



SOCIAL CONTACT AND THE RELATIONSHIP WITH DIVORCE

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ABSTRACT

This study investigated the consequence of divorce for a person's contact with friends, relatives and neighbors. The Swiss Household Panel was used, which provided a large, nationally representative and recent sample of respondents. The *liberation-* and *isolation* hypotheses formulated by Kalmijn and Broese van Groenou (2005) were tested, and their main findings were confirmed. Furthermore, hypotheses were tested concerning whether educational attainment influenced the effect of divorce on social contact. However, no significant effect was found.

Keywords: divorce, social contact, educational attainment

PREFACE

“Not merely in the realm of commerce but in the world of ideas as well our age is organizing a regular clearance sale. Everything is to be had at such a bargain that it is questionable whether in the end there is anybody who will want to bid.” – S.K.

Clearly this thesis cannot be considered part of the world of ideas, as it was most certainly not had at a bargain. However, for what it's worth, I invite the reader to bid.

I kindly thank my supervisor, Anne-Rigt Poortman, for her insight and comments; both of which have proven invaluable. I also thank my friends and family for their enduring support, as without them this thesis would surely have gone for a penny. And I thank my God, who has always stood near in the secret place.

In dedication to

Julius Louis Zerwick

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1 INTRODUCTION

Since the liberalization of divorce in the Netherlands in 1971 the divorce rate has steadily risen from around 3,3 divorces per 1000 married couples in 1970, to approximately 9,7 divorces in 2017 (Centraal Bureau voor de Statistiek, 2018b). This entails that currently a little over one in three marriages end in divorce (CBS, 2018a). The rising divorce rate can be attributed to a broad set of societal changes, such as the increased economic independence of women; the increased importance of the women's liberation movement; greater social acceptance of divorce; and greater expectations for personal fulfillment from romantic relationships and marriage (Amato, 2000; Amato, 2010; Aughinbaugh, Robles, & Sun, 2013). Recognized as a critical event in a person's life, divorce can have consequences for various significant life domains. It can have an economic impact by leading to a drop in household income; it can have an impact on housing and a person's domestic lives by causing one partner to have to move away and/or both partners having to sell the marital home; it can have an impact on a person's health and psychological well-being, as it can lead to more health problems and a higher risk of mortality; and divorce can have social outcomes in the form of losing friends and having less social contact (Amato, 2010; Bracke, Colman, Symoens, & Van Praag, 2010; Leopold, 2018; Sbarra, Law, & Portley, 2011).

In this study I will focus on the consequence of divorce for a person's social contact. This relationship is important, as one's social contacts can potentially both attenuate, or exacerbate, the effects of divorce on a person's wellbeing (Milardo, 1987). A common finding is that after a divorce a person may lose around half of their personal relationships within two years of the divorce (Broese van Groenou, 1991; Milardo, 1987). This is in part caused by a divorce severing the connection between people and the contexts in which they were embedded during the time that they were married (Jacobson, 1983). Such network losses, especially if they persist, can be detrimental to a person's psychological wellbeing as they can cause enduring social distress (Terhell, 2004). Therefore divorce can potentially have significant social consequences. And yet, some findings show that the social consequences of divorce are not unequivocally and ubiquitously negative. People that are divorced and who don't remarry appear to have more supportive interactions with people in their network than those who are in their first or second marriage (Kalmijn

& Broese van Groenou, 2005; Terhell, 2004). Furthermore, networks of people that are divorced can recover in a longer term than many studies on the social consequences of divorce focus on (Albeck & Kaydar, 2002; Kalmijn & Broese van Groenou, 2005; Leopold, 2018), and it seems that in fact many people's networks do. Some studies even show that this initial loss of personal relationships does not affect everyone that goes through a divorce, and some actually gain contacts (Kalmijn & Broese van Groenou, 2005; Terhell, 2004).

Studies therefore have produced heterogeneous findings on the effect of divorce for people's social contact. One important study in this field is that of Kalmijn and Broese van Groenou (2005). They differentiated between different types of social contact, and found that people that are divorced have more contact with friends, but less contact with neighbors (Kalmijn & Broese van Groenou, 2005). This study aims to investigate whether Kalmijn and Broese van Groenou's (2005) findings are still valid when tested using a larger and more recent sample than was available at the time of their study. In doing so, I hope to contribute to the body of knowledge concerning the consequences of divorce for one's social contact, and thereby add to the weight of evidence on either side of the scales. Therefore my research question is: does divorce have a positive or a negative influence on a person's social contact? To investigate this question, I will use data from 2016 from the Swiss Household Panel. This dataset is large, nationally representative, and quite unique in that it has collected fairly extensive personal network data.

