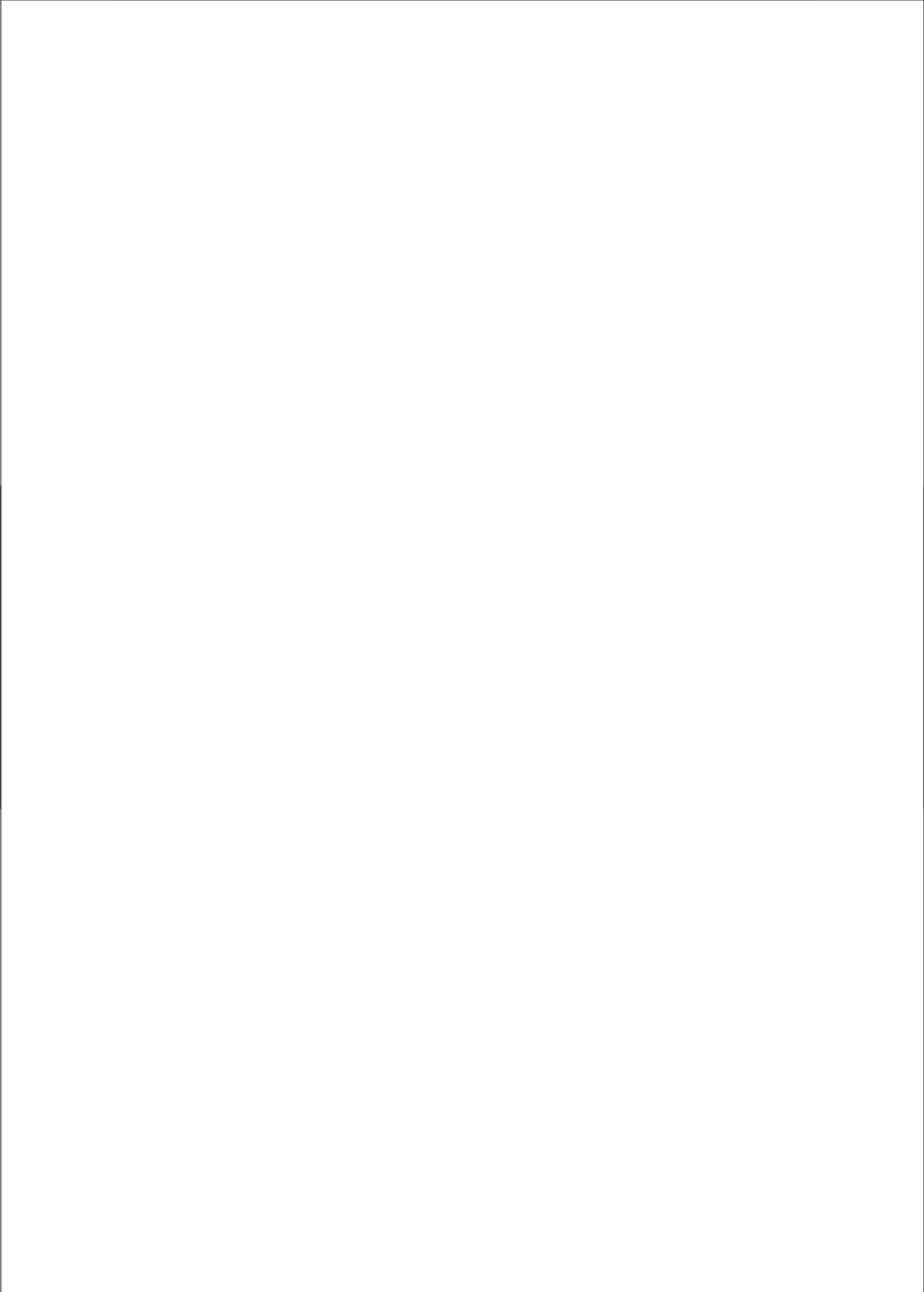


## NETWORKS IN CONTEXTS

How meeting opportunities affect  
personal relationships



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How meeting opportunities affect  
personal relationships

## NETWERKEN IN CONTEXTEN

Hoe ontmoetingsgelegenheden  
persoonlijke relaties beïnvloeden  
(met een samenvatting in het Nederlands)

Proefschrift

ter verkrijging van de graad van doctor  
aan de Universiteit Utrecht  
op gezag van de rector magnificus,  
prof. dr. J.C. Stoof,  
ingevolge het besluit van het college voor promoties  
in het openbaar te verdedigen op  
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Gerrit Willem Mollenhorst

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Promotores: Prof. dr. B.G.M. Völker  
Prof. dr. H.D. Flap

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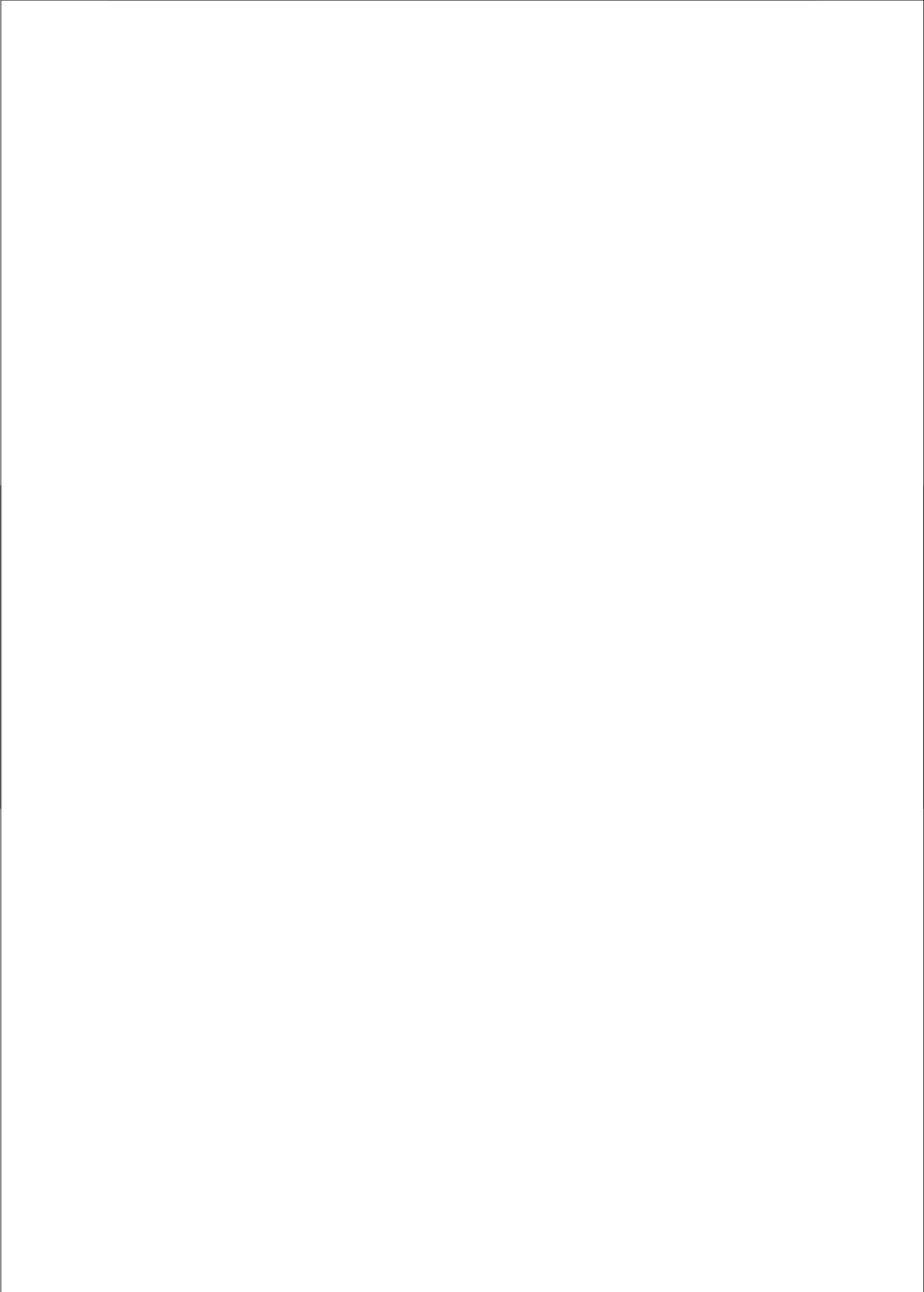
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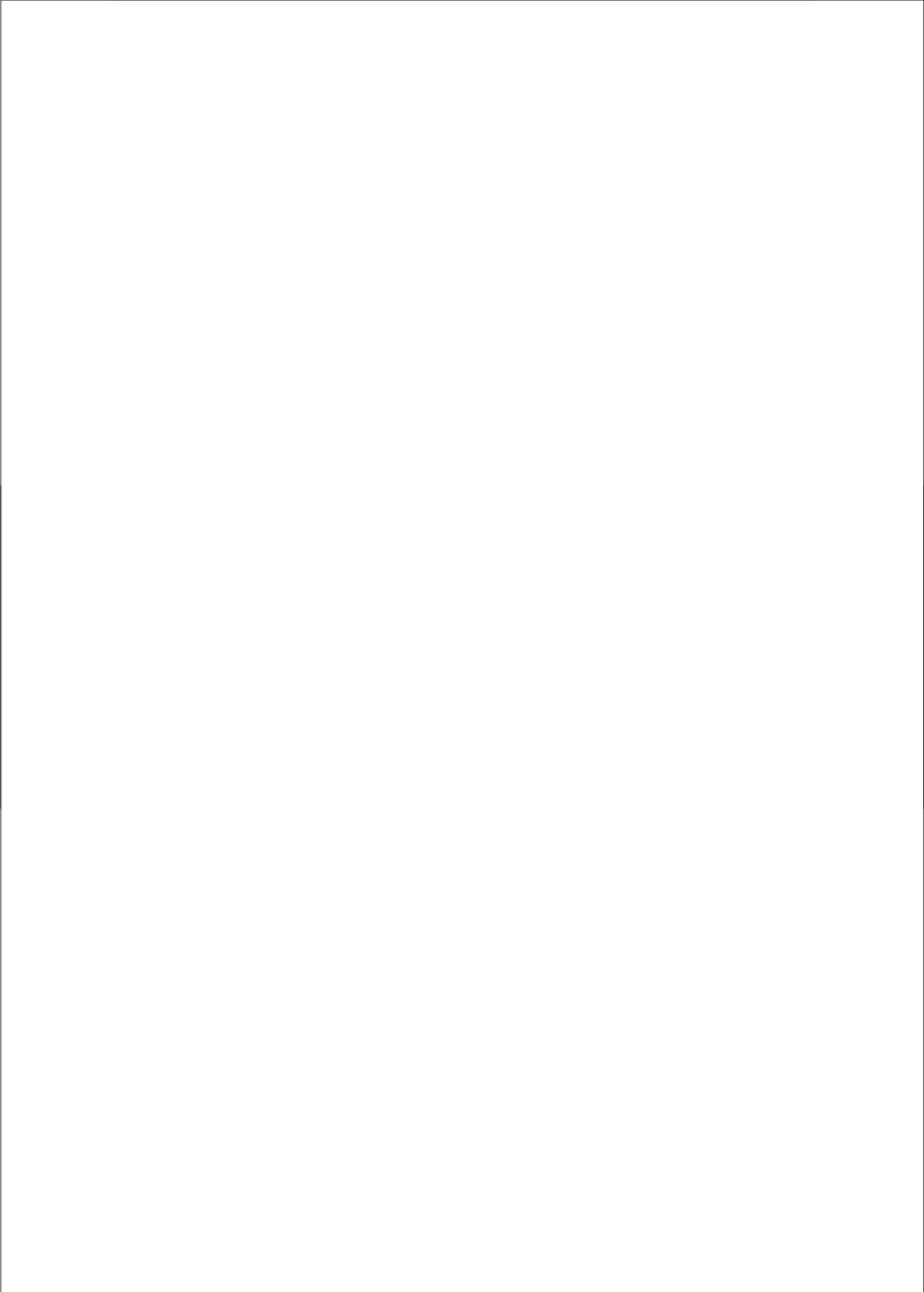


# Table of Contents

<b>Chapter 1</b>	<b>11</b>
<i>Introduction</i>	
1.1 Networks in contexts	12
1.2 Social contexts affecting the composition of personal networks	13
1.3 Social contexts affecting characteristics of relationships and the structure of personal networks	14
1.4 Social contexts affecting changes in personal networks	15
1.5 The Survey of the Social Networks of the Dutch	16
1.5.1 The sample	
1.5.2 Measuring personal networks	
1.5.3 Measuring social contexts	
<b>Chapter 2</b>	<b>19</b>
<i>Social Contexts and Similarity in Relationships in Core Discussion Networks</i>	
2.1 Introduction	20
2.2 Revisiting effects of social contexts on core discussion networks	21
2.3 Social contexts affecting similarity in personal relationships	22
2.3.1 Social composition of contexts	
2.3.2 Enforced interaction within contexts	
2.3.3 The amount of time spent in contexts	
2.3.4 Path-dependency in the use of social contexts	
2.4 Data and measurements	26
2.4.1 The Survey of the Social Networks of the Dutch	
2.4.2 Measurements	
2.4.3 Analyses	
2.5 Results	30
2.5.1 Describing core discussion networks in the Netherlands	
2.5.2 The effects of social contexts on similarity in core discussion relationships	
2.5.3 Path-dependent use of social contexts	
2.6 Discussion	37
2.7 Conclusions	38
<b>Chapter 3</b>	<b>41</b>
<i>Social Contexts and Similarity in Relationships of Different Strength</i>	
3.1 Introduction	42
3.2 Previous research	44
3.3 Methods	45
3.3.1 The Survey of the Social Networks of the Dutch	
3.3.2 Measurements	
3.3.3 Analyses	
3.4 Results	48
3.4.1 Social contexts for meeting a partner, friends and acquaintances	
3.4.2 Similarity in personal relationships	
3.4.3 Social contexts affecting similarity in personal relationships	
3.5 Conclusions and discussion	53

<b>Chapter 4</b>	<b>57</b>
<i>Context Overlap and Multiplexity in Personal Relationships</i>	
4.1 Private and public: Two worlds apart?	58
4.2 Context overlap and multiplexity in informal personal relationships	59
4.2.1 Context overlap	
4.2.2 Multiplexity and the effect of context overlap	
4.3 Methods	61
4.3.1 The Survey of the Social Networks of the Dutch	
4.3.2 Informal network delineation	
4.3.3 Measuring overlap structure, using affiliation networks	
4.3.4 Multivariate multilevel analysis	
4.4 Results	64
4.4.1 Size and composition of informal personal networks	
4.4.2 Overlap among social contexts	
4.4.3 Context overlap affecting multiplexity	
4.5 Conclusions	72
4.6 Discussion	72
<b>Chapter 5</b>	<b>75</b>
<i>Social Contexts and Transitive Triads in Core Discussion Networks</i>	
5.1 Introduction	76
5.2 Shared contexts and transitivity	78
5.3 Methods	80
5.3.1 The Survey of the Social Networks of the Dutch	
5.3.2 Core discussion network delineation	
5.3.3 Dependent and independent variables	
5.3.4 Analyses	
5.4 Results	85
5.5 Conclusions	92
5.6 Discussion	94
<b>Chapter 6</b>	<b>97</b>
<i>Social Contexts and Changes in Personal Networks</i>	
6.1 Introduction	98
6.2 Explaining network changes	99
6.2.1 Characteristics of social contexts and the stability of existing personal relationships	
6.2.2 Social contexts and the emergence of new personal relationships	
6.2.3 Important life events and changes in personal networks	
6.3 Data and methods	104
6.3.1 The Survey of the Social Networks of the Dutch	
6.3.2 Network delineation	
6.3.3 Social contexts	
6.3.4 Network changes	
6.3.5 Important life events	
6.3.6 Control variables	
6.3.7 Analyses	
6.4 Results	108
6.4.1 The composition and stability of personal networks	
6.4.2 Social contexts and relationship stability	
6.4.3 Why relationships disappeared	
6.4.4 Social contexts and the emergence of new relationships	
6.5 Conclusions	117
6.6 Discussion	120

<b>Chapter 7</b>	<b>123</b>
<b><i>Conclusions, Discussion, and Suggestions for Future Research</i></b>	
7.1 Introduction	124
7.2 How social contexts affect personal relationships and networks	124
7.2.1 Social contexts and similarity in personal relationships	
7.2.2 Social contexts and the interplay between choice and constraints	
7.2.3 A path-dependent use of social contexts	
7.2.4 Overlapping social contexts	
7.2.5 Social contexts and changes in personal networks	
7.3 Size and composition of, and changes in personal networks	129
7.4 Suggestions for future research	131
7.4.1 Choices within constraints	
7.4.2 The structure of context overlaps and the structure of networks	
7.4.3 Changes in personal networks	
<b>Samenvatting (Summary in Dutch)</b>	<b>135</b>
H.1 Inleiding	136
H.2 Sociale contexten en gelijkheid in relaties voor persoonlijke gesprekken	139
H.3 Sociale contexten en gelijkheid in relaties van verschillende sterkte	141
H.4 Overlappende contexten en multifunctionaliteit van persoonlijke relaties	143
H.5 Sociale contexten en transitieve triades in persoonlijke netwerken	144
H.6 Sociale contexten en veranderingen in persoonlijke netwerken	145
H.7 Conclusies, discussie en suggesties voor toekomstig onderzoek	147
<b>Appendix A</b>	<b>153</b>
<i>Name-Generating Questions in the Survey of the Social Networks of the Dutch</i>	
<b>Appendix B</b>	<b>157</b>
<i>Additional Tables</i>	
<b>References</b>	<b>163</b>
<b>Acknowledgements</b>	<b>171</b>
<b>Curriculum Vitae</b>	<b>172</b>
<b>ICS Dissertation Series</b>	<b>173</b>



# **Chapter 1**

## ***Introduction***

## 1.1 Networks in contexts

Sociology traditionally challenges the common idea that the emergence and composition of personal networks are simply a result of an individual's preferences for certain types of associates. Since the 1950s, scholars realized that, irrespective of people's preferences, *opportunities* for contact affect the emergence, composition, structure, and stability of personal networks (e.g., Blau 1977; Blau and Schwartz 1984; Blumstein and Kollock 1988; Feld 1981, 1982; Fischer 1982a; Fischer et al. 1977; Huckfeldt 1983; Kalmijn 1998; Kalmijn and Flap 2001; Laumann 1966; Lazarsfeld and Merton 1954; Marsden 1990a; McPherson and Smith-Lovin 1987; Verbrugge 1977; Völker and Flap 1997).

This idea implies that whom one works and socializes with, or even whom one marries, is not merely an individual decision, but also depends on conditions beyond the individual. The social contexts people enter in their daily life, such as the place where they work, the family they belong to, the neighborhood in which they live, the clubs and associations they are a member of, and so forth, provide the pool of available others out of which they select their personal network members. Consequently, the number of different persons in these social contexts determines the chances to meet and interact with certain types of others, thereby affecting the relationships that emerge.

In this collection of five research papers, entitled *Networks in Contexts. How Meeting Opportunities Affect Personal Relationships*, we focus on the social contexts in which people meet and engage in personal relationships and on the consequences of these meeting opportunities for resulting relationships and network structures. Following Fischer et al. (1977:42), we use a *choice-constraint approach* stressing that personal networks are the result of individual choices made within the constraints of social contexts. It is not our aim to disentangle the relative importance of choice effects and constraint effects. Instead, while using general assumptions with respect to people's preferences, for example for associates with similar characteristics, we study how meeting in various social contexts affects the characteristics of personal networks and their members. The overarching research question therefore reads:

*What are the effects of social contexts on personal relationships and networks?*

In the five research papers, we successively examine the effects of social contexts on: a) the composition of personal networks (Chapters 2 and 3), b) characteristics of relationships and the structure of personal networks (Chapters 4 and 5), and c) changes in personal networks over seven years (Chapter 6). This means that throughout the papers, context effects are studied for various characteristics of personal networks. Next to the various network characteristics, also different parts of people's networks are studied. While some papers focus on the inner core of intimate networks (e.g., Chapters 2 and 5), other papers focus on people's larger networks that also include weaker relationships. In this way, the effects of social contexts are examined for relationships of different strength. Sections 1.2 through 1.4

introduce the five papers, and indicate their connection. A general description of the survey data used to test our hypotheses follows in section 1.5.

## 1.2 Social contexts affecting the composition of personal networks

Previous studies on personal relationships have shown that people tend to associate with people of their own kind. This means that people have disproportionately homogeneous networks, consisting of network members with similar lifestyles and sociodemographic and socioeconomic characteristics (Lazarsfeld and Merton 1954; Laumann 1966; for an overview, see McPherson, Smith-Lovin, and Cook 2001). From a psychological perspective, this tendency is explained in terms of interpersonal attraction. It is easier, more pleasant, and emotionally more rewarding to associate with people who have the same interests and attitudes (see Huston and Levinger 1978 for an overview). From a sociological perspective, homogeneity in personal networks is increasingly explained in terms of opportunities for contact. The social homogeneity of most social contexts in which people meet others creates a strong baseline homophily in networks (McPherson et al. 2001; see also Huckfeldt 1983 and McPherson and Smith-Lovin 1987).

These two perspectives are not played off against each other in this research. Instead, while assuming that people indeed prefer to associate with others who are like themselves, we study in Chapter 2 how the sociodemographic composition of the *social contexts* in which people get to know each other affects the composition of personal networks. Specifically, we focus on the degree of *similarity* between people and their *core discussion network* members. Based on three characteristics of social contexts – (a) the social composition of a context, (b) whether interactions in a context are enforced or regulated, and (c) the amount of time people spend in a context – we hypothesize how contexts affect similarity in personal relationships. Moreover, we examine the extent to which a path-dependent use of social contexts, i.e., people being more likely to draw multiple network members from the same context, is an additional constraint on personal network composition. We focus on core discussion networks (which consist of individuals with whom people discuss important personal matters), based on the assumption that preferences for similar associates are stronger when selecting the most intimate network members. Consequently, if we demonstrate that the social context in which confidants got to know each other affects the degree of social similarity in their relationship, we have a strong case for the choice-constraint approach and the impact of contextual constraints on resulting relationships.

Although previous research demonstrated the importance of social contexts for personal networks, it had never been attempted to inquire into the differential effects of social contexts on various types of social relationships. A preference for certain types of others might count differently for different types of relationships. For some types of relationships, one would not or hardly accept deviation from one's preferences, whereas for

other relationships, preferences are less important or not even specified. So, the preferences for similarity might also not be of equal importance in all types of interactions.

In Chapter 3, we therefore examine the extent to which the effect of *social contexts* on *similarity* in personal relationships differs for *relationships of different strength*, focusing on partners, friends, and acquaintances. We expect that the effect of social contexts is stronger for weaker relationships and weaker for stronger ones, because preferences are less important for relationships with associates with whom one only has a casual talk than with associates with whom one shares important personal matters. Therefore, one will not be inclined to accept the first opportunities presented by a certain social context for the selection of a person to have strong relationships with, but one might also look in other contexts. However, because it does not matter so much if a friend or acquaintance does not match one's preferences on all social dimensions, one will be more inclined to accept a person as a friend or an acquaintance when met at a certain occasion in a given social context. This idea implies that the effect of a social context on the resulting relationship is expected to be stronger for intimate relationships than for superficial relationships.

### **1.3 Social contexts affecting characteristics of relationships and the structure of personal networks**

Several sociologists have argued that the grand changes in the economic and social structure of modern western societies in the nineteenth and twentieth century, such as industrialization, the spread of wage labor, and increased geographical mobility, resulted in a decrease in social cohesion and meeting each network member in a single social context (e.g., Fischer et al. 1977; Coleman 1990). This implies that one works with one set of people, lives together with a second set, and spends his or her leisure time with a third set of people. Especially public contexts (such as the workplace, neighborhoods, clubs, and associations), are considered to be separated from private contexts (such as a person's home, the family context, and the friends context). In turn, this 'unbundling' or lack of overlap among social contexts is considered to have resulted in a decreasing level of multiplexity of personal relationships, such that people nowadays undertake each social activity with another network member (for examples of literature on this topic, see, e.g., Stein 1960; Fischer et al. 1977; Coleman 1990; Wellman 1999; Pescosolido and Rubin 2000).

In Chapter 4, I study a) the *overlap among social contexts* in which people informally meet network members who provide sociability, company, emotional support, and practical support, and (b) how context overlap affects the *multiplexity of personal relationships*. More precisely, I examine the effect of sharing multiple social contexts with a network member on the number of activities people undertake with their network members.

Whereas Chapter 4 provides a description of the overlap structure of social contexts in which people meet their network members, we focus in Chapter 5 on the structure of

people's networks, by looking at the level of *transitivity of triads* in core discussion networks. More precisely, we study how the social contexts from which network members are drawn affect the likelihood that a person's network members also mutually know each other. Our hypotheses are built upon the idea that social contexts not only provide a person with opportunities to meet network members, but also affect the extent to which one's network members know each other mutually. From this perspective, transitivity is less likely if a person meets her/his network members in different contexts, and more likely if one meets her/his network members in the same context. Moreover, the more contexts that are shared in a network triad, the more likely that triad will be transitive. Chapter 5 provides an answer to the question to what extent the transitivity of triads in core discussion networks is affected by shared social contexts.

#### **1.4 Social contexts affecting changes in personal networks**

Previous research showed that personal relationships are far from stable, but change considerably within a couple of years. For example, Wellman, Wong, Tindall, and Nazer (1997), and Degenne and Lebeaux (2005) found that only a minority of people's intimate, respectively, important network members stayed in the networks over a period of ten, respectively, six years. In addition, recent research by McPherson, Smith-Lovin, and Brashears (2006) reported that within two decades the number of confidants of the Americans had decreased significantly. Chapter 6 extends the existing knowledge of changes over time in the composition of personal networks, because we do not only examine the *stability of existing relationships*, but also the *emergence of new relationships*. Moreover, we study the extent to which network changes are a result of (a lack of) meeting opportunities, as they are provided by the social contexts in which network members got to know each other and in which they continue to meet each other.

First, we examine the effects of various social contexts on the likelihood that existing relationships are continued or terminated. We take into account various important life events that have occurred in a person's life, such as marriage, birth of the first child, divorce, getting another job, or retiring, since one of the explanations proposed in earlier research on network change is that these important life events result in the loss of some network members as well as in the creation of new relationships (e.g., Shulman 1975; Stueve and Gerson 1977; Fischer and Oliner 1983; Campbell and Lee 1990; Broese van Groenou 1991; Wellman et al. 1997; Terhell 2003). We suppose, however, that it is not the life event as such that causes network changes, but the fact that life events make people entering other contexts in their daily life (cf. Feld and Carter 1998).

Second, we focus on what happened to network members who disappeared from a person's network and answer the question whether he or she is still in touch with these network members or not. Subsequently, we examine the extent to which a lack of meeting

opportunities is an important reason why network members become less important or why they disappear from a person's network.

The final question we address in Chapter 6 is to what extent the emergence of new relationships is restricted by the supply of the social contexts in which people meet their existing network members. Specifically, we examine whether new network members are drawn, a) from newly entered contexts, for example, as a consequence of an important life event, b) from the context from which a relationship was broken off, or c) from one of the contexts in which one of the remaining network members is met (i.e., path-dependent use of social contexts (see Chapter 2)).

## 1.5 The Survey of the Social Networks of the Dutch

### 1.5.1 *The sample*

All empirical tests in this research are based on data from two waves of *The Survey of the Social Networks of the Dutch*. The first wave of this rich panel dataset was conducted in 1999/2000 (referred to as SSND1; see Völker and Flap 2002) and contains information on 1,007 individuals in the Netherlands, who are representative for the Dutch population between 18 and 65 years of age. To collect the data, a stratified random sample of 40 of the approximate 500 Dutch municipalities was drawn. These municipalities represent the various provinces and regions, while taking into account the degree of urbanization and number of residents in these municipalities. In each of the municipalities, four neighborhoods were randomly selected using the postal code system. Next, per neighborhood, 25 addresses were randomly selected. At eight of these addresses, the resident between 18 and 65 years of age who was to have her/his birthday first was interviewed. In the end, with a response rate of 40 percent, which nowadays is common for survey research in the Netherlands, the dataset of 1,007 respondents from 161 neighborhoods was realized.

Comparing these SSND1 data with national statistics on basic sociodemographic features, we found that men, married people, and higher educated people are somewhat overrepresented in the dataset. In addition, people with a paid job are oversampled. Nonetheless, we use the unweighted data on all 1,007 respondents, because Van der Gaag (2005) showed that various network characteristics only slightly change when using a weighted instead of an unweighted sample. Moreover, we control for sex, marital status, level of education, and having a paid job in our final analyses.

Seven years after the first wave (i.e., in 2007), we retrieved the addresses of 863 of the original 1,007 respondents. Over 70 percent of these 863 people were willing to be re-interviewed. This resulted in a panel dataset which contains information on 604 individuals in The Netherlands, who were between 26 and 72 years of age in 2007 (the second wave is referred to as SSND2, see Völker, Flap, and Mollenhorst 2007).

Comparing these SSND2 data with the SSND1 data on various basic sociodemographic features as well as on the size of the core discussion networks, we only found that married people, older people, and the higher educated were somewhat more likely to participate again in the second wave. Consistent with these findings, a comparison of the SSND data with national statistics on basic sociodemographic features showed that men, married people, older people, and the higher educated are somewhat overrepresented in (both waves of) our data. We control for these personal characteristics in our analyses whenever possible.<sup>1</sup>

### 1.5.2 Measuring personal networks

In both waves of the SSND, respondents were interviewed about various kinds of personal relationships using thirteen name-generating questions (cf. Fischer 1982a). One of these questions was the so-called ‘core discussion network’ name generator, which reads: *Life is usually not only about going-out and enjoying company. Everybody needs someone to talk about important matters from time to time. With whom did you discuss important personal matters during the last six months?* (cf. Burt 1984; Marsden 1987; Bailey and Marsden 1999). Other examples of our name-generating questions are: *If you are doing an odd job at home and you need someone to give a hand, for example, to carry furniture, or to hold a ladder, whom do you ask for help?* and, *Many people visit others in their leisure time. Who do you visit?* A translation of the complete lists of name-generating questions as they were used in the two waves of the SSND are provided in Appendix A, including the maximum number of associates that could be named at each of the questions.

### 1.5.3 Measuring social contexts

After collecting the names of the personal contacts, name-interpreting questions were asked with respect to each contact named, in order to receive information about each of the network members, as well as about the relationships between the respondent and their network members. For example, respondents were asked about a) various sociodemographic characteristics of their network members, b) the type, and strength of their relationships, and c) the extent to which their network members mutually know each other.

The most important name-interpreting questions for this research concern the social contexts in which people meet their personal relationships. In order to determine the social

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<sup>1</sup> The effects of these control variables are not presented in the tables throughout this dissertation in order to save space, and because they might distract the reader too much from focusing on the independent variables that concern our hypotheses. Moreover, effects of these control variables are often insignificant. In case they are significant, they are in general not very strong and did not or hardly affect the effects of the independent variables presented in the tables. We therefore only mention the effects of these control variables in case they yield noteworthy results.

context in which individuals got to know each other, respectively in which they continued to meet each other, respondents were asked for every person mentioned:

*Where, on what occasion, did you get to know this person?*

*And where, on what occasion, do you currently meet this person?*

To answer both these questions, respondents could choose from the following social contexts<sup>2</sup>:

- in the neighborhood
- with/via family
- at school
- at work
- at a club or association (split up in 'sports club', 'voluntary association', and 'other club or association' in the second wave)
- with/via a friend
- at a public going-out place
- at my home (i.e., respondent's home)
- at her/his home (i.e., the network member's home)
- at church
- on a vacation
- at a party
- on the internet
- somewhere else

This measure, we argue, is a better measure of social contexts than the one that was applied in earlier research on the effects of social contexts on personal relationships and networks. Like Fischer (1982a) in his examination of personal networks in Northern California, Marsden (1990a) measured contexts indirectly as role relations. The underlying argument is that responses to the question on role relations, which indicate the different ways in which respondents and their network members are connected, give clues as to the contexts in which dyadic ties are formed (cf. Marsden 1990a:399). In our study, we measured contexts directly, by asking people straightforwardly about the social contexts in which they got to know their network members. Of course, the effects of the social contexts on the composition and structure of personal networks could be best determined if, for example, the actual social composition of the contexts was also measured, instead of making assumptions about them as we do in this research. Notwithstanding this, our measure improves upon earlier measures, because the 'focus of activity' around which relationships emerge and are maintained is more accurately determined if one asks people for the social contexts in which they meet their associates than if one asks for the type of relation they have. Moreover, it is well possible that although an associate is only mentioned as a relative or a friend, that he or she does share multiple social contexts with the respondent concerned.

Chapters 2 through 6 present the five research papers this dissertation contains. Chapter 7 finishes this dissertation with the main conclusions that can be drawn from the findings, a discussion of these findings, and some suggestions and recommendations for future research.

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<sup>2</sup> In the first wave, respondents were allowed to mention only one context per network member. Although we assume that respondents reported the most important context, this might nevertheless lead to underestimated effects of meeting in the various social contexts on our dependent variables. In the second wave, respondents were allowed to mention up to three contexts per network member.

## Chapter 2

### ***Social Contexts and Similarity in Relationships in Core Discussion Networks<sup>1</sup>***

#### ***Abstract***

*Social contexts in which confidants get to know each other affect the composition of their personal networks, inter alia the similarity among confidants. Results from analyses on a representative sample of the Dutch population between 18 and 65 years of age (SSND 2000), support the idea that similarity among confidants can be explained by a) the social composition of a context, b) the extent to which interactions within a context are enforced, and c) the amount of time people spend in a context. Moreover, there is a certain degree of path-dependency in the use of social contexts, which leads to reinforced context effects on similarity among confidants.*

---

<sup>1</sup> A slightly different version of this paper was published in *Social Forces* (Mollenhorst, Völker, and Flap 2008a). The authors are grateful to three anonymous *Social Forces* reviewers and several colleagues within the Interuniversity Center for Social Science Theory and Methodology (ICS) for helpful comments.

## 2.1 Introduction

Since the 1980s, sociologists pay increasing attention to the supply-side perspective on the emergence of personal networks. For example, Blau (1977:79) stated that “social associations depend on opportunities for social contacts”. Verbrugge (1977) abbreviated this as “there is no mating without meeting”. Feld (1981) and Feld and Carter (1998) not only pointed at the explanatory weakness of demand-side assumptions, they also further developed the theory on the supply of social ties in Feld’s ‘focus theory’. And, according to Fischer, who speaks of a choice-constraint approach, “people can select friends only from among other people available to them and that pool is shrunken tremendously by the social contexts in which people participate” (Fischer 1982a:179). The underlying argument is that whom one works and socializes with, or even the person one marries, is not merely an individual decision. Social relationships and networks also depend on conditions beyond the individual. The number of different persons in the social contexts in which one moves around determines the chances to meet certain types of others and thereby the types of relationships that will emerge. In other words, the sociodemographic composition of the contexts in which people live, work, and socialize constitutes the opportunity structure to get to know particular others.

A major finding in studies on personal relationships is that personal networks are disproportionately homogeneous with regard to sociodemographic characteristics. According to the homophily principle, people tend to associate with people of their own kind, i.e., those with similar lifestyles, and sociodemographic and socioeconomic characteristics (Laumann 1966; Lazarsfeld and Merton 1954; for an overview, see McPherson et al. 2001). From a psychological perspective, this tendency is explained in terms of interpersonal attraction, because having the same interests and attitudes makes association easier, more pleasant, and emotionally more rewarding (see Huston and Levinger 1978 for an overview). Sociological studies, however, increasingly focus on the structural sources of homophily, because the social homogeneity of most social contexts in which people meet others creates a strong baseline homophily in networks (McPherson et al. 2001). Huckfeldt remarked: “the available pool of socially similar individuals varies as a function of context, so that the same set of preferences might produce different friendship groups in different environments” (Huckfeldt 1983; see also McPherson and Smith-Lovin 1987). These two perspectives imply an interplay between the choices for certain types of associates and meeting opportunities. On this, Huckfeldt remarked “the militant contextualist may be in danger of ignoring the effect of individual preferences on associational patterns and friendship choice, but the focus on personal control may ignore important external constraints on supply” (Huckfeldt 1983; see also Blumstein and Kollock 1988).

In this study, we use a choice-constraint approach stressing that personal networks are the result of individual choices made within contextual constraints (cf. Fischer et al. 1977; Fischer 1982a). Based on three characteristics of social contexts, we hypothesize how these contexts affect similarity in personal relationships. Subsequently, we test our hypotheses using data on core discussion networks. Core discussion networks consist of individuals with whom people discuss important personal matters (Bailey and Marsden 1999; Burt 1984; Marsden 1987). While people can have many network members and even many friends, they do not tend to discuss important personal matters with every one of them, but only with those they really trust. We therefore use the word ‘confidant’ to indicate these core discussion network members (cf. Marsden 1987). We show how the social contexts people draw confidants from affect the social composition of these core discussion networks by looking at similarity between confidants with respect to age, level of education, sex, and religion.<sup>2</sup> One can assume that personal preferences for similar associates are stronger when selecting the most intimate network members. This implies that revealing an effect of the context in which confidants get to know each other on social similarity in their relationships is a strong corroboration of the choice-constraint approach and the impact of contextual constraints on resulting relationships.

## **2.2 Revisiting effects of social contexts on core discussion networks**

The choice-constraint approach, a supply-side perspective, has been applied to various kinds of personal relationships, for example, friendships (McPherson and Smith-Lovin 1987; Verbrugge 1977), marital relationships (Blau and Schwartz 1984; Kalmijn 1998; Kalmijn and Flap 2001), sexual relationships (Laumann et al. 1994), relationships with colleagues (Flap, Bulder, and Völker 1998), and relationships with neighbors (Huckfeldt 1983; Völker and Flap 1997). Moreover, Marsden (1990a) provided empirical confirmation for Blau’s ‘opportunities for contact’ postulate, using it to explain the composition of Americans’ core discussion networks. For other applications, see Blau, Blum, and Schwartz (1982), Blum (1985), Cook and Whitmeyer (1992), Fischer et al. (1977), De Graaf and Kalmijn (2003), Kalmijn (2002), and Podolny and Baron (1997).

Although these studies present valuable findings, they have a few shortcomings that consequently provide reasons to reconsider the main arguments. First, previous empirical studies show effects of social contexts on the composition of personal networks, but give no insight into the interplay between the choice for and the opportunities to meet certain types of associates. We formulate hypotheses on this interplay, using dimensions of social contexts as described in Feld’s 1981 paper “The Focused Organization of Social Ties”.

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<sup>2</sup> We examined similarity of these four characteristics, because previous research has shown that sex, age, religion, and education strongly structure a person’s network. Ethnicity (or race) creates another strong division in this sense, but unfortunately, we have no data on the ethnicity of people’s personal network members. Other similarity measures (e.g., with respect to people’s values) have often proved to be derivatives of social positions themselves (cf. McPherson et al. 2001).

Second, the majority of previous empirical studies ignored the fact that the emergence of a subsequent network relationship is dependent on preceding relationships. For several reasons, which we discuss below, we expect that people draw subsequent network members from the same context as they had already drawn previous members. We then examine this path-dependency and its effect on the composition of core discussion networks.

Third, due to the wording of the name-generating question in the General Social Survey of 1985, it is not fully clear whether the inner core of people's personal networks was actually delineated. In the GSS, used *inter alia* in Marsden's work (Marsden 1987, 1988, 1990a), respondents were asked for names of people they discussed 'important matters' with. A more valid question to measure core discussion networks, is to ask for those with whom people discuss 'important personal matters'. This latter formulation puts even more emphasis on the inner core of those others whom one really trusts (cf. Bailey and Marsden 1999; Burt 1984). In fact, this wording was originally proposed to be used in the GSS (Burt 1984), but is used in the Survey of the Social Networks of the Dutch (see Völker and Flap 2002), which provides data for our analyses.

Fourth, we have a better measure of contexts than applied in earlier studies. Like Fischer (1982a) in his examination of personal networks in Northern California, Marsden (1990a) measured contexts indirectly as role relations. The underlying argument is that responses to the question on role relations, which indicate the different ways in which respondents and their network members are connected, give clues as to the contexts in which dyadic ties are formed (cf. Marsden 1990a:399). In our study, we measured contexts directly, by asking people straightforwardly about the social contexts in which they got to know their network members.

### **2.3 Social contexts affecting similarity in personal relationships**

According to Fischer et al. (1977), personal relationships are the results of individual choices made within social constraints. This implies that people are able to realize their preferences for certain types of others, as long as these types of others are available. In other words, the social composition of a personal network is a reflection of the composition of the social contexts in which an individual moves around. But next to the social composition of contexts, there are some other characteristics of social contexts that affect the emergence of personal relationships. Feld (1981) described a number of dimensions of social contexts, of which we will use the two most important in a choice-constraint approach. First, social contexts vary in the extent to which interactions are institutionally regulated or enforced. Second, they vary with regard to the amount of time one generally spends in that context. By examining how these context characteristics affect similarity between confidants who got to know each other in these contexts, we gain insight into the interplay of choice and constraints. Additionally, we examine what we call the 'path-

dependent use of social contexts', arguing that this reinforces the effects of social contexts on personal network composition.

### *2.3.1 Social composition of contexts*

The social composition of contexts can bring about similarity as well as dissimilarity in personal relationships. Many contexts are segregated with regard to age, sex, or other sociodemographic characteristics. The opportunity to get to know many similar others in these contexts provides a major sociological explanation for why people start personal relationships with similar others (cf. Feld 1982; Fischer 1982a; Kalmijn and Flap 2001; Marsden 1990a). Other social contexts where people spend time, however, are considerably heterogeneous with respect to sociodemographic characteristics, making associations with similar others less likely. In these cases, the social composition of the context constrains similarity (cf. Coleman 1990; Fischer 1982a; Marsden 1990a; McPherson et al. 2006). Hence Proposition A:

*The more homogeneous the social composition of a social context, the more similarity in core discussion relationships drawn from that context.*

This leads to the following hypotheses. First, with regard to age, one can easily get to know a similar confidant at school, because schools are especially segregated by age. Also at public going-out places (such as bars, pubs, nightclubs, etc.), at clubs or associations, or with/via friends, one can easily get to know age similars, because many public going-out places<sup>3</sup> as well as clubs and associations are age-segregated (cf. McPherson and Smith-Lovin 1987), and friends of friends are likely to be of the same age. Finding age-similar confidants with or via family, however, is much more difficult, because (extended) families include multiple generations: parents, spouses, siblings, children, and sometimes grandparents (cf. Marsden 1990a; Uhlenberg and De Jong Gierveld 2004).

Second, educational similarity, obviously, can be expected among confidants who got to know each other at school. Next, due to the strong correlation between education and occupation, educational similarity is also expected for those who started interacting at the workplace. Finally, because friends of friends are likely to have the same level of education, confidants who got to know each other with/via a friend are – compared to those who got know each other in other social contexts – expected to be somewhat more similar in educational level.

Third, with regard to people's sex, we expect relatively more similarity among core discussion relationships drawn from the workplace (cf. Reskin 1993; Spijkerman 2000) and

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<sup>3</sup> We use the term 'public going-out places' throughout this dissertation to refer to bars, cafes, eating places, pubs, nightclubs, but also cultural places such as cinemas and concert or theatre halls. For the argument, one actually wants to have information on the age composition of going-out places in The Netherlands. While having no information on that composition, we inquired into general population statistics on going-out behavior (Statistics Netherlands, [www.statline.nl](http://www.statline.nl)). For example, older age groups in general visit these places much less frequently than younger ones: while 37 percent of the age group of 15-24 years visit a pub about once a week, this percentage is 13 for the age group 25-44 and drops to 7 for the age group 45-64.

from clubs or associations (cf. McPherson and Smith-Lovin 1987), because these contexts are usually more segregated by sex than society as a whole.<sup>4</sup>

Fourth, religious similarity is expected to be relatively more likely for confidants who got to know each other at school because, at least in the heyday of ‘pillarization’ in the Netherlands, the school system was structured according to religious background.<sup>5</sup> Next, because a person’s religion is strongly determined by the religion of the family of origin, those who got to know each other via family are also likely to be similar in religion.

### 2.3.2 *Enforced interaction within contexts*

According to Feld (1981), the extent to which interactions between people in a context are institutionally regulated or enforced affects the emergence of personal relationships. Enforced interactions not only make the emergence of relationships within that context more likely, but also affect between whom a relationship will originate (see also Feld 1982; Fischer 1982a). Consequently, one’s freedom to select those who are most similar to oneself out of the given pool of potential associates is constrained by these enforced interactions. Thus, Proposition B is:

*The more people are forced to interact with certain others in a social context, the stronger the effects of the social composition of the social context on similarity in core discussion relationships drawn from that context.*

Related to this proposition, we formulate the following hypotheses. Within families there are often strong expectations as to whom one needs to interact with intensively, which reduces the freedom to choose the relative who is most similar to oneself. We therefore expect the age heterogeneous composition of the family context to have a strong negative effect on age similarity in core discussion relationships. Interactions at work are often institutionally organized, according to division of labor. Linking this to the segregated composition of many workplaces with regard to sex, and especially education, high sex and educational similarities are expected among confidants who got to know each other at work.

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<sup>4</sup> We have no direct information on the composition of different voluntary organizations, yet we do have information on who visits what kind of organization. We inquired into representative data (n= about 13,000) on the Dutch population with regard to the composition of associations (AVO1999, Amenities and services utilization survey, SCP Steinmetz Archive, p1513). In these data, it has been inquired into membership in 10 different voluntary organizations (ranging from political parties, PTAs, sports clubs, to cultural associations). In addition, one question was asked on ‘any other’ organization the respondent is a member of. Analyses show that many organizations are segregated with regard to sex. Odds ratios for women being a member vary between 4.4 for organizations related to women’s rights and 0.52 for membership in a Union or a professional association (the latter is calculated for working women).

<sup>5</sup> Straightforwardly, a church is the prototypical example of a context that is expected to provide associates who are similar as regards religious background. In our data, however, the number of core discussion network members who got to know each other at church is too small to represent a category on its own. This is presumably due to the low number of regular churchgoers in the Netherlands in 2000. Therefore, those who got to know each other at church form part of the category ‘other contexts’.

The absence of rules on interactions within a context provides the opportunity to select the preferred one out of the given pool of potential associates. From the social composition perspective, no effects of getting to know each other at school or at public going-out places are to be expected on sex similarity, because both contexts in general consist equally of both men and women. Within these contexts, however, enforced interactions hardly exist, so that people are free to choose associates out of the pool of others provided by these contexts. Consequently, an adolescent's preference for having same-sex friends (cf. Leenders 1996) is not hindered by characteristics of the school context, nor is one's aim to get to know a potential partner of a certain sex hindered by characteristics of public going-out places.

### *2.3.3 The amount of time spent in contexts*

Also according to Feld (1981, 1982), another constraint with regard to selecting personal network members is the limited amount of time and money people can spend. Because of these limitations, people are restricted in the number of contexts they can enter. Moreover, the more time they spend in a specific context (e.g., the more hours they are at work), the less time is left to spend in other contexts, and the more likely confidants are drawn from that former context, even if they do not fully meet the preferred characteristics. Consequently, it constrains the extent to which people can decide to look for similar others in another social context in case they prefer similars, but are currently faced with a context full of dissimilar others. Proposition C is:

*The more time is spent in a social context, the more likely confidants will be drawn from that context, the stronger the effects of the social composition of the context on similarity in core discussion relationships drawn from that context.*

Hypotheses based on this proposition are as follows: In general, people spend a great share of their time at work and in the family context. It is therefore likely that people get to know confidants in these contexts. Linking this to the segregated composition of many workplaces with regard to sex, and especially education, as well as to the institutionally organized interactions at workplaces, we expect high levels of sex and educational similarity among confidants who got to know each other at work. Linking this to the segregated composition of families with regard to religion and the integrated composition with regard to age, we expect a high level of religious similarity and a low level of age similarity among confidants who got to know each other via family.

**Table 2.1** Summary of hypotheses about the effects of social contexts on similarity in personal relationships

Social contexts	Similarities			
	Age	Education	Sex	Religion
With/via family	–			+
At school	+	+	+	+
At work		+	+	
At a club/association	+		+	
With/via a friend	+	+		
At a public going-out place	+		–	

Notes:

+ means that the social context concerned has a stimulating effect on similarity.

– means that the social context concerned has a constraining effect on similarity.

### 2.3.4 Path-dependency in the use of social contexts

Verbrugge (1979) found that people who select a kin, neighbor, or coworker as a close friend repeat that criterion for other close friends. An explanation for this repetition is that “people live in limited social arenas which influence who they become acquainted with and who they see routinely in their daily rounds. These limitations should influence similarly how ego develops *all* his or her close friendships. Moreover, a chain of friendship formation may occur” (Verbrugge 1979). For this reason, we expect a certain degree of repetitive use of social contexts to get to know confidants, which we call a ‘path-dependent use of social contexts’. That is, if people have multiple confidants, the contexts in which they get to know these different confidants are dependent on each other. When people use a particular social context from which to draw confidants, subsequent confidants are likely to be drawn from the same context because that is more convenient and makes life less complicated. A potential implication of this path-dependent use of social contexts, instead of switching to another context, is that the effect of the social context one starts to draw confidants from on similarity among confidants is reinforced. In short, we formulate the following two specific hypotheses:

- 1) The likelihood to draw confidants from a certain social context increases if the first confidant was already drawn from that context.
- 2) Drawing subsequent confidants from the first used social contexts, instead of switching to another context, results in reinforced effects of that first context on similarity among confidants.

