Inequality in Access to Social Capital in the Netherlands

Frank van Tubergen
Utrecht University, Netherlands and King Abdulaziz University, Saudi Arabia

Beate Volker
Utrecht University, Netherlands

Abstract
Whereas much research has been done on the benefits of social capital, less is known about the causes of the unequal distribution of social capital in people's networks. This study examines inequalities in access to social capital in terms of the socio-economic resources that are embedded in personal networks. Using data from NELLS, a nationally representative survey of the Dutch population aged 15–45 years, results show that within this age group access to social capital increases with age and educational qualifications, and is lower among women. Residing in a less affluent neighbourhood and scoring lower on a measurement for cognitive abilities are associated with less social capital. Participation in voluntary associations and having an ethnically diverse network are associated with more access to social capital. Surprisingly, when studying differences across national origin groups, we do not find that Turkish immigrants are disadvantaged in access to social capital.

Keywords
homophily, inequality, personal networks, social capital, social networks

Introduction

There exists a large and rapidly growing literature on the benefits of social capital for various domains of life. It is argued and indeed found that people with more social capital find better jobs with less effort (Lin, 1999). Furthermore, social capital has also been found to have important consequences for other dimensions of stratification, such as

Corresponding author:
Frank van Tubergen, Department of Sociology, Utrecht University, Padualaan 14, Utrecht, 3584 CH, Netherlands.
Email: f.vantubergen@uu.nl

health (Smith and Christakis, 2008) and education (Coleman, 1988). The literature on social capital consists of a wide range of questions, concepts, theories and approaches about how social networks and, more specifically, the social capital in these networks affect people's life chances (Burt, 2005; Coleman, 1988; Lin, 2001; Lin and Erickson, 2008; Putnam, 2000; Van der Gaag, 2005).

Whereas there are abundant studies on the *benefits* of social capital, less is known about the *causes* of the unequal distribution of social capital. Given the importance of social capital for people's life chances, understanding how social capital is distributed and who has less access to social capital is scientifically as well as socially important. In his review of the literature on social capital and status attainment, Lin suggested that 'differential access to social capital deserves much greater research attention' (2001: 122). This suggestion is more than 10 years old, but points still at an unresolved issue. In this study we take up this question.

Given the many definitions and concepts of social capital, we need to clarify from the beginning which dimension of social capital we study. We follow researchers who focus on a specific kind of social capital, namely the socio-economic resources that are embedded in people's personal network and that can be accessed and mobilized (Lin, 2001). There are many different aspects of social capital, and definitions thereof (Bourdieu, 1986; Burt, 2005; Coleman, 1988; Putnam, 2000; Van der Gaag, 2005), but in this study we focus on this socio-economic and instrumental (Lin, 2001; Lin and Erickson, 2008) dimension of social capital. Having personal connections to people holding higher status occupational positions or knowing people with occupations across a wide range of social prestige is indicative of this kind of social capital (Erickson, 2004; Lin and Dumin, 1986; Van der Gaag, 2005). When we use the term 'social capital' we refer to the (high) socio-economic resources embedded in the personal network, and consequently talk about individual variation in access to (socio-economic) network resources. Furthermore, it is important to mention that what we label as access to network resources actually means potential access; that is, we assume for simplicity that personally knowing someone implies that one could access the resources of that person, such as his or her information on job openings.

The key question we aim to answer in this article is: why are there individual differences in access to resourceful networks? Why are some people befriended with a lawyer and professor, whereas others are not? As stated by Lin (2001), studies that explicitly aimed to answer this question are scarce, but some studies have been done. In their study of 557 respondents aged 21–64 years old and living in the United States, Cross and Lin (2008) found no inequalities across age and gender in network resources. Blacks and Hispanics appeared to have less social capital than Whites. A positive effect of age on network resources was observed by Li et al. (2008), who examined 1559 respondents in the United Kingdom. They also report that ethnic minorities have fewer network resources, and that gender differences are unclear. Behtoui (2007, 2008), using data on 2349 employed people residing in Malmö, Sweden, found that education, work experience and being a member of a voluntary association were positively related to network resources. Swedish-born people had more social capital than immigrants, whereas no gender differences were found. In the Netherlands a survey conducted in 1999 among 1007 respondents showed that access to resourceful networks was higher among males,

Dutch majority members, and those who were higher educated and employed (Volker et al., 2008). Other studies on inequality in network resources that rely on samples of at least 500 respondents were done in China (Lin, 2001; Lin et al., 2009) and Taiwan (Chen, 2009).

We aim to contribute to the studies on individual differences in access to network resources.

First, we do *replication research* on relationships that were studied before. Replication based on different samples, populations or measures is one of the golden rules for cumulative social research (Firebaugh, 2008), and replication studies are particularly important when there is much uncertainty about empirical relationships. This is the case in research on access to network inequality, where not only have few studies been done, but the findings of these studies are also often contradictory. We come with new evidence from a large-scale survey representative of the population aged 15–45 in Holland.