The effect of divorce on social contact is properly conceived as depending on personal and structural conditions, as well as on characteristics of the personal relationships themselves (Terhell, 2004). One such personal condition is educational attainment. Educational attainment has received very little attention in the context of social contact following divorce, yet there are some clues as to its relevance. People with a higher degree of education are more likely to marry; are older when they first marry; and are less likely to divorce (also from a second spouse) than those with a lower or no degree in higher education (Aughinbaugh et al., 2013). Educational attainment also seems to have an influence on the social contacts of people that are divorced: Men with a higher degree of education have a higher number of alters in their network post-divorce; have more new relationships after a divorce and also participate more in social activities (Terhell, 2004). And finally, education may have an influence on social contact after a divorce as changes

therein can in part be explained as being due to people's capacity to respond to the social consequences of their divorce; to recognize its detrimental effects and actively work to counteract them by rebuilding their social networks (Gerstel, 1988). Therefore my second research question is: does a person's educational attainment influence the relationship between divorce and social contact?

Research on the social consequences of divorce are not only relevant to the scientific endeavor, but can also provide insight which is valuable for broader society. Since more people are confronted with divorce than ever before, the question of its impact in relation to a person's social contact is acutely relevant for the wellbeing of individuals, and by extent for society.

2 THEORETICAL FRAMEWORK

In the following sections (2.1.1 - 2.1.3) I will discuss for different categories of persons mechanisms which describe the effect of divorce on social contact. Dissolution of the relationship between two people that cohabit is treated as being equivalent to divorce. The two main hypotheses concerning these mechanisms are borrowed from the work of Kalmijn and Broese van Groenou (2005). In section 2.1.4, the role of a person's resources in time and money and how they are expected to be related to the effects of these mechanisms is discussed. Finally in section 2.2, I relate how a person's level of education is expected to moderate the effect of the discussed mechanisms.

2.1 DIVORCE AND SOCIAL CONTACTS

Two hypotheses which concern different mechanisms by which divorce may influence social contact are: a *liberation hypothesis* and an *isolation hypothesis* (Kalmijn & Broese van Groenou, 2005). The *liberation-* and *isolation hypotheses* propose opposing direct effects of divorce on the sum total of social contacts; the *liberation hypothesis* proposing a positive effect, and the *isolation hypothesis* proposing a negative effect. *Liberation* and *isolation* both consider two different aspects of changes caused by divorce to arrive at the respective expectations: an effect on a person's social network and an effect on a person's

need for social contact. Though the hypotheses propose opposing effects, the mechanisms which they put forth may operate simultaneously, depending on the category of person that an actor has contact with (Kalmijn & Broese van Groenou, 2005). The categories which will be investigated in this study are friends, relatives, and neighbors. Which mechanism is expected to be in effect, or whether both are expected to be in effect, will be related in the following per category of type of social contact. There is no explicit derivation of hypotheses for the effects of remarriage on social contact; the effect of remarriage is assumed to be equal to the effect of marrying for the first time. Therefore the expectation is that there will be no significant differences between remarried persons and persons married for the first time. It will be interesting to see whether this assumption holds, and in this regard the investigation concerning being remarried is essentially explorative.

I will first discuss both the *liberation*- and *isolation* hypotheses in relation to friends; then relatives; and finally neighbors; each time starting with the effect on a person's social network, and ending with the effect on a person's need for social contact.

2.1.1 FRIENDS

LIBERATION

When a person becomes romantically involved with a partner, their friendship network decreases in size and the number of alters in their network that are shared with the partner gradually increases. This is a process known as 'dyadic withdrawal' (Johnson & Leslie, 1982; Kalmijn, 2003; Kalmijn, 2012). The shrinking of one's friendship network is hypothesized to be due to friends experiencing time competition with a person's spouse (Johnson & Leslie, 1982). A person only has so much time in a day and when they are dating, or living together with a partner, a lot of their time is occupied with the partner. These shifts in the life-course have indeed been shown to be correlated with the greatest reductions in number of friends (Kalmijn, 2003). A person's time for social contact is further limited by the necessity of spending time with the friends and relatives that the partner brings into the relationship. (Johnson & Leslie, 1982; Kalmijn, 2003). *Liberation* suggests that the negative effect of marriage on contact with a person's *exclusive*

friendship network will be reversed by divorce. This is because a person will now no longer have to divide their time between their friends and their partner, or between their friends and their partner's friends or relatives (Gerstel, 1988). The *liberation hypothesis* therefore proposes that the effect of divorce on a person's contact with friends is positive.

The second aspect which *liberation* appeals to is the proposition that divorce has the effect of changing a person's need for social contact. This change in the need for social contact due to divorce, in turn has the effect that people increase their social contact. Previous studies have shown that being divorced increases a person's need for support (Amato, 2010). This increased need arises because the transitions that a divorce entails often presents a person that has divorced with emotional and practical problems due to the necessity of adjusting to a new life and the loss of an intimate relationship (Amato, 2010; Kalmijn, 2012). Additionally, the loss of an intimate relationship is expected to cause a person's relative need for social contact to increase. Where a partner would previously provide support and intimacy, after a divorce a person is forced to look for alternatives, even if their absolute need for social support has stayed the same (Kalmijn, 2012). Therefore, on this account also, the *liberation hypothesis* proposes that divorce will have a positive effect on contact with friends.