## 2.4 Data and measurements

### 2.4.1 The Survey of the Social Networks of the Dutch

We use data from the first wave of *The Survey of the Social Networks of the Dutch* (Völker and Flap 2002), which was conducted in 1999/2000. This dataset contains information on 1007 individuals in the Netherlands, and is representative for the Dutch population between 18 and 65 years of age. To collect the data, a stratified random sample was drawn from 40

of the approximate 500 Dutch municipalities, representing the various provinces and regions, while taking into account the degree of urbanization and number of residents in these municipalities. In each of the municipalities, four neighborhoods were randomly selected using the postal code system. Next, per neighborhood, 25 addresses were randomly selected. At eight of these addresses, the resident between 18 and 65 years of age who was to have a birthday first was interviewed. In the end, with a response rate of 40 percent, which nowadays is common for survey research in the Netherlands, the dataset of 1007 respondents from 161 neighborhoods was realized.

Comparing these SSND data with national statistics on basic sociodemographic features, we find that men, married people, and higher educated people are somewhat overrepresented in the dataset. In addition, people with a paid job are over-sampled. Nonetheless, we use the unweighted data on all 1,007 respondents, because Van der Gaag (2005) showed that various network characteristics do not change remarkably when using a weighted instead of an unweighted sample. Moreover, we control for sex, marital status, level of education, and having a paid job in our final analyses.

#### 2.4.2 Measurements

##### *Dependent Variables*

Respondents were interviewed about various kinds of personal relationships. Their networks were delineated through thirteen ‘name-generating’ questions.<sup>6</sup> One of these questions read: *Life is usually not only about going-out and enjoying company. Everybody needs someone to talk about important matters from time to time. With whom did you discuss important personal matters during the last six months? May I (again) have the first name and the first letter of the family name of those persons?* Respondents were allowed to name persons they had already mentioned to previous name-generating questions, and could add a maximum of five new persons.<sup>7</sup> One’s core discussion network then consists of those who were mentioned answering this particular question.

Having collected the names of the personal contacts, additional questions (the ‘name-interpreters’) were asked about the contacts as well as about the relationship with them. Similarity between respondent and network member with regard to sex and religion (based on four categories: no religion, Roman Catholic, protestant, and other religion)<sup>8</sup> was measured using dummy-coded variables. Age similarity and educational similarity (based

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<sup>6</sup> A complete list of the name-generating questions is presented in Appendix A.

<sup>7</sup> Since respondents were allowed to mention five additional network members, we assume that the number of core discussion relationships is not truncated. In addition, as we show in Table 2.2, not even 15 percent of all respondents mentioned five confidants or more.

<sup>8</sup> Respondents are considered religious if they reported going to church at least once a year, and network members if the respondent concerned knew about his/her religion. We think these measures are comparable, since going to church at least once per year as well as knowing about the religion of the network member both imply that they are not only registered, but that religion has a meaning in their lives.

on four categories: primary education to lower vocational education, (lower) general secondary education to pre-university education, intermediate vocational education to higher vocational training and university degree)<sup>9</sup> were measured as the negative absolute difference of, respectively, age and level of education between respondent and network member.<sup>10</sup> Finally, we combined the four similarity measures into one measure called ‘overall similarity’. Overall similarity indicates how many of these four characteristics the respondent and network member share.<sup>11</sup> For this, we considered respondent and network member to be similar with regard to age if their age difference was maximally five years, and considered them similar with regard to education if their level of education was the same.

### *Independent Variables*

In order to determine the social context in which individuals got to know each other, respondents were asked for every person mentioned: *Where, on what occasion, did you get to know this person?* They could choose from several contexts: ‘at school’, ‘at a club or association’, ‘at work’, ‘with/via family’, ‘with/via a friend’, ‘at my home’, ‘at her/his home’, ‘in the neighborhood’, ‘at a public going-out place’, ‘at church’, ‘on a vacation’, ‘at a party’, and ‘somewhere else’. For the analyses, we combined the contexts at respondent’s home, at the network member’s home, at church, on a vacation, at a party, and elsewhere into one category called ‘other contexts’. Additionally, respondents were asked how long they have known each of their network members, which creates the opportunity to indicate in which social context one got to know one’s first confidant. In case respondents had no single, but multiple longest core discussion relationships, we considered the first mentioned as the first confidant and the others as subsequent confidants.

### *Control Variables*

In our final analyses, we controlled for the following respondent characteristics: age, sex, marital/cohabiting status, level of education (four categories: primary education to lower vocational education, (lower) general secondary education to pre-university education,

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<sup>9</sup> Using this similarity measure, we might suffer from what is sometimes called ‘floor and ceiling effects’. With respect to age similarity, however, we think this is hardly the case, since respondents are between ages 18 and 65. With respect to educational similarity, it is true that people with a university degree only have the opportunity to choose associates with the same or a lower level of education, whereas the reverse holds true for people in the lowest educational category. To a certain extent, however, we control for these floor and ceiling effects by including age and level of education of the respondent as independent variables in the analyses.

<sup>10</sup> We take the *negative* absolute difference, since the absolute difference would indicate dissimilarity between respondent and confidant.

<sup>11</sup> Because the number of categories that are used to measure education similarity and the range of age differences that is used to measure age similarity both affect the likelihood that respondent and confidant are indicated as similar in these respects, we also constructed another measure of overall similarity by summing z-scores of the four similarity variables. Models in which we used this measure yielded results that were very well comparable to those presented in this contribution. To simplify the interpretation of results, we therefore present results that are based on the unstandardized measures.

intermediate vocational education to higher vocational training and university degree), having a paid job, nationality (i.e., being a native, a first-generation immigrant, or a second-generation immigrant.), degree of urbanization of place of residence (measured as the number of people living within a 15-minute car drive of the respondent),<sup>12</sup> and religion (categories are no religion, Roman Catholic, protestant, and other religion).

### 2.4.3 Analyses

Because of the hierarchical structure of our data, i.e., personal networks are nested ‘within individuals’, we use multilevel techniques for the analysis.<sup>13</sup> More specifically, we use hierarchical linear modeling, which is an extension of the general linear model in which the probability model for the errors, or residuals, has a structure reflecting the hierarchical structure of the data (Snijders 2003; Snijders and Bosker 1999). Previous research, for example, Van Duijn, Van Busschbach, and Snijders (1999) and Völker and Flap (2001), showed multilevel methods to be particularly suited for the analysis of relations in personal networks, because justice is done to the hierarchical nested structure of the data and the resulting dependence between observations ‘within respondents’.

Before presenting the results from these multilevel analyses, we first provide some benchmarks on size and composition of core discussion networks of the Dutch (Table 2.2), on similarity in core discussion relationships (Table 2.3), and on where these confidants got to know each other (Table 2.4). Next, we examined the effect of the context in which confidants got to know each other on their similarity. Table 2.5 presents predicted similarity levels in core discussion relationships with regard to age, level of education, sex, religious background, and a combination of these similarity characteristics called ‘overall similarity’. For each social context, predicted similarity levels with regard to age, level of education, and overall similarity are calculated from multilevel linear regression models. With regard to sex and religion, predicted similarity levels are calculated from multilevel logistic regression models.

Table 2.6 provides information on the number of contexts people use to get to know their core discussion network members, and Tables 2.7 and 2.8 give insight into the path-dependent use of contexts and its consequences for similarity in core discussion relationships. More specifically, Table 2.7 shows the probability that one gets to know a second, third, fourth (etc.) confidant in a particular context in case one already got to know the first confidant in that context. These probabilities are calculated from multinomial logistic regression models on the context in which respondents got to know subsequent confidants (i.e., all confidants minus the first one), while the context in which they got to know the first confidant is used as an independent variable. In Table 2.8, we show the effect of switching to another context to get to know subsequent confidants on the association

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<sup>12</sup> Calculations by Van Ham (see Van Ham 2002). Data are from Statistics Netherlands, [www.cbs.nl](http://www.cbs.nl).

<sup>13</sup> For all analyses presented in this dissertation, we used the statistical software package STATA<sup>®</sup>, release 9.

between the level of similarity between respondent and first confidant and the level of similarity in subsequent relationships. To examine this, we calculated multilevel linear regression models with similarity between respondent and subsequent confidant as dependent variable, and with similarity between respondent and first confidant, having switched to another context, and an interaction term between these two as independent variables. The interaction provides the opportunity to show the extent to which, given the level of similarity between respondent and first confidant, switching to another context to get to know a subsequent confidant results in more or less similarity in the subsequent relationship. Reported are the mean similarity levels between respondent and subsequent confidants, as calculated from multilevel linear regression models for overall similarity in core discussion relationships.

## 2.5 Results

### 2.5.1 Describing core discussion networks in the Netherlands

Table 2.2 shows basic univariate distributions of core discussion network size and composition. On average, the Dutch report having 2.4 persons with whom they recently (i.e., during the six months prior to the interview) discussed important personal matters. A sizable percentage of respondents report having no (13 percent) or only one (27 percent) confidant. Furthermore, Dutch core discussion networks, for a large part, consist of friends (39 percent), followed by relatives (30 percent), and one's partner (22 percent).

**Table 2.2 Core discussion network size and composition**

	Value	%	Mean	St. dev.	(N)
Network size	0	13.0	2.37	1.97	1007
	1	27.3			
	2	21.5			
	3	13.2			
	4	10.7			
	5	9.4			
	6+	4.8			
Average composition					
	partner	22.4			870
	relatives	29.8			
	friends	39.1			
	others	8.5			

Source: SSND, 1999/2000

Table 2.3 shows the extent to which core discussion relationships differ from fictitious random relationships among respondents, with regard to similarity in age, level of education, sex, and religion. We compared the average difference between respondents and their matching confidants, with the average difference between respondents in our sample. Assuming that our sample is representative of the whole population, it gives an indication of whether there is more similarity in intimate personal relationships than between arbitrary

people in society. Overall, it turns out that there is indeed more similarity in core discussion relationships than among the sample of respondents themselves with regard to age, level of education, and sex.

**Table 2.3 Similarity in core discussion relationships**

Variable	%	Mean	St. dev.	(N)
<b>Age similarity<sup>a</sup></b>				
between respondent and confidants				
0-1 year difference	17.7	-9.23	9.95	2373
2-5 years difference	36.4			
6-10 years difference	16.7			
> 10 years difference	29.0			
between randomly chosen respondents		-12.84		1007
<b>Education similarity<sup>b</sup></b>				
between respondent and confidants				
no difference	47.5	-0.71	0.77	2347
1 level difference	35.7			
2 levels difference	15.4			
3 levels difference	1.3			
between randomly chosen respondents		-1.02		1007
<b>Sex similarity</b>				
between respondent and confidants		0.61	0.49	2390
between randomly chosen respondents		0.51		1007
<b>Religion similarity<sup>c</sup></b>				
between respondent and confidants		0.56	0.50	2222
between randomly chosen respondents		0.60		999

Source: SSND, 1999/2000.

<sup>a</sup> Age similarity is measured as the negative absolute age difference between respondent and confidant (respectively, between two randomly chosen respondents);

<sup>b</sup> Educational similarity is measured as the negative absolute difference between respondent and confidant (respectively, between two randomly chosen respondents) in highest level of education completed. Based on variables on level of education with categories primary education to lower vocational education, (lower) general secondary education to pre-university education, intermediate vocational education to higher vocational training, university degree;

<sup>c</sup> Respondents are considered religious if they go to church at least once a year. For both respondents and confidants, religion categories are: 'no religion', 'Roman Catholic', 'protestant', and 'other religion'.

Specifically, Table 2.3 shows that a) whereas the average age difference between two randomly chosen respondents is 12.8 years, confidants on average differ from the concerned respondent by 9.2 years; b) whereas two randomly chosen respondents differ by an average of 1.0 level of education, the mean educational difference between respondent and confidant is 0.7 level<sup>14</sup>; and c) on average, one's core discussion network consists of 61 percent same-sex relationships, whereas sex similarity among respondents is 51 percent. Considering that 22 percent of all core discussion network members are partners (Table 2.2), this last finding indicates that many remaining confidants are of the same sex. With respect to religious background, however, we find somewhat less similarity in core

<sup>14</sup> Keep in mind that educational similarity is measured as the negative absolute difference between respondent and confidant with respect to their highest level of education completed, based on variables with four categories: primary education to lower vocational education, (lower) general secondary education to pre-university education, intermediate vocational education to higher vocational training, university degree.

discussion relationships than among respondents (respectively, 56 and 60 percent on average).<sup>15</sup>

Table 2.4 provides insight into the extent to which various social contexts contribute to people's core discussion networks. It turns out that the Dutch, on average, get to know one of four confidants in the family context. Workplaces are the second most important supplier of confidants; almost 15 percent got to know each other there. Clubs, schools, and neighborhoods are more or less equally important: between 8 and 10 percent of all confidants got to know each other in each of these contexts. Finally, it turns out that people find few core discussion network members at public going-out places and with/via a friend.

**Table 2.4 Social contexts in which people get to know core discussion network members**

	%	N
In the neighborhood	8.3	197
With/via family	22.8	542
At school	9.2	218
At work	14.5	345
At a club/association	9.8	233
With/via a friend	6.0	142
At a public going-out place	6.3	150
Other <sup>a</sup>	23.1	548
Total	100.0	2375

Source: SSND, 1999/2000.

<sup>a</sup> That is, at respondent's home, at the network member's home, at church, on a vacation, at a party or elsewhere.

### 2.5.2 *The effects of social contexts on similarity in core discussion relationships*

In Table 2.5, we show the extent to which the social context in which confidants got to know each other affects their similarity, by presenting predicted similarity levels in core discussion relationships for a number of social contexts.<sup>16</sup> Whether confidants who got to know each other in a certain social context are significantly more (or less) similar to each other than confidants who got to know each other in one of the other contexts, can be determined by comparing the similarity levels for these specific social contexts among themselves. The first column shows that age similarity among confidants in particular is affected by the social context in which they got to know each other. As hypothesized, those who got to know each other at school, at a public going-out place, at a club or association and with/via a friend are generally most similar in age. Whereas the mean age difference between confidants is about nine years, those who got to know each other in these contexts are on average between three and six years different in age. The family is clearly the

<sup>15</sup> Keep in mind that respondents are considered religious if they reported going to church at least once a year, and network members if the respondent concerned knew about his/her religion. We think these measures are comparable, since going to church at least once per year as well as knowing about the religion of the network member both imply that they are not only registered, but that religion has a meaning in their lives.

<sup>16</sup> See the sections about measurements and analyses for important remarks with respect to these analyses.

context that supplies confidants most dissimilar in age. The average age difference between confidants who got to know each other with/via family is almost 16 years.

The second column shows the effects of social contexts on similarity in education. As expected, at school and at work, people got to know confidants who are most similar to themselves in level of education. Whereas the mean educational difference between confidants is 0.70 levels (based on four categories), those who got to know each other at school or at work on average differ only 0.43, respectively 0.51 levels of education. Other social contexts have no significant effect on educational similarity in core discussion relationships. A positive effect of getting to know each other with/via a friend on educational similarity, as we hypothesized, was not found.

The third column shows the effects of social contexts on sex similarity in core discussion relationships. In contrast to our hypotheses, it turns out that sex similarity among confidants is not more likely in case they got to know each other at work or at a club or association than in case they got to know each other in one of the other social contexts. In accordance with our hypotheses, we find that sex similarity is relatively more likely when confidants got to know each other at school, and most unlikely when they got to know each other at a public going-out place. Whereas the probability of sex similarity in core discussion relationships on average is 0.61, it is 0.78 if they got to know each other at school and 0.30 if they got to know each other at a public going-out place. The positive association between knowing each other from school and sex similarity indicates that an adolescent's preference for having same-sex friends is not hindered by characteristics of the school context, and is in line with other research findings on friendships from school (e.g., Leenders 1996). The substantial negative association between knowing each other from a public going-out place and sex similarity indicates that people are not hindered in their aim to get to know a potential partner at a public going-out place. And indeed, this effect is mainly due to the fact that a large share of confidants who got to know each other in this context became the partner of the respondent concerned.<sup>17</sup> In addition, although we did not have specific hypotheses about neighborhood effects, we do find a positive association between neighborhood and sex similarity. This might have two explanations: a) the absence of rules with regard to frequent interactions between neighbors, and b) differences in sex composition of neighborhoods at different moments during the day, such that, for example, unemployed women mainly meet other unemployed women in their neighborhood (cf. Marsden 1990a).

The fourth column shows that social contexts hardly affect religious similarity among confidants. Only those who got to know each other in the neighborhood are relatively the least likely to have the same religious background: Whereas the probability of religious similarity between confidants on average is 0.56, it is 0.45 if they got to know each other in

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<sup>17</sup> Analyses not presented here show that 96 out of 150 confidants who got to know each other at a going-out place are the partner of the respondent concerned.

the neighborhood. No further effects of social context on religious similarity are found, and also the likelihood-ratio test indicates that adding social contexts does not significantly improve the model. This means that none of our hypotheses with regard to religious similarity is confirmed. However, because we controlled for the respondent's religion in these analyses, we can notice that one's religion actually predicts religious similarity between confidants to a greater extent than does social context. Roman Catholics, especially, but protestants too, discuss important personal matters with co-religionists, almost irrespective of social context.

By combining the four similarity dimensions into one overall similarity measure, Table 2.5's last column shows that, of all examined social contexts, schools clearly provide the most similar confidants. On average, confidants who got to know each other at school are similar with regard to three out of four dimensions. Most dissimilar are confidants who got to know each other with/via family; on average, they are not even similar on two out of four dimensions.

**Table 2.5 Predicted similarity levels in core discussion relationships<sup>a</sup>**

Social context	Similarities <sup>b</sup>				Overall (N = 2172)
	Age (N = 2353)	Education (N = 2327)	Sex (N = 2361)	Religion (N = 2204)	
In the neighborhood	-6.29 (1.19)	-0.78 (0.13)	0.77 (0.03)	0.45 (0.16)	2.22 (0.15)
With/via family	-15.96 (1.17)	-0.79 (0.14)	0.61 (0.05)	0.54 (0.15)	1.88 (0.16)
At school	-2.97 (0.96)	-0.43 (0.12)	0.78 (0.03)	0.61 (0.11)	2.96 (0.12)
At work	-7.06 (0.94)	-0.51 (0.13)	0.63 (0.04)	0.54 (0.13)	2.27 (0.14)
At a club/ association	-5.88 (1.11)	-0.70 (0.14)	0.62 (0.05)	0.58 (0.12)	2.28 (0.15)
With/via a friend	-4.85 (1.03)	-0.64 (0.12)	0.55 (0.05)	0.60 (0.11)	2.30 (0.13)
At a public going-out place	-3.59 (1.00)	-0.72 (0.13)	0.30 (0.04)	0.58 (0.14)	2.10 (0.16)
Other <sup>c</sup>	-11.27 (1.01)	-0.81 (0.13)	0.58 (0.05)	0.58 (0.14)	2.01 (0.15)
Average	-9.17 (4.66)	-0.70 (0.18)	0.61 (0.12)	0.56 (0.14)	2.17 (0.33)
Model improvement by adding social contexts (LR Chi <sup>2</sup> )	518.73***	53.37***	112.72***	11.05	180.60***

Source: SSND, 1999/2000. Standard deviations in parentheses. <sup>a</sup> p<0.05, <sup>\*\*</sup> p<0.01, <sup>\*\*\*</sup> p<0.001.

<sup>a</sup> Calculated from multilevel linear regression models for age similarity, educational similarity, and overall similarity in core discussion relationships, and calculated from multilevel logistic regression models for similarity with regard to sex and religion. In each model, we controlled for the effects of respondent's age, sex, level of education, marital status, having a paid job, nationality, degree of urbanization in place of residence, and religious background;

<sup>b</sup> Age similarity and educational similarity are both measured as the negative absolute difference between respondent and confidant. Sex similarity and religious similarity are both dummy-coded variables, such that similarity levels report the probability of a positive outcome assuming that the random effect is zero. Overall similarity is measured as the number of dimensions on which respondent and confidant are similar. For additional information, see the section about measurements.

<sup>c</sup> Other contexts are at the respondent's home, at the network member's home, at church, on a vacation, at a party, and elsewhere.

### 2.5.3 Path-dependent use of social contexts

As final step, we answer the question whether, due to a path-dependent use of social contexts, characteristics of the social context one starts drawing confidants from, even more

prevalently affect the social composition of the resulting core discussion network. To that end, we examined whether getting to know a confidant in a particular context results in an increased likelihood to draw subsequent confidants from the same context. First, Table 2.6 shows the extent to which people get to know their confidants in different contexts. It turns out that most people, given that they have more than one confidant, have drawn them from at least two different social contexts. However, drawing multiple confidants from one context is far from unusual: 37 percent of those who have two confidants got to know them in the same context, and 64 percent of those who have three confidants got to know at least two of them in the same context.

**Table 2.6** Number of contexts people use to get to know core discussion network members (percentages)

Network size	Number of contexts						(N)
	1	2	3	4	5	6	
1	100.0						(275)
2	37.0	62.9					(216)
3	15.9	48.4	35.6				(132)
4	3.7	49.5	41.1	5.6			(107)
5	2.1	18.9	52.6	23.1	3.1		(95)
6+	0.0	12.5	25.0	45.8	14.5	2.0	(48)

Source: SSND, 1999/2000.  
 Pearson's correlation between core discussion network size and number of contexts used = 0.81 (if number of contexts > 1 : 0.69 / if number of contexts > 2 : 0.56)

Second, Table 2.7 provides insight into the actual path-dependent use of social contexts by respondents to get to know their confidants. We estimated a multinomial logit model on the social contexts in which respondents got to know their subsequent confidant (i.e., their second, third, and following confidants). Using the context where they got to know their first confidant (i.e., the confidant with whom one has the longest relationship) as an independent variable in the analysis, we predicted the effect of that context on the likelihood that they got to know subsequent confidants in the same context. Based on this model, Table 2.7 then presents for each context the estimated probability that people got to know subsequent confidants in the same context as their first confidant. In general, the likelihood that core discussion network members got to know each other in a particular context substantially increases if the first member was drawn from that particular context. Between contexts there are, however, differences in these effects. Knowing the first confidant with/via a friend, for example, increases the probability that one got to know a subsequent confidant with/via a friend with about 7 percent (from .06 to .13). Knowing the first confidant in the neighborhood or with/via family increases the probability that one got to know a subsequent confidant in the same context to about 30 percent. And, knowing the first confidant from work or from a club or association even increases the probability that one got to know a subsequent confidant in the same context to almost 40 percent.

**Table 2.7 Path-dependency in the use of social contexts<sup>a</sup>**

Social context	Probability that a subsequent confidant is drawn from a social context	
	... in case the first confidant was not drawn from that context	... in case the first confidant was drawn from that context
	In the neighborhood	0.09 (0.03)
With/via family	0.11 (0.06)	0.29 (0.09)
At school	0.06 (0.06)	0.18 (0.11)
At work	0.17 (0.07)	0.38 (0.12)
At a club/ association	0.11 (0.04)	0.39 (0.07)
With/via a friend	0.06 (0.04)	0.13 (0.05)
At a public going-out place	0.05 (0.03)	0.19 (0.08)
Other <sup>b</sup>	0.18 (0.08)	0.37 (0.08)

Source: SSND, 1999/2000. N = 1632 relationships. Standard deviations in parentheses.

<sup>a</sup> In each model, we controlled for the effects of respondent's age, sex, level of education, marital status, having a paid job, nationality, degree of urbanization in place of residence, and religious background;

<sup>b</sup> Other contexts are at respondent's home, at the network member's home, at church, on a vacation, at a party, and elsewhere.

Finally, Table 2.8 shows the effect of context switching on similarity in core discussion relationships. The presented similarity levels are calculated from multilevel linear regression models where similarity between respondent and the subsequent confidant is the dependent variable, and similarity between respondent and first confidant, switching to another context to get to know this subsequent confidant, and an interaction term between these two variables, are independent variables. Figures in the table then show the level of similarity (indicating on how many of the personal characteristics age, education, sex, and religion, respondents and confidants are similar) in subsequent core discussion relationships in case one did, respectively did not, switch to another context to get to know the subsequent confidant. On average, switching to another context results in finding a somewhat more similar subsequent confidant. This effect of switching, however, is dependent on the level of similarity in the first core discussion relationship. Switching does naturally not result in more similarity in subsequent relationships in case the first confidant is similar to the concerned respondent on all four dimensions, but if one's confidant is not similar on all four dimensions simultaneously, switching results in more similarity in subsequent relationships.

**Table 2.8 The effect of context switching on similarity in core discussion relationships<sup>a</sup>**

Level of similarity between respondent and first confidant	Level of similarity in subsequent core discussion relationships <sup>b</sup> ...	
	in case one <i>did not</i> switch to another context to get to know this contact	in case one <i>did</i> switch to another context to get to know this contact
0	1.43 (0.20)	2.13 (0.21)
1	1.79 (0.21)	2.21 (0.20)
2	2.02 (0.23)	2.30 (0.22)
3	2.39 (0.21)	2.42 (0.22)
4	2.75 (0.19)	2.61 (0.20)
Average	2.07 (0.40)	2.32 (0.25)

Source: SSND, 1999/2000. N = 1343 relationships. Predicted mean similarity levels, with standard deviations in parentheses.

<sup>a</sup> Level of similarity between respondent and first confidant is measured as the number of dimensions on which respondent and confidant are similar. For additional information, see the section about measurements.

<sup>b</sup> Predicted mean similarity levels are calculated from multilevel linear regression models for similarity in subsequent core discussion relationships, controlling for the effects of respondent's age, sex, level of education, marital status, having a paid job, nationality, degree of urbanization in place of residence, and religious background.

## 2.6 Discussion

Comparing core discussion network size of the Dutch with those of the Americans (see Marsden 1987), it seems that Dutch people, on average, have fewer confidants (2.4 on average) than Americans, who report having three core discussion network members. Furthermore, among the Dutch, there are more people who have none or just one confidant (13 and 27 percent for the Dutch, respectively, compared to 9 and 15 percent for the Americans). One reason for these differences could be the difference between the formulations of the name-generating questions used in the surveys. As we mentioned, Marsden (1987) used data from the General Social Survey 1985, which asked for those with whom the respondent discussed *important matters*, whereas we asked our respondents for names of people with whom they discussed *important personal matters*. This emphasis on the inner core of those others whom one really trusts (cf. Burt 1984) can result in smaller delineated networks. A second reason for the difference could lie in the fact that, unlike the GSS 1985, our question regarding ‘discussing important personal matters’ was just one of a number of name-generating questions in the survey. A third explanation might be related to cultural differences between Americans and the Dutch, rather than in the way of measuring core relationships. Perhaps forming intimate relationships is easier for Americans or perhaps Americans enjoy discussing important (personal) matters more than Dutch people do (cf. Fischer 1982b). A fourth reason could be that the GSS data which Marsden used, were collected 15 years before we collected ours. McPherson et al. (2006) repeated Marsden’s 1987 analyses using data from the 2004 GSS and found that Americans’ core discussion network sizes had declined substantially in 19 years: The mean network size had decreased from 2.9 in 1985 to 2.1 in 2004.<sup>18</sup> Because the average Dutch core discussion network size of 2.4 persons in 2000 is between these two network sizes for the Americans, the same process of network size decline might be taking place in the Netherlands. We collected a second wave of our dataset in 2006/2007, so in the future, we will be able to answer the question on a (further) decline in core discussion network size in the Netherlands after 2000.

Next, comparing our results with regard to the effects of social contexts on similarity in core discussion relationships with results previously presented by others, we encounter a number of noteworthy differences. Marsden (1990a), for example, found a positive effect of the proportion of kin on the proportion cross-sex ties within core discussion networks. In contrast, we found no effect of getting to know each other with/via family on sex similarity, but we did find a positive association between getting to know each other at school or in the neighborhood and sex similarity, as well as a negative association between getting to know each other at a public going-out place and sex similarity. Another example is given by Kalmijn and Flap (2001), who linked marriage choices in the Netherlands to the type of

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<sup>18</sup> See Chapter 6 for some remarks with regard to potential problems with these data.

setting couples had in common before they married. Whereas with regard to educational similarity in marital relationships they only found a positive effect of having attended the same school, our study shows that for core discussion relationships, next to getting to know each other at school, getting to know each other at work also makes educational similarity more likely. Also, whereas Kalmijn and Flap (2001) found a negative effect on religious similarity of having shared the same workplace and a positive effect of having shared the same neighborhood, the same school, and when parents or siblings of the spouses knew each other, we only found that getting to know each other in the neighborhood makes religious similarity between confidants somewhat less likely.

All of these studies support the argument that the social composition of the contexts in which people move around affects the social composition of their personal networks. However, differences between Marsden's (1990a) and our results indicate that it is important to look closely at how we measure things, because results may be affected by using different personal network delineation methods and the way of measuring contexts. With respect to the way of measuring of contexts, we note that the effects of the social composition of contexts on the social composition of personal networks could be better determined if the actual social composition of these contexts was also measured, instead of simply making assumptions about them. Furthermore, differences between our results and those of Kalmijn and Flap (2001) indicate the need to be cautious in generalizing the effects found with respect to one type of relationship to other types of relationships. Despite the fact that one's marriage partner is likely to be part of one's core discussion network, the differences indicate that the effects of social context on similarity in relationships are different for marriage relationships than for core discussion relationships in general (for an overview of differences in similarity between various types of relationships, see McPherson et al. 2001). A related intriguing question is the extent to which the effects of the (social composition of the) contexts in which network members get to know each other are different for different types of relationships. These effects are presumably stronger for weak relationships than for strong relationships, because preferences might weigh less heavily in the choice of with whom to have a casual talk than in decisions on confidants for discussing important personal matters.

## **2.7 Conclusions**

This study shows that the Dutch, on average, report having 2.4 persons with whom they recently discussed important personal matters. Surprisingly many respondents had no confidant or only one (13, respectively 27 percent). We also showed that, in accordance with previous research, one's confidants are generally more likely to be similar to oneself in age, level of education, and sex than are randomly chosen other people (see, e.g., Louch 2000; Marsden 1987, 1988; McPherson et al. 2006; Verbrugge 1977). Next, by showing that similarity in core discussion relationships, which are typically intimate, is associated

with the social context in which people find each other, we have a strong case for the choice-constraint approach to study personal networks: the composition of personal networks reflects the set of people to whom one has access.

Two main contributions can be assigned to this study. First, we examined the interplay between choice and constraint effects, by focusing on how three characteristics of social contexts in which people get to know their core discussion network members affect similarity in these intimate personal relationships. Based on a) the specific social composition of a context, b) whether interactions with specific others in a context are enforced, and c) the amount of time people generally spend in a context, we hypothesized how various social contexts affect similarity in core discussion relationships. We conclude that age similarity between confidants who got to know each other at school, at public going-out places, at clubs or associations, and with/via a friend, age dissimilarity between confidants who got to know each other with/via family, but also educational similarity between confidants who got to know each other at school or at work, can all be explained by the social composition of these contexts (in accordance with proposition A, i.e., that homogeneous context composition entails more similarity in core discussion networks). A context full of similar others makes it easy to get to know a similar confidant, whereas a context with many dissimilars makes a relationship with a dissimilar more likely. An additional explanation for the positive association between getting to know each other at work and educational similarity, is that interactions with colleagues are often institutionally organized (in accordance with proposition B, i.e., that *forced* interactions in contexts entail more effects of context composition on core discussion networks), as well as that people generally spend much time at work (in accordance with proposition C, i.e., the more time is spent in a certain context, the more likely confidants will be drawn from that context, and hence the stronger the effects of social composition), which both make ‘meeting’ and ‘mating’ of similar educated associates likely. Another explanation for the strong negative association between getting to know each other with/via family and age similarity is that within families there are often (strong) regulations or expectations with respect to with whom one has to interact most, which restricts one’s freedom to choose the most similar out of the given pool of others as provided by the family context (in accordance with proposition B). Finally, the findings that confidants who got to know each other at school and in the neighborhood are most likely to be same-sex, and that confidants who got to know each other at a public going-out place are likely to be of the opposite sex, can be explained by the fact that these contexts have no strong regulations or expectations with respect to with whom one needs to interact. This lack of regulations and expectations, combined with the sex-integrated composition of these contexts, leaves room for people to select same-sex confidants at school and in the neighborhood and opposite-sex confidants (mostly partners) at public going-out places (in accordance with propositions A and B). In short, this means that the social composition of the context one draws confidants from affects the social composition of the resulting network, but particularly if the context takes

much of a person's time and if interactions within the context are institutionally regulated or enforced. Furthermore, we show that in case the social composition of the context does not constrain one's preference for associating with a similar or dissimilar other, and regulations with regard to with whom one has to interact are absent, people can actually realize their preferences to a greater extent.

Second, we show how another important constraint on network member selection affects similarity in relationships. In case an individual has multiple confidants, which is the case for about 60 percent of the population, the context from which a subsequent confidant is drawn is dependent on the context from which one drew the first confidant. The likelihood that one gets to know a subsequent confidant in a particular context is substantially greater if the first confidant was drawn from the same context (in accordance with Hypothesis 1). However, in order to end up with more similarity in the network, one is generally better off after switching to another social context instead of drawing subsequent confidants from the first used context (in accordance with Hypothesis 2). Assuming that high levels of similarity in personal networks are preferred, this path-dependent use of social contexts is an additional constraint with regard to personal network composition. This path-dependency implies that the composition of an individual's personal network is affected by the social composition of the social contexts from which one draws associates, and that especially the context in which one gets to know the first network member plays an important role for network composition.

## Chapter 3

# ***Social Contexts and Similarity in Relationships of Different Strength<sup>1</sup>***

### ***Abstract***

*This paper examines the effect of social contexts on similarity in personal relationships. We argue that the effect of social contexts is larger for weaker, and smaller for stronger relationships. Using data from The Survey of the Social Networks of the Dutch (collected in 1999/2000, N = 1007), we first describe where people got to know their acquaintances, friends, and partner and that similarity in these relationships with regard to age, level of education, sex, and religion, generally varies. We then inquire whether getting to know each other in a certain context affects similarity, and whether this effect is different for relationships of different strength. Our main conclusion, however, is that the effect of social contexts on similarity is remarkably consistent across partnerships, friendships, and acquaintanceships.*

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<sup>1</sup> A slightly different version of this chapter was published in *Social Networks* (Mollenhorst, Völker, and Flap 2008b). The authors are grateful to two anonymous *Social Networks* reviewers and several colleagues within the Interuniversity Center for Social Science Theory and Methodology (ICS) for helpful comments. An earlier version of this paper was presented at the 26<sup>th</sup> International Sunbelt Social Network Conference in Vancouver, BC, April 2006.

### 3.1 Introduction

Within sociology, it is widely acknowledged that the social composition of the social contexts people enter in their daily life – providing the ‘pool’ of available others – plays a substantial role for the composition of their resulting personal networks (cf. amongst others, Blau 1977; Verbrugge 1977; Feld 1981; Feld and Carter 1998; Fischer 1982a; Huckfeldt 1983; McPherson and Smith-Lovin 1987; Völker and Flap 1997; Kalmijn 1998). For many activities, people select associates who are immediately available for interaction in some context in which they spend their time. In particular, it has been shown that the degree of similarity of interaction partners with regard to sociodemographic characteristics, is influenced by the type of social context in which they meet or got to know each other, for example, with/via family, in the neighborhood, at work or a voluntary association (see Marsden 1990a; Kalmijn and Flap 2001; Mollenhorst et al. 2008a). These studies provide a strong case for the importance of opportunities (or ‘supply’), next to preferences (or ‘demand’) for certain types of interaction partners. Although preferences cannot be denied in the process of network member selection, the opportunities to realize these preferences are determined by the social composition of the contexts which one enters or has entered formerly.

So far, the argument that the social composition of the contexts in which people meet affects the resulting personal network has generally been made for all types of network members, without taking into account that preferences for certain others might count differently for different types of relationships. For some types of relationships, one would not accept deviation from one’s preferences, while for other relationships preferences are of less importance or not even specified very clearly.

In most literature, it is assumed that people prefer others who are similar to themselves on important social dimensions. Similarity, for example, with regard to age, education, or lifestyle, lowers the costs of transactions and enhances mutual understanding and trust (see, e.g., Homans 1950; Laumann 1966). Yet, the preferences for similarity might not be of equal importance in all types of interactions. For example, the preference for a similar educated marriage partner might be very salient and important for that type of relation, yet for a casual chat or for occasional companionship, it might be quite inspiring and interesting to have a person available in the network, who differs in that respect. Our main idea is that for a strong relationship, for example, with a marriage partner, the characteristics of that person are much more important than for relationships with friends or acquaintances. Furthermore, for strong relationships, one will not be inclined to accept the first opportunities provided by a given social context, but one will also look in other social contexts. For a weaker relationship, for example, a friend for social companionship, however, it does not matter that much if the person does not match one’s preferences on all

social dimensions. Hence, one will be more inclined to accept a person as a friend or an acquaintance, when met at a certain occasion in a given social context.

This idea implies that the strength of the effect of a social context on the resulting relationship is different for various types of relationships, specifically for relationships of different strengths. Although there is ample evidence demonstrating the general importance of social contexts for personal networks, it has never been attempted to inquire into the differential effect of social contexts on various types of social relationships. Therefore, the purpose of this paper is to examine the extent to which the effect of social contexts on similarity in personal relationships differs for partners, friends, and acquaintances. We expect that the effect of social contexts is stronger for weaker relationships and weaker for stronger ones, because preferences weigh less heavily in choosing with whom to have a casual talk than in the choice of someone with whom to share important personal matters.

We have two reasons to focus on partners, friends, and acquaintances. First, these types of relationships can all start in a variety of social contexts, whereas less variation can be expected in the contexts in which, for example, relatives, colleagues and neighbors get to know each other. In general, relatives get to know each other at home (the respondent's or the network member's), or with/via family; colleagues get to know each other at work, and neighbors in the neighborhood. More variation is expected with regard to partnerships, friendships, and acquaintanceships. A second reason for focusing on these three types of personal relationships is their range in strength. Partnerships are in general stronger relationships than friendships, and friendships are stronger than acquaintanceships. Assuming that preferences weigh more heavily in the choice of stronger relationships than in the choice of with whom to have a casual chat, we expect the effect of the composition of the social context where pairs get to know each other to be weaker for intimate personal relationships (partnerships) than for casual relationships (acquaintanceships).

The effect of the social composition of the social context on similarity in personal relationships could be in two opposite directions. If one wants to meet a similar person, and the context is full of similar others, the context will have a positive (or stimulating) effect on similarity in the relationship. For example, since people are structurally inscribed in schools according to their age, schools are full of others of the same age, making associations with similar others in that respect easy. And due to a generally strong correlation between level of education and occupation, workplaces are likely to provide potential network members with the same level of education. The opposite applies if the context is full of dissimilar others: the context then has a negative (or constraining) effect on similarity. Extended families, for example, consist of multiple generations, which makes association with similar others with respect to age less likely. Irrespective of whether the effect of social context on similarity is positive or negative, depending on the social composition of the context, we expect the effect of social context to be larger, the weaker the type of relationship. As already argued, this is because weaker preferences leave more

room for the effect of the social composition of the context. Thus, the general hypothesis for this study reads as follows:

*The stimulating or constraining effect of social context on similarity in personal relationships is larger for friendships than for partnerships and larger for acquaintanceships than for friendships.*

### **3.2 Previous research**

Sociological research on the emergence of personal networks has increasingly paid attention to people's meeting opportunities. Earlier studies focused on people's preferences for certain types of associates (e.g., Lazarsfeld and Merton 1954; Newcomb 1961; Laumann 1966; Duck 1991). More recent studies, however, follow Blau's 'opportunities for contact' argument (Blau, 1977), according to which individual preferences are insufficient for explaining the composition of personal networks. It turns out that with whom one socializes and works, fools around and even marries is not wholly a personal decision. Whether people succeed in associating with the type of others they prefer depends on their opportunities to meet these others. This opportunity structure for meeting specific others is determined by the sociodemographic composition of the contexts in which people live, work and 'hang out'.

As mentioned above, the supply-side perspective has already been applied to several kinds of personal relationships; for example, friendships (Verbrugge 1977; McPherson and Smith-Lovin 1987), core discussion network relationships (Marsden 1990a; Mollenhorst et al. 2008a), marital relationships (Blau and Schwartz 1984; Kalmijn 1998; Kalmijn and Flap 2001), sexual relationships (Laumann et al. 1994), relationships with colleagues (Flap et al. 1998) and relationships with neighbors (Huckfeldt 1983; Völker and Flap 1997). Other important applications of the supply-side perspective are, for example, Fischer et al. (1977), Blau et al. (1982) and Kalmijn (2002). However, the effects of social contexts on different types of relationships have not yet been studied in a comparative way, as we aim to do in this paper.

In a nutshell, our perspective is that supply-side and demand-side arguments on the emergence of relationships provide complementary insights into the way personal relationships are formed. Social contexts, like meeting places and institutional arrangements, delimit 'the pool' from which people can choose their friends, a partner, and acquaintances. Individual preferences subsequently determine how people choose these associates out of the given pool.

The remainder of this paper is organized as follows: in the next section, we present our data and describe our measurements and analyses performed, section 3.4 describes the results of our analyses, and we finish with a discussion of these findings and our conclusions.

### **3.3 Methods**

#### *3.3.1 The Survey of the Social Networks of the Dutch*

In order to learn where people got to know their partner, friends, and acquaintances, and to discern the extent to which the effect of social contexts on similarity in personal relationships varies among these three types of personal relationships, we used data from the first wave of *The Survey of the Social Networks of the Dutch* (SSND1) (Völker and Flap 2002). This dataset, which was collected in 1999/2000, contains information on 1007 individuals in the Netherlands and is representative of the Dutch adult population between the ages of 18 and 65. To collect the data, a stratified random sample was drawn consisting of forty municipalities representing the various Dutch provinces and regions. In addition, the degree of urbanization and the number of residents of these municipalities was taken into account. In each of the forty municipalities, four neighborhoods were randomly selected using the Dutch zip-code system. Next, per neighborhood, 25 addresses were randomly selected. At eight of these addresses, one person was interviewed. This was the resident between 18 and 65 years of age, who was to have his or her birthday first. In the end, with a response rate of 40 percent, which is common for survey research in the Netherlands nowadays, a dataset of 1007 respondents from 161 neighborhoods was realized.

Comparing these SSND1 data with national statistics on basic sociodemographic features, we found that men, married people, and the somewhat higher educated were a bit over-represented. In addition, people with a paid job were over-sampled. We nonetheless used the data on all 1007 respondents because Van der Gaag (2005) showed that various network characteristics hardly changed when using a weighted instead of an unweighted sample. Moreover, we control for sex, marital status, level of education, and having a paid job in our final analyses.

#### *3.3.2 Measurements*

##### *Dependent variables*

The personal networks of the respondents were delineated through so-called ‘name-generating questions’, 13 in total, which are presented in Appendix A. Having collected the names (initials) of a respondent’s personal contacts, additional questions (the ‘name-interpreters’) were asked about the contacts themselves, as well as about the relationship between the respondent and her/his network members. Similarity between respondent and network member with regard to sex was measured straightforwardly, using a dummy-coded variable. Religious similarity is also measured by a dummy-coded variable, using variables on religion with four categories: ‘no religion’, ‘Roman Catholic’, ‘protestant’, and ‘other religion’. Respondents are considered religious if they reported going to church at least

once per year, while network members are considered religious if the respondent concerned indicated that he or she had a certain religion. Age similarity and educational similarity were measured, respectively, as the negative absolute difference<sup>2</sup> in age and level of education between respondent and network member.<sup>3</sup> Educational similarity is determined using variables on the highest level of education completed, with four categories: 'primary education to lower vocational education', '(lower) general secondary education to pre-university education', 'intermediate vocational education to higher vocational training', and 'university degree'.

#### *Independent variables*

Type of relationship between respondent and network member is determined by the answer to the question, 'How are you connected to this person?' Respondents could choose a maximum of three out of the following categories: 'partner', 'parent', 'child', 'parent-in-law', 'brother/sister', 'other relative', 'friend', 'boss', 'direct colleague', 'other colleague', 'someone who works for you', 'someone from your neighborhood', 'direct neighbor', 'someone who is a member of the same club or association' and 'acquaintance'.

To determine the social context in which the respondent got to know the network member, respondents were asked for every person mentioned: 'Where, on which occasion, did you get to know this person?' They could choose one out of the following contexts: 'at school', 'at a club or association', 'at work', 'with/via family', 'with/via a friend', 'at my home', 'at her/his home', 'in the neighborhood', 'at a public going-out place', 'at church', 'on a vacation', 'at a party' and 'somewhere else'. Obviously, the effect of the social composition of context on the social composition of personal networks can best be determined if the actual social composition of the contexts were measured as well, instead of making assumptions about them. Like nearly all other scholars, we unfortunately lack this information, since collecting these data is made infeasible by our type of survey and restrictions of time and money. Asking for the context in which people got to know each other, as we did, is in any case a step in the right direction, and improves on existing measurements.

#### *Control variables*

Because previous research (e.g., Marsden 1987) showed that personal network composition is affected by personal (sociodemographic) characteristics, and because of the sampling

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<sup>2</sup> We take the *negative* absolute difference, since the absolute difference would indicate dissimilarity between respondent and network member.

<sup>3</sup> Using these similarity measures, we might suffer from what is sometimes called 'floor and ceiling effects'. With respect to age similarity, however, we think this is hardly the case, since respondents are between 18 and 65 years old. With respect to educational similarity, it is true that people with a university degree only have the opportunity to choose network members with the same or a lower level of education, whereas for people in the lowest educational category the reverse is true. To a certain extent, however, we control for these 'floor and ceiling effects' by including age and level of education of the respondent as independent variables in the analyses.

method used, in our final analyses we controlled for the following (personal) characteristics of the respondent: age, sex, marital (or cohabiting) status, level of education, having a paid job, nationality,<sup>4</sup> degree of urbanization of place of residence,<sup>5</sup> and religion.

### *3.3.3 Analyses*

Section 3.4 presents the results of our statistical analyses. Table 3.1 shows where (i.e., in which social context) respondents got to know their partner,<sup>6</sup> friends, and acquaintances. Since our focus is on these three types of relationships, other kinds of relations are left out of the analyses. This means that family ties, co-worker relations, and fellow club members are omitted, provided these network members were not also mentioned as a partner, a friend or an acquaintance. Table 3.2 shows how similarity (regarding age, level of education, sex, and religion) between the respondents and their personal contacts varies across the three types of relationship.

In Table 3.3, we show the fit of various models that we estimated on the effect of social context, the effect of type of relationship, and interaction effects, on similarity in personal relationships with regard to age, level of education, sex, and religion. We present likelihood-ratio chi-squares, respectively Wald chi-squares, with accompanying degrees of freedom in parentheses on these various models. Model 1 is the base model in which we controlled for several respondent characteristics (see previous subsection). In Models 2 and 3, we added one of the two relationship attributes to the base model each time; type of relationship in Model 2, and the social context in Model 3. In Model 4 we added both these attributes to the base model at the same time. Then, by adding interaction terms to this last model in Models 5a through 5c, we tested whether the effects of social contexts on similarity in personal relationships varied among types of relationships. In Model 5a, we included interaction terms between social contexts and partnerships, as well as between social contexts and acquaintanceships (friendships are the reference category). In Model 5b, we just included interaction terms between social contexts and partnerships, in order to test whether the effects of social contexts on similarity is different for partnerships as compared to friendships and acquaintanceships. For a similar reason, we included interaction terms between social contexts and acquaintanceships in Model 5c. Finally, for each similarity measure, we underlined the model that fitted best, which means that adding (more specific) interaction terms did not improve the model significantly at the 5 percent level.

With regard to each of the four similarity measures, the model that fitted best is then presented in detail in Table 3.4. These models show multilevel linear regression coefficients on similarity in personal relationships with regard to age and level of

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<sup>4</sup> That is, being a native, a first-generation immigrant, or a second-generation immigrant.

<sup>5</sup> Degree of urbanization is measured as the number of people living within a 15 min car drive from the respondent (calculations by Van Ham, see Van Ham 2002; Data are from Statistics Netherlands, see <http://www.cbs.nl>).

<sup>6</sup> Irrespective of whether they are married, cohabiting, or girl/boyfriend, they were mentioned as 'partner' by the respondent concerned.

education, and multilevel logistic regression coefficients on similarity with regard to sex and religious background. We used multilevel analysis techniques because of the hierarchical clustering structure of our data, i.e., personal relationships are nested ‘within respondents’.<sup>7</sup> Some remarks are called for with respect to these analyses. First, using multilevel logistic regression analyses for similarity in sex and religion means that these models represent log odds ratios.<sup>8</sup> Second, as mentioned in our discussion of the control variables, we controlled for several personal characteristics of the respondent. Third, the coefficients on the various social contexts in Table 3.4 show the effect of getting to know each other in a certain social context on similarity, with ‘other context’ as the reference category. This reference category consists of those who got to know each other at respondent’s home, at the network member’s home, at church, on a vacation, at a party, or elsewhere. Because of this mixed reference category, coefficients as presented are best evaluated relative to one another instead of simply relative to the reference category. Fourth, if not specified otherwise, when reporting ‘significant’ differences, we mean significant at the 5 percent level.