Second, we aim to further develop and *systematize theoretical argumentations*. Although several studies have examined the relationship between social categories like age, gender and employment and access to resourceful networks, the theoretical arguments behind these determinants have remained somewhat implicit. For example, it remains unclear which theory is challenged by empirical evidence when studies find no gender differences in network resources. We propose two theoretical mechanisms, which we label 'homogeneity-consolidation' and 'network diversity', and formulate their core assumptions, auxiliary assumptions and testable hypotheses. We derive new hypotheses that have not been previously proposed and tested.

By considering both old and new determinants, as well as the theoretical mechanisms behind these determinants, we provide an understanding of how and why inequalities in access to (instrumental, socio-economic) social capital arise.

Homogeneity-Consolidation

The first theoretical mechanism is that of *homogeneity-consolidation*. Earlier formulations that go in the direction of this theory can be found in some of the studies on access to social capital. Behtoui (2007: 386) stated that 'the composition of an individual's network is largely understandable in terms of the "homophily" principle'. Lin (2000), in his review of the literature on access to social capital, emphasized the role of 'homophily' in network formation *in combination* with 'unequal opportunities for members of different groups defined over race, gender, religion, caste, or other ascribed characteristics' (2000: 787). Based on these propositions, we formulate the homogeneity-consolidation mechanism that rests on two core assumptions.

The first is that of network homogeneity: the tendency of individuals (Ego) to have ties to network members (alters) that are similar to themselves. This assumption is confirmed by empirical research. Networks are homogeneous along many different dimensions, such as ethnicity, gender, age, religion, values, income and education (Kalmijn, 1998; McPherson et al., 2001). One driving force behind this tendency is homophily; that is, the preference for interacting with people who are personally, culturally and economically similar to themselves (McPherson et al., 2001). Another explanation for the homogeneity of personal networks is that of unequal meeting opportunities. Social

contexts are often segregated by ethnicity, education, income and other social categories, which restricts opportunities to meet people from other groups. Migrants, for example, often live in ethnically concentrated neighbourhoods and often attend schools with many co-ethnics (Eve, 2010), which restricts the opportunities for interacting with members of another group and the creation of interethnic friendships (McPherson et al., 2001).

The second assumption is that there is a certain consolidation of attributes of alters and their position in the labour market. For example, when alters are young (say, 15–25), and younger people are generally more often unemployed and inactive in the labour market and occupy lower status jobs than somewhat older people (say, 25–45), then there is a consolidation between alters' age and occupational status. Common explanations for consolidation are differential returns to human capital and discrimination.

When combining the two assumptions, individual differences in access to social networks can be explained. For example, when ego A is still at school, he or she is likely to have many friends who are in school as well (homogeneity assumption). Few friends of ego A are employed (consolidation), and he or she has a less-resourceful network than ego B who is employed.

The homogeneity-consolidation mechanism specifies two *unknown, unmeasured* parameters. Both the *degree* of homogeneity of a certain attribute X, and the *degree* of consolidation of attribute X with occupational position are contingent quantities that fluctuate over time and space. Thus, although network homogeneity along various dimensions has been well established, the degree of homogeneity is not a constant, and this is also true for consolidation. It means that auxiliary assumptions are needed about both parameters in order to deduce testable hypotheses. It also implies that the contradictory findings in the literature about differences across, for example, age, gender and education in access to social capital, can only be meaningfully interpreted when the auxiliary assumptions are fully fledged out.

In this study, we address these assumptions, derive hypotheses and test these with data from the Netherlands. This does not mean, however, that we can directly test these unknown parameters, as they remain unmeasured. Instead, we make assumptions about the degree of homogeneity of a certain attribute X and the degree of consolidation of attribute X with occupational position, and we try to empirically falsify the *implications* derived from these assumptions. These implications are the testable hypotheses, which we formulate below.

With respect to network homogeneity, various studies among adolescents and adults have shown that in the Netherlands networks are homogeneous along age, gender, socio-economic position and national origin (Baerveldt et al., 2004; Kalmijn, 1998, 2002). With respect to national origin, we focus on the two largest non-western immigrant groups in the Netherlands: Turks and Moroccans. It is particularly among these two groups that personal networks are segregated from Dutch majority members (Martinovic et al., 2009; van Tubergen, 2014). It is equally observed in the Netherlands that there is consolidation between these social categories (age, gender, education and national origin) and occupation (Merens and Ross, 2011). Women, people who have lower educational qualifications and Turks and Moroccans are more often unemployed and inactive, and when employed they occupy lower status jobs than men, people who are higher

educated and Dutch majority members. We also directly consider people's employment status. Age deserves special attention, as the age group studied here (15–45) is somewhat younger than normally the case. The labour force participation in Holland is around 20 per cent among people aged 15–19, then increases approximately linearly to around 90 per cent at age 30–34 and remains more or less stable until age 45–49. This means that even among younger people (15–19) a substantial group already works, and presumably knows other people in their network who work as well, but less so than people who are somewhat older.

