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Size and socio-economic resources of core discussion networks in the Netherlands: differences by national-origin group and immigrant generation

Frank van Tubergen

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Abstract

This study examines differences in the size and socio-economic resources of core discussion networks across national-origin groups and immigrant generation. The analysis is based on the Netherlands Longitudinal Lifecourse Study (2008–10), a nationally representative, large-scale survey of the Dutch population that contains an over-sample of first- and second-generation immigrants from Turkey and Morocco, the two largest non-western immigrant groups in the Netherlands. Results show that Dutch majority members have larger and more resourceful core discussion networks than Turks and Moroccans. Second-generation immigrants from Turkey and Morocco have larger core discussion networks than their foreign-born parents. However, there is no clear evidence for intergenerational increase in resources. The larger and more resourceful core discussion networks of the Dutch are partly attributable to the Dutch being higher educated and employed more often.

Keywords: core discussion networks; strong ties; personal networks; social capital; immigrants; generation.

Introduction

This study examines differences by national-origin group and immigrant generation in the size and composition of strong tie networks. Stronger ties are seen as particularly important for providing social, emotional and practical support (Smith and Christakis 2008). Furthermore, evidence suggests that not only weak ties (Granovetter 1973), but also strong ties are important for labour market outcomes

(Bian 1997; Cappellari and Tatsiramos 2010). Studies of strong network ties provide an important supplement to other research on individual differences in personal networks, such as studies on neighbourhood contacts, social interaction with acquaintances, and other weak ties (McPherson, Smith-Lovin and Cook 2001).

Studies on individual differences in strong tie networks have heavily relied on Burt's famous egocentric name generator, which was implemented for the first time in the 1985 General Social Survey (GSS; Burt 1984; Marsden 1987). The question 'Looking back over the last six months, who are the people with whom you discussed matters important to you?' generates information about the respondent's (i.e. *ego's*) number of core discussion partners (*alters*), as well as several attributes of alters (Marsden 2005). The core discussion question generates names of people's strong ties, such as their friends or other close ties, instead of weaker ties (Marsden 2005; Häuberer 2011).

Most studies on core discussion networks (hereafter labelled 'core network'), however, have appeared in the USA (Fischer 1982; Marsden 1987; McPherson, Smith-Lovin and Brashears 2006; Fischer 2009; McPherson, Smith-Lovin and Brashears 2009). Very few studies have been done in Europe. Exceptions are studies conducted in Germany (Wöhler and Hinz 2007) and in the Netherlands (Mollenhorst, Völker and Flap 2008; Völker, Pinkster and Flap 2008). Next to the size of the core network, most studies considered the composition of the core network in terms of the proportion of non-kin and heterogeneity in terms of ethnicity, age and gender (Marsden 1987; McPherson, Smith-Lovin and Brashears 2006; Völker, Pinkster and Flap 2008). Further, studies have been generally descriptive in purpose and have documented the size and composition of core networks in a given nation, or studied changes in such networks over time (McPherson, Smith-Lovin and Brashears 2006; Fischer 2009).

In this study, I aim to contribute to the literature, in two ways. First, I assess possible differences across national-origin groups. Little attention has been paid in the literature to possible group differences in core discussion networks. Studying group differences in core networks is important, because differences in the size and resources of core networks have important consequences for both instrumental and expressive actions (Lancee 2010; Kanas, van Tubergen and van der Lippe 2011). A growing body of literature stresses that social resources might be important in understanding ethnic disadvantage (Lancee 2010). Immigrants, so it is argued, do not have access to resourceful social networks, and that might hinder their occupational career. Although previous findings show that both weak and strong ties affect people's occupational career (Granovetter 1973; Cappellari and Tatsiramos 2010), it is unclear whether ethnic inequalities in access to resourceful networks indeed exist. The current paper thereby aims to contribute to the literature by studying in detail national-origin

differences in the resources of strong tie networks. I compare the core networks of the two largest non-western national-origin groups in the Netherlands, namely Turks and Moroccans, to that of Dutch majority members.

Second, I study possible changes in the size and composition of core discussion networks across immigrant generations, which has not been done before. Are second generation immigrants equally disadvantaged as their (foreign-born) parents in terms of the size and resources of their core network? Or are they more similar to the native (Dutch) majority? Theoretically, I try to assess whether differences across national-origin groups and across generations can be attributed to demographic and structural factors, or that over and above these characteristics differences across national-origin groups and generations remain.

The study of access to social resources is a main theme in the literature on social capital (Lin 2000). There is a vast and rapidly growing literature on social capital and different definitions of and approaches to social capital exist (Coleman 1988; Putnam 2000; Lin 2001; Burt 2005; van der Gaag 2005; Lin and Erickson 2008). In this study, I follow the approach developed by Lin (e.g. Lin and Dumin 1986; Lin 2000; Lin and Erickson 2008), who has defined social capital as the resources that are embedded in people's personal network and that can be accessed and mobilized. In this approach, which has also been developed in the literature on immigrants (Behtoui 2007; Li, Savage and Warde 2008; Völker, Pinkster and Flap 2008), social capital can facilitate both instrumental and expressive actions (Lin 2001), and in this article I focus on the instrumental dimension. Thus, rather than considering the resources within people's networks that can generate well-being and affection (i.e. expressive actions), I focus on the resources that promote people's socio-economic life chances.