### 3.4 Results

#### 3.4.1 Social contexts for meeting a partner, friends and acquaintances

Table 3.1 shows where respondents got to know their partner, friends and acquaintances. In general, different social contexts provide different types of relationships. More specifically, we see that whereas relatively few partners got to know each other in the neighborhood, this context is quite popular for getting to know new friends and acquaintances. The same can be said for the workplace, though in general relatively more relationships are formed at work than in the neighborhood. The opposite is true for public going-out places, which are popular for getting to know a partner, whereas hardly any friendships and acquaintanceships are the result of going to a bar or other such establishment.

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<sup>7</sup> Specifically, we used the hierarchical linear model (HLM), which is an extension of the general linear model in which the probability model for the errors, or residuals, has a structure reflecting the hierarchical structure of the data (Snijders 2003; Snijders and Bosker 1999).

<sup>8</sup> Defined by  $\text{logit}(p) = \ln(p/1-p)$ , where  $\ln(x)$  denotes the natural logarithm of the number  $x$ . The range of the log odds ratio is from minus infinity to plus infinity (Snijders and Bosker 1999:211-212). For example, the third column of Table 3.4 on sex similarity shows a coefficient estimate of 0.998 for the main effect of getting to know each other ‘at school’. This means that getting to know each other ‘at school’ is associated with an increase of 0.998 in the log odds ratio, or equivalently, a ratio of  $\exp^{0.998} = 2.71$  in the odds ratio for sex similarity in personal relationships.

**Table 3.1** Where partners, friends, and acquaintances got to know each other (percentages)

	Partner (N=542)	Friends (N=3167)	Acquaintances (N=486)
In the neighborhood	4.8	14.0	20.6
With/via family	5.0	6.0	5.1
At school	7.8	13.2	2.3
At work	11.6	17.8	23.1
At a club/association	9.6	14.2	9.7
With/via a friend	8.1	11.7	6.0
At a public going-out place	26.6	5.1	2.3
Other contexts <sup>a</sup>	26.5	18.0	30.9
	100	100	100

Source: SSND1, 1999/2000.

<sup>a</sup> That is, at church, at respondent's home, at the network member's home, on a vacation, at a party or elsewhere.

### 3.4.2 Similarity in personal relationships

Table 3.2 shows the extent to which similarity between the respondents and their personal contacts varies across the three types of relationships. Regarding age similarity, there are indeed substantial differences between partnerships, friendships, and acquaintanceships. On average, partners differ in age by about 4 years, whereas the average age difference between respondents and their friends is 6.2 years and between respondents and their acquaintances more than 9 years. Partners and friends hardly differ in educational level, whereas acquaintances are more likely to differ from the respondent in level of education. Also from the table, we see that, on the one hand, 95 percent of respondents are heterosexual. On the other hand, some 74 percent of friends are of the same sex as the respondent, and almost 70 percent of acquaintances are of the same sex as the respondent. Similarity in religion is found somewhat more often for friendships than for acquaintanceships, and most often for partnerships. Lastly, the general decrease in standard deviations with increasing strength of relationships already confirms our assumption that weaker preferences leave more room for other effects (e.g., that of social context) on similarity.

**Table 3.2** Mean similarity per type of relationship

Type of relationship	Similarity with regard to ...			
	Age <sup>a</sup>	Education <sup>b</sup>	Sex <sup>c</sup>	Religion <sup>d</sup>
Partnership	-4.066 (3.743)	-0.674 (0.773)	0.047 (0.213)	0.634 (0.482)
Friendship	-6.238 (6.905)	-0.638 (0.761)	0.737 (0.439)	0.590 (0.491)
Acquaintanceship	-9.172 (8.017)	-0.816 (0.806)	0.691 (0.462)	0.519 (0.500)

Source: SSND1, 1999/2000. Standard deviations in parentheses.

<sup>a</sup> Negative absolute age difference between respondent and network member;

<sup>b</sup> Negative absolute difference between respondent and network member with regard to their highest level of education completed. Based on variables with four categories: (1) primary education – lower vocational education', (2) '(lower) general secondary education – pre-university education', (3) 'intermediate vocational education – higher vocational training' and (4) 'university degree';

<sup>c</sup> Dummy-coded variable (0=dissimilar, 1=similar);

<sup>d</sup> Dummy-coded variable (0=dissimilar, 1=similar), based on variables with four categories: 'no religion', 'Roman Catholic', 'protestant', and 'other religion'.

### 3.4.3 Social contexts affecting similarity in personal relationships

Table 3.3 presents the fit of various models on the effects of social contexts, types of relationships, and interactions between these relationship attributes, on similarity in personal relationships with regard to age, level of education, sex, and religion. It shows that both, the type of relationship (Model 2) and the social context in which people get to know each other (Model 3), substantially affect similarity in personal relationships. Moreover, including both attributes in one model (Model 4) provides a significant better model fit as compared to including none or just one of these attributes to the model in which we also control for relevant respondent characteristics. Adding interaction terms for two of the three types of relationships (for the remaining type is the reference category) and social contexts, however, did not improve any of the models significantly. Only with regard to age similarity, adding interaction terms between partnership and social contexts resulted in a better model. This means that the effect of social contexts on age similarity is different for partnerships as compared to friendships and acquaintanceships. The effects of social contexts on similarity with regard to level of education, sex, and religion, are stable across types of relationships: there are no statistical different effects of social contexts for partnerships, friendships, and acquaintanceships.

**Table 3.3 Model fit of multilevel linear, respectively logistic regression analyses on similarity in personal relationships with regard to age, level of education, sex, and religion**

	Similarity with regard to ...			
	Age	Education	Sex	Religion
	LR Chi <sup>2</sup>	LR Chi <sup>2</sup>	Wald Chi <sup>2</sup>	Wald Chi <sup>2</sup>
Model 1 = respondent characteristics	103.24*** (13)	112.52*** (13)	32.04** (13)	35.97*** (13)
Model 2 = Model 1 + type of relationship	245.62*** (15)	130.11*** (15)	418.39*** (15)	46.14*** (15)
Model 3 = Model 1 + social context	260.68*** (20)	194.83*** (20)	216.77*** (20)	55.08*** (20)
Model 4 = Model 1 + type of relationship + social context	372.96*** (22)	<u>208.40*** (22)</u>	<u>460.33*** (22)</u>	<u>61.72*** (22)</u>
Model 5a = Model 4 + interaction terms on 'type of relationship' x 'social context'	388.99*** (36)	222.78*** (36)	471.59*** (36)	76.76*** (36)
Model 5b = Model 4 + interaction terms on 'partner' x 'social context'	<u>387.21*** (29)<sup>a</sup></u>	212.95*** (29)	467.64*** (29)	72.05*** (29)
Model 5c = Model 4 + interaction terms on 'acquaintance' x 'social context'	375.43*** (29)	218.91*** (29)	464.96*** (29)	66.97*** (29)
Number of respondents	923	921	872	893
Number of network members	4101	4019	3589	3658

Source: SSND1, 1999/2000. \*p<0.05, \*\*p<0.01, \*\*\*p<0.001. Numbers of degrees of freedom are in parentheses.

Note that the best fitting models are underlined.

<sup>a</sup> LR-test on Model 5b versus Model 4 = 14.25\* (7).

In Table 3.4, we present the models with the best fit in detail.<sup>9</sup> The first column relates to age similarity in personal relationships. First, controlling for social context, we find that a partner is generally more similar in age to the respondent than are friends (by 3.3 years), and that friends are more similar in age than are acquaintances (by 2.4 years). Second, since only interaction effects between partnerships and social contexts are included in this model, and not between friendships/acquaintanceships and social contexts, the main effects of social contexts show how the context in which friends and acquaintances got to know each other affects age similarity in the resulting relationship. On the one hand, friends and acquaintances who were met at school are relatively most similar to the respondent in terms of age, followed by those who got to know the respondent at a public going-out place. Next, although to a lower extent, friends and acquaintances who got to know each other at a club or association, with/via a friend or in the neighborhood are also more similar with regard to age than those who got to know each other in another context (the reference category). On the other hand, friends and acquaintances who got to know each other with/via family are least similar in age. The interaction terms for partnerships and social contexts show that the effect of getting to know each other at school or at a public going-out place on similarity is significantly smaller for partnerships than for friendships and acquaintanceships. This means that age similarity between partners is hardly affected by the social context in which they get to know each other.

The second column relates to similarity in the highest level of education completed. First, controlling for social context, we find that acquaintances are a little less similar to the respondent in level of education than are partners and friends.<sup>10</sup> Second, compared to other contexts, schools and workplaces provide personal network members who are relatively most similar in terms of education. The finding that interaction effects for types of relationships and social contexts did not improve this model (see Table 3.3), indicates that these effects of social contexts on educational similarity is not different across partnerships, friendships, and acquaintanceships.

The model on sex similarity in personal relationships (third column) first shows that, controlling for social contexts, sex similarity is very unlikely for partnerships, but also significantly less likely for acquaintanceships than for friendships. Second, most likely to be of the same sex as the respondent are personal network members who got to know each other at school<sup>11</sup> (odds ratio: 2.71), followed by those who got to know each other at a club

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<sup>9</sup> Our discussion under 'measurements' provides several important notes with respect to these analyses.

<sup>10</sup> By controlling for respondent's level of education in the analyses, we found that educational similarity is more likely, the higher one's level of education.

<sup>11</sup> As reported in Chapter 2 (Mollenhorst et al. 2008a), the positive association with getting to know each other at school suggests that it is not the social composition of this context that stimulates sex similarity. It is, however, in line with the traditional finding in research on friendships in school that friendships among students are disproportionately same-sex relationships (e.g., Leenders 1996).

or association (odds ratio: 1.46) and in the neighborhood<sup>12</sup> (odds ratio: 1.32). Most likely to be of the opposite sex are personal network members who got to know each other at a public going-out place (odds ratio: 0.60). Also with regard to sex similarity, the finding that interaction effects for types of relationships and social contexts did not improve this model (see Table 3.3), indicates that these effects of social contexts on sex similarity is not different across partnerships, friendships, and acquaintanceships.

**Table 3.4** Multilevel linear regression coefficients for similarity in personal relationships with regard to age and level of education, and multilevel logistic regression coefficients (log odds ratios) for similarity with regard to sex and religion<sup>a</sup>

	Similarity with regard to...			
	Age <sup>b</sup>	Education <sup>c</sup>	Sex <sup>d</sup>	Religion <sup>e</sup>
Type of relationship				
Partnership	3.297 (0.578)***	0.005 (0.034)	-4.249 (0.220)***	0.122 (0.149)
Friendship <sup>f</sup>	ref.	ref.	ref.	ref.
Acquaintanceship	-2.390 (0.334)***	-0.139 (0.038)***	-0.263 (0.119)*	-0.444 (0.187)*
Social context				
In the neighborhood	0.918 (0.376)*	-0.001 (0.041)	0.258 (0.138) <sup>†</sup>	-0.446 (0.185)*
With/via family	-0.953 (0.510) <sup>†</sup>	0.069 (0.053)	-0.068 (0.180)	0.175 (0.236)
At school	4.073 (0.406)***	0.295 (0.043)***	0.998 (0.168)***	-0.177 (0.189)
At work	0.556 (0.355)	0.210 (0.037)***	0.285 (0.129)*	-0.343 (0.170)*
At a club/association	1.755 (0.395)***	0.026 (0.042)	0.382 (0.145)**	0.029 (0.189)
With/via a friend	1.405 (0.416)***	0.049 (0.044)	-0.243 (0.145) <sup>†</sup>	-0.135 (0.199)
At a public going-out place	2.499 (0.563)***	0.057 (0.050)	-0.506 (0.188)**	0.280 (0.235)
In another context <sup>g</sup>	ref.	ref.	ref.	ref.
Interaction effects				
Partner * in the neighborhood	0.138 (1.419)			
Partner * with/via family	0.012 (1.421)			
Partner * at school	-3.313 (1.169)**			
Partner * at work	-1.196 (1.018)			
Partner * at a club/ association	-1.794 (1.092)			
Partner * with/via a friend	-1.727 (1.173)			
Partner * at a public going-out place	-2.485 (0.928)**			
Constant	-7.289 (0.591)***	-0.865 (0.069)***	0.697 (0.200)***	0.324 (0.375)
Number of respondents	923	921	872	893
Number of network members	4101	4019	3589	3658

Source: SSND1, 1999/2000. <sup>†</sup> p<0.10, \* p<0.05, \*\* p<0.01, \*\*\* p<0.001 (two-tailed tests).

Unstandardized coefficients, with standard errors in parentheses.

<sup>a</sup> In each model, we controlled for the effects of respondent's age, sex, level of education, marital status, having a paid job, nationality, degree of urbanization of place of residence, and religious background.

<sup>b</sup> Age similarity is measured as the negative absolute age difference between respondent and network member.

<sup>c</sup> Educational similarity is measured as the negative absolute difference between respondent and network member with regard to their highest level of education completed. Based on variables with four categories: (1) 'primary education – lower vocational education', (2) '(lower) general secondary education – pre-university education', (3) 'intermediate vocational education – higher vocational training' and (4) 'university degree'.

<sup>d</sup> Sex similarity is a dummy-coded variable (0=dissimilar, 1=similar).

<sup>e</sup> Religious similarity is a dummy-coded variable (0=dissimilar, 1=similar).

<sup>f</sup> Friendships make up the reference category, which means that other relationships, such as family ties and co-worker relationships are left out of the analyses, if they are not also mentioned as partner, friend, or acquaintance.

<sup>g</sup> Other contexts are: at respondent's home, at the network member's home, at church, on a vacation, at a party, and elsewhere.

<sup>12</sup> As also reported in Chapter 2 (Mollenhorst et al. 2008a), the positive effect of neighborhoods on sex similarity might be a result of a difference in sex compositions of neighborhoods between night and day, such that unemployed women mainly meet other women in the neighborhood during daytime (cf. Marsden 1990a).

The fourth column concerns religious similarity in personal relationships. First, whereas partnerships and friendships do not significantly differ in this respect, acquaintances are relatively less similar to the respondent with regard to religion.<sup>13</sup> Second, compared to other social contexts, religious similarity is somewhat less likely for personal network members who got to know the respondent at work (odds ratio: 0.70), or in the neighborhood (odds ratio: 0.64). Also with regard to religious similarity, the finding that interaction effects for types of relationships and social contexts did not improve this model (Table 3.3), indicates that these effects of social contexts on religious similarity is not different across these three types of relationships.

### **3.5 Conclusions and discussion**

This study builds upon and confirms earlier research findings that similarity in personal relationships is affected by the social context in which people encounter one another (e.g., Marsden 1990a; McPherson et al. 2001; Kalmijn and Flap 2001; Mollenhorst et al. 2008a). Comparing these previous findings among themselves, one runs up against a number of divergent results (for specifications, see Mollenhorst et al. 2008a). There are several possible explanations for the differences. One is the different method that researchers use to delineate personal networks. Another is their different means of measuring contexts: for example, by type of role relation (Marsden 1990a), by shared settings (Kalmijn and Flap 2001), and by context in which they got to know each other (Mollenhorst et al. 2008a). These differences indicate a need for caution in generalizing effects found with respect to one type of relationship to other types of relationships (for an overview of differences in similarity, or ‘homophily’, between various types of relationships, see McPherson et al. 2001).

In this study, we inquired into the differential effect of social contexts on various types of social relationships. New insights provided by this study, therefore, relate to differences between partnerships, friendships, and acquaintanceships in the effect of getting to know each other in various social contexts (i.e., meeting opportunities) on similarity in these types of personal relationships with regard to age, level of educational, sex, and religious background. We hypothesized that the stimulating or constraining effect of social context on similarity in personal relationships is larger for friendships than for partnerships and larger for acquaintanceships than for friendships. This hypothesis is based on the assumption that preferences are less important for weak relationships than for strong relationships. Empirical findings presented in this paper partly confirm our hypothesis: the effect of social context on age similarity in personal relationships is larger for friendships and acquaintanceships as compared to partnerships. Whereas social contexts have varying

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<sup>13</sup> By controlling for respondent’s religion, we found that religious similarity is more likely for Roman Catholics (log odds = 1.094, S.D. = 0.250). Protestants and people with another kind of religion do not differ in this respect from nonreligious people.

effects on age similarity in friendships and acquaintanceships, not all of these social contexts affect age similarity in partnerships. In particular, the strong positive effects of getting to know each other at school and at public going-out places on age similarity, do not apply to partnerships. For similarity with regard to level of education, sex, and religion, however, goes that social contexts do not affect similarity differently across partnerships, friendships, and acquaintanceships.

A number of other, more specific, conclusions can be drawn from our empirical research. First, the finding that age similarity between partners is hardly affected by the context in which they got to know each other is remarkable in light of the study by Kalmijn and Flap (2001) on marriage choices. They found that the type of setting couples had in common before they married affected not only educational and religious endogamy, but also age endogamy. This difference underlines the importance of looking closely at how the effect of social context is measured.<sup>14</sup> Second, we did not find a larger effect of social context for acquaintanceships as compared to friendships on any of the four similarity dimensions. This is possibly a result of the way respondents were asked about the type of relationship between themselves and their network members. ‘Acquaintance’ was the last answer category offered by our survey, perhaps leading respondents to label a network member as an acquaintance only because they did not fit into either of the preceding categories. In actuality, ‘acquaintances’ might just be a small group of varied remainders. Third, we found a negative effect (at the 10 percent level of significance) of getting to know each other with/via family on age similarity in personal relationships. This indicates that the ‘integrating function’ of the family context with regard to age similarity in personal networks is not due only to the simple fact that in this context, people meet relatives who are of another generation (cf., e.g., Fischer 1982a; Coleman 1990), but that also other types of personal relationships (such as partnerships, friendships, and acquaintanceships) which emerge in the family context are relatively dissimilar in age. Fourth, we found that sex similarity in personal relationships is most unlikely for people who got to know each other at a public going-out place. This effect is partly due to the substantial part of partners who got to know each other at a public going-out place (more than one out of every four). Notwithstanding this, the negative effect of public going-out places on sex similarity applies to all three types of relationships, indicating that public going-out places, relative to other social contexts, are especially suited for starting personal relationships with others of the opposite sex.

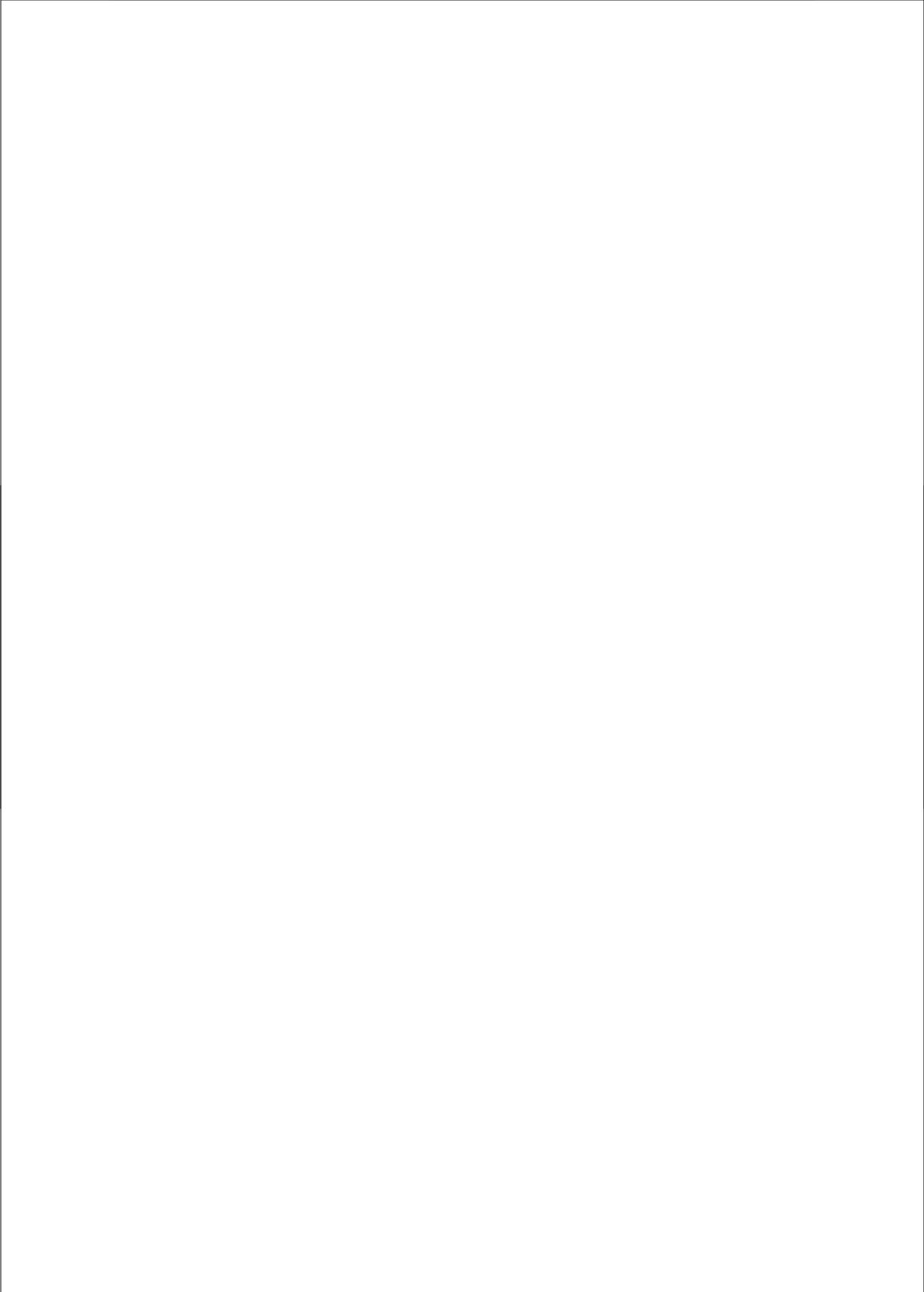
We assumed that people’s preference for similar others is more important for intimate relationships than for more superficial associations. And indeed, we generally found most similarity between partners, and least between acquaintances. Notwithstanding this, the

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<sup>14</sup> An advantage of their (Kalmijn and Flap 2001) measure of interaction opportunities is that it takes into account if associates share more than one setting (e.g., school and a sports club). A disadvantage of their measure is that couples who share a setting not always got to know their partner in that setting (e.g., they knew each other already for a long time as classmates, and much later they became co-members of the same sports club).

context in which associates got to know each other turned out to affect similarity consistently across types of relationships. This means that people use other ways to exert their preference for certain types of associates. One way could be that people draw personal network members from multiple contexts in order to find associates who match their preferences. They might also choose social contexts with an eye to the 'pool' of people they will meet there. Alternatively, for strong relationships, people might search more thoroughly or longer within a certain context to find a person who matches their preferences. These are relevant questions for future research.

To summarize, this study again reveals that people's personal networks reflect the social composition of the contexts which they enter during their daily lives. More importantly, although intimate associates are generally more similar to each other on sociodemographic dimensions than are more superficial associates, social contexts predominantly affect the level of similarity across different types of personal relationships consistently. This strongly supports the argument that meeting opportunities have a robust effect on the social composition of people's personal networks.



# Chapter 4

## ***Context Overlap and Multiplexity in Personal Relationships<sup>1</sup>***

### ***Abstract***

*In the sociological literature, it is suggested that grand changes in the structure of modern western societies in the 19th and 20th century resulted in low levels of overlap among social contexts nowadays, which means that people usually meet each network member in a single social context. In this contribution, I examine the overlap structure among social contexts in which people meet personal network members, thereby especially focusing on overlap between public contexts and private contexts. Next, because it is also suggested that low levels of context overlap result in a replacement of multiplex relationships by uniplex relationships, I examine the extent to which sharing multiple contexts affects multiplexity in personal relationships. The main conclusions, which are based on empirical tests on data from the second wave of *The Survey of the Social Networks of the Dutch*, are a) that private contexts are much more likely to overlap with other contexts than public contexts, and b) that sharing multiple contexts in general, but especially sharing multiple private contexts, has a substantial positive effect on multiplexity.*

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#### 4.1 Private and public: Two worlds apart?

It is suggested that grand changes in the economic and social structures of western countries in the nineteenth and twentieth century, such as industrialization, the spread of wage labor, increased geographical mobility, and so on, resulted in a decrease in social cohesion and a loss of personal relationships. Communal solidarities of the past are replaced by a dominant concern for the private world nowadays and densely connected social networks degenerated into sparsely connected networks. And ultimately, people will no longer be members of a community, but 'bowling alone' (Putnam 2000). For examples of literature on this topic, see e.g., Stein (1960), Nisbet (1969), Fischer et al. (1977), Fischer (1982a), Coleman (1990, 1993), Wellman (1999), and Pescosolido and Rubin (2000).<sup>2</sup>

From a sociological perspective, this alleged change in relational patterns is repeatedly explained by focusing on contextual opportunities and constraints. Coleman (1990, 1993), for example, speaks of an irreversible shift of activities that once took place in what he called primordial contexts, to activities nowadays taking place in purposive contexts; activities that formerly took place at home, at a relative's home, or in the neighborhood (such as home care, child care, consumption of food, work, and leisure activities) become more and more 'unbundled' and are taken over by modern, anonymous, social and economic organizations. Accordingly, people are expected to sacrifice multiplex relationships for single purpose relationships and social contexts no longer overlap. This lack of context overlap means that one works with one set of people, lives together with another set and spends his or her leisure time with a third set of people (Fischer et al. 1977; Coleman 1990, 1993).

This paper contributes to this field of research in two ways. First, I address the question to what extent people's public and private life have become two worlds apart, by examining the overlap structure among social contexts in which people nowadays meet their informal personal network members. Do people nowadays indeed meet their colleagues only at work? And do they meet their sports mates only at the sports club? Alternatively, do they meet the same people at both of these places? Or do they meet these people also at home? Second, I study whether meeting each other in multiple contexts is a

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<sup>2</sup> Although these arguments have a long pedigree, there is little empirical evidence for this alleged decline in individual social capital. Wellman and Wortley (1990), for example, showed that most networks of East Yorkers (Toronto) have a 'saved' component as well as a 'liberated' component: "One segment of a network is composed of immediate kin whose relations are densely knit and broadly supportive, while other segments contain friends, neighbours, and workmates whose relations are sparsely knit, companionate, specialized in support, and connected with other social circles" (See also Wellman 1979). Hennig (2007), in a re-evaluation of the Community Question arrived at the same conclusion for German networks. And also recently, McPherson et al. (2006), concluded that "shifts in work, geographic, and recreational patterns may have combined to create a larger demarcation between a smaller core of very close confidant ties and a much larger array of less interconnected, more geographically dispersed, more unidimensional relationships".

condition for a relationship to be a multiplex relationship. Or the other way round, does meeting each network member in a single context mean that relationships are uniplex?

## **4.2 Context overlap and multiplexity in informal personal relationships**

When answering the aforementioned questions, I focus on informal personal networks, which consist of people who provide sociability, company, emotional support, and practical support. I study this part of people's personal networks, because it refers to that part of one's personal network that is not directly exogenously determined.<sup>3</sup> Moreover, it is less restricted than studies that focused on specific types of relationships or on associates with whom people discuss important matters (e.g., Marsden 1987, 1990; McPherson et al. 2006). Examining personal relationships that provide practical help, emotional support, advice, or companionship, instead of just focusing on core discussion networks, therefore also provides a better picture of the current level of social isolation.

### *4.2.1 Context overlap*

The overlap structure among social contexts can be examined by looking at the social contexts in which people currently meet their informal personal network members. I focus on social contexts such as workplaces, neighborhoods, voluntary associations and so forth, because these kinds of social contexts in which people meet each other are accurate measures of the 'foci of activity' through which personal relationships emerge and are maintained. According to Feld, "a focus is defined as a social, psychological, legal, or physical entity around which joint activities are organized [...] As a consequence of interaction associated with their joint activities, individuals whose activities are organized around the same focus will tend to become interpersonally tied and form a cluster" (Feld 1981:1016). In others words, the social contexts (or foci) people enter in their daily life provide the pool of available others, out of which they can select personal network members.

Although social contexts can be categorized by a number of conceptual dimensions, such as their size, degree of constraint, et cetera (see, e.g., Coleman 1990: Ch.22; Feld 1981; Fischer 1982a), probably the most fundamental division of social contexts is that of public contexts, such as workplaces, neighborhoods, and clubs on the one hand, and private contexts, such as one's own home, the family, and the friends context on the other hand. It is this dimension that I use to hypothesize why overlap is more likely among some social contexts than among other contexts.

Since activities such as home care, child care, food consumption, work, and leisure activities are more and more taken over by modern, anonymous, social and economic organizations (cf. Coleman 1993), people spend much more of their time in public social

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<sup>3</sup> For additional information on this, see section 4.3.

contexts than in private contexts. The fact that many of these public contexts are 'segmented' in one specific activity makes it unlikely that people meet the same group of people in all contexts. More specifically, the segmented character of public contexts makes that overlap among two or more public contexts is very unlikely. Somewhat more likely are overlaps between a public context and a private context. This means that people invite a colleague at home or meet their sports mate not only at a sports club, but also at home. Most likely, however, are overlaps among two private contexts. As soon as people meet each other at home, they are likely to meet each other at both their homes: relatives are likely to visit each other at home, and so do friends. Hence, the first hypothesis reads:

*Context overlap is more likely between a private social context and a public social context as compared to two public social contexts, but most likely between two private contexts.*

#### 4.2.2 Multiplexity and the effect of context overlap

Second, I examine the strength of the recurrently used argument for uniplex personal relationships. The aforementioned scholars commonly argue that the low degree of multiplexity in personal relationships is a result of people meeting each of their network members in a single social context. Although they seem to agree on this, this mechanism has not been empirically examined. This study therefore addresses the question whether context overlap is a condition for relationships to be multiplex.

While the degree of multiplexity of relationships is addressed in various previous studies, it is also defined in various ways. In her research on multiplexity in adult friendships, Verbrugge (1979) already distinguished three definitions of multiplexity, as they were introduced by previous scholars. First, Gluckman, used the word multiplexity to refer to "the coexistence of different normative elements in a social relationship" (Gluckman 1962), which points at the coexistence of multiple roles within one relationship, for example, being colleagues as well as friends or relatives. So, a relationship is called uniplex if there exists just one role, and the more roles there exist, the more multiplex the relationship is called (see also, amongst others, Barnes 1969, 1972; Boissevain 1974; Fischer et al. 1977; Marin 2004). Second, according to Kapferer (1969:213), multiplexity "simply refers to the number of exchange contents which exist in a relationship. In this case a relationship becomes multiplex when there is more than one exchange content within it, the minimum amount deemed necessary for a relationship to exist" (see also, amongst others, Mitchell 1969; Fischer 1982a; Haines and Hurlbert 1992).<sup>4</sup> And third, Wheeldon argued that "if the situations in which people habitually see one another are clearly distinguished it is possible to separate, very crudely, the strands which contribute to their relationship" (Wheeldon 1969:132). His definition implies that a relationship is called

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<sup>4</sup> A combination of both of these definitions is also used repeatedly, for example, by Ibarra (1995), Lazega and Pattison (1999), and Skvoretz and Agneessens (2007).

'multiplex' if people do not only see each other at work, but also belong to the same sports club. This definition is also used by Wellman and Wortley (1990).

Although I agree with Verbrugge (1979:1287) that "whether defined by roles, behaviors, or affiliations, multiplexity refers to *multiple bases for interactions* in a dyad", I think that there are still important differences between these definitions of multiplexity, especially between the first two on the one hand, as compared to the third definition on the other hand. Meeting each other in multiple social contexts (Wheeldon's definition), is one amongst other mechanisms through which the coexistence of multiple roles (Gluckman's definition), but in particular the coexistence of different activities or exchange contents in a relationship (Kapferer's definition) can occur. I therefore define multiplexity as the number of exchange contents in a personal relationship. This issue is previously addressed by Feld (1981:1024-25), where he stated, "a pair of individuals who share many foci are also likely to have multifaceted exchange relationships, but an analytical distinction should be maintained", as well as by McPherson et al. (2001:437), and by Jackson, Fischer, and McCallister Jones (1977:44-45).

Based on the structural argument that the grand changes in the structure of modern western societies resulted in non-overlapping (or unbundled) social contexts, which in turn resulted in a replacement of multiplex relationships by uniplex, single purpose relationships, the second hypothesis reads:

*The smaller the number of social contexts in which informal network members meet each other, the less multiplex their relationship.*

## 4.3 Methods

### 4.3.1 *The Survey of the Social Networks of the Dutch*

In order to discern the overlap structure among social contexts for meeting informal personal relationships, and its effects on multiplexity in these relationships, I use data from the second wave of *The Survey of the Social Networks of the Dutch* (referred to as SSND2, see Völker et al. 2007). This second wave is a follow-up survey of the survey that was conducted in 1999/2000 (see Völker and Flap 2002). Seven years after the first wave, we re-interviewed as many of the original 1,007 respondents as possible. Over 70 percent of all respondents of whom we were able to retrieve their current home address were re-interviewed, which resulted in a dataset containing information on 604 individuals in The Netherlands, who are between 26 and 72 years of age.

Comparing these SSND2 data with national statistics on basic sociodemographic characteristics, we found that men, married people, older people and the higher educated were somewhat overrepresented. I therefore control for these personal characteristics in the analyses when possible.

#### 4.3.2 Informal network delineation

The personal networks of the respondents were delineated through 13 ‘name-generating’ questions, which are presented in Appendix A. Five name generators asked for specific role-relations, such as colleagues one frequently cooperates with and next-door neighbors (questions 3, 4, 5, 7, and 13 of the questionnaire of wave 2). To delineate *informal* personal networks, I do not make use of these role-related questions, because that part of one’s network is directly exogenously determined. Instead, I focus on the remaining eight questions that generate people’s ‘informal personal network’ (i.e., questions 1, 2, 6, and 8 to 12).

Answering each of the name-generating questions, respondents were allowed to mention network members they had already mentioned in response to previous questions. In addition, they could add a certain maximum number of names every time (five in most cases, but the number is presented in the Appendix A directly after every question).<sup>5</sup>

Having collected the names of a respondent’s personal contacts, additional questions (the ‘name-interpreters’) were posed on the relationship between the respondent and the network member. This provides the opportunity to control for the following variables in the analyses: frequency of contact, whether they like each other, duration of the relationship, and type of relationship.<sup>6</sup>

To determine the social context (or focus) in which people currently meet their informal network members, respondents were asked for every person mentioned: ‘*Where, on which occasion, do you meet person x nowadays?*’ They could choose up to three of the following contexts: ‘at school’, ‘at a sports club’, ‘at a voluntary association’, ‘at another organization/ association’, ‘at work’, ‘with/via family’, ‘with/via a friend’, ‘at my home’, ‘at her/his home’, ‘in the neighborhood’, ‘at a public going-out place’, ‘at church’, ‘on a vacation’, ‘at a party’, ‘on the internet’ and ‘somewhere else’.

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<sup>5</sup> Only when answering question six, a sizable number of respondents named 5 new network members (about 10 percent), which indicates that restricting respondents to add 5 new network members per question maximally, hardly caused truncation of informal personal network size. Furthermore, it indicates that the number of network members that was named while answering the remaining five name-generating questions also hardly had any disturbing effect on the number of network members people could mention answering the eight ‘informal network’ name-generating questions.

<sup>6</sup> Frequency of contact was measured by asking ‘How often do you usually have contact with person x?’, with answer categories ‘every day’, ‘every week’, ‘every month’, ‘every three months’, ‘once or a few times a year’, and ‘even less frequently’.

Liking each other is measured by asking ‘Could you indicate, on a five-point-scale, to what extent you like person x?’, with answer categories ‘not’, ‘not much’, ‘somewhat’, ‘much’, and ‘very much’.

Duration of the relationship is measured by asking for the number of years they have already known each other.

Type of relationships is measured by asking ‘How are you related to person x?’, allowing respondents to choose up to three of the following categories: ‘partner, living in’, ‘partner, not living in’, ‘parent, living in’, ‘parent, not living in’, ‘child, living in’, ‘child, not living in’, ‘in-law, living in’, ‘in-law, not living in’, ‘sibling, living in’, ‘sibling, not living in’, ‘other relative, living in’, ‘other relative, not living in’, ‘friend’, ‘boss’, ‘direct colleague’, ‘other colleague’, ‘former colleague’, ‘employee’, ‘someone from the neighborhood’, ‘direct neighbor’, ‘former neighbor’, ‘co-member of the same club/association’, ‘acquaintance’, and ‘other, namely...’.

The variable on ‘*multiplexity*’ of a relationship measures the number of exchange contents in an informal personal relationship. This means that I counted the number of name-generating questions in reply to which each network member was mentioned by the respondent. To that aim, I combined the first and second name-generating questions into one exchange content ‘giving and/or receiving advice’, and the sixth and twelfth name-generating questions into one exchange content ‘giving and/or receiving practical help’. This means that the multiplexity of a relationship ranges from 1 to 6.

#### *4.3.3 Measuring overlap structure, using affiliation networks*

The SSND data facilitate a reconstruction of the structure of social contexts for meeting network members and the extent to which they overlap. Usually, survey data order respondents in rows and their attributes (e.g., participation in events) in columns. An important property of these affiliation networks is that they allow us to study the dual perspectives of actors and events (Wasserman and Faust 1994). For the duality of relationships between actors and events, see Breiger’s classic paper on ‘the duality of persons and groups’ (Breiger 1974).<sup>7</sup>

To examine overlap among social contexts for meeting informal network members, I started with a matrix, ordering network members (as they are mentioned by the respondents) in rows, and the social context in which they meet in columns. Next, I transformed this two-mode affiliation network into a one-mode network: I converted this ‘network members by contexts’ matrix to a ‘contexts by contexts’ matrix, by multiplying the transpose of the ‘network members by contexts’ matrix with the ‘network members by contexts’ matrix itself,<sup>8</sup> using the software package Ucinet (Borgatti, Everett, and Freeman 2002). The cells of the resulting sociomatrix (Table 4.3) present the degree of overlap among social contexts for meeting informal personal network members. To illustrate, consider a person who meets a network member at school as well as at work. This contributes 1 to the overlap frequency for ‘at school’ versus ‘at work’ in the matrix. Consider a second relationship with a person one meets at a sports club, at work, and at church. This contributes 1 to the overlap frequency for ‘at a sports club’ versus ‘at work’, 1 to the overlap frequency for ‘at a sports club’ versus ‘at church’, and 1 to the overlap frequency for ‘at work’ versus ‘at church’. The numbers on the main diagonal in this matrix show the total number of ‘memberships’ in each of the social contexts, i.e., the total sum of network members of all respondents altogether who meet in each of the social contexts.

Although the frequencies of overlaps among the social contexts in which people meet network members are informative in themselves, their description of overlap is distorted by the ‘size’ of each context. Two popular contexts for meeting network members show a

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<sup>7</sup> Examples of research that have employed affiliation networks are enumerated by Wassermann and Faust (1994:295-6).

<sup>8</sup> For a mathematical explanation of this approach, see e.g., Wasserman and Faust 1994: Chapter 8.

higher overlap than two non-popular contexts, not necessarily because these contexts ‘appeal’ to each other, but simply because in both contexts many people meet each other (see, e.g., Bonacich 1972; Faust and Romney 1985; Wasserman and Faust 1994). To control for this ‘context size’, I use Bonacich’ (1972) normalization method. The resulting normalized matrix (not presented) is then used as input to a Johnson’s (1967) hierarchical clustering analysis. Both methods are implemented in Ucinet (Borgatti et al. 2002). The results of this analysis are presented in Figure 4.1.

#### 4.3.4 *Multivariate multilevel analysis*

The final part of my examination consists of a multivariate multilevel analysis on the effect of context overlap on multiplexity in informal personal relationships (Table 4.5). The dependent variable ‘multiplexity’ measures the number of exchange contents in an informal personal relationship. In all four models in this table, I control for respondent’s age, sex, level of education, marital status, employment status, and network size.

In the first model, I examine the effect of context overlap, using two dummy-coded variables which indicate whether the respondent and the network member meet each other in two or in three different social contexts. The number of contexts is split up further in the second model, indicating whether the overlap involves ‘private contexts’ or ‘public contexts’. In this model, the contexts ‘with/via family’, ‘with/via a friend’, ‘at respondent’s home’, and ‘at the network member’s home’ are considered ‘private contexts’, whereas all other contexts are considered ‘public contexts’.

In the third model, I add four relationship characteristics, which are expected to have an effect on multiplexity: frequency of contact, the extent to which they like each other, the duration of the relationship, and the type of relationship (see, e.g., Fischer et al. 1977:44-45). To that, the original variable on contact frequency is recoded into two dummy-coded variables for ‘weekly contact’, and ‘daily contact’, such that relationships with contact frequencies less than once a week make up the reference category. The initial variables on types of relationships were recoded into seven dummy-coded variables for ‘partner’, ‘relative, living in’, ‘relative, not living in’, ‘friend’, ‘co-worker’, ‘neighbor’, and ‘co-member’, such that those who do not fit into one of these categories (e.g., acquaintances) make up the reference category.

## 4.4 Results

In this section, I present results of empirical tests of the hypotheses on the overlap structure among social contexts and on the effect of context overlap on multiplexity in informal personal relationships (sections 4.4.2, respectively section 4.4.3). Before that, I describe the size and composition of informal personal networks and the multiplexity of these relationships in section 4.4.1.

#### 4.4.1 Size and composition of informal personal networks

Table 4.1 shows that the average informal personal network consists of about ten members, although there is substantial variation among respondents. About 25 percent of the respondents reported having six network members or less, while almost seven percent mentioned merely three members or less. In substantive terms, this means that one of four people has no more than six different people with whom to discuss work-related or personal problems, whom to pay a visit sometimes, from whom to receive practical help with odd jobs in or around the house and with whom to spend a night out sometimes. A considerable number, about 40 percent of the respondents, however, reported having over ten network members with whom they are involved in these types of activities.

**Table 4.1 Informal personal network size and composition<sup>a</sup>**

Variable	#	%	Mean	St. dev.	Mode	(N)
Overall informal personal network size			9.75	4.65	9.0	604
0 – 3	41	6.8				
4 – 6	115	19.0				
7 – 10	210	34.8				
11 – 15	170	28.2				
16 or more	68	11.3				
Total	604	100.0				
Types of relationships						604
Partner			0.67	0.57		
Relatives			2.68	2.23		
Friends			2.28	2.10		
Co-workers			2.01	2.27		
Neighbors			1.61	1.57		
Others <sup>b</sup>			1.48	2.32		
Number of types of relationships			1.10	0.33		5894

Source: SSND2, 2007.

<sup>a</sup> Eight name-generating questions were used to delineate these networks (see section 4.3.2).

<sup>b</sup> 'No answer' is included in this category.

On average, one third of all informal personal network members are relatives, partners included ( $[2.68+0.67]/9.75$ ). About a quarter are called friends ( $2.28/9.75$ ), a surprisingly small part, given the content of the name-generating questions we used. It actually means that over 40 percent of one's informal network members are not one's partner, relative, or friend, but are 'just' called a coworker, neighbor, co-member of the same club, acquaintance or whatsoever ( $[2.01+1.61+1.48]/9.75$ ). Moreover, respondents predominantly have single role relationships with their informal network members (1.10 on average).

The first part of Table 4.2 shows that informal network members are most relevant when it comes to giving and/or receiving a hand with odd jobs at home or to paying a visit; people on average report having more than four associates for each of these activities (4.33,

respectively 4.36). Moreover, they also mention having three people who will help them in case they fall ill. The average size of the ‘core discussion network’ is 2.41 (i.e., the number of network members with whom one discusses important personal matters). This number stayed remarkably stable since the previous wave of our survey in 1999/2000 in which we found an average size of 2.37 (Mollenhorst et al. 2008a). Multiplex relationships are not rare: The average number of exchange contents in a relationship is 1.90. Additional analyses, which are not presented in these tables, showed a) that people are likely to discuss their important personal matters with people they also go out with, b) that those who help each other with odd jobs around the house are also likely to give a hand when one falls ill, and c) that relationships with people who are asked for or who give advice on problems at work are hardly ever multiplex relationships.

**Table 4.2 Exchange contents and social contexts**

Variable	Mean	St. dev.	(N)
Exchange contents in relationships <sup>a</sup>			604
Give or receive work-related advice	1.90	2.22	
Give or receive help with odd jobs	4.33	2.80	
Pay him/her a visit	4.36	2.64	
Discuss important personal matters with	2.41	2.21	
Going-out with	2.51	2.37	
Provide me with help when I am ill	3.04	2.40	
<i>Multiplexity<sup>b</sup></i>	<i>1.90</i>	<i>1.11</i>	<i>5894</i>
Contexts in which they currently meet <sup>c</sup>			604
At school	0.04	0.21	
At a sports club	0.33	0.73	
At a voluntary association	0.14	0.55	
At another association	0.25	0.77	
At work	2.01	2.30	
With/via family	1.60	1.83	
With/via a friend	0.81	1.37	
At respondent's home	5.97	3.54	
At network member's home	5.02	3.15	
In the neighborhood	1.24	1.41	
At a public going-out place	0.38	1.11	
At church	0.15	0.61	
On a vacation	0.31	0.72	
At a party	0.75	1.50	
On the internet	0.07	0.39	
Somewhere else <sup>d</sup>	0.61	1.88	
<i>Context overlap<sup>e</sup></i>	<i>2.02</i>	<i>0.89</i>	<i>5894</i>

Source: SSND2, 2007.

<sup>a</sup> Figures show the average number of network members who were mentioned by the respondents for each exchange content.

<sup>b</sup> Multiplexity is the number of exchange contents within a relationship.

<sup>c</sup> Figures show the average number of network members who are currently met in each social context.

<sup>d</sup> ‘No answer’ is included in this category.

<sup>e</sup> Context overlap is the number of contexts in which they currently meet each other.

The second part of Table 4.2 shows where informal network members currently meet each other. The vast majority meet at home: An average number of six informal members meet at respondent's home, whereas five meet at the network member's home. Of course, household members of the respondent mainly cause the difference between these two numbers. The next most important social contexts to meet informal network members are the workplace (where on average 2.0 members are met), the family context (1.6 on average), and the neighborhood (1.2 on average). All other social contexts are of minor importance for meeting informal network members. Finally, this table shows that people on average share two contexts with their network members.

#### *4.4.2 Overlap among social contexts*

In Table 4.2, I showed where informal network members currently meet each other, and that they share two social contexts on average. Next, Table 4.3 presents the overlaps among these social contexts. To give an example: The figure in the first row and first column shows that 3605 (of all 5894) network members are met at respondent's home. Next, the figure in the first row, second column (which is the same as the figure in the second row, first column) shows that 2790 network members are met both at respondent's home as well as at the network member's home. The off-diagonal figures therefore indicate the overlap among social contexts.

Table 4.3 shows that the by far most frequently occurring context overlap is between respondent's home and the network member's home (2790 instances), which actually makes up 29.6 percent (2790/8435) of all overlaps. The second most frequently occurring overlap is between respondent's home and the family context (794 instances). Looking more broadly, one can see that most overlaps occur among the 'private' contexts respondent's home, the network member's home, with/via family, and with/via a friend. Altogether, overlaps among these contexts make up 59.2 percent of all overlaps (4993/8435). Next, overlaps in which one private context and one public context are involved make up 35.5 percent of the overlaps (2993/8435), which means that just 5.3 percent of all overlaps occur between two public contexts (449/8435). These findings confirm the first hypothesis that context overlap is more likely between a private social context and a public social context as compared to two public social contexts, but most likely between two private contexts.

The overlap structure among social contexts, as presented in Table 4.3, however, is distorted by the 'size' of each context. This means that two popular contexts for meeting network members show a higher overlap than two non-popular contexts, simply because in both contexts many people meet each other. To obtain the overlap structure among social contexts, controlled for 'context size', I used Bonacich' (1972) normalization method. From the resulting table (which is not presented in this paper) it is hard to see which contexts are relatively more likely to overlap than others.