We also derive new hypotheses from the homogeneity-consolidation theory. We propose that beyond ego's education and employment position, cognitive abilities also affect access to social capital. We assume that networks are segregated along ability, talent and intelligence. On the assumption that alters with higher cognitive abilities will in general have a better position in the labour market, it is expected that when ego has higher cognitive abilities, he or she will have more access to social capital.

Neighbourhood poverty can also affect access to resourceful networks. Neighbourhoods are segregated according to occupational status, and people who live in poor neighbourhoods might be isolated from people working in the mainstream labour market (Wilson, 1984). We expect to see that residents of poorer neighbourhoods have less access to resourceful networks. In line with this, Small (2007) found with data on residents of the Chicago Census tracts that neighbourhood poverty negatively affects the number of intimate non-kin ties who are employed. In our study, we consider the effect of neighbourhood poverty on the resources of personal networks, which include but are not limited to intimate non-kin ties.

Network Diversity

The second mechanism that we distil from the literature is concerned with the consequences of network diversity; that is, the degree to which alters are affiliated to different groups. When an individual is connected to different kinds of groups or networks, and these groups or networks are not well interconnected, he or she will know a more diverse group of people via his or her connections. A key assumption of the *network diversity mechanism* is that when similar contacts are concentrated within one group, social capital obtained from the relationships to these network members is overlapping and redundant.

Although these arguments are well known in research on the performance of managers (Burt, 2005) and the job-finding process (Burt, 2005; Granovetter, 1973, 1974), they have not found their way into the literature on inequality in access to network resources. We propose this diversity mechanism for understanding individual differences in access to social capital, and assume that when people have contact to members of various (non-overlapping) groups, they will have more access to resourceful networks.

A first empirical test concerns involvement in voluntary associations. Voluntary associations, such as sports clubs and religious and political organizations, provide opportunities to meet others who are dissimilar in terms of socio-economic standing (Ruiter and De Graaf, 2009). It is hypothesized that the more strongly people are actively involved in voluntary associations, the more access they have to social capital.

The second way in which we test the role of network diversity is to consider the diversity of ego's friends in terms of national origin. We assume that when, for example, a Turkish immigrant only has contacts with other Turkish immigrants his network is ethnically homogeneous, whereas it is more diverse when he also has contacts with people from different national origins. We hypothesize that the more a person's friendship network is mixed in terms of national origin, the more resourceful network they will have. In sum, we empirically test that access to network resources is higher among those who are members of a voluntary association and who have an ethnically mixed network.

Data and Measurement

Data

We make use of NELLS (De Graaf et al., 2010). NELLS is a nationally representative, large-scale survey of the Dutch population aged 15–45, with an oversample of immigrants (and their children) from Turkey and Morocco.

The overall non-response rate of the survey was 52 per cent. There is some selective non-response. Women are over-represented among Moroccans, older respondents are over-represented in all three groups, and the western part of the Netherlands is under-represented. In our description of the data (Table 2), we use weights to correct for this. Also, even though translated questionnaires were used, 4.6 per cent of the Moroccans and 6.7 per cent of the Turkish sample could not cooperate because of language problems (De Graaf et al., 2010). We examined the possible consequences of this selectivity for the differences across national origin groups by performing an additional analysis in which we only focus on the children of Turkish and Moroccan immigrants (i.e. who were born and educated in the Netherlands, and for whom there are no language barriers to give an interview). The results remain the same as reported in this study.

In total, 5312 respondents were interviewed. Excluded from our analyses were people who fall outside the age range 15–45 ($N = 32$), those who did not fill in the self-completion questionnaire (406), and those who had missing information on other variables (194). The presented multivariate analysis is based on 4680 respondents.

Dependent Variables

Access to socio-economic resourceful networks is measured with the *position generator*. The position generator is a measure of the instrumental dimension of social capital (Erickson, 2004; Lin and Dumin, 1986; Van der Gaag, 2005) and it measures the resources of the strong and weak ties within people's networks. The position generator captures the connections that people have to other people from different levels of the occupational hierarchy, on the assumption that knowing more different occupations and having access to higher status jobs generates more social capital. This is a specific and instrumental aspect of social capital, which does not cover the broader notion of social capital. However, it also has the advantage that it narrows the social capital concept

down to access to others with a given occupational status. Furthermore, in the western world, social resources often come with occupation. The position generator is a well-established measurement of instrumental social capital (e.g. Lin and Dumin, 1986; Van der Gaag, 2005; Van der Gaag and Snijders, 2005; Van der Gaag et al., 2008). A drawback of the measure is that sometimes people have more to gain by knowing someone with a specific occupation (e.g. a carpenter who knows another carpenter). Empirically, however, research shows that access to different occupations, and to high status jobs in particular, has a positive influence on people's occupational status and income (Behtoui, 2007; Chen, 2009; Cross and Lin, 2008; Lai, 2008; Li et al., 2008; Lin, 2001; Lin et al., 2009; Pinkster, 2009; Volker and Flap, 1999).

