i>			
Migrants (all groups)	49.5	21.0	39.8
<i>Maghreb/Africa</i>	33.3	-	-
<i>Middle East</i>	57.7	-	47.8
<i>Western Balkan</i>	66.7	-	52.6
<i>EU-15</i>	-	14.3	-
<i>EU-12</i>	-	21.4	34.6
<i>Interethnic ties among the close contacts living in the neighbourhood</i>			
Migrants (all groups)	25.0	49.0	36.0
<i>Maghreb/Africa</i>	21.0	-	-
<i>Middle East</i>	25.0	-	13.0
<i>Western Balkan</i>	20.8	-	36.8
<i>EU-15</i>	-	51.0	-
<i>EU-12</i>	-	42.9	46.1

Source: Geitonies Survey (2010). Notes: - = excluded due to small numbers per category.

So far, closest friends in the neighbourhood have been treated as a homogeneous group, comprising strong ties to all kinds of social group members, such as colleagues, co-students, family members, and other neighbours or acquaintances. However, migrants, particularly when they come from poorer home countries, tend to locate near friends and relatives in destination areas often dominated by their own group. These family and kin networks provide a social support system that may include housing, jobs and most importantly a sense of community (Boyd, 1989; Bruhn, 2005, p. 53-54). However, these

family dominated social networks often compound social disadvantage by having less access to networks of more established social groups (compare also the discussion on “supportively segregated” migrants in Patulny’s contribution in this volume). We therefore explored the extent to which the previously discussed strong ties amongst migrants in the three Viennese neighbourhoods are ties to family and kinship members. Overall, the share of family ties in the local network amongst migrant groups in the two deprived areas ‘Am Schöpfwerk’ and ‘Ludo-Hartmann-Platz’ is on average (more than) twice that of their counterparts living in the inner city district ‘Laudongasse’. This pattern holds particularly true for former guest worker migrants originating from regions in the Middle East and Western-Balkans and for a lesser extent to Maghrebian/African migrants.

The lower embeddedness in family and kinship networks among migrants residing in the inner city neighbourhood ‘Laudongasse’ also translates into a higher share of non-coethnic contact. In contrast, for migrants in the predominantly social housing neighbourhood of ‘Am Schöpfwerk’, only one in four has a contact in their closest circle of friends in the area either of Austrian origin or belonging to another migrant group. The share is found to be slightly higher among migrants in the working class district ‘Ludo-Hartmann-Platz’ (overall 36 per cent). Here, it is particularly Eastern European migrants who have the largest number of interethnic contacts (46.1 per cent), whilst migrants originating from the Middle East are overwhelmingly surrounded by members of their own ethnic community, indicating a tendency to become encapsulated within their own “ethnic enclave”. To summarise, it appears that the two groups with the highest numbers of former guest worker migrants – the Middle East (Turks) and Western Balkans (former Yugoslavians) – maintain particularly strong bonding ties with their own community, but relatively few outward looking, bridging ties with other members of the local population. We will return to this finding in greater detail in the conclusion.

Intensity of local ties in selected activities

As some recent studies on neighbourhood communities and social networks of migrants have argued (e.g. Edwards, 2010), measuring the size and density of networks through measuring the frequency of ties does not provide information on the intensity of those ties nor the concrete situations in which local ties are used to gain social capital. We therefore sought to explore to what extent migrant groups rely on locally organised ties in relation to selected activities and situations. To do so, we examined the number of friends in their local area with whom they spend their free time, and in what form. Next, we explore how many friends have provided advice for personal or professional change or have helped them in a substantive way. This information provides an insight into the intensity of ties between migrants and their locally organised networks. It offers an indication of the dynamic and time-related aspects within social networks, as we are specifically asking about advice and helping relations within a timeframe of the last three years.