The research question that I aim to answer is: 'Are there any differences across national-origin groups and immigrant generation in the size and socio-economic resources of core discussion networks, and if so, can these differences be explained by structural differences across groups and generations?' To answer this question, I analyse unique large-scale survey data of core networks in the Netherlands. Next to studying the size of core networks, I examine several proxy measures of the socio-economic resources of the core network, namely the proportion of non-kin, the average education level and the proportion employed. Ties to non-kin more often contain non-redundant information than connections that are within the family (Lin 2001). Higher-educated and employed network members generally have better information about jobs and they can exert more influence in the job-matching process than lower educated, unemployed people (Lin 2001; van der Gaag 2005).

Prior empirical findings on core discussion networks

Although little is known in the literature about possible differences across ethnicity, race or national origin in the size and composition of core discussion networks, there are a few exceptions. Marsden (1987) compared the core networks of three groups in the USA: whites, blacks and Hispanics. With data from GSS 1985, he showed that – when controlling for several core demographic and structural factors – the core networks of whites were statistically significantly larger than that of blacks, with Hispanics falling in between these two groups. Marsden (1987) also found that the proportion of kin is similar for whites and Hispanics, but significantly lower for blacks. McPherson, Smith-Lovin and Brashears (2006), relying on GSS 2004, equally found that whites have larger core discussion networks than blacks; however, ‘other’ groups were not significantly different from blacks. Also, no differences were found in the proportion of kin for blacks and whites.

Völker, Pinkster and Flap (2008) presented descriptive findings on the size of core discussion networks of various national-origin groups in the Netherlands for the year 1999. Respondents could nominate at most three core discussion partners, and the Dutch mentioned more on average (1.59) than Turks (1.08), Moroccans (1.26) and Surinamese (1.27) and about the same as Antilleans (1.66). Because the number of respondents for each of these four national-origin groups in the survey was very low ($N < 130$), and demographic and structural characteristics were not taken into account, it is difficult to draw conclusions on group differences in the size of core discussion networks in the Netherlands.

Group differences in the socio-economic composition of core discussion networks have not been studied directly with the name generator. An indirect source of information can be found in studies that relied on the position generator instead. The position generator is a measure of instrumental social capital, indicating access to network members holding occupational titles that differ in social prestige (e.g. Lin and Dumin 1986; van der Gaag 2005). This measure, however, captures not only the strong ties in people’s networks, but also their weaker ties. Using the position generator, Cross and Lin (2008) found that in the USA in 2002, blacks and Hispanics had less access to social resources (as measured with the position generator) than whites, even after considering demographic and structural factors. The disadvantaged access of immigrants has equally been found in Sweden (Behtoui 2007), the UK (Li, Savage and Warde 2008) and the Netherlands (Völker, Pinkster and Flap 2008). Unclear in studies that make use of the position generator, however, is whether immigrant groups have core discussion partners with fewer resources and/or that weaker ties in their network are deprived from resources.

Turks and Moroccans in the Netherlands

In this study, I examine the size and resources of the core discussion networks of Turkish and Moroccan immigrants and their children, and compare their core networks to that of Dutch majority members. Turks and Moroccans are particularly interesting to study in the Netherlands because they are the largest non-western immigrant groups and they differ considerably in terms of structural position and sociocultural orientation. Immigrants from Turkey and Morocco first arrived in the Netherlands in the 1960s. These were predominantly male, low-skilled workers who worked in the industrial sector. From the 1970s onwards, this was followed by family reunification and family formation. At present, both groups are much lower educated than the Dutch majority, unemployment levels are higher, and many live in poorer neighbourhoods (Gijsberts and Dagevos 2009). Over 95 per cent of the Turks and Moroccans are Muslim, and their sociocultural orientations (e.g. in terms of gender roles, parental styles, attitudes towards sensitive issues like abortion and divorce) differ quite strongly from that of Dutch majority members (Gijsberts and Dagevos 2009).

The second generation of immigrants from Turkey and Morocco has become larger in the past decades and this group has made important progress in their structural position. Children of immigrants make up a large and rapidly growing proportion of younger age groups in the Netherlands (CBS 2012). In 2011, 25 per cent of the population aged 15–20 were immigrant children. In the major cities, immigrant children make up a far larger part. In Amsterdam, 63 per cent of the population aged 15–20 are immigrant children, and this is true for 58 per cent in the Hague, 60 per cent in Rotterdam and 40 per cent in Utrecht. Compared to their parents, second-generation immigrants from Turkey and Morocco are higher educated, speak the Dutch language much better and generally have higher-income jobs than their parents, although not at the level of their native-Dutch peers. Furthermore, their sociocultural orientation has become more similar to that of the Dutch, although clear differences in religion, norms and values exist (Gijsberts and Dagevos 2009).

Theory and hypotheses

What expectations can be made about differences across groups and generations in terms of the size and socio-economic resources of core networks? Although theoretical work on the determinants of the size and composition of core discussion networks has received somewhat less attention in the literature, scholars have suggested that *individual resources* play a key role (Fischer 1982; Marsden 1987; Moore 1990), and that these resources affect the size and composition of core networks via two mechanisms: opportunities and homophily.