In the survey, respondents were shown a list of 20 occupations (containing both low and high status jobs, though listed in a random order) and then asked to indicate for each occupation whether or not they had 'friends, acquaintances or family members with that occupation'. Respondents were furthermore instructed to name only those people 'whom they know outside the work setting'. This was done in order to make sure that the informal network is measured.

Based on the position generator, prior research has constructed measurements of network extensity (i.e. number of positions), highest accessed (i.e. the highest status job), diversity (i.e. difference between highest and lowest job status), and average prestige (i.e. average status of jobs). In this article, we study the first two outcomes.[1] First, *total number of positions*: this outcome variable indicates how many of the 20 occupations can be accessed within the respondent's network. Second, total number of *higher status positions*: this variable measures the number of jobs that have an ISEI score of 66 to 87 (i.e. the maximum). Of the 20 occupations presented to the respondent, seven fall in this category (e.g. lawyer, doctor, scientist). For comparative reasons, we also present the results for the total number of *medium status positions* (i.e. ISEI between 50 and 64, six occupations in total) and the number of *lower status positions* known (i.e. ISEI between 25 and 49, six in total).

Independent Variables

Education: this measures the highest education level followed of the respondent. Respondents who are still in education are assigned the level of their current education. Following the stratified educational system in the Netherlands, education level was measured in 12 categories, ranging from (1) 'no education' to (12) 'PhD'. We recoded this variable into five dummy variables: at most primary education, lower secondary education, higher secondary, intermediate vocational (reference category), vocational college and university.

Employed: we contrast people who have a job with those who are unemployed or inactive.

Cognitive abilities: respondents had to do short tests on their verbal abilities (respondents had to choose the right equivalence of nine Dutch words, alpha scale 0.84) and analytical skills (respondents had to solve five puzzles, alpha scale 0.80). We standardized both scales and include the average of both ($r = 0.50$) as a proxy measure of their cognitive abilities. Note that including the measures separately gave the same results as the

findings presented here. This measurement is a crude proxy of (various kinds of) cognitive abilities, and more extensive measures are to be preferred. Note also that the discussion of the concept of ability has a long history in sociology and sociologists have also criticized an uninformed use of the concept (see Fischer et al., 1996). For example, the scale for cognitive abilities might not really measure cognitive abilities but experience with language and training. While being aware of these problems, it is important to study its relationship with access to network resources, after taking education into account.

Neighbourhood wealth: is measured by the percentage employed people (including self-employed), aged 15–65. Alternative measures, such as average housing value in the neighbourhood, average income after tax per income recipient, and percentage income recipients with income higher than 80 per cent of national income distribution, correlate strongly with our measure (>0.75), and results for these variables are the same as presented.

Gender and national origin: a dummy variable is included for *gender* (male = 1), and an interval variable for *age* in years. We include dummy variables for *Turks, Moroccans* and *other national origin*, using Dutch majority members as the reference category ('native Dutch'). Respondents whose parents were born in the Netherlands and who were born in the Netherlands themselves are considered as native Dutch. Those who have two parents who are born in Turkey (or Morocco) are considered Turks (Moroccans). Note that this group includes immigrants and their children. The number of respondents for the other groups are too small to differentiate, and are therefore taken together.

Voluntary organizations: the number of voluntary organizations in which people are actively involved (i.e. those who are members of a voluntary organization but do not attend meetings are not considered as actively involved). A list of seven voluntary organizations was presented; including, for example, hobby/music/culture clubs, political organizations and religious organizations. We added active involvement in a sports club to this list.

Ethnic diversity of friends: respondents were asked whether they had one or more than one good friend with the following ethnic background: Dutch, Turkish, Moroccan, Surinamese/Antillean, other non-western. For each ethnic group, respondents could answer either 'yes' or 'no'. We measure the ethnic diversity of friends with the total number of groups mentioned (0 = no diversity, 5 = maximum diversity).

Control Variables: Social Contacts

We include measures of the core network (e.g. partner, friends) as well as weaker ties within the personal network (e.g. contacts in the neighbourhood).