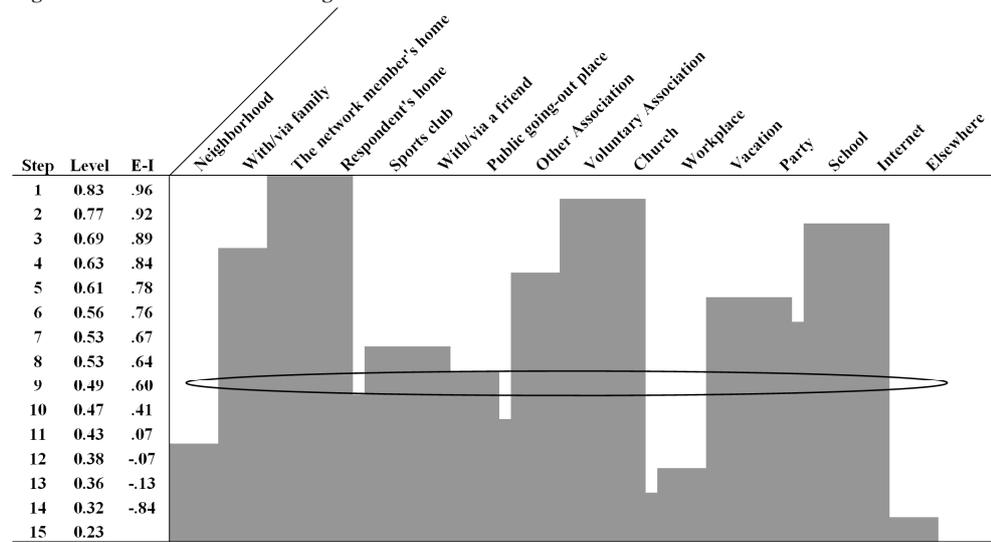
**Table 4.3** Overlap among social contexts

Social Contexts	Private				Public											
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1 Resp. home	3605	2790	794	368	6	153	350	126	36	87	132	56	151	262	22	45
2 Netw. memb. home	2790	3049	696	270	5	131	340	103	28	75	129	51	115	235	18	38
3 With/via family	794	696	967	75	0	10	8	15	2	3	7	3	15	46	7	5
4 With/via friends	368	270	75	492	0	25	22	21	8	15	15	3	17	44	1	7
5 School	6	5	0	0	26	1	0	0	0	0	0	0	1	2	1	1
6 Work	153	131	10	25	1	1218	9	11	9	6	42	6	4	65	9	11
7 Neighborhood	350	340	8	22	0	9	750	22	6	11	11	4	3	37	1	7
8 Sports club	126	103	15	21	0	11	22	202	5	2	10	2	5	11	0	1
9 Voluntary assoc.	36	28	2	8	0	9	6	5	86	6	4	12	1	8	1	1
10 Other assoc.	87	75	3	15	0	6	11	2	6	152	6	5	5	10	1	1
11 Going-out place	132	129	7	15	0	42	11	10	4	6	232	1	11	15	1	2
12 Church	56	51	3	3	0	6	4	2	12	5	1	88	1	4	0	0
13 Vacation	151	115	15	17	1	4	3	5	1	5	11	1	190	23	3	2
14 Party	262	235	46	44	2	65	37	11	8	10	15	4	23	455	4	5
15 Internet	22	18	7	1	1	9	1	0	1	1	1	0	3	4	44	0
16 Elsewhere	45	38	5	7	1	11	7	1	1	1	2	0	2	5	0	371

Source: SSND2 (2007) N = 5894 relationships. Total number of overlaps = 8435.

In Figure 4.1, I therefore present results of a Johnson's (1967) hierarchical clustering analysis. This figure shows, for example, that 83 percent of all informal network members who meet at respondent's or the network member's home, meet at both these places, as well as that 77 percent of all network members who meet at church or at a voluntary association, meet at both these places.

Figure 4.1 Hierarchical clustering of social contexts



Source: SSND2, 2007

According to the 'E-I measure of cluster adequacy',<sup>9</sup> which is implemented in Ucinet (Borgatti et al. 2002), the solution of the ninth step of the procedure (encircled in Figure 4.1) is most tempting. It separates four clusters of contexts with relatively high numbers of overlaps: (1) with/via family, respondent's home, and the network member's home, (2) sports clubs, with/via a friend, and public going-out places, (3) churches, voluntary associations, and other associations, and (4) vacations, parties, schools, and the internet.

The first cluster (respondent's home, the network member's home, and with/via family) provides additional confirmation for the first hypothesis, i.e., that context overlaps are most likely between two private contexts. It turns out that context overlap, not only in the absolute number of overlaps, but also in relative terms most often occurs among the private contexts of one's own home, the network member's home, and the family context. The second cluster, however, shows that the hypothesis is not confirmed for those who meet with/via a friend, because it is relatively more likely that those who meet with/via a

<sup>9</sup> This E-I index measures the ratio of the numbers of overlaps within the clusters to overlaps between clusters (see Borgatti et al. 2002).

friend also meet at a sports club or at a public going-out place than in one of the private contexts. The third and fourth cluster show that, if the number of people who meet in each context is taken into account, overlaps are also likely among church, voluntary associations, and other types of associations, as well as among party, school, vacation, and the internet. Finally, another important finding is that the neighborhood, but especially the workplace hardly overlaps with other contexts, neither in absolute terms, nor in relative terms. This means that the people we meet in these contexts, although they are part of our informal personal network, are most unlikely to be met in multiple contexts.

#### 4.4.3 Context overlap affecting multiplexity

Table 4.4 presents a cross-tabulation of multiplexity (i.e., the number of exchange contents in a relationship) and the number of shared contexts per relationship. While these figures show that there is an association between these two relationship characteristics (Pearson's correlation coefficient is 0.23), they also confirm the argument that a distinction should be made between these two characteristics (see Feld 1981:1024-25): about forty percent of those who share more than one context do not have a multiplex relationship ( $(567+913)/(1234+2391)$ ).

**Table 4.4 Multiplexity and context overlap**

Multiplexity of relationship	Social contexts per relationship			Total
	1	2	3	
1	1467	567	913	2947
2	434	311	623	1368
3	237	208	519	964
4	108	106	230	444
5	21	41	100	162
6	0	1	6	7
Total	2267	1234	2391	5892

Source: SSND2, 2007.

Pearson's correlation between the multiplexity of relationships and the number social contexts in which they meet is 0.23.

Table 4.5 presents results from multilevel regression models on multiplexity in informal personal relationships. In all models, I controlled for respondent's age, sex, level of education, marital status, employment status, and the size of the informal personal network. The first model contains two dummy-coded variables: one for those who meet each other in two different contexts, and one for those who meet in three contexts, such that those who meet in a single context make up the reference category. This model shows that sharing multiple contexts has a strong and positive effect on the multiplexity of a relationship (in accordance with the second hypothesis).

In the second model, the number of shared social contexts is split up further, indicating whether the overlap involves private or public contexts. This model shows that the positive effect of sharing multiple contexts on multiplexity predominantly applies to private contexts: in order to make a relationship multiplex, it is especially important to meet at least

in one private context. The average multiplexity for those who meet each other in just one context is substantially higher if they meet in a private context instead of in a public context. Next, multiplexity increases if people share one private and one public context and even more so if they share two private contexts (both compared to sharing just one public context). Moreover, sharing two public contexts instead of one public context does not affect multiplexity. Also for those who share three contexts, it turns out to be important that at least one of the contexts they share is a private context, in order to make their relationship multiplex. So in short, these findings indicate that for a relationship to be multiplex, it is important to meet each other in multiple contexts, of which at least one has to be a private context.

**Table 4.5** Multilevel regression models on the multiplexity of informal personal relationships<sup>a</sup>

	Model 1	Model 2	Model 3
Frequency of contact			
Weekly			0.40 (0.03) ***
Daily			0.46 (0.04) ***
Liking the other			0.20 (0.02) ***
Duration of relationship			-0.00 (0.00)
Type of relationship			
Partner			0.41 (0.13) **
Relative, living-in			0.53 (0.49)
Relative, not living-in			0.19 (0.06) ***
Friend			0.47 (0.05) ***
Coworker			-0.26 (0.06) ***
Neighbor			0.08 (0.05)
Co-member			-0.08 (0.08)
Social contexts per relationship			
1 context	ref.		
2 contexts	0.41 (0.04) ***		
3 contexts	0.61 (0.03) ***		
1 context: public		ref.	ref.
1 context: private		0.72 (0.05) ***	0.25 (0.07) ***
2 contexts: both private		0.84 (0.05) ***	0.55 (0.06) ***
2 contexts: 1 private & 1 public		0.65 (0.08) ***	0.34 (0.08) ***
2 contexts: both public		0.10 (0.10)	0.06 (0.09)
3 contexts: all private		0.91 (0.04) ***	0.63 (0.06) ***
3 contexts: 2 private & 1 public		0.92 (0.04) ***	0.56 (0.06) ***
3 contexts: 1 private & 2 public		0.99 (0.09) ***	0.57 (0.10) ***
3 contexts: all public		0.42 (0.21) *	0.23 (0.19)
Constant	1.73 (0.16) ***	1.43 (0.16) ***	0.29 (0.19)
Number of relationships	5855	5855	5005
Number of respondents	590	590	577
LR Chi <sup>2</sup>	390.98	693.18	1307.17

Source: SSND2, 2007. \* p<0.05, \*\* p<0.01, \*\*\* p<0.001 (two-tailed tests). Standard errors in parentheses.

<sup>a</sup> All models are controlled for respondent's age, sex, level of education, being married, having a paid job, and informal network size.

Finally, the third model tests whether the effect of sharing multiple social contexts on the multiplexity of a relationship is affected by other relationship characteristics. By controlling for frequency of contact with the network member, the extent to which one likes the network member, the duration of their relationship, as well as the type of relationship, this

model shows that sharing multiple, and especially sharing multiple private contexts, has a robust and positive effect on multiplexity in informal personal relationships.

#### **4.5 Conclusions**

This study provides new insights into the structure and composition of personal networks. First, I show that the average personal network contains about ten members who altogether provide a person with personal or work-related advice from time to time, with instrumental help with odd jobs or in case one falls ill, or who keep her/him company by paying a visit or by going-out together. The finding that just a small part of these informal networks can be considered as the ‘core discussion network’, supports the idea that people probably have “a smaller core of very close confidant ties and a much larger array of less interconnected, more geographically dispersed, more unidimensional relationships” (McPherson et al. 2006).

Second, I show that multiplex relationships are not rare nowadays, and describe which combinations of exchange contents are more likely in a relationship than other combinations of exchange contents. Especially going-out together and discussing important personal matters are often combined in a relationship, as well as giving a hand with odd jobs at home and providing help in case of illness. Relationships with those whom we discuss work-related problems with are most likely to be uniplex.

Third, I show that context overlap is not rare nowadays: people meet their informal network members in two social contexts on average. The great majority of these overlaps among contexts, however, concern overlaps with people’s homes, which means that many informal network members are met at home in combination with another context. Furthermore, I show in more detail that private contexts are more likely to overlap than public contexts, and more in particular, that overlaps among two public contexts hardly ever occur. This means that ‘public’ and ‘private’ are not two worlds apart, but that ‘the public world’ itself is divided in separate segments with strict boundaries.

Fourth, findings in this study support the argument (amongst others made by Feld, 1981) that an analytic distinction should be made between context overlap and multiplexity in personal relationships. The empirical results support the argument that multiplexity in personal relationships is positively affected by the number of contexts people share with each other, even if I control for other relevant relationship characteristics, such as contact frequency and type of relationship. More specifically, I found that sharing at least one private context leads to multiplexity in an informal personal relationship.

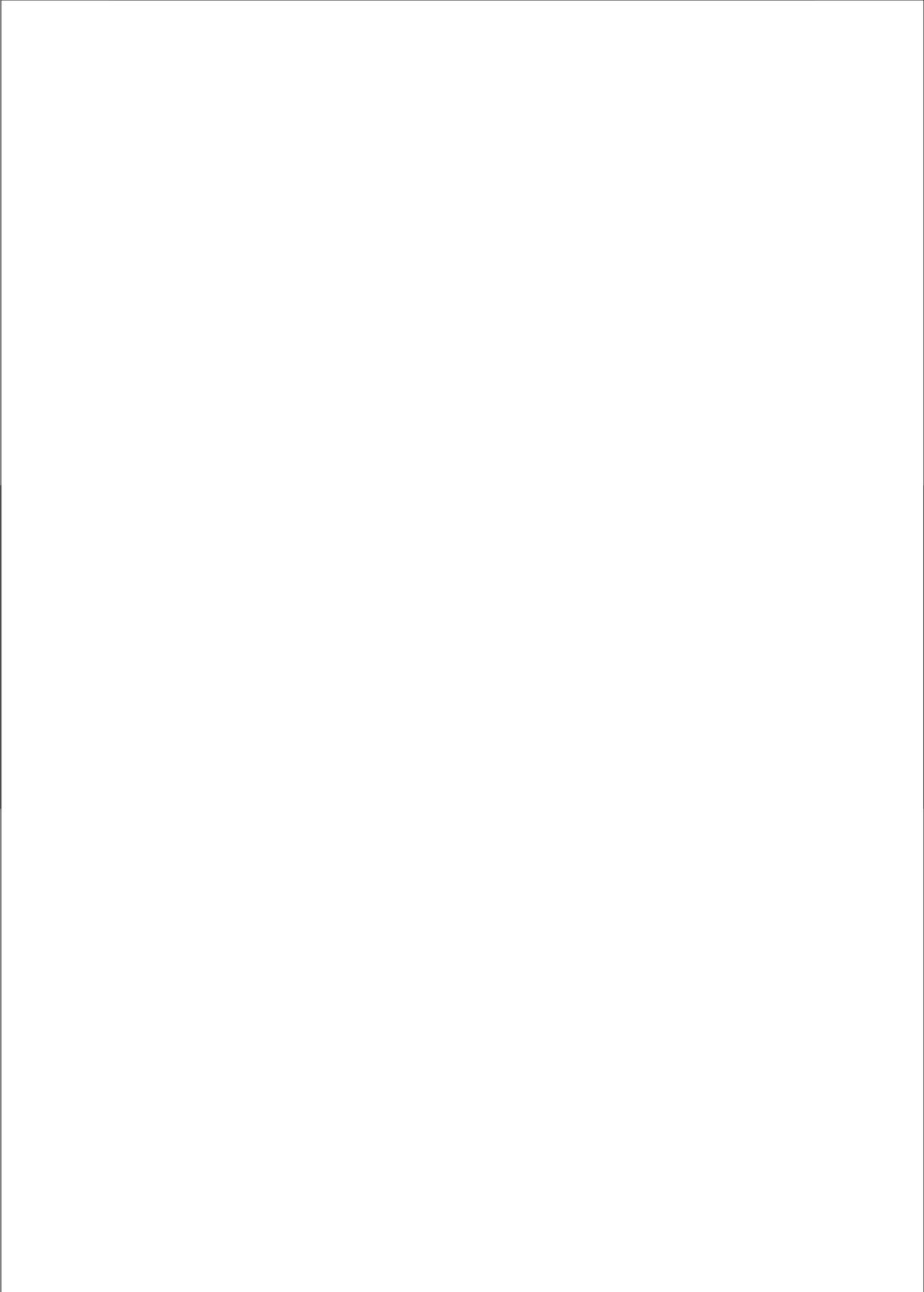
#### **4.6 Discussion**

More generally, this study on context overlap contributes to the research literature, as it provides an insight into the social structure of a present-day modern Western society (cf.

McPherson et al. 2001). The finding that, besides the context overlaps in which people's homes are involved, other relevant social contexts in which people meet their network members hardly overlap, has some important implications.

First, the structure of context overlaps, as presented in this study, is not fully in line with the argument that people live together with one set of people, work with a second set, conduct sports with a third set, and spend a night out with another set of people (as put forward by, amongst others, Fischer et al. (1977) and Coleman (1990)). I show that public contexts hardly overlap each other, but also that there is still overlap among public contexts on the one hand and private contexts on the other hand.

Second, a low level of context overlap might affect the density and sociodemographic composition of the network. When each network member is met in a different context, network density is expected to be low. And because previous research on homogeneity in personal networks has shown that similarity (or homophily) in personal relationships is affected by the context in which they emerge (Marsden 1987; McPherson et al. 2001; Mollenhorst et al. 2008a, 2008b), this might also result in varied and heterogeneous networks. Another possibility, however, is that people just use a small number of contexts to meet their network members, because it is more efficient, and less costly and cumbersome. Social contexts then still hardly overlap, while the resulting networks are dense and homogeneous. In addition, previous research has revealed a certain degree of path-dependent use of social contexts for emerging personal networks, which means that relationships are more likely to emerge in a certain context if one has drawn preceding network members from that particular context (Mollenhorst et al. 2008a). Further research is needed to find out whether people continue to meet their network members in the same contexts in which their relationships originally emerged, or that they find a new 'focus of activity' around which they can maintain their personal relationships (cf. Feld 1981).



# Chapter 5

## ***Social Contexts and Transitive Triads in Core Discussion Networks<sup>1</sup>***

### ***Abstract***

*This paper inquires into the degree of transitivity in networks of confidants with whom one discusses important personal matters. This research builds upon the in sociology widely accepted assumption that, by providing opportunities, the social contexts people enter in their daily life, such as the neighborhood, the family, the workplace, etc., affect the characteristics of personal networks. We argue that the social contexts in which network members meet, substantially affect the degree of transitivity in a network, i.e. the extent to which one's network members mutually know each other. Our main hypothesis is that if people meet their network members in different contexts, transitivity will be lower, while it will be higher if one meets all her/his network members simultaneously in the same context(s).*

*Data from the second wave of The Survey of the Social Networks of the Dutch (2007, N=604) show that about sixty percent of the triads in core discussion networks are transitive, which also means that a substantial part of one's strong relations is unconnected. Next, we show that sharing one or more social contexts is an important condition for, but certainly does not guarantee transitivity. Importantly, the specific characteristics of social contexts explain why sharing certain contexts positively affect transitivity, while sharing other contexts do not.*

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<sup>1</sup> Co-authors are Beate Völker and Henk Flap. A slightly different version of this paper is currently under review. An earlier version was presented at the 4<sup>th</sup> UK Social Network Conference, July 18-20, 2008, University of Greenwich, London, UK. The authors are grateful to Tom Snijders and several other colleagues within the Interuniversity Center for Social Science Theory and Methodology (ICS) for helpful comments.

## 5.1 Introduction

Sociologists widely acknowledge that structural conditions affect the characteristics of personal networks (cf. among others, Simmel [1922] 1955; Blau 1977; Fischer et al. 1977; Fischer 1982a; Marsden 1990a). The number and types of persons one associates with, but also the types of relationships that emerge, are affected by the structure of meeting opportunities. In order to know each other, people first need to meet each other (Verbrugge 1977).

One condition that affects meeting chances is geographical distance. The likelihood that two people meet each other decreases with increasing geographical distance; the closer they live to each other, the more likely they will encounter one another (see, e.g., Fischer 1982a; Van der Poel 1993; Wellman 1996). Living close by, however, is not sufficient to know each other, and is certainly not enough to become members of each other's personal network. For example, not all residents of a village are part of each other's networks, nor are all residents of a neighborhood.

A second condition that contributes to the explanation of the composition of personal networks is the social distance between people. According to Blau and Schwartz (1984), whose theoretical framework is built upon Simmel's ([1922] 1955) ideas, people use each other's social position as criterion for mating; the smaller the social distance between two people, i.e., the smaller the differences between them on various sociodemographic dimensions, the more likely people associate with each other (cf. Blau and Schwartz 1984:9). This tendency of people to associate with others who are like themselves, is also referred to as the 'homophily' principle (see, e.g., Lazarsfeld and Merton 1954; McPherson et al. 2001).

In this paper, we argue that the effects of these two conditions for network patterns – geographical distance and social distance – come together in a third condition: the sharing of social contexts. The social contexts people enter in their daily life, such as the place where they work, the family they belong to, the neighborhood in which they live, the voluntary associations they belong to, and so forth, provide the pool of available others, out of which they select their personal network members (cf. Fischer et al. 1977; Feld 1981). These social contexts will have an independent effect on relationship formation and stability, but sharing contexts is also related to geographical distance and social distance. First, sharing one or more social contexts with a person is more likely the shorter the geographical distance. Second, it is repeatedly shown that people's tendency to associate with others who are like themselves, is not a simple result of a preference for similar others, but also a result of meeting in social contexts that bring together groups of people who are disproportionately homogeneous on some sociodemographic dimension (e.g., Marsden 1990a; Kalmijn and Flap 2001; Mollenhorst et al. 2008a, 2008b). To disentangle these three

conditions, we examine the effects of geographical distance, social distance, and shared social contexts simultaneously.

Many previous studies in this field of research have used ego-centered personal network data, and examined the relationships between respondents and their network members, the composition of the network, or the structure of the network (e.g., by looking at network density). In contrast to these studies, we consider the extent to which triads in core discussion networks are transitive, such that, instead of focusing on the relationships between respondents and their network members, we focus on the structure of personal networks. Actually, we examine the extent to which the persons with whom one discusses important personal matters – henceforth also called ‘confidants’ – mutually know each other.<sup>2</sup> Since we use ego-centered personal network data, a distinction will not be made between reciprocated and unreciprocated relationships: Triads are called ‘transitive’ if the respondent concerned indicated that her/his network members mutually know each other well.<sup>3</sup>

We focus on the inner core of people’s personal networks, because transitivity can in particular be expected for triads in networks consisting of relationships that involve much of people’s time, effort, and emotion. Granovetter (1973:1363) argued that intransitivity is ‘forbidden’ if there are two strong links in a triad, while the third link is absent, because of a) the large amount of time people spend with close relations, b) the high level of similarity in these relationships, and c) the ‘psychological strain’ that results from intransitive triads (Granovetter 1973:1362). Actually, this means that if a person has strong relationships with two others – which is the case for relationships between people and their confidants – than there must also be a relationship between the two confidants as well. It is therefore interesting to determine the extent to which transitivity does, or does not occur in core discussion networks.

Previously, Louch (2000) examined the effect of homophily on transitivity in strong-tie relations, and found that homophily effects are robust and hold after controlling for contact frequency, relationship duration, type of relationship, and the associate’s network embeddedness. In this paper, we argue that the likelihood that two members of one’s network also know each other increases, the shorter the geographical distance between these network members, the smaller the social distance between them, and more importantly, the more social contexts these network members share with each other. More specifically, in the next section, we argue that the particular context(s) where network members meet has (have) a substantial effect on the degree of transitivity and that if people meet their network members in different contexts, transitivity will be lower, while it will be higher if one meets the network members in the same contexts. *In sum, the main purpose of*

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<sup>2</sup> Instead of looking at the density of core discussion networks, we specifically examine the level of transitivity in core discussion triads, because the measure for network density is problematic for networks with dense subgroups (cf. Friedkin 1981; Marsden 1990b).

<sup>3</sup> See also section 5.3.3 for further remarks on this issue.

*this paper is to examine the effects of shared social contexts on transitivity in core discussion networks.*

## **5.2 Shared contexts and transitivity**

In *The Focused Organization of Social Ties*, Feld (1981) discussed the implications of sharing social contexts ('foci' in his terminology) on various characteristics of personal networks. Like Blau and Schwartz (1984), Feld built his theory upon Simmel's classic work *Die Kreuzung Sozialer Kreise* (Simmel [1922] 1955), in which he stated that "the number of different social groups in which the individual participates, is one of the earmarks of culture", and that "as the individual leaves his established position within one primary group, he comes to stand at a point at which many groups 'intersect'" Simmel ([1922] 1955:138, 141). In modern society, social groups have become intersected, since people are related to various social contexts, such as the family, the workplace, the neighborhood, and voluntary associations.

Being related to various contexts affects the structure and other characteristics of one's personal network, including transitivity (cf. Feld 1981:1022-1023), i.e. the notion that 'a friend of a friend is a friend' (see, e.g., Wasserman and Faust 1994:150). The 'focus theory' suggests that transitivity is more likely if two network members are met in the same social context, because "two individuals who are both tied to a third may share a focus with the third; and if they share the same focus with the third person, then they share that with each other and are likely to be tied to each other" (Feld 1981:1022).

The various social contexts are expected to differentiate regarding the extent to which they stimulate transitivity (cf. Jackson et al. 1977:45). For example, when interactions with others in a certain social context are enforced and when people spend much time in that context, it will be likely that relationships emerge among people in that context. Ultimately, this will result in transitivity in personal networks. Feld, who refers to these context characteristics in terms of 'constraints', put it this way: "the more constraining are the foci that they share with the person, and consequently with each other, the more likely it is that they will be tied with each other" (Feld 1981:1022; see also Feld 1982; Fischer et al. 1977; Fischer 1982a; Mollenhorst et al. 2008a).

At workplaces, for example, people spend a great part of their time, and interactions among colleagues are often institutionally regulated. It is therefore likely that if a person knows two of his network members from work, that these network members will also know each other. With regard to this, the family context is different from the work context, since people generally spend less time at a relative's home than at work. However, relationships with people one meets in the family context are often clear and prescribed; even if they do not live in the same household anymore, children generally know their parents, vice versa, and so do siblings. Transitivity is therefore also likely among personal relationships who meet in the family context. Contexts such as neighborhoods, with/via a friend, and

especially one's own home, are less likely to stimulate transitivity. It is well possible that two people who live in the same neighborhood know each other, but this does not have to be the case: interactions among neighbors are generally not enforced, because there are no institutionalized rules for that, and it is often not necessary to interact with neighbors at any price. Meeting with/via a friend, but especially at one's own home is even less likely to stimulate transitivity; of course, if one meets two of her/his network members both at her/his own home, it will be more likely that these two persons know each other than if they do not share this context. It is, however, possible to invite these network members at different times, such that they will never meet each other. If this is the case, sharing this context does not result in transitive triads.

If sharing one social context with two of the network members stimulates transitivity, then sharing multiple social contexts with two network members can be expected to do even better. To quote Feld (1981:1022): "The more foci that they share with the person, and consequently with each other, the more likely it is that they will be tied with each other". Not all contexts, however, can be easily combined in one relationship. For example, private contexts such as one's home and the family context are highly compatible, for at both places one can socialize with relatives. Other combinations of contexts, such as a workplace and a church are much less compatible, because the activities that take place in these contexts are very different. In general terms, Simmel ([1922] 1955:146) stated that "as a rule an overlapping of group-affiliations cannot occur if the social groups involved are too far apart with regard to their purpose and in terms of the demands they make upon the individual. And a group which wants its members to become absorbed unconditionally in its activities must regard it as incompatible with this principle if an individual is differentiated from other members by virtue of his simultaneous affiliation with another group".

Another aspect we consider here is the difference between what we call an 'initially shared context' (which fits Feld's term 'preexisting context' (Feld 1981:1022-23)), and what we call a 'created shared context'. When a person got to know two of her/his network members in the same context – such that they have an initially shared context – transitivity is likely to occur. However, a person who draws associates from multiple social contexts can expect that many of her/his relationships will be with others who do not know each other. It is possible that people try to change this situation by finding or creating a context in which they can meet all their network members simultaneously. In this way, people create transitivity over and above the transitivity induced by shared initial contexts (cf. Feld 1981: 1022-1023).

To summarize the preceding two sections, we formulate the following hypotheses:

- I Transitivity is more likely, the shorter the geographical distance between two members of a person's network*
- II Transitivity is more likely, the smaller the social distance between two members of a person's network*

- III *Transitivity is more likely if two members of a person's network share a social context*
- IV *Transitivity is more likely if two members of a person's network share multiple social contexts*
- V *The effects of geographical distance and social distance on transitivity decrease if two members of a person's network share one or more social contexts*
- VI *Transitivity is more likely, the more interactions are enforced within the social context that is shared by two members of a person's network*
- VII *Transitivity is more likely, the more time people spend in the social context that is shared by two members of a person's network*

### 5.3 Methods

#### 5.3.1 *The Survey of the Social Networks of the Dutch*

To test our hypotheses, we use data from the second wave of *The Survey of the Social Networks of the Dutch* (referred to as SSND2, see Völker et al. 2007). This second wave is a follow-up survey of the survey that was conducted in 1999/2000 (SSND1, see Völker and Flap 2002). Seven years after the first wave, we were able to retrieve the addresses of 863 of the original 1007 respondents. Over 70 percent of these 863 people were willing to be re-interviewed. This resulted in a panel dataset which contains information on 604 individuals in The Netherlands, who are between 26 and 72 years of age.<sup>4</sup>

Comparing these SSND2 data with the SSND1 data on various basic sociodemographic features as well as on the size of the core discussion networks, we only found that married people, older people and the higher educated were somewhat more likely to participate again in the second wave. Consistent with these findings, a comparison of the SSND data with national statistics on basic sociodemographic features showed that men, married people, older people and the higher educated were somewhat overrepresented in (both waves of) our data. We therefore control for these personal characteristics in our analyses when possible.

#### 5.3.2 *Core discussion network delineation*

Respondents were interviewed about various kinds of personal relationships, using thirteen name-generating questions.<sup>5</sup> One of these questions was the so-called 'core discussion network' name generator, which read: *Life is usually not only about going-out and enjoying company. Everybody needs someone to talk about important matters from time to time. With whom did you discuss important personal matters during the last six months? May I*

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<sup>4</sup> We only use data from the second wave of our survey, and not from the first wave, because the information on the social contexts in which people meet and engage in personal relationships is more extensive in the second wave data.

<sup>5</sup> A complete list of all name-generating questions is presented in Appendix A.

*have the first name and the first letter of the family name of those persons?* Respondents were allowed to name persons they had already mentioned in response to previous name-generating questions, and could add a maximum of five new persons.<sup>6</sup> A person's core discussion network then consists of those who were mentioned answering this particular question (cf. Burt 1984; Marsden 1987, 1990a).

As already mentioned in the introduction, we focus on the inner core of people's personal networks, because transitivity can in particular be expected in networks of strong relationships that involve much of people's time, effort, and emotion. According to Granovetter (1973:1361), intransitivity is even 'forbidden' in a triad which consists of a person who is strongly linked to two others. It is therefore interesting to determine the degree of transitivity in core discussion networks. Moreover, we will examine how shared contexts affect transitivity in core discussion triads. Not only by looking at the effects of initially shared contexts, but also the effects of currently shared contexts, because if relationships consume much of one's time, effort, and emotion – and relationships with confidants generally do – and confidants are drawn from different contexts, people are likely to try to find or create another context in which they can meet all confidants simultaneously (cf. Feld 1981:1023).

### *5.3.3 Dependent and independent variables*

Having collected the names of the core discussion network members, additional questions (the 'name interpreters') were asked about each of these confidants, as well as about the relationships with and between them. In order to construct the dependent variable in this paper – transitivity among confidants – we asked the respondents with two or more confidants to what extent *their confidants mutually know each other*. The answer categories were 'they avoid each other', 'they do not know each other', 'they hardly know each other', 'they know each other well', and 'they know each other well and get along'. In contrast to many previous studies on ego-centered personal network data, we do not use this information to calculate the density of the network, because this measure is problematic for networks with dense subgroups (cf. Friedkin 1981; Marsden 1990b). Instead, we recoded the five-category variable on the extent to which two of one's confidants know each other into a dummy-coded variable called transitivity, for triads in which both confidants know each other well (and get along). We can speak about *transitive triads*, if two of one's confidants know each other well, because respondents naturally know their confidants well.<sup>7</sup> As already mentioned in the first section, the use of ego-centered personal network data makes that a distinction cannot be made between reciprocated and unreciprocated

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<sup>6</sup> Since respondents were allowed to mention five additional network members, we assume that the number of core discussion relationships is not truncated. In addition, as we show in Table 5.1, not even 8 percent of all respondents mentioned more than five confidants.

<sup>7</sup> For example, 95 percent trusts her/his confidant (very) strongly, and 96 percent likes the confidant very much.

relationships. Consequently, triads are called ‘transitive’ if the respondent concerned indicated that her/his network members mutually know each other well.<sup>8</sup>

To determine the geographical distance between one’s confidants, we asked the respondents how far each confidant lives away from her/his own home, with categories ‘less than 1 kilometer’, ‘1-3 kilometers’, ‘4-10 kilometers’, ‘11-20 kilometers’, ‘21-40 kilometers’, ‘41-60 kilometers’, ‘61-100 kilometers’, ‘101-150 kilometers’, ‘151-250 kilometers’, and ‘more than 250 kilometers’. With this information, the exact distance is not inferable, but we can determine the maximum distance between two members of one’s core discussion network.<sup>9</sup> For example, if both confidants live no more than 3 kilometers away from the respondent concerned, the distance between these two confidants is maximally 6 kilometers. In this way, we constructed the following dummy-coded variables for the geographical distance between two of one’s confidants: ‘max. 5 kilometers’, ‘max. 20 kilometers’, ‘max. 100 kilometers’, ‘max. 250 kilometers’, and ‘max. > 250 kilometers’. Descriptive results on geographical distance between confidants are presented in Table A in Appendix B.

Social distance is measured using four similarity measures on age, sex, highest level of education completed, and religion. Similarity between two members of one’s core discussion network with regard to sex and religion (based on four categories: ‘Roman Catholic’, ‘protestant’, ‘other religion’, and ‘no religion’) was measured using dummy-coded variables, coded ‘1’ if they are similar and ‘0’ if they are not. Age similarity and educational similarity (based on four categories: ‘1 - primary school to lower vocational training’, ‘2 - (lower) general secondary education to pre-university education’, ‘3 - intermediate vocational education to higher vocational training’, and ‘4 - (post-)university degree’) were measured as the negative absolute difference of, respectively, age and level of education between two members of the core discussion network.<sup>10</sup> Descriptive results on social distance between confidants are presented in Table B in Appendix B.

To determine which social contexts are shared by core discussion network members, we asked the respondents for the social context(s) in which they got to know each other, as well as for the social context(s) in which they currently meet their network members, using the following questions: ‘Where, on which occasion, did you get to know person x?’ respectively ‘Where, on which occasion, do you meet person x nowadays?’ Respondents

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<sup>8</sup> Research on triad transitivity has a long history; See for example, Heider (1958: 206), and Holland and Leinhardt (1970), or the description in Wasserman and Faust (1994:243-247). The same definition of transitivity as we use in this study was previously applied in, e.g., Krackhardt and Kilduff 1999, and Louch 2000.

<sup>9</sup> By using this variable, we might underestimate the effect of living close-by on network transitivity, because it is possible that, e.g., two of one’s confidants live in the same neighborhood, while they both live ‘max. 250 kilometers’ away from the respondent concerned. Alternatively, we have used the same information to calculate the minimum distance between two network members. Using these variables in the analyses, instead of the variable about the maximum distance between network members, yielded similar results. Furthermore, using both sets of variables simultaneously in the analyses is impossible because of high collinearity. We therefore decided to use the variables regarding the maximum distance between network members in the analyses.

<sup>10</sup> We take the *negative* absolute difference, since the absolute difference would indicate dissimilarity between two of one’s network members.

could choose up to three of the following contexts: ‘at school’, ‘at a sports club’, ‘at a voluntary association’, ‘at another organization/association’, ‘at work’, ‘with/via family’, ‘with via a friend’, ‘at my home’, ‘at her/his home’, ‘in the neighborhood’, ‘at a public going-out place’, ‘at church’, ‘on a vacation’, ‘at a party’, ‘on the internet’ and ‘somewhere else’. This information provides the opportunity to determine whether two members of one’s core discussion network have one or more ‘initially shared contexts’ (i.e., if the context(s) in which the respondent concerned got to know them is the same), as well whether they have one or more ‘created shared contexts’ (i.e., the context(s) in which the respondent currently meets them is the same).

In our final analyses (see Table 5.6), we control for the following respondent characteristics: age, sex, marital/cohabiting status, highest level of education completed (four categories: ‘primary education to lower vocational education’, ‘(lower) general secondary education to pre-university education’, ‘intermediate vocational education to higher vocational training’, and ‘university degree’), having a paid job, nationality (i.e., being a native, a first-generation immigrant, or a second-generation immigrant), degree of urbanization of place of residence (measured as the number of people living within a 15-minute car drive from the respondent),<sup>11</sup> religion (categories are ‘Roman Catholic’, ‘protestant’, and ‘other or no religion’), as well as for the size of the respondent’s core discussion network.<sup>12</sup>

#### *5.3.4 Analyses*

The next section presents empirical results of our analyses. We start with descriptive tables about the size and composition of core discussion networks (Table 5.1), about the level of transitivity in core discussion networks (Table 5.2), and about the level of shared contexts (Table 5.3 and Table 5.4). Tables 5.5a and 5.5b show cross-tabulations of the relation between shared contexts and transitivity, and finally, in Table 5.6, we present results of multivariate multilevel logistic models on the effects of geographical distance, social distance, and shared contexts on transitivity in core discussion networks. We use multilevel techniques in order to control for the hierarchical structure of the data. The dependent variable ‘transitivity’ is a characteristic of the (potential) relationship between two members of the core discussion network of the respondent, such that these triads are nested within respondents.

In all models of Table 5.6, we controlled for a number of variables: respondent’s age, sex, level of education, marital status, having a paid job, nationality, religion, level of urbanization, and core discussion network size (for measurements, see the previous subsection). To test hypotheses I and II, in Model 1 we added the maximum geographical

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<sup>11</sup> Calculations by Van Ham (see Van Ham 2002) on data from Statistics Netherlands (see <http://www.cbs.nl>).

<sup>12</sup> We control for network size, because transitivity is less likely, the larger the network (cf. Friedkin 1981; Marsden 1990b).

distance between the two network members and four variables with regard to the social distance between two network members: age similarity (negative absolute age difference), sex similarity (dummy-coded, with value 1 if they are of the same sex), education similarity (negative absolute difference in level of education, based on four categories, see previous subsection), and religion similarity (dummy-coded, with value 1 if they have the same religious background, based on four categories, see previous subsection).

Hypotheses III and IV are tested in Model 2, in which we examine the effects of four dummy-coded variables, which indicate whether the respondent got to know both confidants in one or more similar contexts (one shared initial context, and two or more shared initial contexts), respectively whether the respondent currently meets both confidants in one or more similar contexts (shared current context, and two or more shared current contexts). Then in Model 3, we specified the effects of the various social contexts on transitivity. Since not all types of social contexts are often shared in triads of core discussion networks (as presented in Table 5.3), we combined the following contexts into one category ‘other contexts’: ‘at school’, ‘at a sports club’, ‘at a voluntary association’, ‘at another association’, ‘in the neighborhood’, ‘at a public going-out place’, at church, ‘at a party’, and ‘on a vacation’. This dummy-coded variable has value 1 if two of one’s confidants share one of these (but the same) social context. In all these models, the reference group consists of triads in which no context is shared by the two network members.

Next, we combine the variables of Models 1 and 2 in Model 4, and the variables of Models 1 and 3 in Model 5. By doing so, we are able to test hypothesis V, about the extent to which the effects of shared social contexts on transitivity cancel out the effects of geographical and social distance on transitivity. We need both Models 4 and 5; Model 4 to test hypothesis IV about the effects of the number of shared contexts on transitivity, and Model 5 to test hypotheses VI and VII about the effects of sharing various social contexts on transitivity.

Finally, we examine the effects of the involvement of one’s partner in the triad and its interaction with shared contexts, as a special case in Models 6 and 7. We do so for the following reasons: first, as presented in Table 5.1, partners make up a substantial part of people’s personal networks. Second, the sharing of social contexts might work differently for triads in which one’s partner is involved. And third, the multilevel level structure of these data is even more complicated than we have just described in the first paragraph of this section. If network members are involved in more than one triad, the (potential) relationship between two members of one’s network is not only nested within the respondent, but also within each of the network members. This applies to core discussion networks which consist of more than two members (respondent excluded). However, effects of this nesting of relationships between two network members within each of the network members can mainly be expected if a certain type of network member is especially central in the network, such as one’s partner. Central persons in the network are more likely

to know the other network members, such that transitivity is more likely when this central person is involved. Therefore, instead of using a more sophisticated method of analyses which can deal with these multiple nesting structure, we pay special attention to the involvement of partners in triads.

## 5.4 Results

In Table 5.1, we first describe the size and average composition of core discussion networks of the Dutch in 2007. On average, the Dutch discuss important personal matters with 2.40 different persons. The largest group (32 percent) of people, however, mentioned one confidant. Next, we see that 29 percent of the respondents discuss important personal matters with their partner, while 26 percent of the confidants are relatives, 30 percent are friends, and 14 percent are other associates.

**Table 5.1** Core discussion network size and composition

Size	Frequency	Percentage	Cum. perc.	Mean	Std. dev.	N
0	74	12.25	12.25	2.40	2.21	604
1	196	32.45	44.70			
2	116	19.21	63.91			
3	74	12.25	76.16			
4	46	7.62	83.77			
5	52	8.61	92.38			
6	16	2.65	95.03			
7	12	1.99	97.02			
8	8	1.32	98.34			
9	3	0.50	98.84			
10+	7	1.17	100.00			
Average network composition						530
	partner	29.33				
	relatives	26.58				
	friends	30.13				
	others	14.25				

Source: SSND2, 2007

Answering questions about the effects of shared contexts on transitivity requires that a person has at least two confidants. For that reason, the remaining analyses we report about, are based on data from respondents with a core discussion network with a minimum size of two persons.<sup>13</sup> This means that, because 74 respondents have no confidants, 196 respondents have just one confidant, and 14 respondents did not answer the name-interpreting questions about their network members, the following results are based on data

<sup>13</sup> We performed additional analyses to see whether respondents with none or one confidant differ from respondents with two or more confidants on the following sociodemographic characteristics: age, sex, level of education, marital status, having a paid job, nationality, religion, and level of urbanization. Results showed that men, the lower educated, and people without a paid job are somewhat more likely to be left out of the remaining analyses, since these people are somewhat more likely to have none or one confidant. Moreover, if a person mentioned one confidant this is often her/his partner (51 percent), while 18 percent are relatives, and 19 percent friends.

from 319 respondents. Altogether, these respondents have 1077 confidants, and their core discussion networks contain 1517 triads, which means that there are 1517 unique combinations of one respondent with two confidants.

For these 1517 triads, we describe in Table 5.2 the extent to which there is transitivity, i.e., the extent to which the two confidants of the respondent concerned also mutually know each other. This table shows that many members of core discussion networks also know each other, but not always very well. In a little more than 60 percent of the triads both of one's confidants do know each other well. In almost 22 percent of the triads, however, they hardly know each other, while in 17 percent of the triads, they do not know each other at all, and, remarkably enough, only one respondent mentioned that two of his confidants avoid each other.

**Table 5.2** Transitivity in core discussion triads

	Frequency	Percentage	Cum. Perc.
They avoid each other	1	0.07	0.07
They do not know each other	258	17.01	17.07
They hardly know each other	327	21.56	38.63
They know each other well	373	24.59	63.22
They know each other well and get along	558	36.78	100.00
Total number of triads	1517	100.00	

Source: SSND2, 2007

Next, in Table 5.3, we describe which social contexts are shared in core discussion triads. Specifically, the first two columns show per social context, how many respondents got to know both of her/his confidants in the same context (i.e., shared initial context), while the last two columns show how many respondents currently meet her/his confidants in the same context (i.e., shared current context). In many cases, meeting two confidants in the same context implies that these confidants are likely to have also met and/or currently meet each other in that context and therefore 'share that context'. For example, unless one is member of more than one sports club, meeting two network members at a sports club makes it likely that these two persons also meet each other there. And the same goes for the workplace: unless one has more than one job, meeting two network members at work makes it likely that these two persons also meet each other there. However, unless two of one's network members live in the same household, meeting both at the network members' homes does not mean that a social context is shared.

The first columns of Table 5.3 show that, on average, 0.49 *initial* contexts are shared in a triad, which means that for about half of the triads goes that the respondent concerned got to know both confidants in the same context. Most frequently, this initially shared context is the respondent's home (15.2 percent), followed by the network member's home (9.0 percent). The last two columns show that currently sharing a social context happens much more often than sharing an initial context: on average, 1.35 *current* contexts are shared in a triad. This substantial difference confirms the idea that people find or create (new) contexts in which they can meet their confidants at the same time. As is the case for

initial contexts, also for current contexts goes that the most frequently shared context is the respondent's home. In 71.2 percent of the triads, the respondent concerned meets both confidants at the respondent's home. Next, in 41.2 percent of the triads, both confidants meet the respondent at the confidants' homes, but this is, as we already mentioned, not the same context, unless they live together in the same household.

**Table 5.3 Shared contexts in core discussion triads**

	Initial context		Current context	
	Frequency	Percentage	Frequency	Percentage
At school	22	1.45	0	0.00
At a sports club	9	0.59	5	0.33
At a voluntary association	10	0.66	4	0.26
At another association	22	1.45	18	1.19
At work	70	4.61	50	3.30
With/via family	72	4.75	113	7.45
With/via a friend	54	3.56	63	4.15
At respondent's home	231	15.23	1081	71.26
At the network member's home	137	9.03	625	41.20
In the neighborhood	38	2.50	13	0.86
At a public going-out place	10	0.66	27	1.78
At church	17	1.12	2	0.13
On a vacation	5	0.33	14	0.92
At a party	9	0.59	23	1.52
On the internet	0	0.00	11	0.73
Elsewhere	45	2.97	5	0.33
	#	Std. dev.	#	Std. dev.
Mean number of shared contexts	0.49	0.70	1.35	0.88

Source: SSND2, 2007

Number of triads: 1517

Actually, the difference between the number of triads in which an initial context is shared and the number of triads in which a current context is shared is largely a result of the large number of triads in which one of these two contexts – respondent's home and network member's home – is shared. If we leave out of account the increase in the percentages of the triads in which the respondent's home or the network member's home is shared, then the percentage of triads in which two confidants initially shared a context hardly differs from the percentage of triads in which they currently share a context (49.5, resp. 47.3). This suggests that, in order to be able to meet (all) confidants at the same place and at the same time, people invite their core discussion network members at home.

It is possible that two of one's confidants who both share the context 'network member's home', 'internet', or 'elsewhere' with the respondent, do not also meet each other in that context. The context 'elsewhere', for example, could be any kind of context, and the network member's home is only similar if two confidants live in the same household. We therefore leave these contexts out of account in the remainder of the analyses. Table 5.4 then shows how often two confidants share one or more of these remaining social contexts. What we see is that in one third of the triads, people got to know two confidants in the same context (28.8 + 4.1 + 0.1 = 33 percent), while in the other two third of the triads the confidants initially did not share a context (67 percent). Furthermore,

we see that in most triads, two of one's confidants do currently share at least one context: 63.9 percent share one context, 14.1 percent two contexts, and 0.3 percent three contexts.

**Table 5.4 The number of contexts shared by two members of a person's core discussion network**

# Contexts <sup>a</sup>	Initial context			Current context		
	Frequency	Percentage	Cum. perc.	Frequency	Percentage	Cum. perc.
0	1015	66.91	66.91	328	21.62	21.62
1	437	28.81	95.72	970	63.94	85.56
2	63	4.15	99.87	214	14.11	99.67
3	2	0.13	100.00	5	0.33	100.00
N	1517	100.00		1517	100.00	
Mean	0.37			0.93		

Source: SSND2, 2007

<sup>a</sup> Compared to Table 5.3, the contexts 'network member's home', 'internet', and 'elsewhere', are left out of account in this table.

Our next step is to examine the association between shared contexts and transitive triads in core discussion networks. To this, we recoded the five-category variable on the extent to which two of one's confidants know each other (see Table 5.2) into a dummy-coded variable called transitivity, for triads in which both confidants know each other well (and get along). We then can speak about *transitive triads*, if two of one's confidants know each other well, because respondents naturally know their confidants well. Next, we defined dummy-coded variables which indicate whether two confidants share one or more initial contexts, respectively share one or more current social contexts. Tables 5.5a and 5.5b present the cross-tabulations of initially sharing one or more social contexts and transitivity, respectively of currently sharing one or more social contexts and transitivity.

**Table 5.5a Shared initial contexts and transitive triads**

Transitivity	Shared initial context(s)		Total
	No	Yes	
No	436	150	586
Yes	579	352	931
Total	1015	502	1517

Source: SSND2, 2007

Odds ratio = 1.76

**Table 5.5b Shared current contexts and transitive triads**

Transitivity	Shared current context(s)		Total
	No	Yes	
No	204	382	586
Yes	124	807	931
Total	328	1189	1517

Source: SSND2, 2007

Odds ratio = 3.47

Tables 5.5a and 5.5b show that sharing an initial context is associated with transitivity (with an odds ratio of 1.76), but that the association between currently sharing a social context and transitivity is stronger (with an odds ratio of 3.47). In other words, these tables show that 37.8 percent of all transitive triads have one or more shared initial contexts (352/931), but that 86.6 percent of all transitive triads currently share one or more contexts (807/931).

The latter supports the argument that in order to establish transitivity – i.e. that one’s confidants mutually know each other – they need to share at least one social context with each other. If we look the other way round, however, we see that not all triads in which contexts are shared are also transitive triads: 29.8 percent of all triads in which one or more initial contexts were shared are not transitive (150/502), but more surprisingly, also 32.1 percent of all triads in which one or more current contexts are shared are not transitive (382/1189).

The off-diagonal figures in Tables 5.5a and 5.5b show the relevance to examine which shared contexts lead to transitivity and which do not. Table 5.6 therefore presents results of various multilevel logistic regression models of meeting opportunities on transitive triads in core discussion networks. The units of analysis in these models are all unique pairs of members of respondents’ core discussion networks. The dependent variable ‘transitivity’ is the dummy-coded variable which indicates whether the two members of the core discussion network know each other well. Note that in all models, we controlled for various respondent characteristics (see section 3.4).<sup>14</sup> Moreover, we note that triads which consist of the respondent and two of her/his household members are left out of the analyses, because these triads are all transitive.

The results of Model 1 confirm Hypothesis I about the effect of geographical distance on transitivity. We see that the closer two network members live to each other, the more likely they know each other well. Transitivity is considerably more likely if the distance between the confidants is not more than 5 or 20 kilometers, as compared to triads in which the confidants live further away from each other.<sup>15</sup> Next, Model 1 provides some confirmation for Hypothesis II about the effect of social distance on transitivity. Similarity between the two confidants with regard to their level of education and their religious background both positively affect transitivity. Whether or not the two confidants are of the same age does not affect transitivity, according to the first model. In contrast to our hypothesis, we find that sex similarity is negatively associated with transitivity: it is more likely that two confidants know each other well if they are of opposite sexes.

The results of Model 2 strongly confirm Hypotheses III & IV: sharing one social context has a strong and positive effect on transitivity, but sharing two or more contexts has a substantially stronger effect than sharing one context. This model furthermore shows that transitivity is likely if both confidants were initially drawn from the same social context(s), but is even more likely if both confidants currently meet the respondent in the same social context(s).