To begin, it is argued that people who have more resources – as indicated by being higher educated or employed – have more *opportunities* to form relations outside the local network of family and neighbourhood ties (Moore 1990), which would result in larger core networks. Individual resources also affect the composition of core networks via *homophily*. It is well known that people have a preference to interact with people who are economically and culturally similar to themselves (Kalmijn 1998; McPherson, Smith-Lovin and Cook 2001). This homophily principle states that it is easier and more comfortable for two individuals to interact when they have the same education, skills, resources, norms and values (Kalmijn 1998; McPherson, Smith-Lovin and Cook 2001). Thus, higher-educated people prefer to interact with other higher-educated people, and workers tend to prefer interacting with workers instead of those without a job.

Based on the mechanism of opportunities (which affects the size of the core network) and the mechanism of homophily (which affects the composition of the core network), expectations can be formulated about differences across groups and generations.

The Turks and Moroccans are generally lower educated and more often unemployed than the Dutch, but the second generation have made important progress in their structural position. Thus, given the structurally disadvantaged position of Turks and Moroccans, and in particular that of the first generation, I derive the following three hypotheses:

- The core networks of Turks and Moroccans will be smaller in size, consist of a lower proportion of non-kin, and will be less resourceful than the core networks of Dutch majority members (*Hypothesis 1*).
- The core networks of first-generation Turks and Moroccans will be smaller in size, consist of a lower proportion of non-kin, and will be less resourceful than the core networks of second-generation Turks and Moroccans (*Hypothesis 2*).
- Differences across groups and generations in the size and composition of core networks can be partly attributed to structural differences across groups and generations (*Hypothesis 3*). Thus, if I take the lower socio-economic status of Turks and Moroccans into account, I expect to see that differences in the core networks across groups and generations decline.

Data and methods

I make use of the first wave of the Netherlands Longitudinal Lifecourse Study (NELLS; de Graaf et al. 2010). NELLS is a

nationally representative, large-scale survey of the Dutch population aged 15–45, with an over-sample of first- and second-generation immigrants from Turkey and Morocco. Such large-scale surveys that contain information on people's core networks are very rare. The fieldwork has been done by Intomart GfK, which is one of the leading companies for market and social survey research in the Netherlands. The questionnaire of the first wave of the panel study consisted of two parts: a face-to-face interview and a self-completion questionnaire.

The fieldwork of the first wave started in December 2008 and finished in May 2010. To maximize response rates, respondents received financial incentives to participate. The overall response rate of the survey was 52 per cent, which is about average for face-to-face surveys in the Netherlands. Response was highest for the Dutch (56 per cent), lower for the Turks (50 per cent) and lowest for the Moroccans (46 per cent). Earlier surveys in the Netherlands also had lower response rates for minority respondents. In total, 5,312 respondents were interviewed. Excluded were people who fell outside the age range 15–45 ($n = 32$) and those who had missing information on education ($n = 77$). This resulted in 5,203 respondents. Because information on attributes of network members is sometimes missing, the analyses of the proportion of non-kin ($n = 5,018$), proportion higher educated ($n = 4,698$) and proportion employed ($n = 5,018$) are based on smaller samples.

Dependent variables

The dependent variables are derived from the egocentric name-generator question. The NELLE question (translated from Dutch) reads:

Most people discuss important personal matters with other people. Looking back over the past six months, with whom did you discuss important matters? We would like to know their first names and the first letter of their surname. You can give a maximum of 5 names. These are the most important names. Family members and relatives can be named as well.

Subsequently, respondents were asked for each of the persons they named in their core discussion network (i.e. alters) to describe his/her relationship, educational level, employment and several other characteristics.

Using the information from the name generator, I analyse the following dependent variables. The *size* of the core network is the number of core discussion members mentioned by the respondent. The variable can range from 0 to 5. In an additional analysis, I also study

whether people have at least one confidant (1) or not (0). Second, I measure the *proportion of non-kin* within the core discussion network. The partner and other family members are classified as kin, whereas friends and other members are non-kin. As a sensitivity check, I also examine whether someone has at least one member in his/her core network who is non-kin. Third, I examine the *proportion higher educated* in the personal network. I classified people with higher vocational training or a university degree as higher educated. Alternatively, one could examine whether at least one member of the core network has a high education. In an additional analysis, I study this as a dichotomous outcome. Finally, I study the *proportion employed* in the core network. In an additional analysis, I study whether at least someone in the core network is employed. I consider the proportion higher educated and the proportion employed as two indicators of the resources within core discussion networks.

Independent variables

I classify respondents in terms of their country of birth and that of their parents. I include dummy variables for *Turks*, *Moroccans* and *other national origin*, using Dutch majority members (hereafter: 'Dutch') as the reference category. Respondents whose parents were born in the Netherlands and who were born in the Netherlands themselves are considered as Dutch. Those whose parents were born in Turkey (Morocco) are considered Turks (Moroccans). For Turks and Moroccans, I differentiate between first and second generation. The number of respondents for the 'other' immigrant groups is too small to differentiate by national-origin group.