Partner: measures whether the respondent has a partner, defined as someone with whom the respondent has a relationship with for three months or longer. In addition, we include four separate measures on the frequency of face-to-face contact with the respondents' *friends, parents, other family members*, and *people in the neighbourhood*. These contacts are measured on an ordinal scale, which ranges from (1) 'never' to (7) '(almost) every day' and treated as an interval measure. We assume that when people have more frequent social contacts in a certain domain (e.g. neighbourhood), the size of their network in that domain will be larger. Table 1 provides a descriptive overview of the independent and control variables.

Table 1. Descriptive statistics of independent variables.

	Range	M	S.D.
Social contacts			
Partner	0/1	0.69	
Contact with parents	1–7	5.20	1.89
Contact with family	1–7	5.03	1.59
Contact with friends	1–7	5.49	1.27
Contacts in the neighbourhood	1–7	4.84	1.83
Homogeneity-consolidation			
Education			
Primary or lower	0/1	0.07	
Lower secondary	0/1	0.17	
Higher secondary	0/1	0.07	
Intermediate vocational	0/1	0.35	
Vocational college	0/1	0.21	
University	0/1	0.13	
Employed	0/1	0.66	
Cognitive ability scale	0–1	0.59	0.29
Neighbourhood, housing value (in €1000)	87–419	194.83	47.97
Male	0/1	0.47	
Age	15–46	31.30	8.95
National origin group			
Turk	0/1	0.20	
Moroccan	0/1	0.21	
Dutch	0/1	0.48	
Other	0/1	0.10	
Network diversity			
Ethnic diverse friends	0–5	2.12	1.30
Voluntary participation	0–7	0.86	0.93

Results

The distribution of access to people with different occupations is shown in Table 2. People know least often an estate agent (19.6%), and most often a teacher (57.8%). Around 85 per cent of the respondents who participated in the NELLS survey know at least one of the seven higher status occupations presented. This already high percentage of respondents knowing someone at the lower end of the stratification is even higher in reality, as the number of low status occupations is much larger than presented in the survey. A similar high percentage is true for people with medium- and low status jobs.

Table 3 shows the results of the OLS regression of the total number of positions accessed. In addition, it presents the results of the three separate regressions by the status of the positions accessed.[2]

We find that educational level is positively associated with having access to (higher status) jobs in the personal network. Those with university education have access to 1.5

Table 2. Percentage of occupations accessed in the Netherlands, 2008–2010.

	ISEI	Access to at least one occupation, per status (%)	Access per occupation (%)
High status		85.9	
Doctor	87		31.3
Lawyer	83		25.5
Scientist	71		25.4
Information technologist	70		54.7
Director company, higher manager	69		45.4
Engineer	68		33.9
Teacher	66		57.8
Middle status		82.9	
Musician, artist, writer	64		26.6
Estate agent	61		19.6
Mechanic	59		45.7
Secretary	53		40.4
Book-keeper, accountant	51		32.9
Police officer	50		29.7
Low status		88.3	
Shopkeeper	49		42.1
Sales employee	43		42.0
Nurse	38		50.6
Bus driver	34		38.4
Cook	30		29.7
Construction worker	26		47.8
Foreman (manual work)	25		29.1

Note: Netherlands Longitudinal Lifecourse Survey, 15–45 years of age, $N = 5280$. Weighted figures (own computations).

more occupations in their personal network than those with an intermediate vocational education, and 3.1 more jobs than those with at most primary education. The decomposition by status shows that higher-educated people have far more access to people with higher status jobs than people with a lower education.

People who score higher on the cognitive ability scale access more jobs in their network, in particular higher status jobs. Thus, although our measurement of abilities and talents is only a crude proxy, it is interesting to observe its empirical relationship with network resources. Note also that the effect of the ability measurement differs from the one of education: while the former increased access to all types of occupational positions, higher education is only associated with more access to intermediate and higher status jobs. As expected, people who live in wealthier neighbourhoods have more access to social capital, even when taking into account the other variables in the model, such as education, cognitive ability measurement and the size of the personal network. People who live in wealthier neighbourhoods have more access to jobs at the bottom, middle and top of the hierarchy.

Table 3. OLS regression of number of occupations accessed: Total and per occupational status groups.