Table 4: Number of close contacts living in the neighbourhood with whom migrants share selected activities and situations (per cent)

	Am Schöpfwerk	Laudongasse	Ludo-Hartmann-Platz
		Spending free time	
Migrants (all groups)	36.0	19.0	30.0
<i>Maghreb/Africa</i>	63.2	-	-
<i>Middle East</i>	39.2	-	43.4
<i>Western Balkans</i>	20.9	-	31.5
<i>EU-15</i>	-	20.4	-
<i>EU-12</i>	-	21.4	26.9
		Confidentially and advice	
Migrants (all groups)	36.0	22.0	36.0
<i>Maghreb/Africa</i>	36.9	-	-
<i>Middle East</i>	39.2	-	52.1
<i>Western Balkans</i>	27.5	-	31.6
<i>EU-15</i>	-	28.6	-
<i>EU-12</i>	-	14.3	26.9
		Helping out	
Migrants (all groups)	40.0	18.0	33.0
<i>Maghreb/Africa</i>	57.9	-	-
<i>Middle East</i>	46.2	-	52.2
<i>Western Balkans</i>	20.8	-	26.4
<i>EU-15</i>	-	20.4	-
<i>EU-12</i>	-	10.7	30.7

Source: Geitonies Survey (2010). Notes: - = figures are excluded due to small numbers per category.

The findings presented in Table 4 show a clear ‘ranking’ in the intensity and usage of local network ties for migrants between the three Viennese neighbourhoods. Migrants in the social housing area ‘Am Schöpfwerk’ rely most often on their local ties, followed by migrant residents in ‘Ludo-Hartmann-Platz’ and least often in ‘Laudongasse’. It is striking that migrants from Middle East countries especially (and to a lesser extent among migrants from Western Balkans) rely more heavily on their closest ties in the neighbourhood when in need of advice or help. As previously shown in Table 3, the majority of their local contacts belong either to their own ethnic community or to their kinship. In other words, contacts with whom

they spend their free time or consult for advice and help on substantive matters are mostly relatives and kinship members of the same migrant group.

Thus far we have explored the size, density and intensity of local network ties of migrants along single dimensions. However, in order to achieve an overall measure of ‘local network embeddedness’ of migrant groups in the three Viennese neighbourhoods, we performed a cluster analysis based on the overall number of close contacts living in the neighbourhood and the shares of local contacts with whom they spend their free time or consult for help and advice (see Table 5). Results show that migrants can be classified into two clusters characterised by their degree of ‘local network embeddedness’: Those interviewees in our data with a generally high share of closest friends living in the same neighbourhood also ask these local contacts for help or advice and spending their free time together with them. They form a group of local residents that we have termed ‘highly embedded’ in local social networks (28 per cent of the total sample). The second cluster evident from the migrants in our study is characterised by not having a large number of strong ties living in the same neighbourhood of residence, paralleled by a low number activities with locally organised friends. This group makes up 72 per cent of our sample and its members are labelled as ‘low embedded’ in local networks.

Table 5: Schematic description of clusters of local network embeddedness and their underlying dimensions

	Overall number of closest contacts living in the same neighbourhood	Spending free time	Confidentially and advice	Helping out	Per cent of sample (N)
Cluster 1	High	High	High	High	28 (84)
Cluster 2	Low	Low	Low	Low	72 (216)

Source: Geitonies Survey (2010).

The proportion of migrant residents that are high and low embedded in local networks varies substantially across our three study areas and between migrant groups. In line with the

detailed descriptive analyses presented above, migrant residents with a higher degree of local embeddedness are found more frequently within the two deprived areas. In general, about one third of the local migrant population in these two neighbourhoods can be classified as highly embedded in local networks. As the break down by migrant groups shows, local social ties are especially relevant to migrants originating from Maghreb/African countries, of whom roughly two-thirds can be considered as highly embedded into the local network structure, followed by former guest worker migrants from the Middle East or Western Balkans.

Table 6: Degree of local network embeddedness, by migrant groups per neighbourhood (per cent)

Region of origin	Local network embeddedness	Neighbourhood		
		Am Schöpfwerk	Laudongasse	Ludo-Hartmann-Platz
Migrants (all groups)	Low	64.0	82.0	70.0
	High	36.0	18.0	30.0
<i>Maghreb/Africa</i>	Low	36.8	-	-
	High	63.2	-	-
<i>Middle East</i>	Low	64.3	-	52.2
	High	35.7	-	47.8
<i>Western Balkan</i>	Low	83.3	-	79.0
	High	16.7	-	21.1
<i>EU-15</i>	Low	-	81.6	-
	High	-	18.4	-
<i>EU-12</i>	Low	-	85.7	73.1
	High	-	14.3	26.9

Source: Geitonies Survey (2010). Notes: - = figures are excluded due to small numbers per category.