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<sup>14</sup> While these results are not presented in Table 5.6, the various control variables with characteristics of the respondent showed that, people with a high level of education and those with a large core discussion network, report significantly less transitivity. People’s age, sex, marital status, having a paid job, nationality, religion, and level of urbanization do not significantly affect transitivity in core discussion triads.

<sup>15</sup> As mentioned before, using variables on the minimum distance between the network members yielded similar results.

Results of Models 4 and 5 do not confirm Hypothesis V: the effects of geographical distance and social distance on transitivity do not become smaller if we take shared contexts into account. On the contrary, the effects of geographical distance and sex similarity on transitivity are somewhat larger if we take shared contexts into account. In addition, age similarity between the two core network members is negatively associated with transitivity if shared contexts are taken into account. Altogether, this means that the effects of geographical distance, social distance, and shared contexts do not coincide, but affect transitivity independent of each other.

Models 3 and 5 provide results about the effects of context characteristics on transitivity (Hypotheses VI and VII). If we compare these two models, we see that the effects of most shared contexts on transitivity are somewhat stronger if we control for geographical distance and social distance; only the effect of initially sharing one of the 'other contexts' becomes insignificant. We therefore confine ourselves here to the interpretation of the results of Model 5.

With regard to shared social contexts, Model 5 shows that sharing the 'family context' positively affects transitivity in both cases, when this context is initially shared and/or when it is currently shared. Triads are much more likely to be transitive if the respondent got to know and/or currently meets both confidants with/via family than if there is no shared context (odds ratios are 15.6, resp. 10.6). Triads are also likely to be transitive if the respondent got to know both confidants at work, but especially if he or she currently meets both confidants at work (odds ratios are 2.8, resp. 22.0). A possible explanation for the fact that currently sharing the work context has a much stronger effect on transitivity than initially sharing a workplace, can be that the respondents concerned got to know these people at different points in time; i.e., one could have switched jobs, such that he or she got to know these network members at different workplaces.

Notwithstanding this difference, the strong effect of sharing the workplace confirms Hypotheses VI and VII. According to division of labor, interactions at work are often institutionally organized. In addition, people generally spend much time at work. Both context characteristics increase the likelihood that social relationships emerge in this social context. Transitivity is therefore likely if one currently meets both confidants at work. The strong effect of sharing the family context also confirms Hypothesis VI. Within families there are often strong expectations as to whom one needs to interact with intensively, such that transitivity is likely if one has met or currently meets both confidants in the family context.

**Table 5.6** Multilevel logistic regression models of meeting opportunities on transitive triads in core discussion networks<sup>a,b</sup> (Odds ratios)

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7
<i>Geographical distance<sup>c</sup>:</i>							
Max. 5 kilometers	11.201***			12.647***	15.622***	6.462***	6.602***
Max. 20 kilometers	4.041***			3.968***	4.713***	2.536*	2.322*
Max. 100 kilometers	1.732			1.536	1.826	1.409	1.341
Max. 250 kilometers	1.019			0.884	0.966	0.704	0.645
No max. distance	ref.			ref.	ref.	ref.	ref.
<i>Social distance:</i>							
Age similarity <sup>d</sup>	0.988			0.979**	0.979**	0.971***	0.971**
Sex similarity <sup>e</sup>	0.676*			0.517***	0.490***	0.805	0.850
Education similarity <sup>f</sup>	1.257*			1.183	1.183	1.319*	1.307*
Religion similarity <sup>g</sup>	1.632**			1.673**	1.598*	1.636*	1.654*
<i>Shared initial contexts:</i>							
One shared initial context		1.843***		2.161***			
Two or more shared initial contexts		4.014**		4.167**			
No shared initial context		ref.	ref.	ref.	ref.	ref.	ref.
At work			2.242		2.844*	2.410	2.030
With/via family			6.948***		15.676***	25.511***	23.238***
With/via a friend			3.144*		2.792*	2.380	2.166
At respondent's home			0.872		0.820	1.239	1.831
Other contexts <sup>h</sup>			1.818*		1.824	1.928	1.703
<i>Shared current contexts:</i>							
One shared current context		4.946***		7.299***			
Two or more shared current contexts		14.613***		30.744***			
No shared current context		ref.	ref.	ref.	ref.	ref.	ref.
At work			14.633***		22.074***	44.591***	39.451***
With/via family			5.198***		10.603***	13.821***	15.968***
With/via a friend			1.471		2.801*	5.121**	6.861***
At respondent's home			4.799***		6.385***	5.595***	3.454***
Other contexts <sup>h</sup>			2.756**		4.174***	7.071***	7.414***
<i>Special case – partners:</i>							
Partner involved in the triad						20.247***	3.824**
Partner x Respondent's home is shared initial context							0.022***
Partner x Another shared initial context <sup>i</sup>							10.783
Partner x Respondent's home is shared current context							19.791***
Partner x Another shared current context <sup>i</sup>							0.090
Wald Chi <sup>2</sup>	109.297	140.103	152.780	164.755	173.001	204.243	192.677
Number of triads	1255	1490	1490	1255	1255	1255	1255
Number of respondents	294	314	314	294	294	294	294

Source: SSND2, 2007 \* p<0.05, \*\* p<0.01, \*\*\* p<0.001 (two-tailed tests).

<sup>a</sup> All models are controlled for respondent's age, sex, level of education, marital status, having a paid job, nationality, religion, level of urbanization, and core discussion network size;

<sup>b</sup> Triads are left out of the analyses if both confidants are member of respondent's household;

<sup>c</sup> The variables regarding the maximum geographical distance between two confidants are based on information about how far each of the confidants lives away from the respondent concerned. The variables indicate the maximum distance between two members of one's core discussion network. For example, if both confidants live no more than 10 kilometers away from the respondent concerned, the distance between these two confidants is maximally 20 kilometers, etc.;

<sup>d</sup> Age similarity is measured as the negative absolute age differences between the two confidants;

<sup>e</sup> Sex similarity is a dummy-coded variable which indicates whether or not two confidants are of the same sex;

<sup>f</sup> Education similarity is measured as the negative absolute difference in level of education of two confidants (based on four categories, see section 5.3.3);

<sup>g</sup> Religion similarity is a dummy-coded variable which indicates whether or not two confidants have the same religion (based on four categories, see section 5.3.3);

<sup>h</sup> Other contexts are 'at school', 'at a sports club', 'at a voluntary association', 'at another association', 'in the neighborhood', 'at public going-out places', 'at church', 'at a party', and 'on a vacation'. This variable is a dummy-coded variable with value 1 if two confidants share one of these (but the same) social context;

<sup>i</sup> Another shared context here means that both network members are met 'at work', 'with/via family', 'with/via a friend', or at one of the 'other contexts' (cf. note h).

Next, Model 5 shows that initially as well as currently sharing the ‘friends context’ (which means that a person got to know both confidants with or via another friend) also positively affects transitivity (odds ratios are 2.7, resp. 2.8), while sharing the respondent’s home or one of the ‘other contexts’<sup>16</sup> only positively affects transitivity if one of these contexts is currently shared; i.e., triads are more likely to be transitive if a person currently meets both confidants at one of these contexts (odds ratio is 6.3 for respondent’s home, resp. 4.1 for ‘other contexts’).

Finally, Models 6 and 7 present the results of additional analyses on a special case, i.e., the involvement of one’s partner in the triad. Although we did not formulate specific hypotheses with regard to this, we particularly focus on the involvement of partners, because a) partners make up a substantial part of people’s personal networks (as presented in Table 5.1), b) the sharing of social contexts might work differently for triads in which one’s partner is involved, and c) central persons in the network, such as partners, are more likely to know the other network members (see section 3.4).

With regard to this special case, Model 6 first shows that indeed one’s partner is very likely to know the other members of one’s core network (odds ratio is 20.2). Second, Models 6 and 7 show that the negative association between sex similarity and transitivity is a result of the involvement of the partner in many core discussion triads (cf. Louch 2000): while Models 1, 4, and 5 show a strong and significant negative effect of sex similarity on transitivity, Models 6 and 7 in which we take partner involvement into account show an insignificant effect of sex similarity on transitivity. Third, these models show that the associations between most shared contexts and transitivity are much stronger if we control for the involvement of partners. This implies that triads are much more likely to be transitive if one’s confidants share a social context, and that sharing a social context is especially important if one’s partner is not involved in the triad. Fourth, Model 7 shows that the strong association between transitivity and the involvement of the partner in the triad is predominantly a result of currently sharing the context ‘respondent’s home’. The main effect of partner involvement decreases from an odds ratio of 20.2 in Model 6 to 3.8 in Model 7, while the interaction term for partner involvement and currently sharing respondent’s home is 19.7 in Model 7. In other words, triads in which partners are involved are very likely to be transitive if/because one currently also meets the third person at home.

## 5.5 Conclusions

This study shows that not all members of people’s core discussion networks mutually know each other; about forty percent of all triads in core discussion networks – where each triad consists of a respondent and two confidants – turns out not to be transitive. In other words, if we take for granted that people have strong relationships with those whom they discuss

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<sup>16</sup> This category consists of the contexts ‘at school’, ‘at a sports club’, ‘at a voluntary association’, ‘at another association’, ‘in the neighborhood’, ‘at a public going-out place’, ‘at church’, ‘at a party’, and ‘on a vacation’.

important personal matters with, this means that Granovetter's 'forbidden triads' actually do occur quite frequently (see Granovetter 1973).

Next, we show that three structural conditions help to explain transitivity in core discussion networks. The first two conditions, geographical distance and social distance, contribute to the explanation of transitive triads as follows: living close-by, having a similar level of education, and having a similar religious background make transitivity more likely. Age and sex similarity, however, are both negatively associated with transitivity. Furthermore, we find strong confirmation for the argument that transitivity is likely for triads in which people share the same context with both confidants and unlikely if they have no shared context. The results show that transitivity is more likely if the relationship with both of one's confidants emerged in the same social context, and especially if one currently shares the same context with both confidants.

Despite the strong association between currently shared contexts and transitive triads, still 37 percent of all triads without a currently shared context are nevertheless transitive triads. This does, however, not necessarily imply that these network members do not share a context at all, since it is still possible that these confidants meet each other in a certain context, but apart from the respondent. Next, we also show that still thirty percent of all triads with an initially shared context and thirty-two percent of all triads with a currently shared context are intransitive. We therefore examined which shared contexts result in transitive triads, and which do not.

Our main findings with regard to the effects of shared contexts on transitivity are that sharing the workplace and/or the family context strongly and positively affect transitivity. It is very likely that two of one's confidants know each other well if one got to know and/or currently meets both confidants in one of these two contexts. The fact that, of the various social contexts confidants can share with each other, the workplace and the family context most strongly affect transitivity, confirms our hypotheses about the effects of enforced interactions within the context and the amount of time that is spent in a context. In general, people spend much of their time at work, and interactions among colleagues are often institutionally organized. In addition, although people generally spend less time at a relative's home than at work, in the family context there are often expectations about who needs to interact with whom. It is therefore likely that two of one's confidants know each other well if they are both met at work or in the family context.

Especially when relationships involve a high proportion of time, effort, and emotion – and relationships with confidants generally do – people may create transitivity over and above the transitivity induced by initially shared contexts, by creating or finding a context in which they can meet their network members at the same time (cf. Feld 1981:1022-23). Our results show that it happens much more often that people currently meet both confidants in the same context than that they got to know both confidants in the same context. More specifically, the difference between the average number of initially shared contexts and the average number of currently shared contexts is largely a result of the fact

that many people currently meet their confidants at home. Combining this finding with the strong effect of currently meeting both confidants at home on transitivity, we conclude that people do create transitivity over and above transitivity induced by initially shared contexts, by inviting their network members at home.

## 5.6 Discussion

This study shows that in 2007 the Dutch, on average, report having 2.4 persons with whom they recently discussed important personal matters, while the modal respondent reports having one confidant. This average and modal number of confidants remained remarkably constant since 1999/2000, when we conducted the first wave of our survey (Mollenhorst et al. 2008a).<sup>17</sup> These are interesting findings in the light of comparable research findings for Americans, as reported by McPherson et al. (2006), and findings for Germans, as reported by Wöhler and Hinz (2007). In their paper on the changes in core discussion networks of Americans over two decades, McPherson et al. (2006) show that the mean network size decreased from 2.94 in 1985 to 2.08 in 2004, while the modal respondent reported having three confidants in 1985, but no confidant at all in 2004. In contrast, Wöhler and Hinz (2007) showed that similar changes had not taken place in the core discussion networks of the Germans between 1988 and 2000: Germans reported having 1.86 confidants in 1988 and 2.12 in 2000, while the modal number of confidants was one in both years. Comparing these three countries indicates that, in contrast to the reported increased level of social isolation in America, no such (further) decline in the size of core discussion networks has taken place in Germany, nor in The Netherlands. Further analyses, however, are needed to shed more light on the changes that might have occurred in the personal networks of the Dutch over the past years.

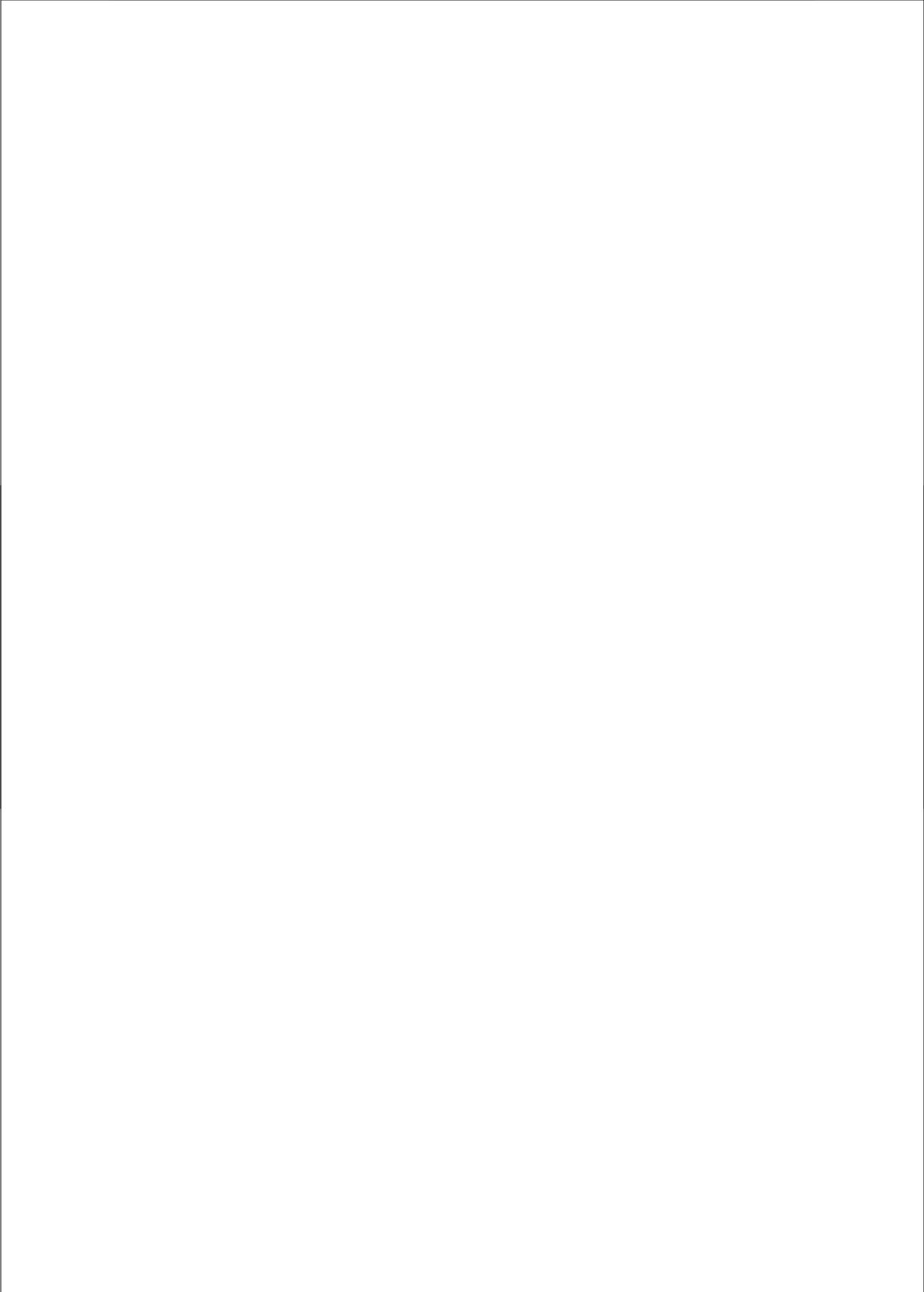
Our results on the effects of shared contexts on transitivity can be compared with the results in Louch (2000). Louch found that triads are significantly more likely to be transitive if both confidants have the same type of relationship with the respondent – i.e., both being kin, neighbors, coworkers, or group members. This is in line with our finding that transitivity is more likely if both confidants share the same context with the respondent concerned. Although a similar role relationships is a proxy for sharing a certain social context (cf. Marsden 1990a), our research contributes to the understanding of the effects of the social context of personal relationships, for at least four reasons. First, we argue that the ‘foci of activity’ around which relationships emerge and are maintained, are more accurately determined if one asks people for the social contexts in which they meet their associates than if one asks for the type of relationship. Moreover, it is well possible that, although an associate is only mentioned as a relative, or a friend, that he or she does share multiple social contexts with the respondent. Second, by distinguishing between initially

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<sup>17</sup> To be precise: the average core discussion network size was 2.37 in 1999/2000 and 2.40 in 2007.

shared contexts and currently shared contexts, we found that especially currently shared social contexts are important for transitivity in core discussion networks. Third, by examining geographical distance, social distance, and shared social contexts simultaneously, we showed that these three conditions do not coincide, but independent of each other significantly affect transitivity. Fourth, we showed that the involvement of one's partner in the triad not only explains the negative association between sex similarity and transitivity (cf. Louch 2000:59), but also that the strong effect of the involvement of one's partner in the triad on transitivity is predominantly a result of the fact that partners meet the other confidants at home.

Finally, this contribution revealed that the contexts in which people got to know their confidants do not overlap to a large extent, while many more network members are currently met in the same context: Two out of three triads have no initially shared context, while over 20 percent have no currently shared context. And, if they do have a shared context, this is often respondent's home. As a result, a substantial part of the triads in core discussion networks is intransitive. If this is the case for the inner part of people's networks, which consist of those with whom they discuss important personal matters, this might even more strongly apply to the larger personal network with more superficial contacts (cf. Mollenhorst 2008). The lack of context overlap in modern societies and resulting lack of transitivity in personal networks may not only have important implications for the characteristics of people's networks as such, but can also have important consequences for individuals themselves. Being a member of multiple social groups can, on the one hand, have positive consequences, for they "strengthen the individual and reinforce the integration of his personality" (Simmel [1922] 1955:141-42) and "provide individuals with multiple social support and thereby free them, at least partly, from oppressive domination by [...] one primary group and its predominant pressures" (Blau 1994:23, cf. Breiger 1990). On the other hand, "multiple group memberships become a source of internal and external conflicts by creating multiple pulls among the individual's values, norms, and sanctions. [...] In sum, the price individuals pay for modernism is a weaker personal and local safety net in which multiple groups pull the individual in different directions" (Pescosolido and Rubin 2000:57; cf. Krackhardt 1999). Further research is therefore needed to shed light on the consequences of a low level or even lack of context overlap and an accompanying low level of transitivity in personal networks, on the well-being of individual persons as well as on society as a whole.



# Chapter 6

## ***Social Contexts and Changes in Personal Networks<sup>1</sup>***

### ***Abstract***

*Previous research showed that close relationships are far from stable: within a few years, the composition of personal networks changes considerably. Our contribution extends the knowledge on changes in personal networks, by not only looking at the stability of existing relationships, but by also looking at the emergence of new relationships. To explain network changes this research specifically focuses on the social contexts from which network members are drawn and in which they continued to meet each other (such as the workplace, family, sports clubs, voluntary associations, and the neighborhood), because these contexts provide meeting opportunities. Detailed information on the personal networks of the Dutch in 2007 is compared with similar information on the networks of the same respondents in 1999/2000. Main results are that a) the relatively stable average size and composition of personal networks disguises the many changes in these network, b) a lack of meeting opportunities is an important reason why personal relationships are discontinued, and c) a path-dependent use of social contexts makes new relationships more likely to emerge in a certain context if existing network members are also met in that context.*

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<sup>1</sup> Co-authors are Beate Völker and Henk Flap. An earlier version was presented at the 5<sup>th</sup> Conference on Applications of Social Network Analysis at the University of Zürich, Switzerland, September 2008. The authors are grateful to several colleagues within the Interuniversity Center for Social Science Theory and Methodology (ICS) for helpful comments.

## 6.1 Introduction

Personal networks are far from static: within a couple of years, the composition of a person's network of close associates changes considerably. A study by Shulman (1975), for example, showed that only 29 percent of the respondents named exactly the same set of intimates<sup>2</sup> after two years, while 46 percent replaced more than half of their close associates within one year. Wellman et al. (1997) showed that only 27 percent of the 162 intimate ties of 33 Torontonians remained intimate over a decade, and that 48 percent of those who had initially been intimate were no longer actively participating in the network or had died. More recently, Degenne and Lebeaux (2005:340) studied the networks of 66 young French men and women in 1995, 1998, and 2001, and they showed that 70 percent of the network members<sup>3</sup> who were present in the first wave were no longer mentioned in the second, and that 63 percent of those who were mentioned in the third wave were not mentioned in the second. In addition, recent research by McPherson et al. (2006) showed that, although within a longer period of two decades, the average number of people with whom Americans discuss important matters had shrunken from 2.9 in 1985 to 2.1 in 2004.

This paper extends the knowledge on changes over time in the composition of personal networks, by using information from two waves of a rich panel dataset on personal networks of the Dutch. Comparing the actual composition of personal networks over time not only creates the opportunity to examine the stability and decay of existing relationships – as is already done in earlier studies – but also creates the opportunity to examine the emergence of new relationships. We successively deal with both aspects of network change in this research, but focus primarily on the second aspect, that is, the emergence of new relationships.

We compare people's networks that consist of those with whom they discuss important personal matters and/or whom they ask for help with odd jobs in or around the house. In addition, our panel dataset also contains information about people's larger networks of associates with whom they have more superficial relationships, as well as information about network members who seemed to have disappeared from their networks after the first wave of our survey. This information creates the opportunity to disentangle whether network members who were mentioned as discussion partners and/or as practical helpers in the first wave, but not in the second wave, indeed disappeared from a person's network or that only the content of their relationship has changed.

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<sup>2</sup> Shulman (1975) examined his respondents' closest relationships outside the household, with a maximum number of six network members.

<sup>3</sup> The networks were restricted to associates whom the respondent described as being important for him (or her) and with whom he or she had a multiplex relationship (Degenne and Lebeaux 2005:338).

## **6.2 Explaining network changes**

In order to explain changes in personal networks, we primarily focus on the social contexts from which network members are drawn and in which they continued to meet each other. Previous research did reveal that, before all, the social contexts a person enters during daily life, such as the workplace, the family, sports clubs, voluntary associations, and the neighborhood, affect the composition and structure of personal networks. By providing meeting opportunities, social contexts present the pool of potential network members. As a result, the level of similarity in personal networks is dependent on the social composition of the context(s) one draws associates from. For example, network members who are met at school are much more likely to be similar in terms of age, sex, and level of education than network members who are met in the family context (Mollenhorst et al. 2008a, 2008b; cf. Fischer et al. 1977; Marsden 1990a).

Empirical research also supports the argument that – next to the social composition of the contexts – other constraints that are enforced upon people in certain contexts also affect the composition and structure of personal networks. For instance, if people spend much time in a context, they are more likely to draw network members from that context, even if these network members do not fully meet their personal preferences for associates with specific sociodemographic characteristics. And, if interactions in a certain context are enforced, relationships with specific persons in that context are more likely to emerge, again, even if these network members do not fully meet their personal preferences (Fischer 1982a; Mollenhorst et al. 2008a). Furthermore, as a result of a path-dependent use of social contexts to meet network members, people end up with network members who are less similar to themselves than if they would have drawn new network members from other contexts than they used before (Mollenhorst et al. 2008a).

Another explanation for network change that is proposed in the research literature is that important life events, such as marriage, the birth of the first child, divorce, getting another job, or retiring, result in the loss of certain network members as well as the creation of new relationships. We propose that it is not the important life event as such that causes the network change, but the fact that life events cause people to enter other contexts in their daily life (cf. Feld and Carter 1998). In order to test this proposition, we investigate to what extent network changes are affected by the social contexts in which network members are met, while controlling for all kinds of important life events.

In the following two subsections, we describe how social contexts can affect the continuation of existing relationships as well as the emergence of new relationships. More specifically, we give an account of how specific context characteristics can affect the continuation of personal relationships in section 6.2.1. Then in section 6.2.2, we formulate hypotheses on this paper's main issue, which is the social contexts from which new network members are drawn. After that, in section 6.2.3, we provide a brief overview of

how a number of important life events are expected to result in network changes, which we therefore take into account in our empirical analyses.

### *6.2.1 Characteristics of social contexts and the stability of existing personal relationships*

Previous studies have revealed that the social contexts people enter during daily life, such as the workplace, the family, sports clubs, voluntary associations, and the neighborhood, affect the composition and structure of their personal networks. More precise, it is found that specific characteristics of social contexts affect the composition of personal networks. For example, in line with Feld's arguments (Feld 1981, 1982), Mollenhorst et al. (2008a) showed that forced interactions within a context, as well as spending a large amount of time in a context, both enlarge the chance that network members are drawn from that social context. We propose that both these context characteristics also enlarge the likelihood that network relationships are continued, which consequently has a positive effect on the stability of personal networks.

First, when interactions within a context are enforced, relationships are more likely to be maintained (Proposition A). At work, for example, interactions are often institutionally organized, according to the division of labor, which makes relationship maintenance easier. In the family context there are often strong expectations as to whom one needs to interact with intensively, which also makes relationship maintenance more likely in this context. In neighborhoods, such enforced interactions are generally lacking; people do not need to interact intensively with their neighbors at all costs. This lack of enforced interactions makes relationship discontinuation easier.

Second, frequent interactions are an important condition for relationship continuation. Spending much time in a certain social context therefore makes maintaining relationships within that context more likely (Proposition B). From this perspective, the workplace is expected to have a strong effect on relationship stability, because many people spend a great share of their time at work. In general, much less time is, for example, spent in public going-out places, such that relationships with associates who are met there are more likely to decay.

In addition to these two context characteristics, we add a third characteristic: the possibility to leave a context. The more difficult it is to leave a social context, the more likely relationships in that context are being maintained (Proposition C). Social contexts vary with regard to the ease with which one can enter or leave that context. For a person who is a member of a certain club or association, he or she can relatively easily decide to leave that context by striking her/his name off the membership list. When people do not like the group of people among whom they work or among whom they reside, it is already more difficult to leave that context; changing jobs or moving to another house is a more radical decision than resigning club membership. However, it needs no explanation that

leaving the family context is probably the most radical and therefore most unlikely solution if the people in that context do not fully please a person.

### *6.2.2 Social contexts and the emergence of new personal relationships*

As people lose some of their network members, they might look for new associates to replace those who are lost. But even if no network member is lost, people can look for new associates to enlarge their network. The contexts from which new network members will be drawn, we argue, depend on the contexts people regularly enter during daily life.

In line with previous arguments and findings by Verbrugge (1979), Mollenhorst et al. (2008a) showed that there is a path-dependent use of social contexts to meet network members. This means that the likelihood to draw a second, third, and subsequent network member from a certain social context depends on the context from which one has drawn one's first network member. From this perspective, we expect that new relationships are more likely to emerge in contexts in which one meets existing network members. This is more easy, and less cumbersome and costly than to look for new associates in a new social context. Hence, hypothesis 1 is:

*The likelihood to draw new network members from a certain social context increases if a person already meets other network members in that context.*

Another possibility is that people like the general composition of their personal network to be stable. For example, one might like to discuss personal issues with one's partner and a close friend, to spend nights out with colleagues, and to ask a neighbor for help with a small job at home, irrespective of who this specific friend, colleague, or neighbor is. In other words, activities are linked to specific social contexts, not to specific persons, because people from specific contexts can help to solve specific problems (cf. Flap and Völker 2001). This implies that if one loses a network member from a certain context, he or she will look for a new network member again in the same context. Hence, hypothesis 2 is:

*The likelihood to draw new network members from a certain social context increases if a person lost a network member from that context.*

Finally, as already mentioned, previous research proposed that important life events bring about changes in personal networks.<sup>4</sup> Following Feld and Carter (1998), we expect that these network changes mostly occur through changes in the social contexts one enters. As a result of certain important life events, people stop spending time in certain contexts, while they will enter social contexts they did not enter before. For example, the birth of children brings people into new contexts such as day-care centers, primary schools, etc., while it may also decrease the time they spend, for example, at public going-out places, such as pubs and cinemas. A serious illness, especially in case of a chronic disease, can make a person unable to do sports, such that he or she will no longer go to the sports club.

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<sup>4</sup> We provide an overview of potential effects of important life events on network changes in the next subsection.

A job change, especially if a person goes to work for another company, takes a person out of her/his working context into a new one. And moving to another house generally brings people to a new residential context. Consequently, as people enter a new social context they probably start personal relationships with others in that context. From this perspective, we expect that new relationships are more likely to emerge in a new social context after the occurrence of an important life event. Hence, hypothesis 3 is:

*The likelihood to draw new network members from a new social context increases with the occurrence of an important life event.*

### 6.2.3 Important life events and changes in personal networks

The focus of previous studies on the effect of important life events on network changes has been on the association between being in a certain stage in the life course and the composition of the network. This neglects, however, the effects of important life events that are not directly linked to a specific life phase, such as a divorce, the death of one's partner, or moving to another house (Van Busschbach 1996). In this research, we take into account the effects of both types of important life events, i.e., events that are directly linked to a life phase, and events that are not. We successively consider the expected effects of the following important life events on network changes: domestic change, health change, employment change, and residential change.

#### *Domestic changes*

Previous empirical research has shown that the composition of personal networks is likely to be different for people with different domestic situations. Compared to single adults, people who are married, and especially when they have children, generally build networks that are more focused on the family (e.g., Shulman 1975; Fischer and Oliner 1983; Wellman et al. 1997), and they are also more likely to associate with their neighbors (Stueve and Gerson 1977; Campbell and Lee 1990). This might go at the expense of relationships with friends, although McPherson et al. (2006) showed that married people on average have larger core discussion networks than unmarried.

When marriage ends – because of the death of the spouse or because of a divorce – this can have at least two different consequences for one's network. On the one hand, it can result in a loss of relationships, in the first place the relationships with the ex-spouse, but also with former in-laws, or with friends of the ex-spouse. On the other hand, people who become single again may (re-)intensify the relationships with their own relatives. Moreover, it may open doors and create opportunities to find new network members (Broese van Groenou 1991; Feld and Carter 1998; Terhell 2003).

The birth of children, and especially the first one, is likely to have an impact on one's personal network. As already mentioned, networks of people with children are more centered on the family and the neighborhood (e.g., Stueve and Gerson 1977; Fischer and

Oliker 1983). One of the proposed explanations for this is the vast amount of time and energy most people spend on childrearing, such that little time is left to associate with friends.

#### *Health changes*

When people are seriously ill for a long time, this might affect their personal relationships. On the one hand, when informal care is given by certain network members (e.g., by relatives), this results in strengthened relationships. On the other hand, especially in case of chronic diseases, other relationships may fade away, because one might not be able to visit or undertake activities with these people anymore. Additionally, in the latter case, meeting new associates will also be problematic (e.g., Tjihuis 1994).

Not only a person's own health condition can affect personal relationships, also one's household members' health might affect one's personal network. If this household member needs much care, for example, this may take much of one's time, which will decrease the amount of time one can spend with other network members.

#### *Employment changes*

When people switch jobs, but stay in the same company, relationships with certain colleagues will become less intense or may even be discontinued (cf. Podolny and Baron 1997). Those relationships, for example, are no longer prescribed by the division of labor in the company, such that there are no longer functional interdependencies. When they start working for another company, these effects will be much stronger. Not only are relationships then no longer regulated, but these people also do not physically meet each other at the workplace anymore. Finally, the largest effects of switching jobs for network stability can be expected when people go to work in another city and consequently need to move to another house.

When people stop doing paid work – because of retirement or for other reasons – this might also have considerable effects on their networks. On the one hand, they can lose contacts with their former colleagues. On the other hand, there will be more time left to associate with other or new network members. The effects therefore largely depend on the focus of one's network before one stopped doing paid work; the more their networks consisted of colleagues, the more disruptive will be the consequences (e.g., Van Tilburg 1992; Van Busschbach 1996).

#### *Residential changes*

The last important life event we take into account in this paper is a special case in the light of the other events. A residential change, or moving to another house, often goes together with one of the other important life events. Some people move to another house because their house became too small or too large because of domestic changes. Another person

moves to another house, because he or she got a new job and the distance to the new workplace is too far. And the elderly might look for another place to live when they retire. In these cases, moving to another house is an important life event that is connected to another important life event.

We will disentangle the effects of these important life events by analyzing them simultaneously. This improves upon earlier research by, for example, Wellman et al. (1997) who analyzed the extent to which networks change as a result of aging, domestic changes, employment changes, and/or residential changes, while using two waves of data (with ten years in between) on the intimate ties of Torontonians. Their main conclusion was that getting in or out of marriage is the life event that affects intimate personal networks most. However, because of their small number of respondents, they could not analyze the effects of the various life stages on network changes simultaneously.<sup>5</sup>

### 6.3 Data and methods

#### 6.3.1 *The Survey of the Social Networks of the Dutch*

To test our hypotheses, we use data from two waves of *The Survey of the Social Networks of the Dutch* (referred to as SSND1, see Völker and Flap 2002, respectively SSND2, see Völker et al. 2007).

The first wave of this panel study was conducted in 1999/2000 and contains information on 1,007 individuals in the Netherlands. This sample is representative for the Dutch population between 18 and 65 years of age. To collect the data, a stratified random sample was drawn from 40 of the approximate 500 Dutch municipalities, representing the various provinces and regions, while taking into account the degree of urbanization and number of residents in these municipalities. In each of the municipalities, four neighborhoods were randomly selected using the postal code system. Next, per neighborhood, 25 addresses were randomly selected. At eight of these addresses, the resident between 18 and 65 years of age who was the first to have birthday was interviewed. In the end, with a response rate of 40 percent, which nowadays is common for survey research in the Netherlands, the dataset of 1007 respondents from 161 neighborhoods was realized.

Seven years after the first wave, we re-interviewed as many of the original 1007 respondents as possible. Over 70 percent of all respondents whose addresses we retrieved were willing to be re-interviewed, which resulted in a dataset that contains information on 604 individuals in The Netherlands, who are between 26 and 72 years of age. Comparing these SSND2 data with national statistics on basic sociodemographic features, we found

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<sup>5</sup> Other examples of theory and findings on the effects of life-cycle stage on features of personal networks are given in the works of e.g., Kahn and Antonucci (1980), Fischer (1982a), Campbell and Lee (1992), Van Tilburg (1998), Kalmijn (2003), Bidart and Lavenue (1997), De Jong Gierveld and Perlman (2006) and Kalmijn and Vermunt (2007).

that men, married people, older people, and the higher educated were somewhat overrepresented. We control for these personal characteristics in our analyses when possible.

### *6.3.2 Network delineation*

In both waves of the SSND, respondents were interviewed about various kinds of personal relationships, using thirteen name-generating questions.<sup>6</sup> One of these questions was the so-called ‘core discussion network’ name generator, which reads: *Life is usually not only about going-out and enjoying company. Everybody needs someone to talk about important matters from time to time. With whom did you discuss important personal matters during the last six months?*<sup>7</sup> (cf. Burt 1984; Marsden 1987; Bailey and Marsden 1999). Another name-generating question reads: *If you are doing an odd job at home and you need someone to give a hand, for example, to carry furniture, or to hold a ladder, whom do you ask for help?*<sup>8</sup> Respondents were allowed to name the initials of persons they had already mentioned in response to previous name-generating questions, and could add a maximum of five new persons at each question. As is explained in section 6.3.4, this research is based on the information on the network members who were mentioned at one or both of these two name-generating questions. Four respondents, unfortunately, did not answer the network questions during the interviews. These respondents are removed from the dataset such that the analyses are based on information on 600 respondents.

### *6.3.3 Social contexts*

After collecting the names of the personal contacts, additional questions (the ‘name interpreters’) were asked about each of the network members, as well as about the relationship between the respondent and these associates. In order to determine the social context in which people got to know each other, respondents were asked for every person mentioned: *Where, on what occasion, did you get to know this person?* Similarly with regard to the contexts in which they continue to meet each other: *And where, on what occasion, do you currently meet this person?* While answering both these questions, respondents could choose from the following contexts: in the neighborhood, with/via family, at school, at work, at a club or association, with/via a friend, at a public going-out place, at home, at church, on a vacation, at a party, on the internet, and somewhere else. In the first wave, respondents were allowed to mention only one context per network member. We assume that they reported the most important context. Nevertheless, this might lead to

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<sup>6</sup> A complete list of all other name-generating questions is presented in Appendix A. Since respondents were allowed to mention five additional network members at each of these questions, we assume that the number of network members is not truncated. In addition, as we show in Table 6.1, not even two percent of all respondents mentioned more than ten network members.

<sup>7</sup> This is name-generating question 12 in wave 1, and name-generating question 10 in wave 2 (see Appendix A).

<sup>8</sup> This is name-generating question 8 in wave 1, and name-generating question 6 in wave 2 (see Appendix A).

underestimated effects of meeting in the various social contexts on our dependent variables. In the second wave, respondents were allowed to mention up to three contexts per network member. For the analyses, we combined the contexts at church, on a vacation, at a party, on the internet, and somewhere else, into one category called 'other contexts', because of the small number of network members who had met in each of these contexts.

#### 6.3.4 *Network changes*

In both waves of the survey (i.e., 1999/2000 and 2007), we used the two name-generating questions we just mentioned. This enables us to observe and examine the changes that have taken place over a seven year period in this part of people's personal networks. After the respondents had named their networks members in the second wave, we showed them the list of names (with accompanying sex and age) they had mentioned as network members in the first wave.<sup>9</sup> We then asked them which of the network members they mentioned in the second wave correspond with the network members they mentioned in the first wave. Network members who were mentioned in the second wave but not in the first wave are considered to be new network members.

Next, we asked the respondents various questions with respect to those who were mentioned in the first wave, but not again in the second wave. That is, we asked them whether they still were in touch with each other or not. If there was no contact anymore, they were asked for the reason(s) why, like, for example, whether they had an argument with each other, whether that person had died, whether they were no colleagues or no neighbors anymore, etc. If they were still in touch with each other, we asked them why that person was not important anymore for the activities named in the two name-generating questions.

#### 6.3.5 *Important life events*

To take into account the effects of important life events that had taken place in the lives of the respondents over the intervening seven years, we asked them whether one or more of the following important life events occurred to them: 'getting married', 'starting cohabitation', 'getting a divorce', 'the birth of a child', 'a job switch', 'stop working or retiring', 'moving to another house', 'a long-lasting or serious illness', 'a long-lasting or serious illness of a household member', 'the death of one's partner', 'the death of another household member', and 'another important life event' they mentioned themselves. We recoded the latter answer category into four new categories: 'the birth of a grandchild', 'the death of a relative', 'child(ren) left home', and 'other life events'.

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<sup>9</sup> This procedure was only followed with regard to the network members who were mentioned at these two name-generating questions. Therefore, this study is restricted to this small, but important part of people's personal networks.

### *6.3.6 Control variables*

We controlled for the following respondent characteristics in our final analyses: age, sex, marital/cohabiting status, level of education (four categories: (1) primary education to lower vocational education; (2) (lower) general secondary education to pre-university education; (3) intermediate vocational education to higher vocational training; and (4) university degree), having a paid job, nationality (i.e., being a native, a first-generation immigrant, or a second-generation immigrant.), degree of urbanization of place of residence (measured as the number of people living within a 15-minute car drive from the respondent),<sup>10</sup> religion (with categories: no religion, Roman Catholic, protestant, and other religion), and type of relationship (with categories: partner, relative, and other relationship).

### *6.3.7 Analyses*

In order to provide useful information about respondents' personal networks, about the changes therein, as well as about important events that occurred to the respondents over the past seven years, the next section includes a number of tables and figures with descriptive results. Next, the reasons why some network members disappeared from the networks between both waves of our survey are also examined by simply making use of descriptive information. On this, we asked the respondents for the reasons why some of their relationships discontinued (see Table 6.5).

Relationship continuation is examined by using multilevel logistic regression models. Specifically, we present results of regression analyses on the effects of the social context in which the respondent met the network member in 1999/2000, while taking into account the occurrence of various important life events between 1999/2000 and 2007, as well as various respondent characteristics and type of relationship (see Table 6.4). A multilevel approach is used in order to do justice to the hierarchical nested structure of the data and the resulting dependence between observations (i.e., relationships) 'within respondents' (see, e.g., Snijders 2003; Snijders and Bosker 1999; Van Duijn et al. 1999; Völker and Flap 2001).

Finally, hypotheses about the contexts in which new relationships emerge are also tested by using multilevel techniques. From separate multilevel logistic regression models, we calculate estimated mean probabilities that the respondent got to know a new network member in each of the various social contexts (see Table 6.7). Next to various control variables on respondents' sociodemographic characteristics and type of relationship, we include as explanatory variables in each of these models, a) a dummy-coded variable indicating that the social context concerned was used by the respondent to meet at least one of her/his network members in 1999/2000, and b) a dummy-coded variable indicating that the social context concerned was used by the respondent to meet at least one of her/his network members who stayed in the network through 2007.

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<sup>10</sup> Calculations by Van Ham (see Van Ham 2002). Data are from Statistics Netherlands, <http://www.cbs.nl>.

## 6.4 Results

### 6.4.1 The composition and stability of personal networks

Over the seven years between 1999/2000 and 2007, the networks of the Dutch have become somewhat larger. Table 6.1 shows that the average number of people one would ask for help with small jobs in and around the house and/or with whom one discussed important personal matters increased from 3.58 in 1999/2000 to 4.15 in 2007. Furthermore, we see in the second panel of this table that there are only a few small changes in the general composition of these networks; the focus nowadays is somewhat more on partners, relatives, and neighbors, and a little less on friends.

**Table 6.1 Network size and composition<sup>a</sup>**

Network size	Wave 1 – 1999/2000		Wave 2 – 2007	
	Frequency	Percent	Frequency	Percent
0 – 1	93	15.50	70	11.67
2 – 3	223	37.17	206	34.33
4 – 5	181	30.17	166	27.67
6 – 7	81	13.50	102	17.00
8 – 10	18	3.00	46	7.67
11+	4	0.67	10	1.67
	Mean	(St. dev.)	Mean	(St. dev.)
Network size	3.58	(2.08)	4.15	(2.54)
Partner	0.47	(0.49)	0.51	(0.51)
Relatives	1.14	(1.24)	1.28	(1.40)
Friends	1.36	(1.49)	1.16	(1.48)
Coworkers	0.29	(0.70)	0.26	(0.69)
Neighbors	0.56	(0.95)	0.90	(1.13)
Others <sup>b</sup>	0.14	(0.46)	0.34	(0.73)

Source: SSND1, 1999/2000 and SSND2, 2007. N = 600 respondents.

<sup>a</sup> Network members are those whom one discusses important personal matters with and/or those whom one asks for help with odd jobs in or around the house.

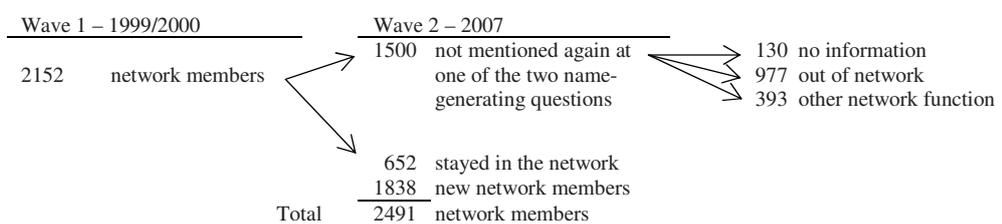
<sup>b</sup> Others include relationships which do not fit in one of the other categories, such as fellow members of a club or association, and acquaintances.

Although the general composition of the networks turns out to be rather stable, this does not mean that the networks are composed of the same people at both points in time. Like in previous research (e.g., Shulman 1975; Wellman et al. 1997; Degenne and Lebeaux 2005), we find in Figure 6.1 that the great majority of network members who were mentioned in 1999/2000 at one or both of the concerning name-generating questions<sup>11</sup> were not mentioned again at one of these questions seven years later. Specifically, of all 2152 network members mentioned in 1999/2000, only 652 (i.e., 30 percent) were still important for these two network functions in 2007. Of the 1500 network members who were not mentioned again with regard to these two network functions, 393 stayed in the network to

<sup>11</sup> I.e., those with whom one discussed important personal matters during the past six months and/or those whom one would ask for help with odd jobs in or around the house.

fulfill another function.<sup>12</sup> About two third of these 1500 network members, however, disappeared completely from the networks [977/1500].<sup>13</sup> During the same period of seven years, a set of 1838 new associates entered the networks, such that in 2007 the networks of all respondents together consisted of 2491 members. In short, Table 6.1 and Figure 6.1 together show a remarkable result: Whereas the size and general composition of people’s personal networks of discussion partners and practical helpers is considerably stable, about 70 percent of these network members are replaced by other persons within seven years.

**Figure 6.1 Network change**



Source: SSND1, 1999/2000 and SSND2, 2007.

#### 6.4.2 Social contexts and relationship stability

Table 6.2 describes from which social contexts the network members (mentioned in 1999/2000) were drawn. More specifically, we show in which social context they got to know each other (first column) as well as where they usually met each other in 1999/2000 (second column), that is at the time of the first interview. What is most striking is that the large majority of the respondents, about 64 percent (1363/2131), reported that the most important context in which they continued to meet each other was their home.<sup>14</sup>

Table 6.2 next shows the extent to which the likelihood to disappear from the network is different for network members who were drawn from various social contexts. The last column reports the odds ratios for relationship continuation through 2007 if the respondent met the network member in a certain social context in 1999/2000. These odds ratios indicate that the most stable relationships are maintained at home and in the family context (odds ratios are 1.36, respectively 1.27). Surprisingly, also relatively many relationships in the neighborhood are still part of the network after seven years (odds ratio is 1.05). Relationships at work are by far the most unstable relationships (odds ratio is 0.20): In

<sup>12</sup> Additional analyses, which are not presented here, show that the most frequently mentioned functions for these network members are: visiting (38.0 percent), receiving help from the respondent with odd jobs in or around the house (30.6 percent), giving help when respondent falls ill (23.2 percent), and spending an evening out together (18.3 percent).

<sup>13</sup> Note that respondents did not provide information with regard to 130 initial network members.

<sup>14</sup> Since in the first wave, respondents were allowed to mention only one context per network member, we assume that they reported the most important context. In the second wave, they were allowed to mention up to three contexts per network member.

other words, not even ten percent of the network members who met each other at work in 1999/2000 were still part of the networks in 2007.

**Table 6.2 Social contexts where people get to know and continue to meet network members in 1999/2000**

Social context	Where they got to know	Where they met in 1999/2000			Odds ratio
		Total	Lost	Continued	
In the neighborhood	391	246	169	77	1.05
With/via family	475	194	127	67	1.27
At school	144	11	8	3	0.86
At work	229	130	119	11	0.20
At a club/association	178	38	28	10	0.82
With/via a friend	119	47	33	14	0.97
At a public going-out place	110	40	30	10	0.76
At home	318	1363	918	445	1.36
Other context <sup>a</sup>	170	62	53	9	0.38
Total # of network members	2134	2131	1485	646	

Source: SSND1, 1999/2000 and SSND2, 2007. Data shown are frequencies.

<sup>a</sup> Other contexts include 'at church', 'on a vacation', 'at a party', and 'somewhere else'.

Table 6.3 describes the important life events that took place in the lives of our respondents between 1999/2000 and 2007. For many people, there was a change in their work situation: 28.1 percent changed jobs, while 15.2 percent retired or stopped doing paid work for another reason. Another frequent occurring event is moving to another house: about one out five respondents moved to another house in the intervening time. With regard to domestic changes, we see that 9.0 percent got married or started to cohabit with a partner, while 3.2 percent got divorced. Moreover, in 10.1 percent of the households, a child was born. The average number of life events that occurred in the lives of our respondents is 1.29, but note that 25.0 percent reported that no important life events had taken place in their lives between 1999/2000 and 2007.

**Table 6.3 Important life events between 1999/2000 and 2007**

Life events <sup>a</sup>	Frequency	Percent
Marriage	19	3.2
Cohabiting	34	5.8
Divorce	19	3.2
Birth of child(ren)	59	10.1
Job change	164	28.1
Stopped work / retired	89	15.2
Moving to another house	124	21.3
Long-lasting illness of resp.	67	11.5
Long-lasting illness of household member	22	3.7
Death of partner	7	1.2
Death of other household member	5	0.8
Other events:		
- birth of grandchild(ren)	24	4.1
- death of a relative, outside household	47	8.0
- child(ren) left the household	21	3.6
- miscellaneous	55	9.4
No event occurred	146	25.0
	Mean	(St. dev.)
Number of important life events	1.29	(1.05)

Source: SSND2, 2007. N = 582 respondents

<sup>a</sup> Multiple answers are possible

Next, Table 6.4 presents results of multilevel logistic regression analyses on the effects of the social context in which network members met in 1999/2000 on the likelihood of relationship continuation, while controlling for the occurrence of important events in a person's life as well as for type of relationship and various respondent characteristics.