	Total	Higher	Medium	Lower
Social contacts				
Partner	0.974***	0.271***	0.253***	0.437***
	(0.148)	(0.0629)	(0.0526)	(0.0702)
Contact with parents	0.00108	−0.00173	0.00820	0.00260
	(0.0415)	(0.0176)	(0.0147)	(0.0197)
Contact with family	0.142***	0.0110	0.0325**	0.0969***
	(0.0465)	(0.0198)	(0.0165)	(0.0221)
Contact with friends	0.272***	0.0833***	0.0792***	0.124***
	(0.0535)	(0.0227)	(0.0190)	(0.0254)
Contacts	0.132***	0.0333**	0.0403***	0.0481***
neighbourhood	(0.0345)	(0.0146)	(0.0122)	(0.0163)
Homogeneity-consolidation				
Education				
Primary or lower	−1.630***	−0.577***	−0.476***	−0.570***
	(0.296)	(0.126)	(0.105)	(0.140)
Lower secondary	−1.255***	−0.581***	−0.336***	−0.353***
	(0.182)	(0.0774)	(0.0647)	(0.0864)
Higher secondary	−0.00355	0.345***	−0.0300	−0.275**
	(0.250)	(0.106)	(0.0887)	(0.118)
Intermediate vocational (ref.)	0	0	0	0
Vocational college	1.033***	0.886***	0.255***	−0.0769
	(0.167)	(0.0709)	(0.0593)	(0.0791)
University	1.576***	1.738***	0.247***	−0.360***
	(0.206)	(0.0876)	(0.0732)	(0.0978)
Employed	0.832***	0.263***	0.232***	0.299***
	(0.151)	(0.0643)	(0.0537)	(0.0718)
Cognitive ability	1.478***	0.748***	0.401***	0.374***
scale	(0.280)	(0.119)	(0.0994)	(0.133)
Neighbourhood, %	0.0353***	0.00819**	0.0105***	0.0128***
employed	(0.00927)	(0.00393)	(0.00329)	(0.00439)
Male	0.715***	0.138***	0.171***	0.345***
	(0.120)	(0.0510)	(0.0427)	(0.0570)
Age	0.0393***	0.0150***	0.0148***	0.00818*
	(0.00902)	(0.00383)	(0.00320)	(0.00427)
Turk	0.0956	0.0678	0.217***	0.0226
	(0.197)	(0.0837)	(0.0700)	(0.0935)
Moroccan	−0.892***	−0.186**	−0.131*	−0.404***
	(0.195)	(0.0830)	(0.0694)	(0.0926)
Other	0.0609	0.144	0.133*	−0.155
	(0.209)	(0.0887)	(0.0742)	(0.0991)

(Continued)

Table 3. (Continued)

	Total	Higher	Medium	Lower
Network diversity				
Ethnic diversity	0.439***	0.161***	0.144***	0.157***
friends	(0.0532)	(0.0226)	(0.0189)	(0.0252)
Voluntary	0.285***	0.138***	0.0944***	0.0374
participation	(0.0648)	(0.0275)	(0.0230)	(0.0307)
Constant	−2.987***	−0.814**	−1.182***	−0.657*
	(0.842)	(0.357)	(0.299)	(0.399)
R-squared	0.177	0.249	0.109	0.084

Note: Standard errors in parentheses. ***p<.01, **p<.05, *p<.1 (two-sided test). Netherlands Longitudinal Lifecourse Survey 2008–2010, respondents 15–45 years of age, *N* = 4664.

We find clear support for inequalities in access to social capital by age and gender. In our study, which pertains to people aged 15–45, we find that with increasing age, people get access to network members with a larger variety of jobs, and in particular they get more access to higher status jobs. Note that due to the stratified educational system, age and education are not confounding factors (i.e. leaving out younger people does not alter the results). We also find strong gender differences, with men having more access to occupations than women. Interestingly, men have a particular advantage in accessing jobs of lower prestige.

With respect to inequalities in access to social capital across national origin groups, however, the findings are puzzling. Although it is observed – as hypothesized – that Moroccans on average have less access to occupations via network members than the native Dutch (*b* = −0.897), they are especially disadvantaged in accessing lower status occupations. Given the overall low status occupied in the Moroccan community, this is an unexpected finding. Even more surprising is that Turks do not access fewer jobs than native Dutch. With regard to access to jobs of medium prestige, they even outperform the Dutch. Further analyses revealed that in the OLS regression of the total number of occupations accessed in the network, and without other variables, Turks score −0.73 lower than the Dutch (*p* <.05). For Moroccans, the difference is −1.93 (*p* <.05). When including education, the Turks do not differ significantly from the Dutch any more, whereas the Moroccans do (*b* = −1.11, *p* <.05).

To examine whether the results could be driven by selective non-response (in terms of language), additional analyses were conducted among the children of immigrants only. These analyses also showed that Turkish-Dutch children do not significantly differ from Dutch majority members. In further analysis, we see that the empirical puzzle (i.e. Turks having as many social resources as the Dutch majority) 'travels' across gender and age groups (i.e. are the same for men and women, and for younger and older people), and also remains when we control for language proficiency, and when we exclude respondents who have contacts with their parents. Thus the puzzle is found across social categories. Furthermore, the puzzle remains when we use alternative measures of network resources (i.e. highest job status accessed, distance between lowest and highest job status).

As expected, active involvement in voluntary organizations is positively associated with access to social capital. Also, we find that people who have a more diverse friendship network in terms of national origins have access to a larger number of (higher status) occupations in their network. We examined whether this association was (partly) due to the larger occupational diversity in cities, where there is also more ethnic diversity, but further analysis (not presented here), showed no evidence for this.