It could be that within the group that I consider to be Dutch majority members, there are third- (or higher-)generation immigrants from Turkey or Morocco. Although this is indeed the case, numbers are small. According to the Central Bureau of Statistics Netherlands (CBSN 2012), there are at most 800 third-generation Turks and 300 third-generation Moroccans. Moreover, these persons are still very young, and it is unlikely that they are in the data set used here (age 15–45). It should also be emphasized that place of origin is one of the many ways in which ethnicity can be defined. With the measure of national origin used here I do not study differences in the network size or resources across 'subgroups' or ethnic groups, such as between Turks and Turkish-Kurds from Turkey, between Muslim and Christian groups, or between Arabic and non-Arabic language groups from Morocco. Ethnic differences in group size, residential concentration, socio-economic status and other factors could lead to ethnic differences in the size and resources of core networks. Given data constraints, however, I am unable to study these differences in this study.

I control for two core demographic characteristics. A dummy variable is included for *gender* (male = 1). I also include dummy variables for *age*, as prior research has shown that the size and composition of personal networks are non-linearly related to age (Marsden 1990).

With respect to structural variables, I consider education and employment. *Education* measures the highest education followed by the respondent. Respondents who are still in education are assigned the level of their current education. The Dutch educational system is highly stratified by educational tracks, which differ in duration and difficulty. Education is measured in twelve ordered categories, ranging from (1) no education to (12) PhD degree. I combined smaller education levels and recoded this into five dummy variables, ordered from low to high: (1) at most primary education; (2) lower secondary education (i.e. in Dutch: the educational tracks of LBO, MAVO, VMBO); (3) higher secondary (i.e. HAVO, VWO), intermediate vocational (i.e. MBO); (4) vocational college (i.e. HBO); and (5) university (i.e. WO, Bachelor, Master, PhD). *Employed*: I contrast people who have a job with those who are unemployed or inactive (e.g. student, housewife).

Table 1 provides a descriptive overview of the independent variables. It shows that, as is evident from other sources, Turkish and Moroccan respondents in the NELLS study are lower educated and more often unemployed than Dutch majority respondents.

Methods and empirical strategy

I will first discuss the bivariate relationship between national origin, immigrant generation and network properties, to examine 'gross' differences across groups and generations. Subsequently, I present the findings from multiple regression analyses, in which demographic and structural factors are taken into account. In this way, I am able to test the hypotheses and to see whether differences across groups and generations (still) remain after these factors are considered. For the ease of interpretation, I first estimate and present ordinary least squares (OLS) regression models of size of the network, proportion of non-kin, proportion higher educated and proportion employed. Next to these OLS models, I also estimate models for categorical variables and count data as a sensitivity check. Specifically, I present a Poisson model to estimate the size of the core network, and binary logistic regression models of the dichotomous outcome variables of having at least one non-kin alter (1/0), one higher-educated alter (1/0) and one employed alter (1/0).

Table 1. Distribution of independent variables, by national origin (presented are proportions, unweighted figures)

	Total (<i>N</i> = 5,203)	Dutch (<i>n</i> = 2,527)	Turks (<i>n</i> = 1,033)	Moroccans (<i>n</i> = 1,085)
National origin				
Dutch	0.49			
Turks, first	0.13			
Turks, second	0.07			
Moroccan, first	0.14			
Moroccan, second	0.07			
Other	0.11			
Male	0.47	0.47	0.50	0.46
Age				
15–25	0.30	0.30	0.28	0.32
26–35	0.31	0.29	0.33	0.37
36–45	0.38	0.41	0.39	0.31
Education				
Primary or lower	0.07	0.01	0.14	0.14
Lower secondary	0.17	0.14	0.22	0.21
Higher secondary	0.07	0.06	0.08	0.07
Intermediate vocational	0.35	0.36	0.33	0.38
Vocational college	0.21	0.28	0.13	0.14
University	0.13	0.15	0.08	0.07
Employed	0.66	0.74	0.62	0.53

Results

Network size

Based on the NELLS survey, I find that in the period December 2008 to May 2010, the average number of core discussion partners was 2.71 (Table 2).

Before discussing differences across national-origin groups and immigrant generation, it is interesting to compare this finding to that of earlier research in the Netherlands and abroad. This figure is close to observations from an earlier study in the Netherlands (Mollenhorst, Völker and Flap 2008), where an average of 2.37 was found with data from the Survey of the Social Networks of the Dutch (SSND), which was conducted in 1999–2000. It is also close to the average of the core discussion network in Germany in 2000 (2.12), found by Wöhler and Hinz (2007), and the average size of core discussion networks in the USA in 2004, as found in the GSS (McPherson, Smith-Lovin and Brashears 2006).