**Table 6.4** Multilevel logistic regression models on relationship continuation through 2007<sup>a,b,c</sup>

	Model 1	Model 2	Model 3	Model 4
<i>Type of relationship</i>				
Partner	4.43***	4.55***	4.46***	4.52***
Relative	1.59***	1.59***	1.57**	1.56**
Other type of relationship	ref.	ref.	ref.	ref.
<i>Important life event</i>				
Marriage		1.98*		2.14*
Cohabiting		0.70		0.70
Divorce		0.48		0.46*
Birth of child(-ren)		0.94		0.89
Job change		1.15		1.15
Stopped work / retired		1.18		1.23
Moving to another house		0.82		0.86
Long-lasting illness of resp.		1.30		1.25
Long-lasting illness of household member		0.73		0.75
Death of partner		0.08*		0.09*
Death of other household member		1.38		1.40
Other life event:				
- birth of grandchild		1.32		1.53
- death of a relative		1.20		1.21
- child(ren) left home		1.71		1.85
- other life event		1.14		1.16
No event occurred		ref.		ref.
<i>Social context<sup>d</sup></i>				
In the neighborhood			1.50*	1.40
With/via family			1.12	1.08
At school			0.79	0.76
At work			0.27***	0.26***
At a club/association			1.09	1.22
With/via a friend			1.54	1.58
At a public going-out place			1.00	0.99
Other context <sup>e</sup>			0.45*	0.42*
At home			ref.	ref.
Wald Chi <sup>2</sup>	117.51	136.43	134.75	152.32
Rho	0.10	0.08	0.09	0.08
Number of network members	2123	2071	2114	2062
Number of respondents	577	560	576	559

Source: SSND1, 1999/2000 and SSND2, 2007. \*p<.05, \*\*p<.01, \*\*\*p<.001 (two-tailed tests).

<sup>a</sup> Data shown are odds ratios.

<sup>b</sup> See section 6.3 for detailed descriptions of the variables used and the methods of analyses.

<sup>c</sup> In each model, we controlled for the effects of respondent's age, sex, level of education, marital status, having a paid job, nationality, degree of urbanization in place of residence, and religious background.

<sup>d</sup> I.e., the social context in which respondents met their network member in 1999/2000.

<sup>e</sup> Other contexts include 'at church', 'on a vacation', 'at a party', and 'somewhere else'.

First, Table 6.4 shows that relationships with relatives, but especially relationships with partners, are much more stable than other types of relationships. Taking that into account, Models 3 and 4 show that network members who were met in 1999/2000 at work or in one of the 'other contexts' are less likely to stay in the network than other network members (odds ratios in Model 4 are 0.26 for 'at work', respectively 0.42 for 'other context', with

meeting 'at home' as reference category). Relationships in the neighborhood are somewhat more likely to be continued as compared to relationships who meet at home, but note that this effect is not statistically significant when important life events are taken into account.<sup>15</sup>

With regard to the effects of important life events on relationship continuation, Models 2 and 4 of Table 6.4 show that just starting or ending marriage significantly affects the stability of network relationships. Getting married has a positive effect on the stability of network relationships (odds ratio is 2.14 in Model 4), whereas ending marriage, as a result of a divorce but especially if one's partner died, negatively affects the stability of network relationships (odds ratios in Model 4 are 0.46 for 'divorce', respectively 0.09 for 'partner died').<sup>16</sup> Moreover, comparing Models 3 and 4 indicates that the effects of meeting at work or at an 'other context' do not change if we control for the occurrence of important life events. This means, on the one hand, that the strong negative effect of meeting at the workplace on relationship continuation is independent of job change and retiring, as well as that the negative effect of meeting at one of the 'other contexts' is also independent of the occurrence of important life events. On the other hand, there is also an independent positive effect of getting married and there are independent negative effects of getting divorced and losing a partner on relationship continuation.

### 6.4.3 *Why relationships disappeared*

Figure 6.1 already showed that 977 network members disappeared from the personal network concerned. In order to learn about the reasons why these persons disappeared from the personal networks – which means that they were also not mentioned at one of the other name-generating questions – we straightforwardly asked the respondents a number of questions on these issues. With regard to the network members who were not mentioned again during the second interview, we asked whether they were nevertheless still in touch with each other or not. Figure 6.2 shows that respondents did not lose sight of all these network members totally; they are still in touch with about 60 percent of them (591/977). With altogether 348 network members, contact was completely broken off, which makes up over 16 percent (348/2151) of all the initial network members in 1999/2000.<sup>17</sup>

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<sup>15</sup> Although the odds ratios in Table 6.2 indicated that most stable are relationships with people who are met at home or with/via family, additional analyses (not presented) showed that the effects of these contexts are not statistically significant (irrespective of controlling for respondent characteristics and type of relationship).

<sup>16</sup> Only a very small part of the strong negative effect of the death of respondent's partner on relationship continuation is due to the fact that this partner was one of the respondent's network members in 1999/2000. Leaving them out of this analysis, therefore, yields similar results. This means that the death of one's partner not only results in the loss of this important network member, but also to the loss of other important network members.

<sup>17</sup> Note that respondents did not provide information with regard to 38 initial network members.

**Figure 6.2** What happened with relations who disappeared from the networks between 1999/2000 and 2007

977	out of the network		348	no contact anymore
			591	still in touch
			38	no information

Source: SSND2, 2007

Next, we asked the respondent with regard to this set of former network members for the reason why they were no longer mentioned as network members and/or why contact with them was discontinued. From Table 6.5, which summarizes these reasons, we learn that a lack of meeting opportunities is the most important factor for relationships discontinuation: 20.3 percent of all relationships were discontinued because they did no longer share a certain social context, such as the workplace, the neighborhood, or a club or association. Next, 21.8 of the relationships were discontinued because they had less frequent contact, which, we argue, also primarily indicates a lack of meeting opportunities, given that ‘relationship changed’ is another answer category itself. Combining the answer categories ‘no shared context’ and ‘less frequent contact’ with the reasons ‘moving to another house’, ‘too large distance’, and ‘network member died’, shows that 52.9 percent of the relationships ( $[213+199+29+9+67]/977$ ) were discontinued because of a lack of meeting opportunities.

**Table 6.5** Why network members disappeared from the network between 1999/2000 and 2007<sup>a</sup>

Reason <sup>b</sup>	Total		Partners and relatives		Other network members	
	Freq.	Percent	Freq.	Percent	Freq.	Percent
Relationship changed <sup>c</sup>	120	12.2	36	10.7	84	13.1
Less frequent contact	213	21.8	66	19.6	147	22.9
No shared context <sup>d</sup>	199	20.3	23	6.8	176	27.4
Moving to another house	29	2.9	1	0.3	28	4.3
Too large distance	9	0.9	3	0.8	6	0.9
Network member died	67	6.8	35	10.4	32	4.9
Forgot to mention <sup>e</sup>	78	7.9	47	13.9	31	4.8
Other reason <sup>f</sup>	185	18.9	86	25.6	99	15.4
No answer	105	10.7	40	11.9	65	10.1
Total number of relationships	977		336		641	

Source: SSND2, 2007.

<sup>a</sup> All relationships in this table were no longer mentioned at any of the 13 name-generating questions (for the list of these questions, see Appendix A). As shown in Table 6.6, respondents nevertheless said to be still in touch with 591 of these 977 network members, while contact was discontinued with 348 network members. In this table, both these groups are taken together;

<sup>b</sup> Up to three different answers were allowed to this question;

<sup>c</sup> This category is a recoding of the following initial categories: ‘we have had a quarrel’, ‘we got divorced’, ‘there was no need for continuation’, and ‘our relationship has changed’;

<sup>d</sup> This category is a recoding of the following initial categories: ‘we are no longer colleagues’, ‘we are no longer members of the same club/association’, ‘we are no longer neighbors’, and ‘we do not share the same context anymore’;

<sup>e</sup> This category includes all kinds of persons who are still important to the respondent concerned, but were forgotten to mention again, such as one’s partner;

<sup>f</sup> This category includes all kinds of reasons, such as ‘our relationship has cooled off’, etc.

In contrast, only 12.2 percent were discontinued because of a ‘change in the relationship’, which includes reasons such as ‘we have had a quarrel’, ‘we got divorced’, ‘there was no

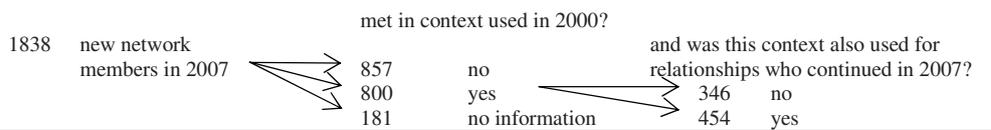
need to continue this relationship', and 'the relationship changed'. We also note that, when asking for the reason why some persons were no longer mentioned as network members, in 7.9 percent of these cases, the respondent answered saying that this person was still very important, but that he or she had forgotten to mention him or her again.<sup>18</sup>

To get more insight in the reasons why relationships disappear, we subsequently split them up in two categories: partners and relatives in the middle column, and other network members in the most right column of Table 6.5. This reveals that a lack of meeting opportunities has a relatively smaller impact on the discontinuation of relationships with partners and relatives than on relationships with other network members: whereas for 38.0 percent of the discontinued relationships with partners and relatives, the reason was a lack of meeting opportunities  $([66+23+1+3+35]/336)$ , this percentage is 60.6 for the discontinued relationships with other network members  $([147+176+28+6+32]/641)$ . Table C in Appendix B also shows this difference, as well as that 'having no shared context anymore' is predominantly mentioned as reason for the discontinuation of relationships with network members who were met in the neighborhood or at work.

#### 6.4.4 Social contexts and the emergence of new relationships

In the previous subsection, we described from which contexts people had drawn their networks members in 1999/2000, as well as which contexts were more, and which contexts were less likely to provide and/or support stable relationships that endured through 2007. Next, we have shown in Figure 6.1 that a set of 1838 new members entered the networks of our respondents between 1999/2000 and 2007. In this section, we examine from which contexts these new relationships were drawn. More specifically, we compare the contexts where new associates are met with the contexts that people use for meeting network members who stayed in their network since 1999/2000.

**Figure 6.3** The use of 'old' and 'new' social contexts to meet new network members



Source: SSND1, 1999/2000, and SSND2, 2007.

Figure 6.3 shows that 51.7 percent of the new relationships  $(857/[1838-181])$  emerged in contexts in which the respondent concerned did not meet one of her/his network members in 1999/2000. This suggests that people draw many new network members from contexts they newly entered. With regard to this, we hypothesized in section 2.2 that entering new contexts is more likely after the occurrence of an important life event (Hypothesis 3). The

<sup>18</sup> 24 out of these 78 turned out to be the partner of the respondent.

results in Table 6.6, however, show that the occurrence of important life events hardly affects the use of an ‘old’ versus a ‘new’ social context to find new network members. Only people whose partner had died between 1999/2000 and 2007 are significantly more likely to get to know new network members in a context in which they did not meet one of their network members in 1999/2000 (odds ratio is 11.25 in Model 3). Additional analyses which are presented in Table D in Appendix B indicate that whether someone meets a new network member in an ‘old’ or in a ‘new’ context is dependent on the type of relationship that emerged, but especially on the specific social context from which the new network member was drawn.<sup>19</sup>

**Table 6.6** Multilevel logistic regression models on using a ‘new’ social context to meet new network members<sup>a,b,c</sup>

	Model 1	Model 2	Model 3
<i>Type of relationship</i>			
Partner		1.46	1.42
Relative		0.37***	0.36***
Other type of relationship		ref.	ref.
<i>Important life event</i>			
Marriage	1.42		1.40
Cohabiting	1.46		1.35
Divorce	0.65		0.61
Birth of child(-ren)	0.79		0.83
Job change	1.19		1.22
Stopped work / retired	0.72		0.72
Moving to another house	0.76		0.77
Long-lasting illness of resp.	1.69		1.61
Long-lasting illness of household member	1.30		1.46
Partner died	9.51*		11.25**
Other household member died	0.70		0.52
Other life event:			
- birth of grandchild	0.79		0.89
- death of a relative	0.59		0.54
- child(ren) left home	0.66		0.69
- other life event	1.32		1.36
No event occurred	ref.		ref.
Wald Chi <sup>2</sup>	28.22	53.09	72.25
Rho	0.33	0.37	0.34
Number of network members	1600	1654	1600
Number of respondents	496	511	496

Source: SSND1, 1999/2000 and SSND2, 2007. \*p<.05, \*\*p<.01, \*\*\*p<.001 (two-tailed tests).

<sup>a</sup> Data shown are odds ratios.

<sup>b</sup> See section 3.2 to 3.5 for detailed descriptions of the variables used and the methods of analyses.

<sup>c</sup> In each model, we controlled for the effects of respondent’s age, sex, level of education, marital status, having a paid job, nationality, degree of urbanization in place of residence, and religious background.

Although Figure 6.3 shows that many new relationships emerged in contexts that were not used to meet existing network members, still 48.2 percent of the new relationships (800/[1838-181]) emerged in a context in which the respondent concerned did meet one of her/his network members in 1999/2000, while 27.3 percent of the new relationships

<sup>19</sup> Relatives are least likely to be found in a ‘new’ social context. If a person uses a new context to meet a new network member, this is often at work, at school, at a club or association, or at one of the ‘other context’, and not very often in the neighborhood or in the family context.

emerged in a context in which the respondent meets a network member who stayed in the networks throughout the intervening seven years (454/[1838-181]). This finding suggests that the likelihood to meet a new network in a certain context depends on the contexts in which a person currently meets her/his existing network members.

In order to test whether this is indeed the case, Table 6.7 reports on the extent to which the likelihood to meet new network members in a certain social context is affected by the contexts in which current network members are met.<sup>20</sup> Table 6.7 reports estimated probabilities for meeting new associates in various social contexts depending on a) whether the respondent used that context to meet her/his network members in 1999/2000, and b) if so, on whether at least one network member who was met in that context in 1999/2000 stayed in the network.<sup>21</sup>

In accordance with Hypothesis 1, Table 6.7 shows that meeting new network members in a certain social context is, in general, more likely if one uses that context to meet existing network members. For example, the middle column shows for the work context, that the probability to meet a new associate at work is 0.11 if one meets existing network members at work as well, whereas this probability is 0.05 if one does not meet existing network members at work. Similarly, the probability to meet a new network member at a club or association is 0.18 if one meets existing network members in that context as well, whereas this probability is 0.07 if one does not use this context to meet existing network members. The likelihood to meet new network members with/via a friend or at home, however, is a bit smaller if existing network members are met in these social contexts.

**Table 6.7 Probability to get to know a new network member in various social contexts<sup>a</sup>**

Social contexts	Average	Context used to meet network members in 2000		Context used for maintained relationships <sup>b</sup>	
		No	Yes <sup>c</sup>	No	Yes <sup>c</sup>
In the neighborhood	0.25 (0.06)	0.23 (0.05)	0.29 (0.06)***	0.26 (0.05)	0.35 (0.05)***
With/via family	0.09 (0.04)	0.08 (0.03)	0.11 (0.05)***	0.10 (0.04)	0.13 (0.05)***
At school	0.04 (0.02)	0.04 (0.02)	0.07 (0.03)***	0.10 (0.04)	0.05 (0.03)***
At work	0.06 (0.04)	0.05 (0.03)	0.11 (0.05)***	0.10 (0.05)	0.15 (0.06)***
At a club/association	0.08 (0.03)	0.07 (0.02)	0.18 (0.04)***	0.12 (0.03)	0.32 (0.06)***
With/via a friend	0.07 (0.02)	0.07 (0.02)	0.04 (0.02)***	0.03 (0.01)	0.04 (0.02)*
At a public going-out place	0.04 (0.03)	0.03 (0.01)	0.12 (0.05)***	0.13 (0.04)	0.11 (0.06)
At home	0.37 (0.08)	0.40 (0.07)	0.37 (0.08)***	0.36 (0.08)	0.37 (0.08)**
Other context <sup>d</sup>	0.16 (0.04)	0.15 (0.03)	0.27 (0.04)***	0.24 (0.03)	0.35 (0.04)***

Source: SSND1, 1999/2000 and SSND2, 2007. N= 1,654 new relationships (of 511 respondents)

<sup>a</sup> Data are estimated mean probabilities, calculated from separate multilevel logistic regression models on the likelihood that the respondent got to know a new network member in each of the various social contexts, while controlling for various respondents' sociodemographic characteristics. Standard deviations in parentheses.

<sup>b</sup> Probabilities in these two columns are only calculated for respondents who used the context concerned to meet network members in 2000, i.e., those who fit in the 'yes' category of the middle columns in this table.

<sup>c</sup> Asterisks are t-tests results, indicating whether estimated mean probabilities are significantly different for the 'yes' column, as compared to the 'no' column (\*p<.05, \*\*p<.01, \*\*\*p<.001; two-tailed tests).

<sup>d</sup> Other contexts include 'at church', 'on a vacation', 'at a party', and 'somewhere else'.

<sup>20</sup> Additional descriptive information on this issue is presented in Table E in Appendix B.

<sup>21</sup> Estimated mean probabilities were calculated from separate multilevel logistic regression models on the likelihood that the respondent got to know a new network member in each of the various social contexts, while controlling for various respondents' sociodemographic characteristics.

The last column of Table 6.7 shows that the likelihood to meet new network members in a certain context is not only dependent on the contexts in which the respondent met her/his network members in 1999/2000, but especially on the contexts in which he or she met those associates who are still part of the network in 2007. For example, the last column shows for the work context, that the probability to meet a new associate at work increases to 0.15 if one also meets one of the remaining network members at work. Another finding: the likelihood to meet a new network member in the neighborhood is 0.35 if one also meets one of the remaining network members in the neighborhood, whereas this probability is 0.23 if one did not meet any her/his network members in the neighborhood in 1999/2000. These results reveal a path-dependent use of social contexts to meet network members. That is, the context in which one meets new network members is dependent on the contexts in which one currently meets existing network members.

Because a) still using a context to meet associates who stayed in the network through 2007, and b) having lost at least one network member from a certain social context, are highly overlapping indicators (inversely related), we are not able to analyze them simultaneously.<sup>22</sup> Analyses, in which we examined the effects of having lost at least one network member from a certain context (not reported), consequently provided similar results as presented in Table 6.7. Only the result that new network members are less likely to be drawn from school if one met a network member at school who stayed in the network, as compared to if one met a network member at school who left the network, supports Hypothesis 2. The many significant and positive effects of still meeting one of the existing network members in a certain social context on the likelihood to meet a new network member in that context, suggest that lost network members are generally not replaced by people from the context from which a person lost a network member (in contrast to Hypothesis 2), but in particular by people from contexts in which this person also meets network members who stayed in her/his network (in accordance with Hypothesis 1).

## **6.5 Conclusions**

In this paper, we have shown that the size and general composition of people's personal networks is relatively stable. The average number of network members with whom people discussed important personal matters during that past six months and whom they would ask for help with an odd job in or around the house slightly increased from 3.5 in 1999/2000 to 4.1 in 2007. Furthermore, these networks became somewhat more centered on the partner, relatives, and neighbors, instead of on friends.

The high degree of stability of these general network figures, however, disguises the many changes that take place in personal networks within seven years. Focusing on those with whom one discussed important personal matters during the past six months and those

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<sup>22</sup> That is, these indicators are only different in case the respondent met two or more network members in the same context, of whom at least one left the network, while at least one stayed in the network.

whom one would ask for help with an odd job in or around the house, we show that only 30 percent of the initial network members still fulfill one of these network functions after seven years (cf. Shulman 1975; Wellman et al. 1997; Degenne and Lebeaux 2005), while the others are replaced by new network members. Together with 18 percent who stayed in the network, but fulfill another (mostly less important) function, only 48 percent stayed in the personal networks of the respondent. Those who were not mentioned again as network members after seven years, however, did not all completely disappear from the respondent's network, for the majority was still in touch with the respondent.

To explain changes in personal networks, we predominantly focused on the social contexts from which network members are drawn and in which they continue to meet each other, because social contexts provide opportunities to meet network members. With regard to the stability of existing relationships, we analyzed the effects of the social contexts in which people met their network members in 1999/2000 on the likelihood of relationship continuation, while controlling for the occurrence of important life events, type of relationship, and various respondent characteristics. The results showed that relationships with people who have met at work or at one of the 'other contexts' (i.e., at church, on a vacation, at a party, and somewhere else) are most unlikely to stay in the network after seven years.

The finding that the most unstable relationships are met at the workplace is the most remarkable and unexpected in the light of our theoretical arguments in section 2.1. Although many interactions with colleagues are institutionally regulated (Proposition A) and although people generally spend a large part of their time at work (Proposition B), relationships with people from work are not likely to be maintained over seven years. Moreover, since we controlled for having changed jobs or retiring in the intervening time, this finding is also not in line with Proposition C about the effect of exit possibilities.<sup>23</sup> The finding that relationships with people who are met at church, on a vacation, at a party or somewhere else – which together make up the category 'other contexts' – are relatively unstable, is in line with these three propositions. People generally do not spend a great part of their time in these contexts, interactions in these contexts are often not enforced, and leaving these contexts is generally not very problematic.

The occurrence of most of the important life events we considered turned out not to affect the stability of relationships. Health changes, employment changes, and residential changes have no significant effect on relational stability. Only starting and ending marriage affect the likelihood that a relationship still continues after seven years: getting married positively affects relationship stability, whereas ending marriage – because of a divorce, but especially if one's partner died – negatively affects the stability of personal relationships (cf. Wellman et al. 1997). Furthermore, the finding that the just mentioned effects of

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<sup>23</sup> A possible explanation is that not only respondents could change jobs during the past seven years, but also the network member whom he or she formerly met at work.

important life events and the effects of the social contexts in which network members are met both independently affect the stability of relationships, suggests that our argument that life events might affect relationship stability via social contexts does not hold true in this respect.

Our findings with regard to the reasons for relationship discontinuation supported our general argument that meeting opportunities are an important condition for the (in-)stability of personal relationships. We showed that a lack of meeting opportunities is an important reason for relationship discontinuation: for 46 percent of the discontinued relationships, the reason why these network members had become less important in the network, or why they had completely left the network, was a matter of meeting opportunities (such as not sharing the same context anymore, too large distances, and meeting less frequently). Specifically, relationships at work and in the neighborhood turned out to be most sensitive to leaving the context. In contrast to that, only 12 percent were discontinued because of a relationship change, such as divorce, or because they had a quarrel.

With regard to the emergence of new relationships – which could mean replacing lost associates, as well as expanding the network – we showed that 48 percent of the new relationships emerge in a social context that is also used by the respondent to meet one or more of her/his already existing network members. Next, we showed that the likelihood to meet a new network member in a certain social context depends on the contexts in which a person continues to meet her/his existing network members. More specifically, meeting a new network member in a certain context is more likely if one met an existing network member in that particular context, but especially if that context is used by the respondent to meet one of the network members who is still part of her/his network after seven years. This finding supports Hypothesis 1 about the effects of a path-dependent use of social contexts to meet network members (cf. Mollenhorst et al. 2008a).

Due to highly overlapping indicators for still using a context to meet associates who stayed in the network through 2007, and for having lost at least one network member from a certain social context, we were not able to test Hypotheses 1 and 2 simultaneously. The many significant and positive effects of still meeting one of the existing network members in a certain social context on the likelihood to meet a new network member in that context, however, suggest that lost associates are in particular replaced by people who are met in contexts in which one also meets network members who stayed in the network, instead of by people from the context from which they lost a network member. In order to disentangle the effects of these two indicators, further analyses are needed on larger personal networks, which make it less likely that these indicators are overlapping.

Finally, 52 percent of the new relationships were drawn from contexts in which none of the existing network is met. This suggests that people draw many new network members from contexts they newly entered. Further analyses did not provide much support for Hypothesis 3 about the effects of important life events on the likelihood to draw new

associates from new social contexts. Only the death of a one's partner makes a person more likely to draw new network members from a 'new' social context.

## 6.6 Discussion

We finish this paper with pointing at four relevant issues with regard to changes in personal networks. First, our finding that the average number of network members with whom the Dutch discussed important personal matters during that past six months and/or whom they would ask for help with an odd job in or around the house did not decrease, but slightly increased from 3.5 in 1999/2000 to 4.1 in 2007 is interesting in comparison with previous research. Previously, Mollenhorst, Völker, and Flap (2008c) showed that the average size of core discussion networks of the Dutch was stable over seven years (2.4 in 1999/2000 as well as in 2007). This means that the networks as examined in this paper had increased because the respondents mentioned more different people whom they would ask for help with odd jobs in or around the house. The stability of the average number of core discussion network members of the Dutch, however, is consistent with findings by Wöhler and Hinz (2007), who showed that the average core discussion network of the Germans consisted of 1.86 members in 1988 and 2.12 in 2000. In contrast, McPherson et al. (2006) showed that the average size of the core discussion networks of Americans had decreased from 2.94 in 1985 to 2.08 in 2004, while the modal respondent reported having three confidants in 1985, but no confidant at all in 2004. Comparing these three studies indicates that a decline in the size of core discussion networks as had taken place in America, did not take place in Germany, nor in The Netherlands.

Second, the results in this paper indicate that changes in personal networks should be interpreted with caution, if one relies on information about networks that are delineated by one or two name-generating questions. Not being mentioned again as a discussion partner and/or practical helper does not always mean that people lost sight of these network members. Like McPherson and colleagues proposed as a possible explanation for the smaller core discussion networks of Americans, it might be that people have "a smaller core of very close confident ties and a much larger array of less interconnected, more geographically dispersed, more unidimensional relationships" (McPherson et al. 2006:372-373). In this research, we have shown that in 23.2 percent of the 1500 cases in which the network member was not mentioned again as discussion partner and/or practical helper again, contact with the network member was indeed discontinued (348/1500, see Figure 6.1 and 6.2). However, in 26.2 percent of the cases, the function of the network member had changed, such that he or she was mentioned at another name-generating question (393/1500, see Figure 6.1). And in 39.4 percent of the cases, although the former network member was also not mentioned at another name-generating question, contact was not lost

totally (591/1500, see Figure 6.1 and 6.2).<sup>24</sup> It remains an interesting question for future research, whether associates who did disappear from the networks return into the network at a later point in time (cf. Völker 1995; Van Busschbach 1996; Morgan, Neal, and Carder 1997).

A similar pattern might also be found if we would examine the true ‘newness’ of the network members who were mentioned as discussion partner or practical helper in 2007, but not in 1999/2000. We found that 73.7 percent of the discussion partners and practical helpers in 2007 were ‘new’ network members, meaning that they were not mentioned as discussion partners or practical helpers in 1999/2000. Unfortunately, our dataset does not contain information about whether these new network members were nevertheless mentioned at one of the other name-generating questions in 1999/2000. However, we do have information about the duration of all network relationships, which shows that many ‘new’ relationships are not truly new. Actually, the average duration of these relationships is about 20 years, while the respondents got to know only a quarter of their new network members during the past seven years.

Third, next to the effects of meeting opportunities on relationship continuation as we have presented in this paper, we expect that structural embeddedness also plays an important role for relationship continuity. As Martin and Yeung (2006) have shown, relationships are more likely to be maintained if they share the contact with a third person. With regard to this, Feld argued that “structural embeddedness presumably arises from sharing one or more foci of activity with one another, and thereby developing common relationships with others from those activities” (Feld 1997:92). In other words, relationships are more likely to be continued if the network member also knows other members of respondent’s network, which in turn will be much more likely if these two network members share the same social context(s) with the respondent concerned (see also Feld 1981; Burt 2002; Mollenhorst et al. 2008c). Disentangling the effects of these structural conditions remains an important task for future research.

Finally, we have shown that there is a path-dependent use of social contexts to meet network members: the likelihood to meet a new network member in a certain social context is higher if one also meets an existing network member in that context (cf. Mollenhorst et al. 2008a). Half of the new relationships, however, emerged in contexts in which none of the existing network members was met. Because our analyses are based on data about discussion partners and practical helpers, it is possible that relationships that we assumed to have emerged in ‘new’ contexts, actually emerged in a context in which the respondent met other network members with whom they have more superficial relationships. In that case, the context itself is not completely new to the respondent, but it is newly used to meet discussion partners and practical helpers. Closely related important questions then are a) whether meeting opportunities, as provided by the social contexts one enters during daily

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<sup>24</sup> Recall that respondents did not provide information with regard to the other 11.2 percent of the cases.

life, have different effects for the emergence of relationships of different strength, and b) to what extent entering a new social context indeed results in the emergence of new relationships. In order to answer the latter question, additional information is needed on the contexts people enter during their daily life, independent of whether they have personal relationships in all those contexts. But more generally, to shed light on these important and understudied issues, more research is needed on changes in personal networks, but especially on the emergence of new personal relationships.

# **Chapter 7**

## ***Conclusions, Discussion, and Suggestions for Future Research***

## 7.1 Introduction

The preceding five empirical chapters challenged the idea that the emergence and composition of personal networks are a simple result of an individual's preferences for certain types of associates. Following the lead of, for example, Lazarsfeld and Merton (1954), Blau (1977), Fischer et al. (1977), Verbrugge (1977), Feld (1981), Huckfeldt (1983), Marsden (1990a), McPherson and Smith-Lovin (1987), Völker and Flap (1997), and Kalmijn and Flap (2001), we argued that irrespective of people's preferences, *opportunities for contact* affect the emergence, composition, and structure of personal networks. We used a choice-constraint approach which stresses that personal networks are the result of individual choices made within the constraints of social contexts (cf. Fischer et al. 1977). From this sociological perspective, the five chapters provided valuable answers to the overarching research question of this dissertation, which reads: *What are the effects of social contexts on personal relationships and networks?*

I finish this dissertation with the main conclusions that can be drawn from our findings and a discussion of these findings. This will be done with respect to the effects of social contexts on personal relationships and networks (section 7.2), and more generally with regard to the size and composition of, and changes in personal networks (section 7.3). Finally, I consider some suggestions for future research (section 7.4).

## 7.2 How social contexts affect personal relationships and networks

### 7.2.1 Social contexts and similarity in personal relationships

In accordance with previous research, we showed in Chapter 2 that, with regard to age, level of education, and sex, people are generally more similar to their core discussion network members than to randomly chosen other people (see, e.g., Louch 2000; Marsden 1987, 1988; McPherson et al. 2006; Verbrugge 1977). By showing that similarity in core discussion relationships, which are typically intimate relationships, is associated with the social context in which people find each other, we provided a strong case for the choice-constraint approach in the study of personal networks: the composition of personal networks reflects the set of people to whom one has access.

Next, in Chapter 3 we inquired into the differential effects of social contexts on similarity for various types of social relationships. Based on the assumption that preferences are less important for weak relationships than for strong relationships, we hypothesized that the stimulating or constraining effects of social contexts on similarity in personal relationships are larger for friendships than for partnerships, and larger for acquaintanceships than for friendships. Indeed, we found that the level of similarity is generally higher for relationships with a partner than for relationships with friends, and least similar for relationships with acquaintances. Taking that into account, the context in

which associates got to know each other affected similarity rather consistently across types of relationships: Similarity with regard to level of education, sex, and religion is not differently affected by social contexts across partnerships, friendships, and acquaintanceships. Only with respect to age similarity, the effect of social context on similarity in personal relationships is larger for friendships and acquaintanceships than for partnerships.

In sum, Chapters 2 and 3 both revealed that people's personal networks reflect the social composition of the contexts which people enter during their daily lives. More importantly, Chapter 3 showed that, while intimate associates are generally more similar to each other on sociodemographic dimensions than are more superficial associates, social contexts affect the level of similarity across different types of personal relationships predominantly in a consistent manner. This finding strongly supports the argument that meeting opportunities have a robust effect on the social composition of people's personal networks.

#### *7.2.2 Social contexts and the interplay between choice and constraints*

In Chapter 2, we specifically examined the interplay between the effects of choice and constraints, by focusing on how three characteristics of social contexts in which people get to know their core discussion network members affect similarity in these relationships. Based on a) the specific social composition of a context, b) whether interactions with specific others in a context are enforced, and c) the amount of time people generally spend in a context, we hypothesized how various social contexts affect similarity in core discussion relationships.

The results confirmed the hypothesis that the social composition of the context a person draws confidants from affects the social composition of the resulting network, in particular if the context takes much of a person's time and if interactions within the context are institutionally regulated or enforced. For example, at school and at work, people get to know confidants who are most similar to themselves in level of education. Both social contexts bring together sets of people who are disproportionately homogeneous in terms of level of education. In addition, students spend a great part of their time at school, adults spend a great share of their time at work, and interactions at work are often institutionally regulated according to the division of work. Together, these context characteristics make that relationships that emerge in these contexts are likely to be similar in level of education. Another example: In the family context, one often meets people of different ages. Because of the 'enforced interactions' in this context, which means that there are often (strong) expectations with respect to with whom one needs to interact, relationships with confidants whom one got to know with or via family are most dissimilar with regard to age.

The findings, however, also confirmed that if the social composition of the context does not constrain one's preference for associating with a similar or dissimilar other, and if

regulations with regard to with whom one has to interact are absent, people can actually realize their preferences for similar others to a greater extent. For example, although neighborhoods and school classes are generally not segregated with regard to people's sex, we found that confidants whom the respondent got to know in one of these contexts were most likely to be of the same sex. We explained these results by a lack of regulated or enforced interactions with specific others in these two contexts, such that people are free to select a same-sex neighbor or classmate as confidant.

### *7.2.3 A path-dependent use of social contexts*

In Chapter 2, we introduced another way in which the selection of network members is constrained by social contexts. If a person has multiple confidants – which is the case for about 60 percent of the population – the context from which a subsequent confidant is drawn depends on the context from which her/his first confidant was drawn. In other words, the likelihood that one gets to know a subsequent confidant in a particular context is substantially greater if the first confidant was drawn from the same context.

This path-dependent use of social contexts was demonstrated again in Chapter 6. The likelihood to meet a new network member in a certain social context depends on the social contexts in which a person continues to meet her/his existing network members. More specifically, meeting a new network member in a certain context is more likely if one already met an existing network member in that particular context, but especially if that is a context in which one met one of the network members who is still part of the network after seven years.

Furthermore, as shown in Chapter 2, in order to end up with more similarity in the network, one is generally better off after switching to another social context instead of drawing subsequent confidants from the first used context. Therefore, this path-dependency implies that the composition of a person's network is affected by the social composition of the contexts from which one draws associates, and that especially the context in which one got to know the first network member has a major effect on the composition of the network. Assuming that high levels of similarity in personal networks are preferred, this path-dependent use of social contexts is an additional constraint with regard to personal network composition.

### *7.2.4 Overlapping social contexts*

The extent to which social contexts overlap and its consequences for personal relationships and networks were examined in two different ways in Chapters 4 and 5. In Chapter 4, I studied context overlap by looking whether people meet each of their network members in a single social context, or that each of the network members is met in multiple contexts. The results indicated that this type of context overlap is not rare nowadays: people meet their informal network members in two social contexts on average. The great majority of

these overlaps among contexts, however, are overlaps with people's homes, which means that many network members are met at home in combination with another context.

Next, in accordance with the hypothesis, I showed that multiplexity<sup>1</sup> in personal relationships is positively affected by the number of contexts people share with each other, even if other relevant relational characteristics, such as contact frequency and type of relationship, are taken into account. More specifically, especially sharing multiple private contexts (i.e., meeting at home, with/via family, or with/via a friend) is positively associated with the multiplexity of personal relationships.

The findings in Chapter 4, however, not only presented the structure of overlaps among social contexts, but also provided an insight into the social structure of a present-day modern Western society (cf. McPherson et al. 2001). The structure of overlaps among contexts is not fully in line with the argument that people live together with one set of people, work with a second set, conduct sports with a third set, and go out with a fourth set of people (as put forward by, amongst others, Fischer et al. (1977) and Coleman (1990)). I showed that public contexts hardly overlap each other, but also that there is still overlap among public contexts and private contexts. This means that 'public' and 'private' are not two worlds apart, but that 'the public world' itself is divided in separate segments with strict boundaries.

In Chapter 5 we studied context overlap in another way, by focusing on the extent to which triads of personal network members have a shared context. This means that we studied whether people meet each of their network members in a different social context, or that they meet multiple network members in the same social context. The results revealed that the contexts in which people got to know their core discussion network members only overlap to a small extent, while many more network members are currently met in the same context. Only one out of three triads have an initially shared context, while about 80 percent have a currently shared context.<sup>2</sup> Moreover, if they do have a shared context, this is often respondent's home.

Next, we examined the effects of shared social contexts on transitivity in core discussion networks, i.e., the extent to which a person's network members also mutually know each other well. We found strong confirmation for the hypothesis that transitivity is likely for triads in which people share the same context with both confidants and unlikely if they have no shared context. Transitivity is more likely if the relationships with both of one's confidants emerged in the same social context and in particular if one currently shares the same context with both confidants. Because people have less control over the relationships between their network members than over their own relationships, these

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<sup>1</sup> Multiplexity was measured as the number of exchange contents in a relationship, i.e. the number of name-generating questions at which a network member was mentioned by the respondent.

<sup>2</sup> A triad has an 'initially shared context' if the respondent got to know both network members in the same context, whereas a triad has a 'currently shared context' if the respondent currently meets both network members in the same social context.

findings provide strong support for the argument that the structure of personal networks is affected by meeting opportunities.

Especially when relationships involve a high proportion of time, effort, and emotion – and relationships with confidants generally do – people may create transitivity over and above the transitivity induced by initially shared contexts, by creating or finding a context in which they can meet their network members at the same time (Feld 1981:1022-23; cf. Granovetter 1973). We showed that it happens much more often that people currently meet both confidants in the same context than that they got to know both confidants in the same context, because many people currently meet their confidants at home. Combining this finding with the strong effect of currently meeting both confidants at home on transitivity, we conclude that people do create transitivity over and above transitivity induced by initially shared contexts, by inviting their network members at home.

#### *7.2.5 Social contexts and changes in personal networks*

In Chapter 6, we analyzed the effects of the social contexts in which people met their network members in 1999/2000 on the likelihood of relationship continuation through 2007. While controlling for the occurrence of important life events, type of relationship and various respondent characteristics, we found that social contexts do affect relationship continuation. Most unlikely to stay in the network over seven years are network members who are met at work or at one of the ‘other’ contexts (i.e., church, vacation, party, and elsewhere). Of all important life events we considered, only starting and ending a marriage affected the likelihood that relationships continued after seven years (cf. Wellman et al. 1997).

Findings on the reasons for relationship discontinuation supported our argument that meeting opportunities are an important condition for the stability of personal relationships. For 46 percent of the discontinued relationships, the reason why these network members had become less important in the network, or why they had completely left the network, was a lack of meeting opportunities (such as not sharing the same context anymore, too large distances, and meeting less frequently). Specifically, relationships in the work and neighborhood context are most sensitive to leaving the context. In contrast, only 12 percent were discontinued because of a relationship change, such as a divorce, or because they had a quarrel.

Next, although about half of the new relationships are drawn from contexts in which none of the existing network members are met, we showed that the likelihood to meet a new network member in a certain context is dependent on the contexts in which one currently meets her/his existing network members. More specifically, meeting a new network member in a certain context is more likely if one meets an existing network member in that particular context, but especially if the respondent used that context to meet one of the network members who is still part of her/his network after seven years.

### **7.3 Size and composition of, and changes in personal networks**

In Chapter 2, we showed that the Dutch, on average, reported having 2.4 persons with whom they recently discussed important personal matters. Surprisingly many respondents had no confidant or only one (13, respectively 27 percent). Comparing the core discussion network size of the Dutch in 1999/2000 with that of the Americans in 1985 (see Marsden 1987), it seems that Dutch people have fewer confidants than Americans, who reported having three core discussion network members. Furthermore, among the Dutch, there are more people who have none or just one confidant (13 and 27 percent for the Dutch, respectively, compared to 9 and 15 percent for the Americans).

We proposed a number of possible reasons for these differences in Chapter 2. First, there is a difference between the formulations of the name-generating questions used in the surveys. Marsden (1987) used data from the General Social Survey 1985, which asked for those with whom the respondent discussed ‘important matters’, whereas we asked our respondents for names of people with whom they discussed ‘important personal matters’. This emphasis on the inner core of those others whom one really trusts (cf. Burt 1984) can result in smaller delineated networks. Second, unlike the GSS 1985, our question regarding discussing important personal matters was just one of a number of name-generating questions in the survey. Asking multiple name-generating questions might negatively affect the number of persons one mentions at each of these questions. Third, there might be a cultural difference between Americans and the Dutch, rather than in the way of measuring core relationships. Perhaps forming intimate relationships is easier for Americans or perhaps Americans discuss important (personal) matters more easily with their network members than Dutch people do (cf. Fischer 1982b). Fourth, we pointed at the fact that the GSS data which Marsden used were collected 15 years before we collected ours. McPherson et al. (2006) repeated Marsden’s 1987 analyses using data from the 2004 GSS and found that Americans’ core discussion network sizes had declined substantially in 19 years: The mean network size had decreased from 2.9 in 1985 to 2.1 in 2004, while the modal respondent reported having three confidants in 1985, but no confidant in 2004. Because the average Dutch core discussion network size of 2.4 persons in 2000 is between these two network sizes for the Americans, we suggested in Chapter 2 that the same process of network size decline might be taking place in the Netherlands.

In Chapter 5, we showed that in 2007 the Dutch, on average, again reported having 2.4 persons with whom they recently discussed important personal matters, while the modal respondent again reported having one confidant. This means that the average and modal number of confidants remained constant since 1999/2000.<sup>3</sup> These are interesting findings, not only in the light of the just mentioned research findings for Americans (McPherson et al. 2006), but also in the light of recent findings for Germans, as reported by Wöhler and

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<sup>3</sup> To be precise: the average core discussion network size was 2.37 in 1999/2000 and 2.40 in 2007.

Hinz (2007). In contrast to McPherson et al. (2006), Wöhler and Hinz (2007) showed that similar changes had not taken place in the core discussion networks of the Germans between 1988 and 2000. The Germans reported having 1.86 confidants in 1988 and 2.12 in 2000, while the modal number of confidants was one in both years (Wöhler and Hinz 2007). Comparing our findings with these two other studies indicates that, in contrast to the reported increased level of social isolation in America,<sup>4</sup> no such (further) decline in the size of core discussion networks has taken place in Germany, nor in The Netherlands.

Finally, in Chapter 6, we showed the relative stability of the size and general composition of people's personal networks, which consist of those with whom one discussed important personal matters during the past six months and those whom one would ask for help with an odd job in or around the house. Specifically, our data indicated a small increase in the average network size from 3.5 in 1999/2000 to 4.1 in 2007. In accordance with previous studies (McPherson et al. 2006; Wöhler and Hinz 2007), personal networks became somewhat more centered on the partner, relatives, and neighbors, instead of on friends.

The high degree of stability of these general network figures, however, disguises the many changes that take place in personal networks within seven years. Focusing on those with whom people discussed important personal matters during the past six months and those whom they would ask for help with an odd job in or around the house, we showed that only 30 percent of the initial network members still fulfill one of these network functions after seven years (cf. Shulman 1975; Wellman et al. 1997; Degenne and Lebeaux 2005). Together with 18 percent who stayed in the network, but fulfill another (mostly less important) function, only 48 percent stayed in the personal networks of the respondent concerned.

However, respondents did not lose sight of all who were not mentioned again as network members after seven years, for they reported to be still in touch with most of them. This finding indicates that changes in personal networks should be interpreted with caution, if one relies on information about networks that are delineated by one or two name-generating questions. Not being mentioned again as discussion partner and/or practical helper does not always mean that people lost sight of these network members. Moreover, a similar pattern might be found if we examine the true 'newness' of the network members who were mentioned as discussion partner or practical helper in 2007, but not in 1999/2000. Unfortunately, our dataset does not contain straightforward information about whether 'new' discussion partners and practical helpers were mentioned at one of the other

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<sup>4</sup> With regard to these findings, Claude S. Fischer (University of California, Berkeley, USA) presented a memo on his website on September 28, 2008. Part of the abstract of this memo reads: "In this memo, I present anomalies found in the 2004 GSS network item which strongly imply that this dramatic increase in apparent social isolation is an artifact. I speculate that the artifact may be the result of random error. With as yet no complete explanation for these anomalies, scholars at this time should draw no inference from this GSS question as to whether American social networks changed substantially from 1985 to 2004 – they probably did not – and should be cautious in using the 2004 network data."

name-generating questions in 1999/2000. Information about the duration of network relationships, however, indicated that the respondents got to know only a quarter of these new network members during the past seven years.

## 7.4 Suggestions for future research

Finally, the following three sections discuss some important issues with regard to which questions remained unanswered in, or arose while carrying out this research. These questions call for future research, which needs to be based on rich longitudinal datasets on personal networks. More specifically, such datasets need to include a) information about multiple types of relationships and activities, which means that multiple name-generating questions need to be used, b) information about meeting opportunities, which means that people need to be asked for the contexts they enter during their daily lives, dependent as well as independent of the fact that they meet a network member in that context, and c) information on changes in networks and social contexts over time.

### 7.4.1 Choices within constraints

In this research, we used a *choice-constraint approach*, stressing that personal networks are the result of individual choices made within the constraints of social contexts (cf. Fischer et al. 1977). We showed in various ways how people's choices to meet and engage in personal relationships are constrained by the social contexts which they enter during their daily lives.

With regard to the extent to which people can exert their preferences for network members who are like themselves on sociodemographic characteristics, we expected in Chapter 3 that preferences are more important for intimate relationships than for superficial relationships. Indeed, we found most similarity between partners, and least between acquaintances. Taking that into account, the context in which associates got to know each other affected similarity rather consistently across types of relationships.

These findings indicate that people use other ways to exert their preferences for specific types of associates. One way to do so could be that people draw personal network members from multiple contexts in order to find associates who match their preferences. To this, they might choose social contexts with an eye to the 'pool' of people they will meet there. However, the 'path-dependent' use of social contexts to meet network members (see Chapters 2 and 6) indicates that this choice is limited. Alternatively, for strong relationships, people might search longer or more thoroughly within a certain context to find a person who matches their preferences. Future research should therefore focus on the relative effects of choices and constraints on the composition and structure of personal networks.

#### 7.4.2 *The structure of context overlaps and the structure of networks*

Chapter 5 showed that certainly not all members of a person's core discussion network mutually know each other. About forty percent of all triads in core discussion networks – where each triad consists of a respondent and two confidants – is not transitive. In other words, if we take for granted that people have strong relationships with those whom they discuss their important personal matters with, this means that Granovetter's 'forbidden triads' actually do occur quite frequently (see Granovetter 1973). Next, we found strong confirmation for the argument that transitivity is more likely for triads in which people share the same context with both confidants than if they have no shared context.

If this is the case for the core of people's networks, which consist of those with whom they discuss important personal matters, this might even more strongly apply to the larger personal network with more superficial contacts. The lack of context overlap in modern societies and resulting lack of transitivity in personal networks may not only have important implications for the characteristics of people's networks as such, but can also have important consequences for individuals themselves. On the one hand, it can strengthen a person's personality (cf. Simmel [1922]1955), or liberate people from dominant pressures by a single group (cf. Blau 1994; Breiger 1990). On the other hand, being a member of multiple groups can also pull a person in different directions as a result of different values and norms in these groups (cf. Pescosolido and Rubin 2000; Krackhardt 1999). Further research needs to examine the consequences of a low level or even lack of context overlap – and the accompanying low level of transitivity in personal networks – for example, for the well-being of individual persons as well as for society as a whole (see also Völker, Flap, and Mollenhorst 2009).