4. Variations in network embeddedness

The degree of network embeddedness might vary along certain characteristics within the migrant populations in our three Viennese neighbourhoods. We therefore examined differences in network embeddedness according to key individual characteristics, such as age, gender, length of residence and economic activity. Additionally, we paid particular attention

to immigration-specific features, such as generational status or language usage (at home). We performed tetrachoric correlations between the degree of embeddedness and our selected variables of interest in order to explore potential relationships between individual characteristics and the degree of embeddedness. Table 7 provides a schematic summary of our results for migrants within each of the three neighbourhoods.

‘Ludo-Hartmann-Platz’ is a classic area of reception for incoming migrants to Vienna and has been since the late 1970s. Thus, it is not surprising that those older migrants who arrived before the last decade in particular show higher degrees of network embeddedness. Although further analyses differentiated by migrant groups were based on relatively small numbers (and are therefore not shown in Table 7), they revealed (albeit not significantly) that the length of residence is of some importance for migrants from the Middle East and the Western Balkans. A longer length of residence seems to increase the chances of getting to know neighbours better and to establishing closer contacts with them, a finding that has often been reported in previous studies (for example Lee and Campbell, 1999), whereas, a higher educational level among migrants leads significantly to fewer local ties in the place of living.

Being embedded in local networks seems to be a particularly strong pattern amongst first generation migrants in our social housing area, whilst second-generation were shown to be less frequently bonded with ties in their place of living, a pattern which does not vary between migrant groups. As reported above, migrants of all origin groups living in ‘Am Schöpfwerk’ tend to have close contacts primarily from their own community (friends and family). Thus, migrants who speak their native tongue more frequently at home are more likely to be highly embedded in the local network structure. When turning to key socioeconomic characteristics such as age, length of residence or the economic status, we didn’t detect variations on the degree of network embeddedness for migrants residing in this local area.

Table 7: Schematic presentation of correlations between the degree of network embeddedness and selected individual control variables of migrants, by neighbourhood

	Am Schöpfwerk	Laudongasse	Ludo-Hartmann-Platz
	High embeddedness	High embeddedness	High embeddedness
Age: <i>above 40 years</i>	o	o	+
Gender: <i>women</i>	o	o	o
Having children	o	o	o
Length of residence: <i>10 years or longer/ever</i>	o	o	+
Language usage at home:			
<i>Predominantly Origin language</i>	+	o	o
Generation: <i>2nd generation</i>	-	o	o
Economic activity: <i>not working</i>	o	o	o
Education: <i>high educational level</i>	o	o	-

Source: Geitonies Survey (2010). Notes: Schematic presentation of tetrachoric correlations. + indicates a positive and – a negative correlation significant on the 5% level. O denotes no significant correlation between high embeddedness and the selected variables displayed on the left side of table 7.

When finally turning to the better-off neighbourhood ‘Laudongasse’ located in an inner city district of Vienna, we didn’t observe any variation in the degree of neighbourhood embeddedness within the migrant population according to socioeconomic and immigration specific characteristics. The absence of differences across economic status is not surprising given the few variations in the social class structure among the migrant groups living in this area.

5. Network embeddedness, neighbourhood belonging and perceptions of solidarity

In this final section we explore empirically how network ties embedded within local relationships drain or support neighbourhood attachment, feelings of belonging, as well as solidarity and trust among residents in the three Viennese neighbourhoods. Previous research has shown that social ties and networks correlate with feelings of home in the place of living (Lalli, 1992), affect neighbourhood attachment (Hipp and Perrin, 2006) and generate a sense of common purpose and social solidarity in the neighbourhood (Lee and Campbell, 1999; Woldoff, 2002). However, most studies pay little attention to migrants and the mechanisms

and circumstances with which their local network embeddedness translates into perceptions of local belonging. The underlying question in this section is therefore whether a high degree of network embeddedness in the neighbourhood translates into higher levels of neighbourhood attachment and identification, as well as trust and solidarity, amongst migrants and other residents within each of the three Viennese neighbourhoods? We have drawn on international literature around neighbourhood and community cohesion (Dekker, 2007; Morrison, 2003; Putnam, 2007) and selected five commonly used indicators to measure attachment and identification with the neighbourhood, as well as solidarity and trust amongst local residents in neighbourhoods. We included subjective information about whether respondents feel ‘attached to the place of living’, whether they are ‘proud of their neighbourhood’ and whether they ‘care about their place of living’. Additionally, we added two indicators that represent perceptions of solidarity and trust amongst local residents: ‘People in this area pull together to improve it’ and ‘People in this area try to be helpful’⁵.