Although the findings on average size of core discussion networks are similar across the Netherlands, Germany and the USA, it should be emphasized that the surveys differ in several ways and that differences might be more pronounced in reality. One important issue is whether the survey has an upper limit of nominations. Unlike

Table 2. *The size and composition of core discussion networks in the Netherlands, by national-origin group and immigrant generation*

Network size (%)	By national-origin group and generation					
	Total	Dutch	Turks		Moroccans	
			1st gen.	2nd gen.	1st gen.	2nd gen.
0	2.17	1.66	6.88	2.98	8.00	4.33
1	24.01	22.09	40.04	30.99	48.80	41.92
2	22.72	21.81	27.09	29.83	20.57	22.17
3	20.47	21.20	14.02	19.15	12.57	13.66
4	13.47	14.56	4.72	5.86	3.79	5.88
5	17.16	18.67	7.25	11.19	6.26	12.03
	100	100	100	100	100	100
Mean network size	2.71	2.81	1.91	2.27	1.74	2.11
Network composition (%)						
Partner	29.5	29.98	33.94	15.21	39.44	12.04
Other family	38.9	39.01	38.40	49.87	36.00	59.21
Friends	25.1	24.98	22.30	28.59	18.65	21.99
Other	6.3	5.97	5.26	6.12	5.90	6.60
	100	100	100	100	100	100

Note: Netherlands Longitudinal Lifecourse Study (NELLS), wave 1, weighted figures

NELLS (maximum of five), the other surveys have no upper limit of nominations. Although attributes of alters are typically asked for the first five names, network size is unlimited. The surveys used in the USA (GSS), the Netherlands (SSND) and Germany (DJI) find that around 5 per cent mention more than five confidants. This probably means that NELLS slightly underestimates the average size of the core discussion network. Another difference is the framing of the question. Whereas the GSS question is about ‘important matters’, the NELLS, GSS and SSND surveys specifically focused on ‘important *personal* matters’. This is another reason to suspect that when asked the same question as in GSS, the size of the average core discussion network in the NELLS survey would be higher.

Besides the average core network size, another important outcome to consider is the proportion with *no* discussion partner – a measure of core network size that circumvents the problem of a fixed upper limit. Based on the NELLS survey, only around 2.17 per cent of the Dutch population has no confidants. This is remarkably lower than reported in an earlier study in the Netherlands (i.e. 13 per cent, Mollenhorst, Völker and Flap 2008), quite close to figures from Germany (4.9 per cent, Wöhler and Hinz 2007) and lower than figures from the GSS 1985 (9–10 per cent, Marsden 1987; McPherson, Smith-Lovin and Brashears 2006) and GSS 2004 (24.6 per cent, McPherson, Smith-Lovin

and Brashears 2006). Thus, although the average core network size is very similar across surveys and countries, there appears to be more variation in the proportion having no discussion partner.

I find important differences across groups and generations in the size of core discussion networks. Dutch majority members have an average core network size of 2.81 (Table 2), as against 2.05 among Turks and 1.87 among Moroccans (data not presented). The mean core network size of first-generation Turks is 1.91, and this increases to 2.27 among second-generation Turks. A similar increase is seen among Moroccans (i.e. from 1.74 to 2.11). Whereas of the Dutch less than 2 per cent have no confidants, this is true of 6–8 per cent of first-generation Turks and Moroccans, and around 3–4 per cent of the second generation.

Do these differences persist when we take demographic and structural differences across groups and generations into account? The OLS regression analysis shows that men have smaller core networks than women, that people aged 26–35 have a larger core network than those who are younger (18–25) and older (36–45), and that education is positively associated with network size (Table 3). Importantly, it appears that the core networks of Turks and especially Moroccans remain smaller when compared to the Dutch, even when these demographic factors (model 1) and structural characteristics (model 2a) are taken into account. Although the difference between Turks, Moroccans and Dutch becomes smaller, the difference remains statistically significant. The same conclusion is arrived at when I estimate a Poisson model of the size of the core network (model 2b).

Table 3, model 1, also shows that differences persist in the size of core discussion networks across generations. Second-generation Turks have significantly larger core networks than foreign-born Turks, although the difference is quite small substantively ($b = 0.163$, p one-sided = .035; results obtained from additional analyses, with different reference categories, not presented here). For Moroccans, the differences across generations are also statistically significant ($p = .005$) and larger in magnitude. When controlling for education (Table 3, model 2), the differences across generations become smaller; however, for Moroccans it remains significant.

Proportion of non-kin

Table 2 also presents the composition of the core network by type of relationship. I find that the partner makes up 29.5 per cent of the core discussion network, as against 39 per cent other family members, 25 per cent friends and 5 per cent other. In previous research (Mollenhorst, Völker and Flap 2008), with data from 1999/2000, these figures were 22.4 per cent (partner), 29.8 per cent (relatives), 39.1 per cent

Table 3. Multiple regression of size and proportion of non-kin of core discussion network