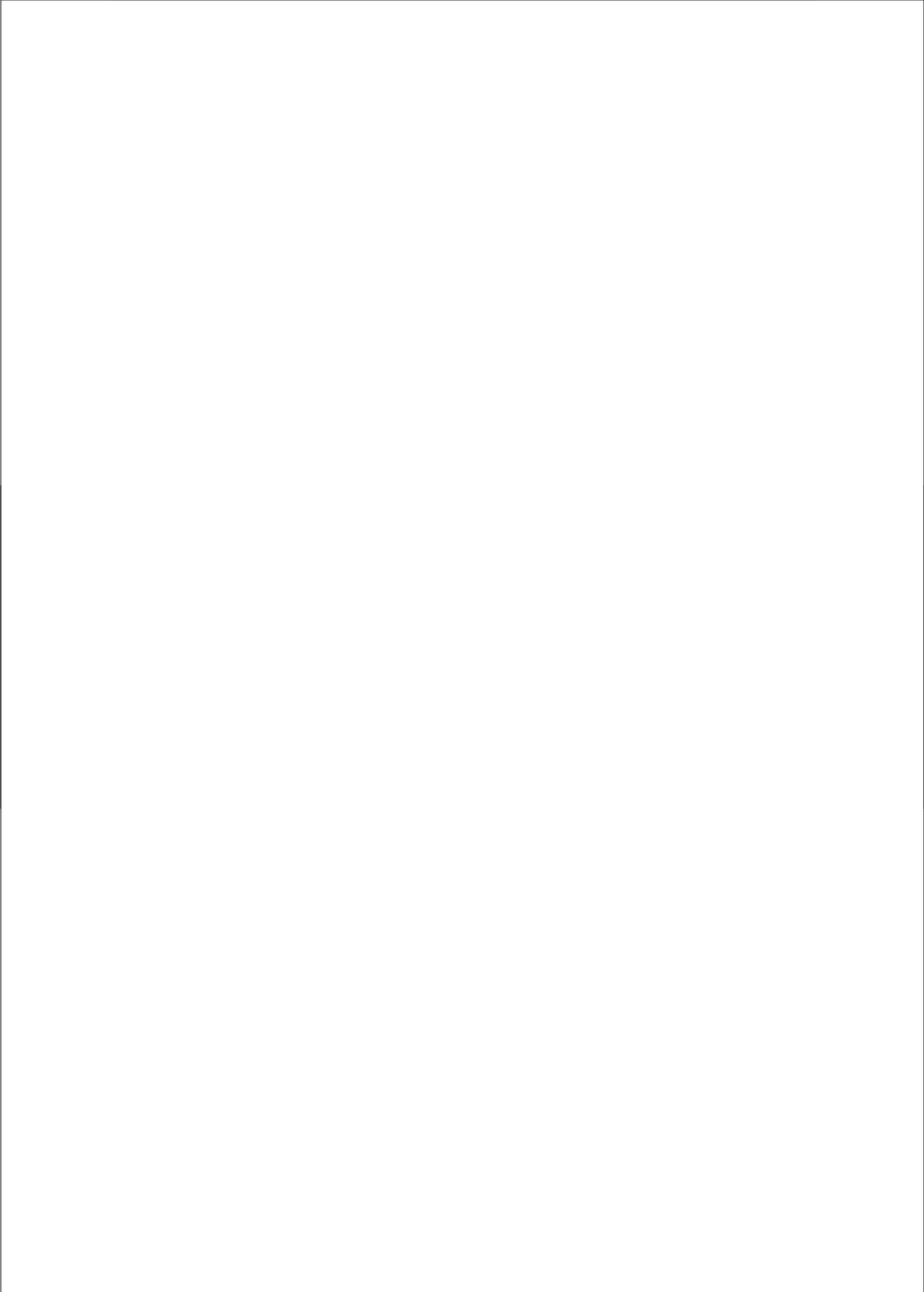
#### 7.4.3 *Changes in personal networks*

Chapter 6 provided important new insights in the changes in personal networks over seven years. These insights, however, bring forth new questions for future research. First, we showed that – while focusing on those with whom people discussed important personal matters during the past six months and those whom they would ask for help with an odd job in or around the house – only 30 percent of the initial network members still fulfill one of these network functions after seven years. Together with 18 percent who stayed in the network, but fulfill another (mostly less important) function, only 48 percent stayed in the personal networks of the respondent. Those who were not mentioned again as network members after seven years, however, did not all completely disappear from the respondent's network, for the majority was still in touch with each other. As already mentioned, these findings indicate that changes in personal networks should be interpreted with caution if one relies on information about networks which are delineated by one or two name-generating questions, because not being mentioned again as discussion partner and/or practical helper does not always mean that people lost sight of these network

members. In addition to this, it is an interesting question for future research, whether associates who disappeared from the networks return into the network at a later point in time (cf. Völker 1995; Van Busschbach 1996; Morgan et al. 1997).

Second, next to the effects of meeting in different social contexts on relationship continuation, as presented in Chapter 6, structural embeddedness might also play an important role for relationship continuity. As Martin and Yeung (2006) have shown, relationships are more likely to be maintained if they share the contact with a third person. With regard to this, Feld argued that “structural embeddedness presumably arises from sharing one or more foci of activity with one another, and thereby developing common relationships with others from those activities” (Feld 1997:92). In other words, relationships are more likely to be continued if the network member also knows other members of respondent’s network, which in turn will be much more likely if these two network members share the same social context(s) with the respondent concerned (cf. Feld 1981; Mollenhorst et al. 2008c). Disentangling the effects of these structural conditions is an important task for future research.

Finally, in accordance with findings in Chapter 2, results in Chapter 6 showed a path-dependent use of social contexts to meet network members. The likelihood to meet a new network member in a certain social context is higher if one also meets an existing network member in that context. About half of the new relationships, however, emerged in contexts in which none of the existing network members was met. Because our analyses were based on data about discussion partners and practical helpers, it is possible that relationships which we assigned to have emerged in ‘new’ contexts, actually emerged in a context in which the respondent met other network members with whom they have more superficial relationships. Moreover, it is also possible that these relationships emerged in a context the person concerned did enter previously, but from which he or she did not draw a network member before. Future research on the emergence of new personal relationships should therefore especially focus on the effects of meeting opportunities.



# **Samenvatting** (Summary in Dutch)

## Hoofdstuk 1      Inleiding

Sociologen betwisten traditiegetrouw dat persoonlijke netwerken vooral het resultaat zijn van persoonlijke voorkeuren van individuen voor bepaalde soorten netwerkleden. Sinds de jaren vijftig van de vorige eeuw beseffen zij dat, ongeacht iemands voorkeur, *ontmoetingsgelegenheden* van invloed zijn op het ontstaan van relaties, de samenstelling en structuur van netwerken, en op veranderingen in netwerken (zie bijv. Lazarsfeld en Merton 1954; Laumann 1966; Blau 1977; Fischer et al. 1977; Verbrugge 1977; Feld 1981; Fischer 1982a; Huckfeldt 1983; Blau en Schwartz 1984; Marsden 1990; McPherson en Smith-Lovin 1987; Blumstein en Kollock 1988; Völker en Flap 1997; Kalmijn 1998; Kalmijn en Flap 2001).

Met wie men werkt, met wie men vrije tijd doorbrengt, en zelfs met wie men trouwt, zijn dus niet enkel individuele keuzes, maar mede afhankelijk van condities buiten het individu. De sociale contexten waarin mensen zich in hun dagelijks leven begeven, zoals de organisatie waarvoor zij werken, de familie waartoe ze behoren, de buurt waarin ze wonen, de clubs en verenigingen waarvan zij lid zijn, enzovoorts, leveren het aanbod van mensen waaruit zij de leden van hun persoonlijke netwerk kunnen selecteren. En omdat men in ieder van deze contexten in aanraking komt met een groep mensen met specifieke kenmerken, bepalen deze contexten de kans dat men bepaalde typen personen ontmoet en beïnvloeden zij daarmee de relaties die zullen ontstaan.

Dit boek waarin vijf onderzoeksartikelen zijn gebundeld, getiteld *Netwerken in Contexten. Hoe ontmoetingsgelegenheden persoonlijke relaties beïnvloeden*, richt zich op de sociale contexten waarin mensen elkaar ontmoeten en persoonlijke relaties aangaan en op de consequenties van deze ontmoetingsgelegenheden voor de gevormde relaties, voor netwerkstructuren en voor veranderingen in persoonlijke netwerken. In navolging van Fischer (1977, 1982a) maken we gebruik van een zogenoemde ‘*choice-constraint*’ benadering, welke benadrukt dat persoonlijke netwerken een gevolg zijn van individuele keuzes die gemaakt worden binnen de beperkingen van sociale contexten. Het is niet onze ambitie te achterhalen in hoeverre persoonlijke netwerken door preferenties of door beperkingen worden bepaald. In deze studie combineren we de vraagbenadering en de aanbodbenadering en onderzoeken we op welke manieren ontmoetingen in verschillende sociale contexten van invloed zijn op de kenmerken van persoonlijke relaties en netwerken. We maken daarbij gebruik van algemene aannames over persoonlijke voorkeuren, bijvoorbeeld voor netwerkleden met dezelfde persoonlijke kenmerken. De overkoepelende onderzoeksvraag luidt daarom:

*Wat is de invloed van sociale contexten op persoonlijke relaties en netwerken?*

In de vijf onderzoeksartikelen onderzoeken we achtereenvolgens de invloed van sociale contexten op a) de samenstelling van persoonlijke netwerken (hoofdstuk 2 en 3), b) kenmerken van relaties en de structuur van persoonlijke netwerken (hoofdstuk 4 en 5), en c)

veranderingen in persoonlijke netwerken over een periode van zeven jaar (hoofdstuk 6). Dit betekent dat we de invloed van sociale contexten voor verschillende kenmerken van persoonlijke relaties en netwerken onderzoeken. Bovendien onderzoeken we verschillende delen van de persoonlijke netwerken; Waar we in een aantal artikelen de kern van de netwerken met de meest intieme relaties onderzoeken (bijv. hoofdstuk 2 en 5), kijken we in andere artikelen juist naar de bredere netwerken van personen met wie men een meer oppervlakkige relatie onderhoudt (bijv. hoofdstuk 3 en 4). Op deze wijze worden contexteffecten onderzocht voor relaties van verschillende sterkte.

De volgende paragrafen geven een korte beschrijving van de totstandkoming en de inhoud van de dataverzameling die we voor dit onderzoek hebben gebruikt. Vervolgens vatten we per hoofdstuk de belangrijkste vragen en bevindingen met betrekking tot de hoofdvraag van deze dissertatie samen. Ten slotte beschrijven we een aantal belangrijke, maar meer algemene bevindingen ten aanzien van persoonlijke netwerken en geven suggesties voor toekomstig onderzoek.

#### *Het onderzoek naar de sociale netwerken van Nederlanders*

Alle toetsingen in dit onderzoek zijn gebaseerd op gegevens die zijn voortgekomen uit *Het onderzoek naar de sociale netwerken van Nederlanders*. De eerste interviewronde van dit onderzoek vond plaats in 1999/2000 (zie Völker en Flap 2002) en leverde informatie op van 1007 personen, welke representatief zijn voor de Nederlandse populatie in de leeftijd van 18 tot 65 jaar. Om deze gegevens te verzamelen werd een gestratificeerde aselechte steekproef getrokken van 40 van de bij benadering 500 Nederlandse gemeentes (verdeeld over de verschillende provincies en regio's), waarbij rekening werd gehouden met de mate van stedelijkheid en het aantal inwoners van deze gemeentes. In elke gemeente werden aselekt vier buurten geselecteerd aan de hand van het postcodesysteem. Vervolgens werden per buurt 25 adressen geselecteerd en werd op acht van deze adressen de bewoner geïnterviewd die tussen de 18 en 65 jaar oud was en het eerst jarig zou zijn. Met een responspercentage van 40 procent leverde dit informatie op van 1007 respondenten in 161 verschillende Nederlandse buurten.

Zeven jaar na het eerste interview (dat wil zeggen in 2007) achterhaalden we de adressen van 863 van de oorspronkelijke respondenten. Zeventig procent van hen was bereid om opnieuw deel te nemen aan het onderzoek. Dit resulteerde in een panel dataverzameling met informatie van 604 personen in Nederland in de leeftijd van 26 tot 72 jaar in 2007 (zie Völker et al. 2007).

Uit een vergelijking van onze gegevens met nationale statistieken over een aantal sociaaldemografische kenmerken is gebleken dat mannen, gehuwden, ouderen en hoger opgeleiden iets zijn oververtegenwoordigd. Bovendien werden bij de steekproeftrekking disproportioneel meer mensen met een betaalde baan geselecteerd. Desalniettemin gebruiken we de ongewogen gegevens van alle 1007, respectievelijk 604 respondenten,

omdat a) Van der Gaag (2005) aan de hand van de gegevens van de eerste interviewronde heeft laten zien dat verschillende netwerkkenmerken slechts in beperkte mate veranderen als men een gewogen in plaats van een ongewogen steekproef gebruikt, en b) omdat we waar mogelijk in onze analyses controleren voor geslacht, leeftijd, huwelijkse staat, opleidingsniveau en het hebben van een betaalde baan.

#### *Persoonlijke netwerken in kaart brengen*

In beide interviews werd de respondenten gevraagd naar verschillende persoonlijke relaties, waarbij gebruik werd gemaakt van dertien ‘naamgenererende’ vragen (vgl. Fischer 1982a). Een van deze vragen luidt: *Het leven draait meestal niet alleen om uitgaan en gezelligheid. Iedereen heeft weleens iemand nodig om belangrijke zaken te bespreken. Met wie heeft u in de afgelopen zes maanden belangrijke persoonlijke zaken besproken?* (vgl. Burt 1984; Marsden 1987; Bailey en Marsden 1999). Andere voorbeelden van naamgenererende vragen zijn: *Als u thuis met een klus bezig bent waarbij u iemand nodig heeft om een handje te helpen, bijvoorbeeld om meubels te dragen of om een ladder vast te houden, wie vraagt u dan om hulp?* en *Veel mensen gaan in hun vrije tijd weleens bij andere mensen op bezoek. Bij wie gaat u wel eens op bezoek?* De complete lijst met naamgenererende vragen zoals ze werden gebruikt in de beide interviewrondes zijn weergegeven in Appendix A (vertaald naar Engels), inclusief het maximum aantal personen dat genoemd mocht worden bij de beantwoording van elk van de vragen.

#### *De meting van sociale contexten*

Na de namen van de netwerkleiden te hebben verzameld, werden verschillende ‘naaminterpreterende’ vragen gesteld om informatie te verkrijgen over de netwerkleiden en de relatie tussen de respondent en de netwerkleiden. Zo werd gevraagd naar a) verschillende sociaaldemografische kernmerken van de netwerkleiden, b) het type en de sterkte van de relatie, en c) de mate waarin de netwerkleiden elkaar onderling kennen.

De voor dit onderzoek belangrijkste naaminterpreterende vraag is de vraag naar de sociale contexten waarin iemand zijn of haar persoonlijke relaties ontmoet. Om vast te stellen in welke sociale context men elkaar heeft leren kennen stelden we voor ieder genoemd netwerklid de vraag: *Waar, bij welke gelegenheid, heeft u deze persoon leren kennen?* En op soortgelijke wijze voor de context waarin men elkaar ten tijde van het interview ontmoette: *En waar, bij welke gelegenheid, ontmoet u deze persoon tegenwoordig?*

Bij de beantwoording van deze beide vragen konden de respondenten kiezen uit de volgende antwoordcategorieën<sup>1</sup>:

- in de buurt
- bij/via familie
- tijdens de opleiding
- op het werk
- bij een club of vereniging (bij het tweede interview opgesplitst in 'sport club', 'vrijwilligersorganisatie' en 'andere club of vereniging')
- bij/via een vriend
- in een openbare uitgaansgelegenheid
- bij de respondent thuis
- bij het netwerklid thuis
- in de kerk
- op vakantie
- op een feestje
- op het internet
- ergens anders

Deze meting is naar onze mening een betere meting van sociale contexten dan de metingen zoals die werden toegepast in eerdere onderzoeken naar de invloed van sociale contexten op persoonlijke relaties en netwerken. Zo hebben Fischer (1982a) en Marsden (1990) contexten indirect gemeten als rolrelaties, welke de verschillende manieren aangeven waarop de respondent en zijn of haar netwerkleden met elkaar verbonden zijn (bijvoorbeeld als vriend, familielid, collega, buurman, enzovoorts). De antwoorden op de vraag naar rolrelaties zijn een aanwijzing voor de contexten waarin relaties zijn ontstaan (vgl. Marsden 1990:399). In onze studie hebben we contexten op directe wijze gemeten door de respondenten rechttoe rechtaan te vragen naar de sociale contexten waarin men de netwerkleden leerde kennen en tegenwoordig ontmoet. Deze meting is een verbetering van voorgaande metingen omdat de 'focus van de activiteit' (zie Feld 1981) waaromheen relaties ontstaan en worden onderhouden meer accuraat wordt vastgesteld indien de respondenten wordt gevraagd naar de sociale contexten waarin men elkaar ontmoet dan indien gevraagd wordt naar het type relatie dat men met elkaar heeft. Bovendien is het goed mogelijk dat een netwerklid dat bijvoorbeeld alleen genoemd wordt als familielid of als vriend wel meerdere sociale contexten met de betreffende respondent deelt.

## **Hoofdstuk 2                    Sociale contexten en gelijkheid in relaties voor persoonlijke gesprekken**

Eerdere studies naar persoonlijke relaties lieten zien dat, wat betreft de sociaaldemografische kenmerken van haar leden, persoonlijke netwerken disproportioneel homogeen zijn samengesteld. Mensen zijn geneigd om te gaan met mensen met een gelijke levensstijl en gelijke sociaaldemografische en sociaaleconomische kenmerken (Laumann 1966; Lazarsfeld en Merton 1954; zie voor een overzicht McPherson et al. 2001). Vanuit

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<sup>1</sup> Tijdens het eerste interview konden de respondenten slechts één context per netwerklid aangeven. Hoewel we aannemen dat respondenten daarom de meest belangrijke context noemden kan dit geleid hebben tot een onderschatting van de invloed van het ontmoeten in de verschillende contexten op onze afhankelijke variabelen. Tijdens het tweede interview konden de respondenten tot drie contexten per netwerklid noemen.

psychologisch perspectief wordt deze geneigdheid gezien als aantrekkingskracht, omdat gelijke interesses en houdingen ervoor zorgen dat een relatie gemakkelijker kan worden onderhouden, plezieriger is en ook emotioneel waardevoller (zie Huston en Levinger 1978 voor een overzicht). Sociologische studies echter richten zich steeds meer op een aanbodverklaring: veel sociale contexten waarin mensen anderen ontmoeten zijn homogeen samengesteld ten aanzien van sociaaldemografische kenmerken, zoals leeftijd, geslacht en opleidingsniveau, wat resulteert in een aanzienlijke basishomogeniteit in persoonlijke netwerken (McPherson et al. 2001; zie ook Huckfeldt 1983 en McPherson en Smith-Lovin 1987).

In hoofdstuk 2 combineren we de vraagbenadering en de aanbodbenadering in een ‘choice-constraint’ benadering, welke benadrukt dat persoonlijke netwerken een resultaat zijn van individuele keuzes die gemaakt worden binnen contextuele beperkingen (vgl. Fischer 1977, 1982a). In dit hoofdstuk onderzoeken we hoe de sociaaldemografische samenstelling van de *sociale contexten* waarin mensen elkaar hebben leren kennen de samenstelling van persoonlijke netwerken beïnvloedt. We richten ons daarbij op de *gelijkheid* tussen mensen en de leden van hun persoonlijke netwerk waarmee zij belangrijke persoonlijke zaken bespreken,<sup>2</sup> waarbij we gelijkheid in relaties meten aan de hand van leeftijd, geslacht, opleidingsniveau en religie. Gebaseerd op drie kenmerken van sociale contexten – a) de sociale samenstelling van een context, b) de mate waarin interacties in een context gedwongen of gereguleerd zijn, en c) de hoeveelheid tijd die mensen in een context doorbrengen – formuleren we hypothesen over de invloed van sociale contexten op gelijkheid in persoonlijke relaties. Daarnaast onderzoeken we in hoeverre een padafhankelijk gebruik van sociale contexten – dat is dat mensen een grotere kans hebben om meerdere netwerkliden uit dezelfde context te halen – een extra beperking is voor de samenstelling van persoonlijke netwerken. We richten ons in dit hoofdstuk op relaties met discussiepartners, omdat we veronderstellen dat persoonlijke voorkeuren voor soortgelijke netwerkliden in het bijzonder van belang zijn wanneer men zijn of haar meest intieme netwerkliden selecteert. Indien we dan aantonen dat de sociale context waarin discussiepartners elkaar hebben leren kennen van invloed is op de mate van gelijkheid in hun relatie, hebben we een sterke ondersteuning voor de ‘choice-constraint’ benadering.

In overeenstemming met eerder onderzoek geven de resultaten in hoofdstuk 2 aan dat er, met betrekking tot leeftijd, opleidingsniveau en geslacht, sprake is van meer gelijkheid tussen mensen en hun discussiepartners dan tussen twee willekeurig gekozen personen (zie bijv. Louch 2000; Marsden 1987, 1988; McPherson et al. 2006; Verbrugge 1977). Vervolgens blijkt dat de sociale samenstelling van de contexten waarin iemand zijn of haar netwerkliden heeft leren kennen van invloed is op de sociale samenstelling van het persoonlijke netwerk, in het bijzonder indien de context veel tijd van iemand vraagt en indien interacties in de context gereguleerd of gedwongen zijn. Zo lijken de

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<sup>2</sup> Hierna te noemen ‘discussiepartners’.

discussiepartners die iemand op school of op het werk heeft leren kennen het meest op hem of haar wat betreft opleidingsniveau, omdat beide contexten groepen mensen samenbrengen die disproportioneel homogeen zijn samengesteld wat betreft opleidingsniveau. Bovendien brengen scholieren veel tijd door op school, brengen volwassenen een groot deel van hun tijd door op het werk en zorgt een werkverdeling er veelal voor dat voorgeschreven is met wie men op het werk geacht wordt samen te werken. Deze contextkenmerken zorgen er samen voor dat relaties die in deze contexten ontstaan een hoge mate van gelijkheid vertonen wat betreft opleidingsniveau. Een ander voorbeeld is de familie context, waarin men vaak mensen ontmoet van verschillende leeftijden. Omdat er in deze context vaak (sterke) verwachtingspatronen bestaan voor wie met wie omgaat, zijn relaties met discussiepartners die men in de familie context heeft leren kennen het meest ongelijk wat betreft leeftijd.

Indien de sociale samenstelling van een context iemands voorkeur om met gelijken om te gaan niet beperkt, en indien er geen regels zijn voor met wie men wordt verwacht om te gaan, kunnen mensen hun voorkeuren voor gelijken in grotere mate verwezenlijken. Buurten en scholen zijn bijvoorbeeld doorgaans niet gesegregeerd naar geslacht. Discussiepartners die men heeft leren kennen in deze contexten zijn echter het vaakst van hetzelfde geslacht. Een verklaring voor deze resultaten is het ontbreken van voorgeschreven interacties in deze contexten, zodat mensen de vrijheid hebben om burens of klasgenoten als discussiepartners te kiezen die van hetzelfde geslacht zijn.

Bovendien laten we zien dat indien iemand meerdere discussiepartners heeft – wat het geval is voor ongeveer 60 procent van de populatie – de kans dat men een volgende discussiepartner in een bepaalde context leert kennen substantieel groter is indien men de eerste discussiepartner in dezelfde context heeft leren kennen. Deze padafhankelijkheid in het gebruik van sociale contexten is een extra beperking voor de samenstelling van het persoonlijke netwerk. Uit de analyses komt namelijk naar voren dat – wanneer we aannemen dat mensen netwerkliden prefereren die zoveel mogelijk op hen lijken – men volgende discussiepartners beter in een andere context kan leren kennen dan in de context waar men het eerste netwerklid heeft leren kennen. Dit betekent dat de sociale samenstelling van het persoonlijke netwerk wordt beïnvloed door de samenstelling van de contexten waarin iemand zijn of haar netwerkliden leert kennen, waarbij de context waarin men de het eerste netwerklid leert kennen een belangrijke stempel drukt op de uiteindelijke samenstelling van het netwerk.

### **Hoofdstuk 3                    Sociale contexten en gelijkheid in relaties van verschillende sterkte**

Hoewel de invloed van sociale contexten op persoonlijke netwerken ook in eerder onderzoek is aangetoond, ging dit eerdere onderzoek niet in op de differentiële invloed van sociale contexten op verschillende typen persoonlijke relaties. In hoofdstuk 3 onderzoeken

we in hoeverre de invloed van sociale contexten op gelijkheid in persoonlijke relaties verschillend is voor *relaties van verschillende sterkte*. Onze verwachting daarbij is dat een voorkeur voor netwerkliden met specifieke kenmerken niet voor elk type relatie even belangrijk is. Bij het ene type relatie accepteert men alleen netwerkliden die aan de voorkeuren voldoen, terwijl voor andere typen relaties voorkeuren minder van belang zijn of zelfs in het geheel niet bestaan. Bij de keuze met wie men een sterke relatie onderhoudt, bijvoorbeeld de huwelijkspartner, zijn de kenmerken van deze persoon veel belangrijker dan bij het selecteren van vrienden of kennissen. Bovendien zal men bij sterke relaties niet snel geneigd zijn het aanbod in een bepaalde context te accepteren indien de mensen in die context niet geheel aan de voorkeuren voldoen, maar zal men ook verder kijken in andere contexten. Vrienden of kennissen wordt men echter gemakkelijker met personen die niet op alle sociale dimensies voldoen aan de voorkeuren. Men zal daarom eerder geneigd zijn het aanbod van een bepaalde context te accepteren wanneer het gaat om het aangaan van een relatie als vriend of kennis. Dit heeft tot gevolg dat de invloed van sociale contexten sterker zal zijn voor intieme relaties dan voor zwakke relaties.

Om de differentiële invloed van sociale contexten op gelijkheid in relaties van verschillende sterkte te onderzoeken kijken we in dit hoofdstuk naar relaties met de partner, vrienden en kennissen. Onze verwachting is dat de stimulerende, danwel beperkende invloed van sociale contexten op gelijkheid in persoonlijke relaties groter is op vriendschapsrelaties dan op partnerrelaties en het grootst op relaties met kennissen. Uit de resultaten blijkt dat er inderdaad sprake is van meer gelijkheid in relaties met partners dan in relaties met vrienden en het minst in relaties met kennissen. Daarmee rekeninghoudend vinden we echter dat de invloed van de sociale context waarin men zijn of haar netwerkliden heeft leren kennen gelijk is voor de verschillende typen relaties: de invloed van de sociale contexten op gelijkheid wat betreft opleidingsniveau, geslacht en religie verschilt niet voor relaties met partners, vrienden en kennissen. Alleen wat betreft leeftijdsgelijkheid is de invloed van de sociale context op gelijkheid groter voor relaties met vrienden en kennissen dan voor partnerrelaties.

Hoofdstuk 2 en 3 tonen beide dat persoonlijke netwerken de sociale samenstelling weerspiegelen van de contexten waarin mensen zich in het dagelijkse leven begeven. Daarmee vormen zij een sterke casus voor de 'choice-constraint' verklaring van persoonlijke netwerken. In het bijzonder laat hoofdstuk 3 zien dat de invloed van sociale contexten op gelijkheid in persoonlijke relaties gelijk is voor relaties van verschillende sterkte. Deze bevinding bekrachtigt het argument dat ontmoetingsgelegenheden een robuuste invloed hebben op de sociale samenstelling van persoonlijke netwerken.

## Hoofdstuk 4 Overlappende contexten en multifunctionaliteit van persoonlijke relaties

Verskillende sociologen hebben gesteld dat de grote veranderingen die zich hebben voorgedaan in de structuur van moderne westerse samenlevingen tot gevolg hebben gehad dat men tegenwoordig ieder netwerklid in één bepaalde sociale context ontmoet (bijv. Fischer et al. 1977; Coleman 1990). Dit betekent dat men werkt met een groep mensen, samenleeft met een andere groep en de vrije tijd doorbrengt met nog weer andere mensen. In het bijzonder wordt aangenomen dat publieke contexten (zoals het werk, de buurt, clubs en verenigingen) gescheiden zijn van privé contexten (zoals thuis, bij familie en bij vrienden). Deze ‘ontbundeling’ van, of het gebrek aan overlappingsen tussen sociale contexten heeft geresulteerd in een afgenomen multifunctionaliteit van persoonlijke relaties (zie bijv. Stein 1960; Fischer et al. 1977; Coleman 1990; Wellman 1999; Pescosolido en Rubin 2000).

In hoofdstuk 4 onderzoek ik a) de *overlappingsen tussen sociale contexten* waarin mensen netwerkliden ontmoeten die hen gezelschap houden en emotionele en praktische hulp bieden<sup>3</sup> en b) hoe overlappende contexten de *multifunctionaliteit*<sup>4</sup> van persoonlijke relaties beïnvloeden. Hierbij gaat de aandacht in het bijzonder uit naar de invloed van het delen van meerdere sociale contexten met een netwerklid op het aantal activiteiten dat iemand met dit netwerklid onderneemt.

De resultaten geven aan dat mensen de leden van hun informele netwerk gemiddeld in twee verschillende sociale contexten ontmoeten. De overgrote meerderheid van deze overlappingsen tussen contexten betreft echter overlappingsen met thuis, wat betekent dat men veel leden van het informele netwerk thuis ontmoet, in combinatie met een andere context. Vervolgens laat ik zien dat de multifunctionaliteit van persoonlijke relaties positief wordt beïnvloed door het aantal contexten dat iemand met deze persoon deelt, ook indien rekening wordt gehouden met andere relevante relatiekenmerken, zoals contactfrequentie en relatietype. Met name het delen van meerdere privé contexten (zoals thuis, bij familie of bij vrienden) hangt positief samen met de multifunctionaliteit van informele persoonlijke relaties.

De bevindingen in hoofdstuk 4 geven niet alleen de structuur weer van de overlappingsen tussen sociale contexten, maar ze geven ook inzicht in de structuur van een moderne westerse samenleving (vgl. McPherson et al. 2001). De getoonde structuur van overlappingsen tussen sociale contexten is niet geheel in overeenstemming met het argument dat mensen tegenwoordig met één groep samenleven, met een tweede groep werken, met een derde groep sporten en met weer een andere groep uitgaan (vgl. Fischer et al. 1977; Coleman 1990). Dit hoofdstuk laat zien dat publieke contexten elkaar onderling weinig

<sup>3</sup> Hierna te noemen ‘leden van het informele netwerk’.

<sup>4</sup> Multifunctionaliteit is gemeten als het aantal activiteiten dat men met een netwerklid onderneemt.

overlappen, maar dat er wel overlappingsen zijn tussen publieke contexten en privé contexten. Dit geeft aan dat ‘publiek’ en ‘privé’ geen twee gescheiden werelden zijn, maar dat de ‘publieke wereld’ zelf verdeeld is in gescheiden segmenten met strikte grenzen.

## **Hoofdstuk 5            Sociale contexten en transitieve triades in persoonlijke netwerken**

Terwijl hoofdstuk 4 een beschrijving geeft van de structuur van overlappingsen tussen de sociale contexten waarin mensen hun netwerkleden ontmoeten, richten we ons in hoofdstuk 5 op de structuur van persoonlijke netwerken door te kijken naar de mate van *transitiviteit van triades* in netwerken van discussiepartners.<sup>5</sup> We onderzoeken de invloed van de sociale contexten waarin mensen hun discussiepartners hebben leren kennen op de mate waarin deze netwerkleden elkaar onderling ook goed kennen. Omdat mensen hun discussiepartners goed kennen spreken we hierbij van een transitieve triade indien twee van iemands netwerkleden elkaar onderling ook goed kennen. Onze hypothesen zijn gebaseerd op het idee dat sociale contexten niet alleen de gelegenheden bieden voor mensen om hun netwerkleden te ontmoeten, maar ook van invloed zijn op de mate waarin die netwerkleden elkaar onderling kennen. Vanuit dit perspectief verwachten we minder transitiviteit indien iemand zijn of haar netwerkleden elk in verschillende contexten ontmoet en meer transitiviteit indien iemand zijn of haar netwerkleden in dezelfde context ontmoet. Bovendien verwachten we dat hoe groter het aantal contexten dat men in een triade met elkaar deelt, hoe groter de kans dat deze triade transitief zal zijn.

De resultaten in hoofdstuk 5 geven aan dat de contexten waarin mensen hun discussiepartners hebben leren kennen in beperkte mate overlappen, maar dat men ten tijde van het interview veel meer discussiepartners in eenzelfde context ontmoette. Twee van de drie triades hebben geen initieel gedeelde context, terwijl iets meer dan 20 procent geen huidige context deelt.<sup>6</sup> Als zij een gedeelde context hebben, dan betekent dit vaak dat de respondent beide discussiepartners bij hem of haar thuis ontmoet.

Vervolgens vinden we een sterke bevestiging voor het argument dat er eerder sprake is van transitiviteit indien men een sociale context deelt dan indien men geen context deelt. Triades zijn eerder transitief indien de respondent beide discussiepartners in dezelfde context heeft leren kennen en in het bijzonder indien de respondent ten tijde van het interview beide discussiepartners in dezelfde context ontmoet. Omdat mensen minder controle hebben over de onderlinge relaties tussen hun netwerkleden dan over hun eigen

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<sup>5</sup> Dit betreft dezelfde discussiepartners als in hoofdstuk 2, dat wil zeggen de netwerkleden waarmee men belangrijke persoonlijke zaken bespreekt.

<sup>6</sup> Een triade heeft een ‘initieel gedeelde context’ indien de respondent beide netwerkleden in eenzelfde context heeft leren kennen. Een triade heeft een ‘huidig gedeelde context’ indien de respondent beide netwerkleden ten tijde van het interview in dezelfde context ontmoette.

relaties vormen deze bevindingen een sterke bekrachtiging van het argument dat de structuur van persoonlijke netwerken wordt beïnvloed door ontmoetingsgelegenheden.

In het bijzonder wanneer relaties veel tijd en energie kosten – en dat geldt over het algemeen voor relaties met personen waarmee men belangrijke persoonlijke zaken bespreken – zijn mensen geneigd transitiveit in hun netwerk te creëren in aanvulling op de transitiveit die het resultaat is van het feit dat men beide netwerkleden in dezelfde context leerde kennen. Hiertoe kunnen zij een context creëren of zoeken waarin men alle netwerkleden tegelijkertijd kan ontmoeten (vgl. Feld 1981:1022-1023). Onze resultaten geven aan dat het inderdaad vaker voorkomt dat men ten tijde van het interview beide discussiepartners in dezelfde context ontmoet dan dat men beide discussiepartners in dezelfde context heeft leren kennen. Dit verschil ligt voornamelijk in het grote aantal discussiepartners dat men ten tijde van het interview thuis ontmoette. Wanneer we deze bevinding combineren met de sterke invloed van het thuis ontmoeten van beide discussiepartners op transitiveit, dan brengt ons dat tot de conclusie dat mensen inderdaad transitiveit in hun netwerk creëren in aanvulling op de transitiveit als gevolg van een gedeelde initiële context door hun netwerkleden bij hen thuis uit te nodigen.

## **Hoofdstuk 6            Sociale contexten en veranderingen in persoonlijke netwerken**

In eerder onderzoek werd aangetoond dat persoonlijke relaties verre van stabiel zijn, maar aanzienlijk veranderen binnen een aantal jaren. Zo vonden Wellman et al. (1997) en Degenne en Lebeaux (2005) dat slechts een minderheid van de relaties met intieme, respectievelijk belangrijke, leden in het netwerk blijven bestaan over een periode van tien, respectievelijk zes, jaar. Bovendien rapporteerden McPherson et al. (2006) dat het aantal discussiepartners van de Amerikanen sterk is afgenomen binnen twee decennia. Hoofdstuk 6 is een aanvulling op de bestaande kennis over veranderingen door de tijd in de samenstelling van persoonlijke netwerken, omdat we niet alleen ingaan op de *stabiliteit van bestaande relaties*, maar ook op het *ontstaan van nieuwe relaties* binnen een periode van zeven jaar. We richten ons hierbij op relaties met netwerkleden met wie men belangrijke persoonlijke zaken bespreekt en/of die men vraagt om een helpende hand bij een klus in of om het huis.

Om netwerkveranderingen te verklaren, richten we ons in het bijzonder op (een gebrek aan) ontmoetingsgelegenheden, zoals die worden gevormd door de sociale contexten waarin mensen hun netwerkleden leerden kennen en waarin ze elkaar ontmoetten ten tijde van het interview. Ten eerste onderzoeken we in welke mate de verschillende sociale contexten van invloed zijn op het voortbestaan van relaties na zeven jaren of op de beëindiging van relaties in de tussenliggende periode. Hierbij houden we rekening met een reeks belangrijke gebeurtenissen die zich hebben voorgedaan in iemands leven, zoals een huwelijk, de geboorte van een kind, een scheiding, een verandering van baan of het met

pensioen gaan, omdat een van de verklaringen die in eerder onderzoek wordt voorgesteld is dat dergelijke belangrijke levensgebeurtenissen resulteren in de beëindiging van sommige persoonlijke relaties en in het ontstaan van nieuwe relaties (bijv. Shulman 1975; Stueve en Gerson 1977; Fischer en Oliner 1983; Campbell en Lee 1990; Broese van Groenou 1991; Wellman et al. 1997; Terhell 2003). Ons argument echter is dat niet een levensgebeurtenis op zichzelf netwerkveranderingen teweegbrengt, maar het feit dat dergelijke gebeurtenissen er voor zorgen dat mensen zich in het dagelijkse leven in andere contexten begeven (vgl. Feld en Carter 1998). De resultaten geven aan dat sociale contexten van invloed zijn op het voortbestaan van persoonlijke relaties tussen 1999/2000 en 2007, waarbij we rekening houden met belangrijke levensgebeurtenissen, relatietype en verschillende respondent kenmerken. Relaties met mensen die men op het werk of in een van de 'andere contexten' (d.w.z. in de kerk, op vakantie, op een feestje, of ergens anders) ontmoet hebben de grootste kans om na zeven jaar uit het netwerk te zijn verdwenen.

Ten tweede gaan we in dit hoofdstuk in op de vraag in welke mate een gebrek aan ontmoetingsgelegenheden kan verklaren waarom bepaalde netwerkliden tijdens het tweede interview niet opnieuw als discussiepartner en/of praktische helper werden genoemd of zelfs helemaal uit het netwerk waren verdwenen. De redenen die de respondenten geven waarom relaties minder belangrijk of zelfs beëindigd werden, bevestigen ons argument dat ontmoetingsgelegenheden een belangrijke voorwaarde zijn voor de stabiliteit van persoonlijke relaties. In 46 procent van de gevallen werd een gebrek aan ontmoetingsgelegenheden als reden gegeven, zoals het niet langer delen van dezelfde context, een te grote afstand, en elkaar minder vaak tegenkomen. Persoonlijke relaties met mensen die men op het werk of in de buurt ontmoette zijn daarbij het meest gevoelig voor het verlaten van de sociale context waarin men elkaar ontmoette. Voor slechts 12 procent van de beëindigde relaties werd als reden voor de beëindiging gegeven dat de relatie zelf was veranderd (bijvoorbeeld bij een scheiding of omdat men ruzie kreeg).

De laatste vraag die we in hoofdstuk 6 aan de orde stellen is in welke sociale contexten mensen hun nieuwe netwerkliden leren kennen. Hiertoe onderzoeken we of mensen hun nieuwe netwerkliden leren kennen a) in een context waarin ze zich tevoren niet begaven, bijvoorbeeld als gevolg van een belangrijke levensgebeurtenis, b) in de context waarin men voorheen een van de netwerkliden ontmoette die uit het netwerk is verdwenen, of c) in een context waarin men ook een van de overgebleven netwerkliden ontmoet (d.w.z. een padafhankelijk gebruik van sociale contexten (vergelijk met hoofdstuk 2)). Uit de resultaten blijkt dat men de helft van de netwerkliden die men leerde kennen tussen 1999/2000 en 2007 heeft leren kennen in een context die men voorheen niet gebruikte om netwerkliden te ontmoeten. Desalniettemin is de kans dat men een nieuw netwerklid in een bepaalde context leert kennen afhankelijk van de contexten waarin men zijn of haar andere netwerkliden ontmoette ten tijde van het eerste interview: de kans dat men een nieuw netwerklid in een bepaalde sociale context leert kennen is groter indien men een bestaand netwerklid in de betreffende context ontmoette ten tijde van het eerste interview en in het

bijzonder indien men in die context een netwerklid ontmoette die ten tijde van het tweede interview nog steeds deel uitmaakt van het netwerk.

## **Hoofdstuk 7            Conclusies, discussie en suggesties voor toekomstig onderzoek**

In het zevende en tevens laatste hoofdstuk vatten we de belangrijkste conclusies en discussiepunten samen. Omdat de belangrijkste conclusies over de invloed van sociale contexten op de samenstelling en structuur van en veranderingen in persoonlijke netwerken in de voorgaande paragrafen van deze Nederlandse samenvatting werden beschreven, worden deze hier niet herhaald. De bevindingen in dit onderzoek leiden echter ook tot een aantal belangrijke, maar meer algemene conclusies over de omvang en samenstelling van de netwerken en over veranderingen in persoonlijke netwerken. In de volgende paragraaf vatten we deze conclusies samen. Ten slotte geven we een aantal aanwijzingen voor toekomstig onderzoek.

### *Omvang en samenstelling van, en veranderingen in persoonlijke netwerken*

In hoofdstuk 2 laten we zien dat de Nederlanders in 1999/2000 gemiddeld 2.4 personen noemden waarmee ze in de voorafgaande zes maanden belangrijke persoonlijke zaken bespraken. Verrassend veel respondenten gaven daarbij aan geen of slechts één discussiepartner te hebben (13, respectievelijk 27 procent). Een vergelijking van deze cijfers met vergelijkbare cijfers voor de Amerikanen in 1985 (zie Marsden 1987) laat zien dat de Nederlanders gemiddeld minder discussiepartners noemden dan Amerikanen (die gemiddeld drie discussiepartners noemden). Bovendien zijn er onder de Nederlanders meer mensen die geen of slechts één discussiepartner noemden (13, resp. 27 procent van de Nederlanders, in vergelijking met 9, resp. 15 procent van de Amerikanen).

In hoofdstuk 2 bespreken we een aantal mogelijke redenen voor deze verschillen. Ten eerste bestaat er een verschil tussen beide onderzoeken in de formulering van de naamgenererende vragen. Marsden (1987) gebruikte data van de General Social Survey 1985, waarin werd gevraagd naar mensen met wie men 'belangrijke zaken' heeft besproken, terwijl wij hebben gevraagd naar mensen met wie men 'belangrijke persoonlijke zaken' heeft besproken. Deze nadruk op de netwerkleden die men sterk vertrouwt, resulteert mogelijk tot het noemen van minder netwerkleden. Ten tweede was, in tegenstelling tot de GSS 1985 waarin de vraag naar discussiepartners de enige naamgenererende vraag is, onze vraag naar discussiepartners één van de dertien naamgenererende vragen tijdens het interview. Een derde mogelijkheid is dat Amerikanen wellicht gemakkelijker hun belangrijke zaken bespreken met anderen dan Nederlanders (vgl. Fischer 1982b).

Als vierde en wellicht belangrijkste reden voor deze verschillen hebben we gewezen op het feit dat de gegevens die Marsden (1987) heeft gebruikt 15 jaar eerder werden verzameld dan onze gegevens. McPherson et al. (2006) herhaalden Marsden's analyses waarbij ze gebruik maakten van de GSS 2004 gegevens. Zij vonden dat het aantal discussiepartners van Amerikanen substantieel was afgenomen in 19 jaar: De gemiddelde omvang van de netwerken was afgenomen van 2.9 in 1985 naar 2.1 in 2004.<sup>7</sup> Omdat het gemiddelde netwerk van de Nederlanders in 2000 uit 2.4 discussiepartners bestond, suggereerden we in hoofdstuk 2 dat eenzelfde afname mogelijk ook in Nederland plaatsvindt.

De resultaten in hoofdstuk 5 laten echter zien dat de Nederlanders in 2007 opnieuw gemiddeld 2.4 mensen noemden waarmee ze in de voorafgaande zes maanden belangrijke persoonlijke zaken hadden besproken en dat de modale respondent opnieuw één discussiepartner noemde. Dit betekent dat het gemiddelde en modale aantal discussiepartners van Nederlanders gelijk is gebleven tussen 1999/2000 en 2007. Deze bevindingen zijn niet alleen interessant in het licht van de zojuist genoemde resultaten voor de Amerikanen (McPherson et al. 2006), maar ook in het licht van recente bevindingen voor Duitsers, zoals gerapporteerd door Wöhler en Hinz (2007). In tegenstelling tot McPherson et al. (2006) laten zij zien dat er tussen 1988 en 2000 ook in Duitsland geen sprake is van een afname van het aantal netwerkleden: Duitsers noemden in 1988 gemiddeld 1.8 discussiepartners en 2.1 in 2000, terwijl de modale Duitser in beide jaren één discussiepartner noemde (Wöhler en Hinz 2007). Een vergelijking van deze studies geeft aan dat van een afname van het aantal netwerkleden zoals voor de Amerikanen werd gevonden, geen sprake is geweest in Nederland en Duitsland gedurende de afgelopen jaren.

Ten slotte laten we in hoofdstuk 6 zien dat de omvang en algemene samenstelling van persoonlijke netwerken, in dit geval bestaande uit discussiepartners en mensen die een helpende hand bieden bij een klus in of om het huis, relatief stabiel zijn. Deze netwerken bestonden in 1999/2000 gemiddeld uit 3.5 en in 2007 uit 4.1 personen. In overeenstemming met bevindingen in eerder onderzoek is de nadruk wat betreft de samenstelling van deze netwerken wel wat meer komen te liggen op partners, familieleden en burens, in plaats van op vrienden (McPherson et al. 2006; Wöhler en Hinz 2007). Deze ogenschijnlijk grote mate van netwerkstabiliteit verbergt echter de vele veranderingen die zich in dit deel van de persoonlijke netwerken hebben voorgedaan tussen 1999/2000 en 2007. Slechts 30 procent van de oorspronkelijke discussiepartners en praktische helpers vervult na zeven jaar nog

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<sup>7</sup> Op 23 september 2008 plaatste Claude S. Fischer (Universiteit van Californië, Berkeley, VS) een memo op zijn website, waarin hij enkele onregelmatigheden in de 2004 GSS netwerk module beschrijft. Deze onregelmatigheden impliceren dat de ogenschijnlijk sterke toename in sociaal isolement een artefact is. Hij speculeert vervolgens dat dit artefact mogelijk een gevolg is van willekeurige fouten. Omdat er tot op heden geen volledige verklaringen zijn voor de betreffende onregelmatigheden, stelt Fischer dat wetenschappers op dit moment geen conclusies moeten trekken op basis van deze GSS module ten aanzien van de vraag of de Amerikaanse sociale netwerken al dan niet substantieel zijn veranderd tussen 1985 en 2004.

steeds één van deze twee functies (vgl. Shulman 1975; Wellman et al. 1997; Degenne en Lebeaux 2005). Samen met 18 procent van de oorspronkelijke netwerklede die wel in het netwerk zijn gebleven, maar ter vervulling van een andere (over het algemeen minder belangrijke) functie, maken slechts 48 procent van de oorspronkelijke discussiepartners en praktische helpers na zeven jaar nog deel uit van iemands persoonlijk netwerk. Toch blijkt dat men lang niet alle ‘verdwenen’ netwerklede uit het oog heeft verloren. Ondanks dat velen na zeven jaar niet opnieuw als netwerklid werden genoemd, onderhoudt men met de meerderheid van hen nog steeds contact. Bovendien blijkt men de ‘nieuwe’ discussiepartners en praktische helpers in 2007 gemiddeld al zo’n 20 jaar te kennen, terwijl men slechts een kwart van hen gedurende de afgelopen zeven jaar heeft leren kennen. Het is daarom mogelijk dat deze ‘nieuwe’ netwerklede voorheen een andere netwerkfunctie vervulden. Deze resultaten leiden tot de conclusie dat veranderingen in persoonlijke netwerken met enige terughoudendheid geïnterpreteerd dienen te worden indien we in het onderzoek slechts gebruik maken van één of twee naamgenererende vragen.

#### *Suggesties voor toekomstig onderzoek*

Ter afronding wijzen we op een aantal belangrijke vragen die onbeantwoord bleven of juist zijn ontstaan naar aanleiding van de uitvoering van dit onderzoek. Deze vragen nodigen uit tot verder onderzoek dat gebaseerd dient te zijn op rijke longitudinale dataverzamelingen over persoonlijke netwerken, met onder andere a) informatie over verschillende typen relaties en activiteiten, wat betekent dat meerdere naamgenererende vragen moeten worden gebruikt, b) informatie over ontmoetingsgelegenheden, wat betekent dat aan respondenten moet worden gevraagd in welke sociale contexten zij zich begeven in hun dagelijkse leven, ook indien zij in die contexten eventueel geen netwerklede ontmoeten, en c) informatie over veranderingen in netwerken en sociale contexten door de tijd.

Ten eerste verwachtten we in hoofdstuk 3 dat de voorkeur voor netwerklede met dezelfde persoonlijke kenmerken van grotere invloed zou zijn op sterke relaties dan op zwakke relaties. Inderdaad stellen we de meeste gelijkheid vast tussen partners en de minste gelijkheid tussen kennissen. Wanneer we daar rekening mee houden, hebben de contexten waarin mensen hun netwerklede hebben leren kennen echter een vrij consistente invloed op de mate van gelijkheid in relaties van uiteenlopende sterkte. Dit duidt erop dat mensen op andere manieren hun voorkeur voor gelijken kunnen realiseren. Mogelijk selecteren mensen netwerklede uit verschillende contexten zodat ze de personen vinden die voldoen aan hun voorkeuren, waarbij ze de contexten uitkiezen met het oog op het aanbod van mensen die ze in die contexten zullen ontmoeten. Het padafhankelijke gebruik van sociale contexten om netwerklede te ontmoeten (zie hoofdstuk 2 en 6) geeft echter aan dat deze keuze voor contexten beperkt is. Andere mogelijkheden zijn dat mensen langer of beter zoeken naar de netwerklede met wie ze een sterke relatie aangaan, of dat juist die relaties zich ontwikkelen tot sterke relaties met mensen die het meest op hen lijken.