Numbers revealed that the degree of network embeddedness makes a difference in the social housing area ‘Am Schöpfwerk’. Migrants highly embedded within local networks show on average significantly higher levels of neighbourhood attachment and neighbourhood identification. Furthermore, they care more often about their place of living and also report higher levels of perceived solidarity and trust amongst neighbours within this area⁶. Findings are particularly strong for migrants originating from the Middle East countries, as well as for migrants from Maghreb/Africa who reside in this area. For example, highly embedded migrants from the Middle East (of whom most are Turkish) care significantly more often

⁵ All five indicators are measured on likert-scales with five answer categories, ranging from ‘disagree strongly’ (1) to ‘agree strongly’ (5).

⁶ All numbers reported here are based on mean comparisons by using the Wilcoxon rank-sum test.

about their neighbourhood (mean of 3.9 compared to 3.1 among lowly embedded residents of the same group; $p < 0.05$) or perceive higher levels of solidarity among residents in this neighbourhood of living (mean of 3.5 compared to 2.5 of lowly embedded residents of the same group; $p < 0.01$). Again, similar patterns can also be observed for migrants from Maghreb/Africa in “Am Schöpfwerk”. However, comparable patterns cannot be identified for migrant groups in the remaining neighbourhoods. Indeed, being more embedded in local networks also increases neighbourhood attachment in ‘Laudongasse’, but barely affects any of the remaining variables of interest. When turning to the working class neighbourhood ‘Ludo-Hartmann-Platz’, network embeddedness does not make a significant difference for migrant groups with respect to attitudes and perceptions towards their neighbourhood and its residents. In additional analyses we further examined whether our findings persist once we differentiate among gender, generational status or economic activity (as far as practical). These additional analyses did not alter the outcomes presented here.

6. Summary and conclusion

This chapter has drawn on some explorative and descriptive analysis to study local network embeddedness of migrants and their descendants within three selected Viennese neighbourhoods that differ significantly in their characteristics. More precisely, we investigated local network embeddedness by migrants in two deprived neighbourhoods and one inner city and better-off living area. We did so with the aim of examining if, why and how migrants access, develop and maintain different types of local networks in different social and spatial locations. We argued that as well as individual characteristics of migrants, neighbourhood conditions are key for migrants’ network formation, as they provide opportunity structures for establishing both bridging and bonding ties and therefore significantly shape access to resources (social capital). We have further tested whether

varying degrees of local network embeddedness amongst migrants are related to divergent outcomes in community cohesion.

To begin with, we found that the majority of all migrants in the three neighbourhoods studied have their most important ties external to where they live. This finding is in line with Ryan and Mulholland's argument (see chapter in this volume) that migrants are embedded in networks that are oftentimes located in different places and that their most important ties are often spatially dispersed; a network structure which is typical for the urban context (Wellman, 2001).

However, although the level of local network embeddedness of migrants in the three selected Viennese neighbourhoods remains generally low, our results nevertheless indicated that the degree of embeddedness at a neighbourhood level varies significantly between migrant groups and across urban settings. Migrants in the two deprived Viennese neighbourhoods 'Am Schöpfwerk' and 'Ludo-Hartmann-Platz' are significantly more equipped with greater numbers of locally organised strong ties when compared to migrants in the better-off inner city neighbourhood. Amongst these deprived living areas, we observed a stronger "inward-turning" of migrants through a greater number of contacts within their own ethnic community. Furthermore, it indicates that ethnicity remains a factor in determining social networks of different ethnic groups (Crisp and Robinson, 2010; Gilchrist and Kyprianou, 2011). A large portion of their closest ties and contacts - with whom they spend free time and whom they ask for help and advice - are kinship members living in the same neighbourhood. We found this pattern of localised, co-ethnic (family) networks to be especially strong amongst first generation migrants originating from the Middle East (in particular Turks) and the Western Balkans (predominantly former Yugoslavians) who largely arrived as labour migrants in the 1960s and 1970s. As shown at the beginning of this study however, the average educational and occupational level in the local migrant population is as rather low, thus we can assume the relevance of the well-known tendency of social homophily (see

McPherson et al., 2001), that people with similar backgrounds tend to associate with one another (Kanas et al., 2009).⁷ Nevertheless, there is some question of whether social and economic capital can be gained through these local ties, enabling migrants to improve their life chances (Nannestad et al., 2008; Portes and Landolt, 1996). In other words, being embedded in these dense local networks is not necessarily a sign of social capital, but instead reflects socioeconomic disadvantage and dependency on co-ethnics (Lin and Dumin, 1986).