Social Contacts

Our results show a positive association between personal contacts and network resources. Those who have a partner and those who have more frequent contacts with friends and people in the same neighbourhood have better access to social capital. The observed positive association between frequency of social contacts and social capital is important for studies that had to rely on social contacts or network size as a proxy for the socioeconomic resources in personal networks (Van der Gaag, 2005).

Conclusion

Although much research has been done in the past decades on the consequences and benefits of instrumental social capital, little is known about the causes of individual differences in such network resources. This study developed two theoretical mechanisms that can explain individual differences in access to resourceful networks: homogeneity-consolidation and network diversity. A number of hypotheses were deduced and tested with large-scale data collected in Holland that include controls for social activities and that measure instrumental social capital with the position generator. Two general conclusions can be drawn from our study.

First, we generally find support for the hypotheses derived from the homogeneity-consolidation mechanism. Within the age group 15–45, we observe that women have less access to resourceful networks than men and that access to social capital increases with age. This is presumably the result of the occurrence of gender and age segregation in social networks (homogeneity) and the fact that women and younger people (say: 15–25) are more often inactive or unemployed and, if employed, occupy lower status jobs (consolidation). Our findings are in line with the often made though not equally often tested assumption that women do less well in the labour market than men, partly because of gender differences in access to resourceful networks (Erickson, 2004). The homogeneity-consolidation mechanism is also supported with respect to achieved characteristics, although endogeneity issues might lead to overestimation. People with higher levels of education, people who score higher on the scale measuring cognitive abilities and those who live in wealthy neighbourhoods have more access to people with (high status) job positions – even after controlling for employment position and social activities. The only anomaly for the homogeneity-consolidation mechanism pertains to differences we see across national origin groups. We elaborate on this below.

Second, we find support for the role of network diversity. When people have contact with members of various (non-overlapping) groups, they will have more access to resourceful social capital, *even when measures of personal network size and social*

contacts are taken into account. Active involvement in voluntary organizations – where bridging ties are generated – is positively associated with access to network resources, in particular more access to network members with higher status jobs. This is in line with research showing that active involvement in voluntary organizations has positive economic outcomes (Ruiter and De Graaf, 2009). The positive effect of membership activities is one of the few consistent findings in the literature on access to resourceful networks, as was found earlier in Sweden (Behtoui, 2007), China (Lin et al., 2009) and Taiwan (Chen, 2009). Furthermore, also in line with the diversity mechanism, people who have a more diverse friendship network in terms of national origins have access to a larger number of (higher status) occupations in their network.

Discussion

These findings lead to new directions for further research.

First, this study tested the implications of the assumptions set forth by the homogeneity-consolidation mechanism. We were unable to falsify most of these derived hypotheses, leading us to tentatively accept the underlying assumptions. Further research might take up the challenge to measure and test these assumptions more directly. This requires data that contain not only information on the determinants (age, gender, etc.) and the resources in the network (i.e. position generator), but also the degree of homogeneity and similarity in ego's network in terms of the same attributes of ego (age, gender, etc.).

Second, more international comparative research is needed to get to know whether the conclusions of this study can be generalized beyond the Dutch context. We do think that this is possible on a general level, i.e. we formulated general mechanisms of network formation. However, on the empirical level, one could expect differences. For example, if there are no gender differences in labour force participation and occupational status, one would expect not to find any gender differences in access to network resources. Likewise, if younger age groups (e.g. age 15–25) show high levels of labour force attendance, one might arrive at different conclusions regarding age-related differences in access to network resources.

Third, what explains individual differences in access to various other dimensions of social capital? In this study, we explicitly focused on individual variation in instrumental, socio-economic resources in personal networks. Scholars can elaborate on this research question, and examine inequality in other aspects of social capital. This includes, among others, social trust relations or the degree of social and emotional support available in one's network (i.e. the expressive functions of social capital).

Fourth, as mentioned in the introduction, having a resourceful network is not the same as having access to a resourceful network. Knowing a lawyer might not imply that that lawyer is willing to provide help; for example, share his/her information about job openings. Social capital is the multiplicative outcome of (1) the extensity of the social network (size), (2) resources embedded in the network (e.g. information), and (3) willingness and opportunity of alters to share the resources with ego (cf. Flap and Volker, 2013). Condition (3) needs to be studied more in future research. It might depend on (at least) two other conditions. First, people are *in general* more willing to help each other when they have a stronger relationship. Indeed, 'knowing' someone is a minimum definition of

the social network, and might not come together with reciprocity and solidarity. In our study, respondents were prompted to think about 'friends, acquaintances or family members with that occupation' and only those people 'whom they know outside the work setting'. This means that tie strength is not so minimal in our study as in the case of only 'knowing' a person. The social network studied in our work already implies a certain degree of closeness (and thus reciprocity or willingness). In addition, the willingness of alters to help ego might be a (negative) function of the time and effort involved. Getting extensive legal advice from a lawyer is time consuming, and something typically shared (if needed) among family members or close friends. The position generator is mainly used in research on labour market outcomes, and captures the information and advice about jobs in one's social network. Such job-related information seems much less time consuming to share, and therefore the position generator might be a better measure for less time-consuming resources. Job advice and information flow very well via weak ties (Ryan, 2011).