	Size			Non-kin		
	In absolute numbers		At least one	Proportion		At least one
	Model 1 OLS	Model 2a OLS	Model 2b Poisson	Model 3 OLS	Model 4a OLS	Model 4b Logit
National origin (Dutch ref.)						
Turk (1st gen.)	-0.805*** (0.0579)	-0.647*** (0.0603)	-0.274*** (0.0286)	-0.0232 (0.0166)	-0.0133 (0.0174)	-0.482*** (0.0973)
Turk (2nd gen.)	-0.642*** (0.0782)	-0.541*** (0.0781)	-0.212*** (0.0331)	0.0317 (0.0224)	0.0392* (0.0224)	-0.179 (0.121)
Moroccan (1st gen.)	-1.051*** (0.0548)	-0.880*** (0.0586)	-0.396*** (0.0301)	-0.0527*** (0.0162)	-0.0440** (0.0171)	-0.714*** (0.0991)
Moroccan (2nd gen.)	-0.816*** (0.0801)	-0.720*** (0.0804)	-0.291*** (0.0361)	-0.0383* (0.0220)	-0.0331 (0.0222)	-0.646*** (0.122)
Other	-0.395*** (0.0648)	-0.398*** (0.0639)	-0.151*** (0.0256)	0.0174 (0.0167)	0.0123 (0.0168)	-0.152 (0.0975)
Male	-0.351*** (0.0381)	-0.360*** (0.0380)	-0.150*** (0.0158)	-0.00780 (0.0100)	-0.00642 (0.0101)	-0.299*** (0.0591)
Age (26–35 ref.)						
15–25	0.125** (0.0499)	0.144*** (0.0552)	0.0536** (0.0221)	0.0619*** (0.0129)	0.0492*** (0.0150)	0.367*** (0.0864)
36–45	-0.225*** (0.0462)	-0.169*** (0.0457)	-0.0702*** (0.0193)	0.0114 (0.0120)	0.0166 (0.0120)	0.0177 (0.0713)
Education (intermediate vocational ref.)						
At most primary		-0.279*** (0.0743)	-0.158*** (0.0405)		-0.0108 (0.0249)	-0.224 (0.140)

Table 3 (Continued)

	Size			Non-kin		
	In absolute numbers		At least one	Proportion		At least one
	Model 1 OLS	Model 2a OLS	Model 2b Poisson	Model 3 OLS	Model 4a OLS	Model 4b Logit
Lower secondary		-0.249*** (0.0560)	-0.121*** (0.0265)		-0.00414 (0.0156)	-0.143 (0.0894)
Higher secondary		0.106 (0.0813)	0.0418 (0.0333)		0.00989 (0.0209)	0.145 (0.121)
Vocational college		0.327*** (0.0528)	0.124*** (0.0201)		0.0551*** (0.0133)	0.392*** (0.0787)
University		0.505*** (0.0641)	0.189*** (0.0234)		0.0614*** (0.0156)	0.520*** (0.0953)
Employed		-0.00488 (0.0463)	-0.00156 (0.0197)		-0.0337** (0.0133)	-0.0838 (0.0742)
Constant	3.032*** (0.0435)	2.874*** (0.0649)	1.061*** (0.0268)	0.286*** (0.0106)	0.288*** (0.0177)	0.160 (0.102)
Observations	5,203	5,203	5,203	5,018	5,018	5,018
R ²	0.108	0.136	-	0.011	0.018	-

Note: Netherlands Longitudinal Lifecourse Study (NELLS), wave 1; robust standard errors in parentheses
 *p < .1, **p < .05, ***p < .01

(friends) and 8.5 per cent (other). Hence, I find that within a ten-year period, the core discussion networks in the Netherlands have shifted from non-kin to kin, a conclusion that needs further testing given the differences in survey designs and questionnaires.

I do not find strong differences across groups in the proportion of non-kin. The partner makes up around 30 per cent of the core network of the Dutch, and this is similar to the average of the Turks and Moroccans. Differentiating by generation, however, shows large differences. Among first-generation Turks and Moroccans, around 34–39 per cent of the network consists of the partner, whereas for the second generation this is only around 12–15 per cent. Other family members are the largest group, and this ranges from 39 per cent among the Dutch to 59 per cent among second-generation Moroccans.

When taking demographic factors into account, it appears that the difference between Turks and Dutch is not statistically significant (Table 3, model 3). Moroccans report relatively fewer non-kin members, and although this difference becomes smaller when controlling for their lower education and higher unemployment rate, it remains significant for first-generation immigrants (model 4a). Note that the OLS regression model shows a poor fit, suggesting that the linear specification is problematic here or that other factors not taken into account are important. When analysing a binary logistic model instead (model 4b) of whether someone has at least one member in his/her core network who is not the spouse or another family member, the results across groups and generations are more pronounced. I find that first- and second-generation Moroccans and first-generation Turks are less likely to have a non-kin member than Dutch majority members.

Proportion higher educated and employed

There are important group differences in the socio-economic resources of core discussion networks. Table 4 shows that around 37 per cent of alters in the core networks of Dutch majority members are higher educated (i.e. have obtained higher vocational training or a university degree). This is true for only 20–21 per cent of alters in the core networks of Turks and Moroccans. A similar ethnic disadvantage arises when one considers whether someone has at least one alter with a higher education in the network. Quite surprisingly, there appears to be little difference in the resources of core networks across immigrant generations. For example, whereas 31 per cent of first-generation Turks has at least one alter with a higher education in his/her core network, this is true for 32 per cent among second-generation Turks.