Moreover, migrants living in these two economically deprived neighbourhoods tend to have fewer outreaching (bridging) ties to other migrant groups or the majority population in their closest circle of friends where they live. These findings are in line with Patulny's classification of supportively segregated migrants, characterised by low bridging but high bonding social capital (see Patulny in this volume).

As shown elsewhere (Kohlbacher et al., 2012), socioeconomically disadvantaged non-migrant residents living in the same deprived Viennese neighbourhoods also show a higher dependency on locally organised social networks with respect to help and advice than their counterparts in the better-off living area. However, our findings reveal a multiplier effect for migrants as their dependency on local networks appears at a much higher rate in these deprived neighbourhoods. Thus, this 'sticking together' may also be a consequence of social exclusion and social stratification through an over-reliance on strong ties and bonding capital (Phillipson et al., 2004).

By contrast, migrant populations in the better-off and inner city neighbourhood 'Laudongasse' largely consist of highly-skilled European migrants who are least embedded in

⁷ One must not underestimate language as a factor which is strongly interrelated with education. There is ample evidence for the notion that migrants who acquire proficiency in the language of host-country not only improve their economic opportunities, but simultaneously extend their social networks (Chiswick and Miller 2002).

locally organised networks. This may be partly explained by their generally higher socioeconomic status (and better language proficiency), which extends their social networks (Kanas et al., 2009). Previous research has shown that more highly educated migrants in particular working in professional positions are less involved in local neighbourhood networks (see Ryan and Mulholland in this volume). Instead, they are often equipped with larger networks and spread over a wider geographical area (Poros, 2011). Consequently, as also shown within this study, they often rely less on local ties when in need of help or looking for an important advice.

Generally, individual deprivation and a substantial concentration of socially disadvantaged residents in urban neighbourhoods seems to increase the dependency on locally organised networks, particularly for migrants. These spatially linked inequalities reduce the opportunities for residents to access resource rich networks beyond the borders of their neighbourhood.

Following previous research on neighbourhood and community cohesion, we have further hypothesised that a greater degree of local network embeddedness would translate into higher levels of local community cohesion. Perhaps surprisingly, we only found this correlation to be significant amongst migrants in the neighbourhood 'Am Schöpfwerk' on the outskirts of the city. Here, highly embedded migrants show on average the highest perception of neighbourhood belonging, as well as trust and solidarity within the local population. However, their locally organised networks constituted primarily of ties to co-ethnics, while contacts to other migrant groups and the Austrian majority population are rare. Thus, perceptions of social belonging and solidarity with the local population seem to refer to their own ethnic community rather than to other residents of the social housing neighbourhood. The question remains, however, of why this in-group orientation in networks translates into stronger (ethnic) community cohesion in this particular neighbourhood and not in the others? We attribute this finding to one of the most crucial neighbourhood conditions: the social

climate within the residential area. As previous studies have suggested, a stronger orientation towards the own ethnic group may be read in light of the difficulties migrants might face upon arrival and as sign of protection from discrimination and abuse (Ryan et al., 2008). Indeed, such an argumentation might apply to our findings as well, given that negative attitudes towards migrants and interethnic conflicts (and therefore the overall social climate) tend to be particularly high in social housing neighbourhoods in Vienna (IKF 2008). Findings from the “Geitones” survey revealed that around 66 per cent of the local non-migrant population in the social housing area ‘Am Schöpfwerk’ agrees on the statement that migrants will become a threat to society (Kohlbacher et al., p. 40-41), a result that is above the city average. Thus, experiences of exclusion and xenophobia in their place of living might cause stronger perceptions of solidarity with their own migrant community. Combining this finding with the above discussed “in-group” orientation their closest network points towards the emergence of ethnic enclaves within this neighbourhood (see Gilchrist and Kyprianou, 2011; Robinson et al., 2007 for similar findings).

We must remember, however, the various methodological caveats involved in our investigation: First and foremost, the sample size of our data is relatively small. Our analyses were limited to descriptive observations on neighbourhood differences. Therefore our conclusions should be considered with reservation. Although our arguments and findings would benefit from a greater empirical scrutiny, this chapter has nevertheless provided initial insights into how network formation amongst migrants is shaped by their individual characteristics and spatial conditions in which these processes take place.

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