Finally, why are Turks not disadvantaged in their access to resourceful networks? In explaining ethnic and racial inequalities in the labour market in the Netherlands, researchers have often argued that Turks and Moroccans are deprived in access to resourceful networks (van Tubergen, 2014). We find that Moroccan immigrants have less access to social capital than the Dutch, but for Turks this is not the case. Turks have equal access to social resources as the Dutch, and they have slightly more access to medium status positions than the Dutch. These findings seemingly contradict a previous study on social capital of migrants in the Netherlands, which found that immigrants have less access to social capital than the Dutch, who are also born in the Netherlands (Pinkster and Volker, 2009). However, that study investigated only a small number of immigrants, in a small number of relatively disadvantaged neighbourhoods. It might be the case that within a particular area, Dutch, who are also born in the Netherlands, are better off in terms of social capital. Yet, given the higher unemployment rate of the Turks, their extensive access to resourceful ties is an empirical puzzle that needs to be addressed in further research. Our finding is in line with Erel (2010) who argues that migrants combine cultural capital from their country of origin with that accessed in their country of destination; this way creating new forms of resources. Erel's arguments build upon case studies of skilled Turkish and Kurdish women in Great Britain and Germany. However, this does not explain why it would apply only to Turkish people and not also to Moroccans.

One explanation is that Turks could be more often occupied in 'traditional' occupations and sectors, which would provide face-to-face opportunities for interactions with people of higher status. Further research needs to consider the concentration of non-western immigrants (vis-a-vis majority members) in the occupations that are used in the position generator (Erickson, 2004). Another explanation might be related to the fact that Turks in the Netherlands are relatively well organized in their own community (Fennema and Tillie, 1999). Turks in the Netherlands have been found to be far more organized in voluntary and ethnic organizations than Moroccans and other groups. The Turkish community is highly concentrated and there are also many ties between different Turkish communities and organizations. For example, it has been found that among Turks, many persons had a function in more than one board of an ethnic organization (Fennema and Tillie, 1999). This finding might explain why Turks are not disadvantaged in terms of

social capital. Because of their high degree of organizational involvement, access to social capital might be available for members of the community as a kind of collective good, available through participation in the community. Further research is encouraged to study these possible explanations. In particular, we need further research to connect our finding of network relationships that give potential rise to social capital with the actual consequences of these relationships.

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Notes

1. The highest accessed occupation is not studied here, because it is sensitive to the specific occupations selected by the researcher. The list of 20 occupations is a small sample of the occupations in the job market, and focusing on the single highest can induce bias due to unobserved factors. For the same reason, we rely on the number of occupations known as a measure of network diversity instead of the difference between the status of the highest and lowest jobs. Also, we analyse different dimensions of the position generator instead of one general factor, to examine possible differential effects.
2. A number of data checks and sensitivity analyses were performed. Inspection of the Variance Inflation Factors (VIF) shows no signs of multicollinearity (i.e. VIF < 2.5). We also checked for missing data, which is almost entirely due to 406 respondents who did not fill in the self-completion part (in which questions on social contacts are asked). Analyses have been repeated with the multiple imputation in STATA 11 (i.e. 'mi estimate'). The results based on 20 imputations led to the same conclusions as the analysis presented, which uses casewise deletion. Further, conclusions remained the same when using cluster correction in STATA 11 (i.e. 'cluster', used for the variable on percentage employed in neighbourhood) and when estimating the models with seemingly unrelated regression in STATA 11 (i.e. 'sureg', used to take into account that the four models are not independent). Because these additional more advanced models cannot be integrated in a single analysis and the results of each are substantively the same as the more simple method, we present the results from the latter analyses only.

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Frank van Tubergen is Professor at the Department of Sociology, Utrecht University, Utrecht (Netherlands), and Distinguished Adjunct Professor at the King Abdulaziz University, Jeddah (Saudi Arabia). His research interests include social networks, immigration and religion. His work has appeared in *American Journal of Sociology*, *American Sociological Review*, *Social Forces* and *Demography*.

Beate Volker is Professor at the Department of Sociology, Utrecht University, Utrecht (Netherlands). Her research interests include the contextual conditions of network formation, e.g. in neighbourhoods and organizations. Her work is published in *Social Forces*, *Social Networks* and *Social Science Research* amongst others.