What happens when we control for background characteristics? Controlling for demographic characteristics yields the same picture on

Table 4. Resources of core discussion networks in the Netherlands, by national-origin group and immigrant generation (percentages)

	By national-origin group and generation					
	Total	Dutch	Turks		Moroccans	
			1st gen.	2nd gen.	1st gen.	2nd gen.
Education						
Alters higher educated (%)	37.22	37.29	21.13	20.19	22.16	20.34
At least one alter higher educated (%)	57.05	57.94	31.30	32.27	32.58	32.66
Employment						
Alters employed (%)	76.11	78.25	60.05	63.89	61.94	55.78
At least one alter employed (%)	91.65	93.73	75.49	83.10	74.47	71.21

Note: Netherlands Longitudinal Lifecourse Study (NELLS), wave 1, weighted figures

group differences: Turks and Moroccans have significantly fewer higher-educated alters in their core discussion network (Table 5, model 1). At the same time, the results reveal no significant differences across generations in the educational composition of core networks, which is contrary to what was expected. When taking education into account, the difference between Turks and Moroccans on the one hand and Dutch majority members on the other, becomes smaller (Table 5, model 2a). Surprisingly, however, it then also appears that second-generation immigrants from Turkey and Morocco have slightly fewer higher-educated alters in their network than their parents.

Regarding the employment status of network members, the results are quite similar to that of the education of alters. Among the networks of the Dutch, 78 per cent of the alters are employed, as across – on average of the generations – 61 per cent of the Turks and 60 per cent of the Moroccans (Table 4). There are some interesting differences across generations. Whereas for Turks, the second generation has a network with more employed persons than the first generation (64 per cent vs 60 per cent), the reverse is true for the Moroccans, where the second generation has fewer employed alters in core networks than the first generation (56 per cent vs 62 per cent).

The ethnic disadvantage in having ties to employed persons remains when I control for demographic characteristics (Table 5, model 3). Structural differences play a role, as people who are higher educated and who are currently employed have more core network members who are employed (Table 5, model 4a). A comparison of model 3 to model 4a shows that differences across national-origin groups in the

Table 5. Multiple regression of education and employment of alters within the core discussion network

	Higher-educated alters			Employed alters		
	Proportion		At least one	Proportion		At least one
	Model 1 OLS	Model 2a OLS	Model 2b Logit	Model 3 OLS	Model 4a OLS	Model 4b Logit
National-origin group (Dutch ref.)						
Turk (1st gen.)	-0.162*** (0.0165)	-0.0709*** (0.0161)	-0.693*** (0.117)	-0.182*** (0.0171)	-0.138*** (0.0178)	-1.243*** (0.139)
Turk (2nd gen.)	-0.168*** (0.0202)	-0.0946*** (0.0191)	-0.895*** (0.147)	-0.153*** (0.0211)	-0.129*** (0.0212)	-1.035*** (0.175)
Moroccan (1st gen.)	-0.152*** (0.0168)	-0.0494*** (0.0168)	-0.622*** (0.119)	-0.184*** (0.0175)	-0.133*** (0.0179)	-1.419*** (0.134)
Moroccan (2nd gen.)	-0.139*** (0.0209)	-0.0670*** (0.0199)	-0.737*** (0.142)	-0.215*** (0.0225)	-0.184*** (0.0225)	-1.561*** (0.153)
Other	0.0298 (0.0197)	0.0139 (0.0172)	-0.0637 (0.114)	-0.0747*** (0.0163)	-0.0573*** (0.0161)	-0.740*** (0.154)
Male	0.00293 (0.0108)	-0.00765 (0.00971)	-0.156** (0.0678)	-0.0133 (0.00988)	-0.0221** (0.00979)	-0.524*** (0.0876)
Age (26–35 ref.)						
15–25	-0.0755*** (0.0139)	-0.0448*** (0.0141)	-0.330*** (0.0994)	-0.0757*** (0.0123)	-0.0183 (0.0141)	-0.187 (0.127)
36–45	-0.0546*** (0.0133)	-0.0181 (0.0118)	-0.272*** (0.0827)	-0.0533*** (0.0118)	-0.0438*** (0.0117)	-0.347*** (0.111)
Education (intermediate vocational ref.)						
At most primary		-0.0985*** (0.0198)	-1.184*** (0.194)		-0.0771*** (0.0270)	-0.749*** (0.153)

Table 5 (Continued)

	Higher-educated alters			Employed alters		
	Proportion		At least one	Proportion		At least one
	Model 1 OLS	Model 2a OLS	Model 2b Logit	Model 3 OLS	Model 4a OLS	Model 4b Logit
Lower secondary		-0.0960*** (0.0126)	-0.888*** (0.110)		-0.0317** (0.0158)	-0.350*** (0.120)
Higher secondary		0.0321 (0.0205)	0.216* (0.130)		-0.0251 (0.0217)	-0.142 (0.165)
Vocational college		0.250*** (0.0141)	1.385*** (0.0870)		0.0485*** (0.0121)	0.457*** (0.141)
University		0.419*** (0.0168)	2.024*** (0.117)		0.0372*** (0.0144)	0.483*** (0.166)
Employed		0.0103 (0.0122)	-0.0308 (0.0881)		0.102*** (0.0129)	0.625*** (0.0996)
Constant	0.402*** (0.0123)	0.251*** (0.0168)	0.0598 (0.117)	0.831*** (0.00981)	0.726*** (0.0170)	2.698*** (0.155)
Observations	4,698	4,698	4,698	5,018	5,018	5,018
R ²	0.048	0.253	-	0.065	0.090	-

Note: Netherlands Longitudinal Lifecourse Study (NELLS), wave 1; robust standard errors in parentheses
 *p < .1, **p < .05, ***p < .01

ties to employed network members are partly attributed to the lower average education and higher average unemployment rate of Turks and Moroccans. This is in line with expectations. Against expectations, however, I find that the children of immigrants from Turkey and Morocco do not have more resourceful core discussion networks than their parents.