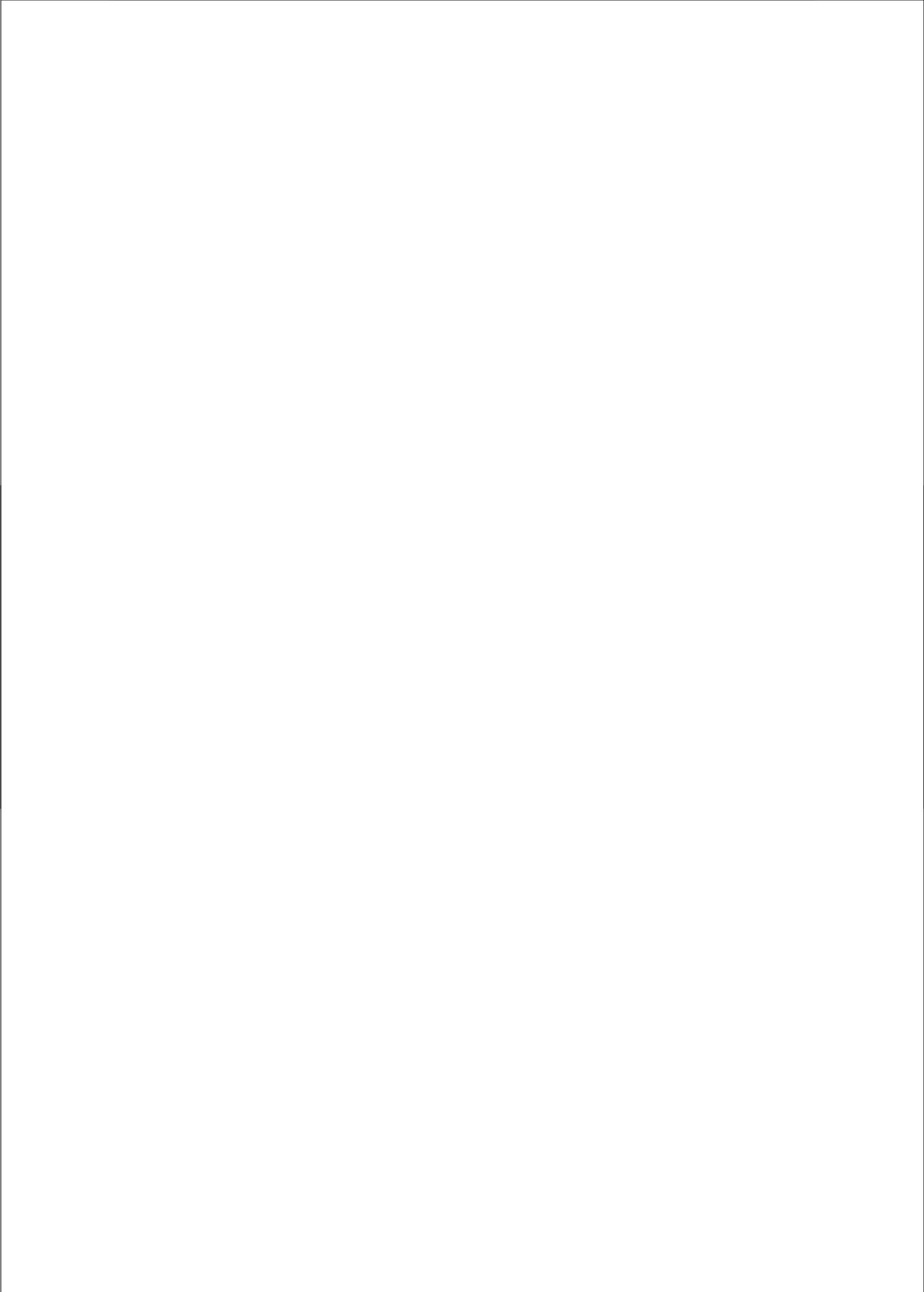
Ten tweede laten we in hoofdstuk 5 zien dat zeker niet alle netwerkliden waarmee men belangrijke persoonlijke zaken bespreekt elkaar onderling ook goed kennen. Dit betekent dat de volgens de balanstheorie ‘verboden triades’ in de praktijk wel degelijk veelvuldig voorkomen (zie Granovetter 1973). Vervolgens laten we zien dat de kans dat iemands discussiepartners elkaar onderling kennen groter is indien men deze twee netwerkliden in dezelfde context ontmoet. Indien dit het geval is voor netwerken van sterke relaties, is het goed mogelijk dat dit nog meer van toepassing is op de bredere persoonlijke netwerken die ook zwakkere relaties bevatten. Het gebrek aan overlappende contexten in moderne samenlevingen en het resulterende gebrek aan transitiviteit in persoonlijke netwerken heeft niet alleen belangrijke gevolgen voor de kenmerken van persoonlijke netwerken, maar kan ook belangrijke consequenties hebben voor de mensen zelf. Enerzijds kan het zorgen voor een versterking van iemands persoonlijkheid (vgl. Simmel [1922]1955) of kan het mensen bevrijden van de dominante druk van een bepaalde groep (vgl. Blau 1994; Breiger 1990). Anderzijds kan het deel uitmaken van verschillende groepen er ook toe leiden dat iemand in verschillende richtingen wordt getrokken als gevolg van uiteenlopende waarden en normen die binnen deze groepen gelden (vgl. Pescosolido en Rubin 2000; Krackhardt 1999). Meer onderzoek is daarom nodig naar de gevolgen van een gebrek aan overlappende contexten en de bijbehorende beperkte mate van transitiviteit in persoonlijke netwerken voor het welbevinden van individuen alsook voor de samenleving als geheel (zie ook Völker et al. 2009).

Ten derde leiden de resultaten in hoofdstuk 6 tot nieuwe vragen ten aanzien van de veranderingen in persoonlijke netwerken. Zo blijkt dat slechts 30 procent van de genoemde discussiepartners en praktische helpers in 1999/2000 nog steeds dezelfde functie vervult in 2007, terwijl 18 procent nog wel onderdeel uitmaakt van het netwerk, maar ter vervulling van een andere functie. Met de meerderheid van de personen die niet opnieuw als netwerklid worden genoemd is het contact echter niet geheel verbroken. Dit geeft niet alleen aan dat resultaten ten aanzien van veranderingen in persoonlijke netwerken met enige terughoudendheid moeten worden geïnterpreteerd, maar leidt ook tot de vraag of netwerkliden die uit het netwerk zijn verdwenen op een later tijdstip weer in het netwerk zullen terugkeren (vgl. Van Busschbach 1996; Morgan et al. 1997).

Ten vierde laten we in hoofdstuk 6 zien dat de sociale contexten waarin men elkaar ontmoet van invloed zijn op het voortbestaan van relaties. Eerder onderzoek heeft aangetoond dat structurele inbedding ook een belangrijke rol speelt bij de stabiliteit van relaties. Zo lieten Martin en Yeung (2006) zien dat relaties een grotere kans hebben te blijven voortbestaan indien men beide contact heeft met een derde persoon. Feld stelt in dit kader dat structurele inbedding waarschijnlijk een gevolg is van het delen van één of meerdere contexten (vgl. Feld 1997:92). Met andere woorden, relaties hebben meer kans te blijven voortbestaan indien iemands netwerkliden ook andere leden van het netwerk kennen, wat op haar beurt weer eerder het geval zal zijn indien deze netwerkliden dezelfde context(-en) met elkaar en/of met de respondent delen (vgl. hoofdstuk 5; Feld 1981). Het

ontwarren van de invloed van deze structurele condities op de stabiliteit van persoonlijke relaties is daarom een belangrijke vraag voor toekomstig onderzoek.

Ten slotte geven we in hoofdstuk 6 aan dat ongeveer de helft van de nieuwe relaties in 2007 zijn ontstaan in ‘nieuwe’ contexten, dat wil zeggen in contexten waarin de betreffende respondent geen van zijn of haar bestaande relaties ontmoette. Omdat onze analyses gebaseerd zijn op gegevens over discussiepartners en praktische helpers is het mogelijk dat relaties die we hebben aangemerkt als waren zij ontstaan in ‘nieuwe’ contexten, in werkelijkheid zijn ontstaan in contexten waarin de respondent andere netwerkliden ontmoette met wie hij of zij een meer oppervlakkige relatie heeft. Het is bovendien mogelijk dat deze relaties zijn ontstaan in contexten waarin men zich wel eerder begaf, maar waar men niet eerder netwerkliden leerde kennen. Toekomstig onderzoek naar het ontstaan van nieuwe persoonlijke relaties dient daarom in het bijzonder aandacht te besteden aan de invloed van ontmoetingsgelegenheden.



# **Appendix A**

## ***Name-Generating Questions in the Survey of the Social Networks of the Dutch***

*Appendix A - Name-Generating Questions*

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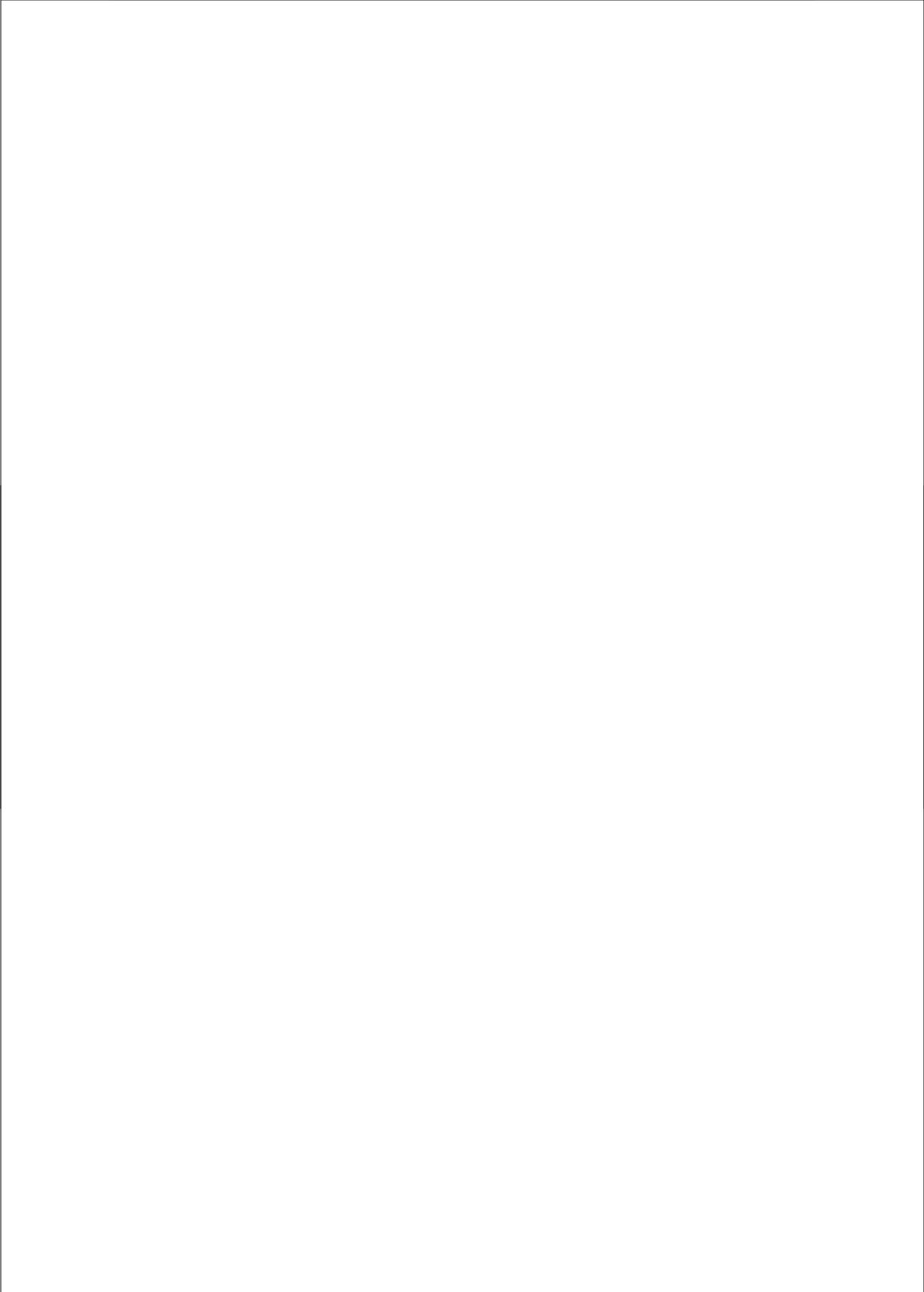
<b>Wave 1 – 1999/2000</b>	<b>Wave 2 – 2007</b>
1 Who helped you find your current/last job? (one person maximum)	
2 If you have a problem at work, whom do you ask for advice? (in addition to already named person, five new persons at maximum)	1 If you have a problem at work, whom do you ask for advice? (five persons at maximum)
3 Are there people who come to you for advice when they have problems at work? (in addition to already named people, five new persons at maximum)	2 Are there people who come to you for advice when they have problems at work? (in addition to already named people, five new persons at maximum)
4 At work, people do not always cooperate; sometimes they make trouble for each other. How is that with you? Which colleague makes trouble for you or has made trouble for you lately? (in addition to already named people, five new persons at maximum)	
5 Who are the two colleagues with whom you interact most? (two persons, or alternatively already named, at maximum)	3 Who are the two colleagues with whom you interact most? (two persons, or alternatively already named, at maximum)
6 Who is your boss? (one person, or alternatively already named, at maximum)	4 Who is your boss? (one person, or alternatively already named, at maximum)
	5 People do not only have cooperative relationships, but sometimes people also bother each other. With whom do you quarrel sometimes, or who really bothers you sometimes? In short: who annoys you? (in addition to already named people, five new persons at maximum)
7 Who helped you get your house or from who did you directly buy it? (one person, or alternatively already named, at maximum)	
8 If you are doing a job at home and need someone to help, for example, to carry furniture, or to hold a ladder. Whom do you ask for help? (in addition to already named people, five new persons at maximum)	6 If you are doing a job at home and need someone to help, for example, to carry furniture or to hold a ladder. Whom do you ask for help? (in addition to already named people, five new persons at maximum)
9 Is there anyone, besides household members, who has a key to your house? (in addition to already named people, five new persons at maximum)	

---

**Wave 1 – 1999/2000**

**Wave 2 – 2007**

- |    |   |    |  |
|----|---|----|--|
| 10 | Who are your two direct neighbors? Which are the neighbors who live most nearby you (the people in the house to the left, the right, above, and below your house)? (two persons, or alternatively already named, at maximum)  | 7  | Who are your two direct neighbors? Which are the neighbors who live most nearby you (the people in the house to the left, the right, above, and below your house)? (two persons, or alternatively already named, at maximum)   |
| 11 | Many people visit others in their leisure time. Whom do you visit? (in addition to already named people, five new persons at maximum)   | 8  | Many people visit others in their leisure time. Whom do you visit? (in addition to already named people, five new persons at maximum)  |
|    |   | 9  | Do you know people you like going-out with, for example, to a movie, a bar, a theatre, etc., and with whom you actually do this sometimes? (in addition to already named people, five new persons at maximum)  |
| 12 | Life is not only about going-out and having fun. Everybody needs someone to discuss important things with sometimes. With whom have you discussed important personal matters during the past six months? (in addition to already named people, five new persons at maximum) | 10 | Life is not only about going-out and having fun. Everybody needs someone to discuss important things with sometimes. With whom have you discussed important personal matters during the past six months? (in addition to already named people, five new persons at maximum)            |
|    |   | 11 | Whom could you ask for help in case you fall ill? Think for example of going to a grocery store or a drugstore for you. (in addition to already named people, five new persons at maximum)   |
|    |   | 12 | We did already ask you for those whom you ask to help you sometimes. We would also like to know whether there are people who ask you to help them. So, who does sometimes ask you for help with an odd job at home? (in addition to already named people, five new persons at maximum) |
| 13 | If we look at the list of names we have gathered, is there anyone who is important to you, but who is not yet on this list? (in addition to already named people, five new persons at maximum)  | 13 | If we look at the list of names we have gathered, is there anyone who is important to you, but who is not yet on this list? (in addition to already named people, five new persons at maximum)   |



# **Appendix B**

## ***Additional Tables***

**Table A Geographical distance between the members of people's core discussion networks**

	Frequency	Percentage	Cum. perc.
<i>Maximum geographical distance</i>			
0 kilometers	92	6.19	6.19
Max. 2 kilometers	72	4.84	11.03
Max. 20 kilometers	432	29.05	40.08
Max. 100 kilometers	463	31.14	71.22
Max. 250 kilometers	278	18.70	89.91
No maximum distance	150	10.09	100.00
Total	1487	100.00	

Source: SSND2, 2007

Variables regarding the maximum geographical distance between two of one's confidants are based on information about how far each of the confidants lives away from the respondent concerned. The variables indicate the maximum distance between two members of one's core discussion network. For example, if both confidants live no more than 10 kilometers away from the respondent concerned, the distance between these two confidants is maximally 20 kilometers, etc.

**Table B Social distance between the members of people's core discussion networks**

	Mean	Std. dev.	N
<i>Similarity with regard to ...</i>			
Age <sup>a</sup>	-12.40	12.02	1,404
Sex <sup>b</sup>	0.54	0.49	1,507
Level of education <sup>c</sup>	-0.76	0.82	1,324
Religion <sup>d</sup>	0.60	0.48	1,395

Source: SSND2, 2007

<sup>a</sup> Age similarity is measured as the negative absolute age difference between the two of one's confidants;

<sup>b</sup> Sex similarity is a dummy-coded variable which indicates whether the two of one's confidants are of the same sex;

<sup>c</sup> Education similarity is measured as the negative absolute difference in level of education of the two of one's confidants (based on four categories, see section 5.3.3);

<sup>d</sup> Religion similarity is a dummy-coded variable which indicates whether the two of one's confidants have the same religion (based on four categories, see section 5.3.3).

**Table C** Multilevel logistic regression models on relationship discontinuation, because of having no shared context anymore<sup>a,b,c</sup>

	Model 1	Model 2	Model 3	Model 4
<i>Type of relationship</i>				
Partner	0.12***			0.17***
Relative	0.13***			0.20***
Other type of relationship	ref			ref
<i>Important life event</i>				
Marriage		0.34		0.40
Cohabiting		0.62		0.69
Divorce		0.90		1.03
Birth of child(-ren)		1.51		1.65
Job change		1.78*		1.82*
Stopped work / retired		0.80		0.83
Moving to another house		1.87*		1.71
Long-lasting illness of resp.		1.05		1.40
Long-lasting illness of household member		0.35		0.32
Partner died		0.72		0.80
Other household member died		1.81		2.10
Other life event: - birth of grandchild		2.08		1.80
- death of a relative		0.83		0.90
- child(ren) left home		1.11		1.65
- other life event		1.01		1.20
No event occurred		ref		ref
<i>Social context<sup>d</sup></i>				
In the neighborhood			4.57***	2.26**
With/via family			0.32*	0.74
At school			1.46	0.99
At work			8.81***	4.86***
At a club/association			3.15	1.58
With/via a friend			0.96	0.52
At a public going-out place			1.28	0.59
Other context <sup>e</sup>			2.11	1.17
At home			ref	ref
Wald Chi <sup>2</sup>	69.77	38.37	69.94	86.75
Rho	0.23	0.19	0.26	0.19
Number of network members	864	840	859	830
Number of respondents	415	401	415	400

Source: SSND1 1999/2000 and SSND2, 2007.

<sup>a</sup> Data shown are odds ratios; \*p<.05, \*\*p<.01, \*\*\*p<.001 (two-tailed tests).<sup>b</sup> In each model, we controlled for the effects of respondent's age, sex, level of education, marital status, having a paid job, nationality, degree of urbanization in place of residence, and religious background; See section 6.3 for detailed descriptions of the variables used and the methods of analyses.<sup>c</sup> Interaction effects between the occurrence of important life events and social contexts, e.g., between moving to another house and meeting in the neighborhood, or between a job change and meeting at work, do not improve the model.<sup>d</sup> I.e., the social context in which respondents met their network member in 1999/2000.<sup>e</sup> Other contexts include 'at church', 'on a vacation', 'at a party', and 'somewhere else'.

**Table D** Multilevel logistic regression models on using a 'new' social context to meet new network members<sup>a,b,c</sup>

	Model 1	Model 2	Model 3	Model 4	Model 5
<i>Type of relationship</i>					
Partner			1.46		0.77
Relative			0.37 <sup>***</sup>		0.41 <sup>***</sup>
Other type of relationship			ref		ref
<i>Important life event</i>					
Marriage	1.42			1.52	1.51
Cohabiting	1.46			1.44	1.41
Divorce	0.65			0.57	0.58
Birth of child(-ren)	0.79			0.78	0.80
Job change	1.19			1.25	1.26
Stopped work / retired	0.72			0.64	0.65
Moving to another house	0.76			0.68	0.67
Long-lasting illness of resp.	1.69			1.77	1.74
Long-lasting illness of household member	1.30			1.64	1.66
Partner died	9.51 <sup>*</sup>			12.44 <sup>*</sup>	13.25 <sup>*</sup>
Other household member died	0.70			0.52	0.51
Other life event: - birth of grandchild	0.79			0.79	0.83
- death of a relative	0.59			0.54	0.52
- child(ren) left home	0.66			0.66	0.70
- other life event	1.32			1.44	1.41
No event occurred	ref			ref	ref
<i>Social context<sup>d</sup></i>					
In the neighborhood		1.41		1.41	0.94
With/via family		0.75		0.70	0.98
At school		3.40 <sup>***</sup>		3.50 <sup>***</sup>	2.77 <sup>**</sup>
At work		4.07 <sup>***</sup>		4.05 <sup>***</sup>	2.89 <sup>***</sup>
At a club/association		2.44 <sup>***</sup>		2.59 <sup>***</sup>	1.94 <sup>**</sup>
With/via a friend		2.00 <sup>**</sup>		1.99 <sup>**</sup>	1.49
At a public going-out place		2.21 <sup>**</sup>		2.08 <sup>*</sup>	1.81
Other context <sup>e</sup>		3.45 <sup>***</sup>		3.34 <sup>***</sup>	3.27 <sup>***</sup>
At home		ref		ref	ref
Wald Chi <sup>2</sup>	28.22	94.76	53.09	107.12	116.39
Rho	0.33	0.42	0.37	0.39	0.40
Number of network members	1600	1654	1654	1600	1600
Number of respondents	496	511	511	496	496

Source: SSND1 1999/2000 and SSND2, 2007.

<sup>a</sup> Data shown are odds ratios. <sup>\*</sup>p<.05, <sup>\*\*</sup>p<.01, <sup>\*\*\*</sup>p<.001 (two-tailed tests).

<sup>b</sup> In each model, we controlled for the effects of respondent's age, sex, level of education, marital status, having a paid job, nationality, degree of urbanization in place of residence, and religious background; See section 6.3 for detailed descriptions of the variables used and the methods of analyses.

<sup>c</sup> Note that Models 1 and 3 are identical to Models 1 and 2 in Table 6.6.

<sup>d</sup> I.e., the social context in which respondent got to know the new network member.

<sup>e</sup> Other contexts include 'at church', 'on a vacation', 'at a party', and 'somewhere else'.

Table E Social contexts for meeting network members<sup>a</sup>

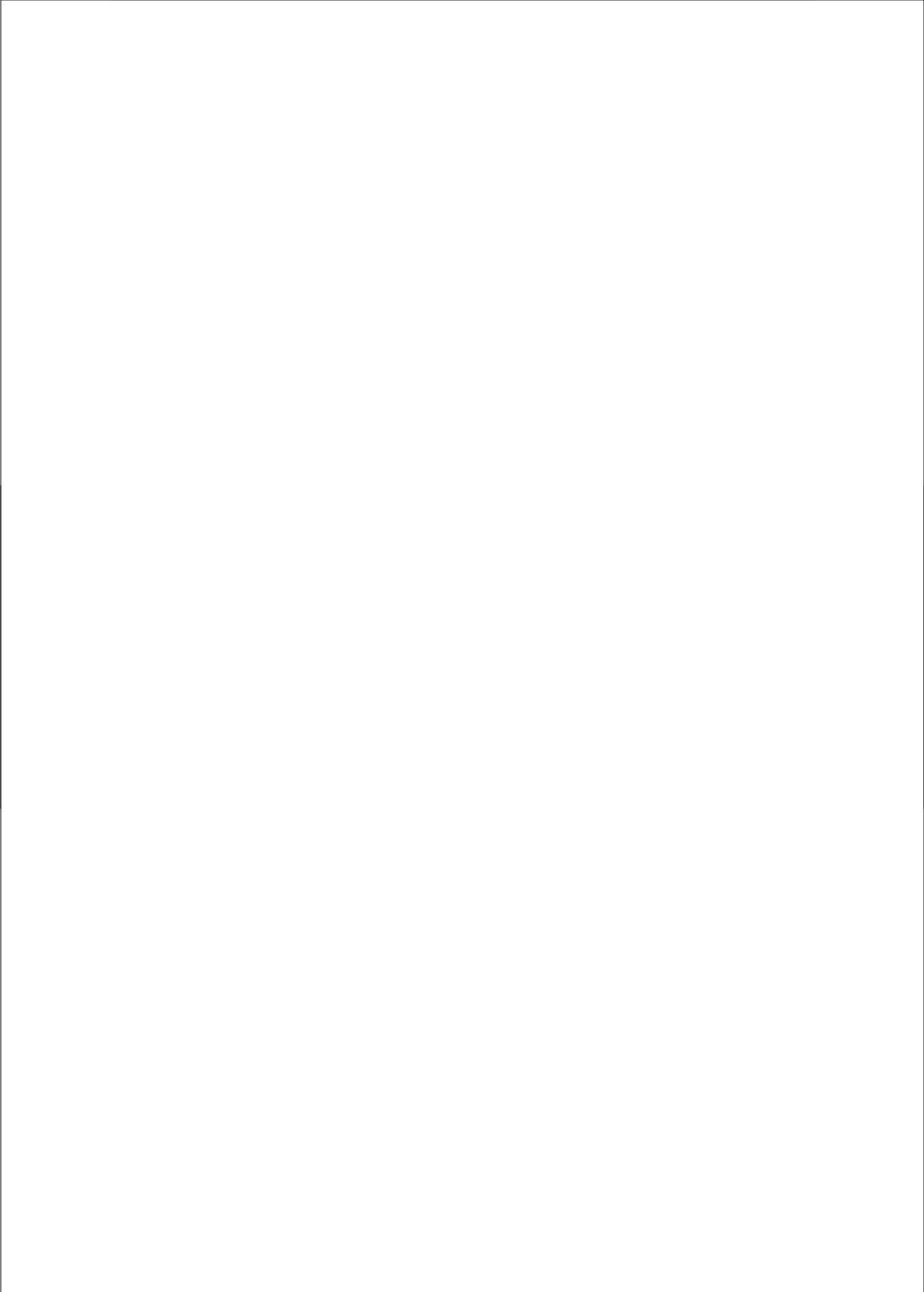
Social Context	Wave 1 – 2000 <sup>b</sup>										Wave 2 – 2007 <sup>b</sup>				
	Total wave 1		Stayers		Stayers		New members		Total wave 2						
	emerged	continued	emerged	continued	emerged	continued	emerged	continued	emerged	continued	emerged	continued			
Column	1	2	3	4	5	6	7	8	9	10					
In the neighborhood	18.3	11.5	18.2	11.9	19.3	12.7	27.0	20.4	24.9	18.3					
With/via family	22.2	9.1	23.6	10.3	12.9	21.6	14.1	17.7	13.8	18.7					
At school	6.7	0.5	7.2	0.4	9.4	0.3	5.1	0.6	6.3	0.5					
At work	10.7	6.1	6.7	1.7	8.8	4.4	10.6	7.8	10.1	6.9					
At a club/association	8.3	1.7	7.7	1.5	11.2	6.6	11.2	9.5	11.2	8.7					
With/via a friend	5.5	2.2	4.1	2.1	10.4	9.3	10.5	9.9	10.5	9.8					
At a public going-out place	5.1	1.8	7.7	1.5	12.6	5.9	5.7	4.1	7.6	4.6					
At home	14.9	63.9	15.4	68.8	42.8	89.7	40.7	77.4	41.3	80.7					
Other context <sup>c</sup>	7.9	2.9	9.1	1.3	24.7	19.4	19.5	17.8	20.9	18.2					
Total # of network members	2134	2131	648	646	611	634	1657	1754	2268	2388					

Source: SSND1, 1999/20002 and SSND2, 2007.

<sup>a</sup> Data shown are percentages. The 'emerged' columns report the social contexts in which respondents got to know the network members, whereas the 'continued' columns report the social contexts in which they met each other at the time of the interview.

<sup>b</sup> In the first wave, respondents were allowed to mention only one context, while up to three contexts could be named in the second wave.

<sup>c</sup> Other contexts includes 'at church', 'on a vacation', 'at a party', and 'somewhere else'.



# References

- Bailey, S., and P.V. Marsden. 1999. "Interpretation and Interview Context: Examining the General Social Survey Name Generator Using Cognitive Methods." *Social Networks* 21:287-309.
- Barnes, J.A. 1969. "Networks and Political Process." Pp. 51-76 in *Social Networks in Urban Situations: Analyses of Personal Relationships in Central African Towns*, edited by J.C. Mitchell. Manchester University Press, Manchester.
- 1972. "Social Networks." Model No. 26 in *Anthropology*. Addison Wesley, Reading.
- Bidart, C., and D. Lavenu. 2005. "Evolutions of Personal Networks and Life Events." *Social Networks* 27:359-376.
- Blau, P.M. 1977. *Inequality and Heterogeneity*. The Free Press, New York.
- 1994. *Structural Contexts of Opportunities*. The University of Chicago Press, Chicago.
- Blau, P.M., T.C. Blum, and J.E. Schwartz. 1982. "Heterogeneity and Inter marriage." *American Sociological Review* 47:45-63.
- Blau, P.M., and J.E. Schwartz. 1984. *Crosscutting Social Circles: Testing a Macrostructural Theory of Intergroup Relations*. Academic Press, Orlando.
- Blum, T.C. 1985. "Structural Constraints on Interpersonal Relationships: A Test of Blau's Macrosociological Theory." *American Journal of Sociology* 91:511-521.
- Blumstein, P., and P. Kollock. 1988. "Personal Relationships." *Annual Review of Sociology* 14:467-490.
- Bonacich, P. 1972. "Technique for Analyzing Memberships." *Sociological Methodology* 4:176-185.
- Borgatti, S.P., M.G. Everett, and L.C. Freeman. 2002. *Ucinet 6 for Windows*. Analytic Technologies, Harvard.
- Boissevain, J. 1974. *Friends of Friends: Networks, Manipulators and Coalitions*. Basil Blackwell, Oxford.
- Breiger, R.L. 1974. "The Duality of Persons and Groups." *Social Forces* 53:181-190.
- 1990. "Social Control and Social Networks: A Model from Georg Simmel." Pp. 453-476 in *Structures of Power and Constraint. Papers in Honor of Peter M. Blau*, edited by C. Calhoun, M.W. Meyer, and W.R. Scott. Cambridge University Press, New York.
- Broese van Groenou, M.I. 1991. *Gescheiden Netwerken. De Relaties Met Vrienden en Verwanten Na Echtscheiding*. [Separated Networks. Relationships With Friends and Relatives After Divorce]. Thesis Publishers, Amsterdam.

## References

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- Burt, R.S. 1984. "Network Items and the General Social Survey." *Social Networks* 6:293-339.
- , 2002. "Bridge Decay." *Social Networks* 24:333-363.
- Campbell, K.E., and B.A. Lee. 1990. "Gender Differences in Urban Neighboring." *Sociological Quarterly* 31:495-512.
- , 1992. "Sources of Personal Neighbor Networks: Social Integration, Need, or Time?" *Social Forces* 70:1077-1100.
- Coleman, J.S. 1990. *Foundations of Social Theory*. Harvard University Press, Cambridge, MA.
- , 1993. "The Rational Reconstruction of Society: 1992 Presidential Address." *American Sociological Review* 58:1-15.
- Cook, K.S., and J.M. Whitmeyer. 1992. "Two Approaches to Social Structure: Exchange Theory and Network Analysis." *Annual Review of Sociology* 18:109-27.
- Degenne, A., and M.O. Lebeaux. 2005. "The Dynamics of Personal Networks at the Time of Entry into Adult Life." *Social Networks* 27:337-58.
- De Graaf, P.M., and M. Kalmijn. 2003. "Alternative Routes in the Remarriage Market: Competing-Risk Analyses of Union Formation after Divorce." *Social Forces* 81:1459-1498.
- De Jong Gierveld, J., and D. Perlman. 2006. "Long-Standing Nonkin Relationships of Older Adults in the Netherlands and the United States." *Research on Aging* 28:730-48.
- Duck, S.W., 1991. *Friends for Life: The Psychology of Personal Relationships*. Second (revised) edition. Harvester, New York.
- Faust, K., and A.K. Romney. 1985. "Does STRUCTURE Find Structure? A Critique of Burt's Use of Distance as a Measure of Structural Equivalence." *Social Forces* 7:77-103.
- Feld, S.L. 1981. "The Focused Organization of Social Ties." *American Journal of Sociology* 86:1015-1035.
- , 1982. "Social Structural Determinants of Similarity among Associates." *American Sociological Review* 47:797-801.
- , 1997. "Structural Embeddedness and Stability of Interpersonal Relations." *Social Networks* 19:91-95.
- Feld, S.L., and W.C. Carter. 1998. "Foci of Activity as Changing Contexts for Friendship." Pp. 136-152 in *Placing Friendship in Context*, edited by R.G. Adams and G. Allan. University Press, Cambridge.
- Fischer, C.S. 1982a. *To Dwell Among Friends: Personal Networks in Town and City*. University of Chicago Press, Chicago.
- , 1982b. "What Do We Mean by 'Friend'? An Inductive Study." *Social Networks* 3:287-306.

- Fischer, C.S., R.M. Jackson, C.A. Stueve, K. Gerson, L. McCallister Jones, and M. Baldassare. 1977. *Networks and Places. Social Relations in the Urban Setting*. Free Press, New York.
- Fischer, C.S., and S.J. Olicker. 1983. "A Research Note on Friendship, Gender, and the Life Cycle." *Social Forces* 62:124-33.
- Flap, H., and B. Völker. 2001. "Goal Specific Social Capital and Job Satisfaction. Effects of Different Types of Networks on Instrumental and Social Aspects of Work." *Social Networks* 23:297-320.
- Flap, H., B. Bulder, and B. Völker. 1998. "Intra-organizational Networks and Performance." *Computational and Mathematical Organization Theory* 4:109-47.
- Friedkin, N.E. 1981. "The Development of Structure in Random Networks: An Analysis of the Effects of Increasing Network Density on Five Measures of Structure." *Social Networks* 3:41-52.
- Friemel, T.N. 2008. *Why Context Matters. Applications of Social Network Analysis*. VS Verlag, Wiesbaden.
- Gluckman, M. 1962. "Les Rites de Passage." Pp. 1-52 in *Essays on the Ritual of Social Relations*, edited by M. Gluckman. Manchester University Press, Manchester.
- Granovetter, M.S. 1973. "The Strength of Weak Ties." *The American Journal of Sociology* 78:1360-1380.
- Haines, V.A., and J.S. Hurlbert. 1992. "Network Range and Health." *Journal of Health and Social Behavior* 33:254-66.
- Heider, F. 1958. *The Psychology of Interpersonal Relations*. John Wiley and Sons Inc., New York.
- Hennig, M. 2007. "Re-evaluating the Community Question from a German Perspective." *Social Networks* 29:375-390.
- Holland, P.W., and S. Leinhardt. 1970. "A Method for Detecting Structure in Sociometric Data." *American Journal of Sociology* 76:492-513.
- Homans, G.C. 1950. *The Human Group*. Harcourt, Brace and Company, New York.
- Huckfeldt, R.R. 1983. "Social Contexts, Social Networks, and Urban Neighborhoods: Environmental Constraints on Friendship Choice." *American Journal of Sociology* 89:651-669.
- Huston, T.L., and G. Levinger. 1978. "Interpersonal Attraction and Relationships." *Annual Review of Psychology* 29:115-156.
- Ibarra, H. 1995. "Race, Opportunities, and Diversity of Social Circles in Managerial Networks." *The Academy of Management Journal* 38:673-703.
- Jackson, R.M., C.S. Fischer, and L. McCallister Jones. 1977. "The Dimensions of Social Networks." Pp. 39-58 in *Networks and Places. Social Relations in the Urban Setting*, edited by C.S. Fischer, R.M. Jackson, C.A. Stueve, K. Gerson, L. McCallister Jones, and M. Baldassare. Free Press, New York.
- Johnson, S.C. 1967. "Hierarchical Clustering Schemes." *Psychometrika* 32:241-53.

## References

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- Kahn, R.L., and T.C. Antonucci. 1980. "Convoys Over the Life Course: Attachment, Roles and Social Support." Pp. 253-286 in *Life-Span Development and Behavior, Vol. 3*, edited by P.B. Baltes and O. Brim. Academic Press, New York.
- Kalmijn, M. 1998. "Intermarriage and Homogamy: Causes, Patterns, Trends." *Annual Review of Sociology* 24:395-421.
- , 2002. "Sex Segregation of Friendship Networks: Individual and Structural Determinants of Having Cross-Sex Friends." *European Sociological Review* 18:101-118.
- , 2003. "Shared Friendship Networks and the Life Course: An Analysis of Survey Data on Married and Cohabiting Couples." *Social Networks* 25:231-49.
- Kalmijn, M., and H. Flap. 2001. "Assortative Meeting and Mating: Unintended Consequences of Organized Settings for Partner Choices." *Social Forces* 79:1289-1313.
- Kalmijn, M., and J.K. Vermunt. 2007. "Homogeneity of Social Networks by Age and Marital Status: A Multilevel Analysis of Ego-Centered networks." *Social Networks* 29:25-43.
- Kapferer, B. 1969. "Norms and the Manipulation of Relationships in a Work Context." Pp. 181-244 in *Social Networks in Urban Situations: Analyses of Personal Relationships in Central African Towns*, edited by J.C. Mitchell. Manchester University Press, Manchester.
- Krackhardt, D. 1999. "The Ties that Torture: Simmelian Tie Analysis in Organizations." *Research in the Sociology of Organizations* 16:183-210.
- Krackhardt, D. and M. Kilduff. 1999. "Whether Close or Far: Social Distance Effects on Perceived Balance in Friendship Networks." *Journal of Personality and Social Psychology* 76:770-782.
- Laumann, E.O. 1966. *Prestige and Association in an Urban Community*. Bobbs-Merrill, Indianapolis.
- Laumann, E.O., J.H. Gagnon, R.T. Michael, and S. Michaels. 1994. *The Social Organization of Sexuality: Sexual Practices in the United States*. University of Chicago Press, Chicago.
- Lazarsfeld, P.F., and R.K. Merton. 1954. "Friendship as a Social Process: A Substantive and Methodological Analysis." Pp. 298-348 in *The Varied Sociology of Paul F. Lazarsfeld* edited by P.L. Kendall. Columbia University Press, New York.
- Lazega, E., and P.E. Pattison. 1999. "Multiplexity, Generalized Exchange and Cooperation in Organizations: A Case Study." *Social Networks* 21:67-90.
- Leenders, R.T.A.J. 1996. "Evolution of Friendship and Best Friendship Choices." *Journal of Mathematical Sociology* 21:33-48.
- Louch, H. 2000. "Personal Network Integration: Transitivity and Homophily in Strong-Tie Relations." *Social Networks* 22:45-64.

- Marin, A. 2004. "Are Respondents More Likely to List Alters with Certain Characteristics? Implications for Name Generator Data." *Social Networks* 26:289-307.
- Marsden, P.V. 1987. "Core Discussion Networks of Americans." *American Sociological Review* 52:122-131.
- 1988. "Homogeneity in Confiding Relations." *Social Networks* 10:57-76.
- 1990a. "Network Diversity, Substructures, and Opportunities for Contact." Pp. 397-410 in *Structures of Power and Constraint. Papers in Honor of Peter M. Blau*, edited by C. Calhoun, M.W. Meyer, and W.R. Scott. Cambridge University Press, New York.
- 1990b. "Network Data and Measurement." *Annual Review of Sociology* 16:435-463.
- Martin, J.L., and K.T. Yeung. 2006. "Persistence of Close Personal Ties over a 12-Year Period." *Social Networks* 28:331-62.
- McPherson, M., and L. Smith-Lovin. 1987. "Homophily in Voluntary Organizations: Status Distance and the Composition of Face-to-Face Groups." *American Sociological Review* 52:370-379.
- McPherson, M., L. Smith-Lovin, and M.E. Brashears. 2006. "Social Isolation in America: Changes in Core Discussion Networks over Two Decades." *American Sociological Review* 71:353-375.
- McPherson, M., L. Smith-Lovin, and J.M. Cook. 2001. "Birds of a Feather: Homophily in Social Networks." *Annual Review of Sociology* 27:415-444.
- Mitchell, J.C. 1969. *Social Networks in Urban Situations*. University of Manchester Press, Manchester.
- Mollenhorst, G. 2008. "Context Overlap and Multiplexity in Personal Relationships." Pp. 55-77 in *Why Context Matters. Applications of Social Network Analysis*, edited by T.N. Friemel. VS Verlag, Wiesbaden.
- Mollenhorst, G., B. Völker, and H. Flap. 2008a. "Social Contexts and Core Discussion Networks: Using a Choice-Constraint Approach to Study Similarity in Intimate Personal Relationships." *Social Forces* 86:937-65.
- 2008b. "Social Contexts and Personal Relationships: The Effect of Meeting Opportunities on Similarity for Relationships of Different Strength." *Social Networks* 30:60-68.
- 2008c. "Meeting Opportunities and Transitive Triads in Core Discussion Networks." Paper presented at the *4th UK Social Network Conference*, University of Greenwich, London, UK, July 2008.
- Morgan, D.L., M.B. Neal, and P. Carder. 1997. "The Stability of Core and Peripheral Networks over Time." *Social Networks* 19:9-25.
- Newcomb, T.M. 1961. *The Acquaintance Process*. Holt, Rinehard & Winston, New York.
- Nisbet, R. 1969. *The Quest for Community*. Oxford University Press, New York.

## References

---

- Pescosolido, B.A., and B.A. Rubin. 2000. "The Web of Group Affiliations Revisited: Social Life, Postmodernism, and Sociology." *American Sociological Review* 65:52-76.
- Podolny, J.M., and J.N. Baron. 1997. "Resources and Relationships: Social Networks and Mobility in the Workplace." *American Sociological Review* 62:673-93.
- Putnam, R.D. 2000. *Bowling Alone: The Collapse and Revival of American Community*. Free Press, New York.
- Reskin, B. 1993. "Sex Segregation in the Workplace." *Annual Review of Sociology* 19:241-70.
- Shulman, N. 1975. "Life-Cycle Variations in Patterns of Close Relationships." *Journal of Marriage and the Family* 37:813-821.
- Simmel, G. [1922] 1955. *Conflict and The Web of Group Affiliations*. Translated by K.H. Wolff, and R. Bendix. Free Press, New York.
- Skvoretz, J., and F. Agneessens. 2007. "Reciprocity, Multiplexity, and Exchange." *Measures, Quality & Quantity* 41:341-57.
- Snijders, T.A.B. 2003. "Multilevel Analysis." Pp. 673-677 in *The SAGE Encyclopedia of Social Science Research Methods (Volume II)*, edited by M. Lewis-Beck, A.E. Bryman, and T.F. Liao. SAGE Publications, Thousand Oaks, CA.
- Snijders, T.A.B., and R.J. Bosker. 1999. *Multilevel Analysis. An Introduction to Basic and Advanced Multilevel Modeling*. SAGE Publications, London.
- Spijkerman, R. 2000. *De Positie van Mannen en Vrouwen in het Bedrijfsleven en Bij de Overheid*. [The Position of Men and Women in Businesses and at the Government]. Ministry of Social Affairs and Employment, The Hague.
- Stein, M.R. 1960. *The Eclipse of Community*. Princeton University Press, Princeton, NJ.
- Stueve, C.A., and K. Gerson. 1977. "Personal Relations Across the Life-Cycle." Pp. 79-98 in *Networks and Places. Social Relations in the Urban Setting*, edited by C.S. Fischer, R.M. Jackson, C.A. Stueve, K. Gerson, L. McCallister Jones, and M. Baldassare. Free Press, New York.
- Terhell, L. 2003. *Changes in the Personal Network after Divorce*. Thela Thesis, Amsterdam.
- Tijhuis, M.A.R. 1994. *Social Networks and Health*. Nivel, Utrecht.
- Uhlenberg, P., and J. De Jong Gierveld. 2004. "Age-segregation in Later Life: An Examination of Personal Networks." *Ageing & Society* 24:5-28.
- Van Busschbach, J. 1996. *Uit het Oog uit het Hart? Stabiliteit en Verandering in Persoonlijke Relaties* [Out of Sight, Out of Mind? Stability and Change in Personal Relationships]. Thesis Publishers, Amsterdam.
- Van der Gaag, M. 2005. *Measurements of Individual Social Capital*. F&N Boekservices, Amsterdam.
- Van der Poel, M. 1993. *Personal Networks: A Rational-Choice Explanation of their Size and Composition*. Swets & Zeitlinger, Lisse.

- Van Duijn, M.A.J., J.T. Van Busschbach, and T.A.B. Snijders. 1999. "Multilevel Analysis of Personal Networks as Dependent Variables." *Social Networks* 21:187-209.
- Van Ham, M. 2002. *Workplace Mobility and Occupational Achievement*. Eburon, Delft.
- Van Tilburg, T. 1992. "Support Networks Before and After Retirement." *Journal of Social and Personal Relationships* 9:433-445.
- , 1998. "Losing and Gaining in Old Age: Changes in Personal Networks Size and Social Support in a Four-Year Longitudinal Study." *Journal of Gerontology* 53B:S313-S323.
- Verbrugge, L.M. 1977. "The Structure of Adult Friendship Choices." *Social Forces* 56:576-597.
- , 1979. "Multiplexity in Adult Friendship." *Social Forces* 57:1286-1309.
- Völker, B. 1995. *Should Auld Acquaintance Be Forgot...? Institutions of Communism, the Transition to Capitalism and Personal Networks: The Case of East Germany*. Thesis Publishers, Amsterdam.
- Völker, B., and H. Flap. 1997. "The Comrade's Belief: Intended and Unintended Consequences of Communism for Neighborhood Relations in the Former GDR." *European Sociological Review* 13:241-265.
- , 2001. "Weak Ties as a Liability: The Case of East Germany." *Rationality and Society* 13:397-428.
- , 2002. *The Survey of the Social Networks of the Dutch (SSND1). Data and Codebook*. Utrecht University/ICS, Utrecht.
- Völker, B., H. Flap, and G. Mollenhorst. 2007. *The Survey of the Social Networks of the Dutch, Second Wave (SSND2). Data and Codebook*. Utrecht University/ICS, Utrecht.
- , 2009. "Changing Places: The Influence of Meeting Places on Recruiting Friends." Pp. 28-48 in *Contexts of Social Capital: Social Networks in Communities, Markets and Organizations*, edited by R.M. Hsung, N. Lin, and R. Breiger. Routledge, London.
- Wasserman, S., and K. Faust. 1994. *Social Network Analysis. Methods and Applications*. Cambridge University Press, New York.
- Wellman, B. 1979. "The Community Question: The Intimate Networks of East Yorkers." *American Journal of Sociology* 84:1201-1231.
- , 1996. "Are Personal Communities Local? A Dumptarian Reconsideration." *Social Networks* 18:347-354.
- , 1999. *Networks in the Global Village*. Westview Press, Boulder CO.
- Wellman, B., R.Y. Wong, D. Tindall, and N. Nazer. 1997. "A Decade of Network Change: Turnover, Persistence, and Stability in Personal Communities." *Social Networks* 19:27-50.
- Wellman, B., and S. Wortley. 1990. "Different Strokes from Different Folks: Community Ties and Social Support." *American Journal of Sociology* 96:558-588.

*References*

---

- Wheeldon, P. 1969. "The Operation of Voluntary Associations and Personal Networks in the Political Processes of an Interethnic Community." Pp. 128-180 in *Social Networks in Urban Situations: Analyses of Personal Relationships in Central African Towns*, edited by J.C. Mitchell. Manchester University Press, Manchester.
- Wöhler, T., and T. Hinz. 2007. Entstehung und Entwicklung von Sozialkapital. Pp. 91-112 in *Sozialkapital. Grundlagen und Anwendungen*, edited by A. Franzen, and M. Freitag. VS Verlag, Wiesbaden.

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Gerald Mollenhorst  
Utrecht, March 2009

# Curriculum Vitae

Gerald Mollenhorst was born in Den Ham (Ov.), the Netherlands, on March 30, 1980. After obtaining a Bachelor degree in Business Economics in 2002, he studied Sociology at Utrecht University of which he obtained a Master degree in 2004. In September 2004, he became a PhD student at the Interuniversity Center for Social Science Theory and Methodology (ICS) at the Department of Sociology of Utrecht University, and worked on a research which resulted in this thesis. In 2006, he visited Miller McPherson and Lynn Smith-Lovin at the Department of Sociology of Duke University, Durham, NC. During the four-year PhD research term, he co-authored a few research papers on personal networks that are not included in this thesis, as well as a report of The Netherlands Institute for Social Research (SCP) on social capital at the Dutch countryside. Gerald currently holds a position as Assistant Professor at the Department of Sociology/ICS at Utrecht University. He works on a Utrecht University High Potential research project that was initiated by Beate Völker and Veronique Schutjens, studying the conditions for and consequences of the interdependencies between local entrepreneurs and neighborhood residents.

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