Summary of findings

In this study, I used large-scale, nationally representative survey data to examine the size and socio-economic resources of core discussion networks in the Netherlands. The main contribution of this study is that I looked at differences across national-origin groups and between immigrant generations, which has not been done before. I tried to come up with a first step towards explaining these differences with structural characteristics. Three main conclusions can be drawn from this study.

First, Dutch majority members have larger and more resourceful core discussion networks than first- and second-generation immigrants from Turkey and Morocco. The Dutch have more discussion partners, more confidants that are non-kin (compared to Moroccans) and also discussion partners that are more often higher educated and employed. These findings are supportive of Hypothesis 1. My findings are also in line with studies that examined group differences in access to occupations, as measured with the position generator. Ethnic disadvantage in access to social capital has been reported in Sweden (Behtoui 2007), the UK (Li, Savage and Warde 2008) and the USA (Cross and Lin 2008).

Second, the larger and more resourceful core discussion networks of the Dutch are partly attributable to the Dutch being higher educated and employed more often than Turks and Moroccans. As a result of the Dutch being more resourceful, they have more meeting opportunities outside the family/neighbourhood context than Turks and Moroccans. This provides the Dutch majority members with a larger core network. Furthermore, as a result of homophily processes, the core networks of higher-educated and employed individuals consist of more resourceful people. When I take into account that the Dutch are higher educated and employed more often than Turks and Moroccans, group differences in the size and resources of core discussion networks decline. These findings support Hypothesis 3.

Third, the results across immigrant generations are mixed. On the one hand, I find that second-generation immigrants from Turkey and Morocco have larger core discussion networks than their foreign-born parents, which is in line with Hypothesis 2. On the other hand, however, I find no clear evidence for intergenerational increase in

socio-economic resources. Children of immigrants do not have alters who are more often higher educated or employed than their parents. This is against expectations.

Discussion

The conclusions give rise to (at least) four follow-up questions, which can be addressed in future research.

First, why are there differences across national-origin groups in the size and resources of core networks, even after controlling for structural (and demographic) differences across groups? Why do Turks and Moroccans who are similar in education and employment position as the Dutch have smaller and less-resourceful core discussion networks than the Dutch? Possibly, cultural differences play a role in the desired or normatively valued alters in the personal network. Another explanation is that immigrants are confronted with prejudice and excluded from certain networks by Dutch majority members. Also, the strong spatial and housing segregation by national origin in the Netherlands could play a role, as it leads to strong day-to-day opportunities to meet people of the same national-origin group (Gijsberts and Dagevos 2009). These meeting opportunities lead to ethnically segregated core networks. Given the low education and high unemployment rate of Turks and Moroccans, this could in turn result into less resourceful core networks. Further research could study this explanation by jointly analysing the national origin and resources of the core network, which is beyond the scope of this study.

A second important question for follow-up research is concerned with the consequences of differences across national origin in the size and resources of personal networks for ethnic inequality in the labour market. The large and rapidly growing literature on social capital has emphasized that personal relationships, and the resources that can be accessed via these relationships, are helpful for the occupational career, such as obtaining promotion or receiving higher wages (Lin 1999; Lin and Erickson 2008; Cappellari and Tatsiramos 2010; Lancee 2010). One could argue that when alters are higher educated or employed, they possess more (valuable) information on the labour market and they have more influence that can be supportive. Possibly, then, the smaller size and the less resourceful alters in the core networks of Turks and Moroccans hamper their occupational career, and this inequality in personal networks partly explains the over-representation of Turks and Moroccans in low-income, low-status jobs (Gijsberts and Dagevos 2009). Further research is encouraged to study the dynamic interplay between the size and resources of core networks and the occupational career, using longitudinal data.

A third question deals with an empirical puzzle that came out of this study: why do children of immigrants not have more resourceful core discussion networks than their foreign-born parents? This is surprising, given that second-generation Turks and Moroccans more frequently interact with the Dutch than their parents do (Gijsberts and Dagevos 2009), which would lead to increased opportunities to meet (higher-educated, employed) Dutch alters. Also, the second generation speaks the Dutch language much better, and their norms and values are closer to that of the Dutch. The persistent ethnic disadvantage of access to resourceful core discussion networks is hard to explain, and given its possible consequences for economic incorporation, important to research.

Finally, a key question for follow-up study is whether the differences in core networks by national origin and immigrant generation that I find in this study also generalize to weak network ties. The focus of this study has been the smaller circle of core discussion members, but next to these stronger ties, personal networks also consist of the far larger number of weaker ties (DiPrete et al. 2011; Ryan et al. 2008), and these ties are found to be of particular importance for access to non-redundant (job) information and employment success (Granovetter 1973). Since the 1960s, the immigrant population in Europe has increased dramatically, and many countries now host sizeable proportions of first- and second-generation immigrants. Given the equally problematic labour market integration of (non-western) immigrants in other countries, it seems highly relevant to study ethnic inequalities in personal networks across European societies.

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