ISOLATION

Where *liberation* gives a central place to the *exclusive* friendship network of each of the partners, the *isolation hypothesis* predominantly looks at the *joint* friendship network. When people become romantically involved, not only does their exclusive friendship network decrease in size as a consequence of the process of 'dyadic withdrawal', they also develop a joint friendship network with their partner (Kalmijn, 2003; Kalmijn & Broese van Groenou, 2005). The biggest shifts from exclusive friends to joint friends again happens when a person starts dating, and / or when a person starts to live together with a partner. People that are dating share 20–25% of their friends with their partner, and when they start living together they report that 50% of their friends are shared (Kalmijn, 2003). The process of 'dyadic withdrawal' can therefore more properly be understood as one in which both partners move from having an exclusively personal friendship network, to partly having a joint friendship network, and partly having an exclusive friendship network.

That partners form a joint network can be explained by appealing to Heider's (1958) balance principle. According to the balance principle, the hypothetical situation in which a person has a friend, and the person's spouse does not like this friend, results in an unbalanced "triad" (the "forbidden triad"). Such unbalanced triads give rise to tension, and people will therefore strive to have all triads in their social network to be balanced. This means that concerning a person's friends, their partner will either have friendly relations with them, or the person will stop being friends with them (Kalmijn, 2003). But apart from a joint-network being thought of as a necessity to minimize tensions, a joint network can also be seen rather as a relation-specific investment (Kalmijn, 2003; van Houdt & Poortman, 2018). A joint-network is part of a joint-lifestyle, which contributes to partners' emotional attachment to each other, and increases the cost of union dissolution. However, *Isolation* suggests that when two people divorce, the friends in their joint-network will be faced with a loyalty conflict concerning which partner to remain friends with (Broese van Groenou, 1991; Kalmijn & Broese van Groenou, 2005; Terhell, Broese van Groenou, & Van Tilburg, 2004). Friends' loyalty conflicts are further aggravated by experienced time constraints, as where before friends could interact with both spouses simultaneously, post-divorce they would need to spend double the time to maintain the same relationships (Kalmijn & Broese van Groenou, 2005). Therefore, a person may expect to lose part of their joint-network along with the loss of the relationship with a partner. Given these processes in relation to the joint friendship network, *isolation* proposes a decrease in the contact with friends after a divorce.

Concerning the exclusive personal friendship network, *liberation* proposes that a divorce causes an either relative or absolute increase in a person's need for social contact, which in turns drives an increase in the contact with friends. There are however reasons to think that returning to the pre-marriage level of social contact is not so simple (Kalmijn & Broese van Groenou, 2005; McKenry & Price, 1991). The assumption that reengaging with friends in a person's exclusive personal friendship network is unproblematic only takes into account the needs and opportunities of the divorcee, whereas whether a divorcee will succeed in increasing their social contact also depends on the needs and opportunities of their network. It isn't obvious that all friends will be willing to reengage with a divorcee whom has previously neglected them, and is expected to be heavily dependent on earlier levels of reciprocity. Yet some friends may be unwilling or unable to provide the divorcee with the support they need after having gone through a divorce (Kalmijn, 2012).

The network aspect of the *isolation-hypothesis* and the *liberation-hypothesis* both concern different parts of a person's friendship network. If a person divorces, they are likely to both lose friends from their joint-network, and resume contact with friends from their exclusive personal network (Kalmijn & Broese van Groenou, 2005). Both hypotheses also formulate expectations concerning a person's *need* for social contact, but again these are not mutually exclusive, and may be in operation simultaneously. The total effect could therefore be null if both network and needs-based effects are equally strong, or either positive or negative if they differ in strength. In this study I will not derive a one-sided hypothesis, as I judge the arguments for the proposed mechanisms to be equally strong.

2.1.2 RELATIVES

LIBERATION

Concerning contact with relatives, the social network aspect of the *liberation* mechanism could work most clearly in relation to relatives whom their partner hardly ever saw, and so could be considered part of the person's "exclusive relative network". For example, visiting an uncle whom had no or wanted no contact with my partner. *Liberation* would again propose 'dyadic withdrawal', causing these family members to also experience the time competition from a person's partner, a person's partner's friends, and a person's own friends. Note that 'dyadic withdrawal' has not actually been observed in relation to a person's relatives (Johnson & Leslie, 1982). However, it is very unlikely that a person could ever maintain an exclusive relative network to any degree, because even more strongly than in a person's friendship network, having a relationship with a family member who did not have a relationship with a person's partner would cause tension. Therefore, the aspect of the *liberation hypothesis* concerning a person's exclusive network is not expected to apply to contact with relatives. On the basis of this aspect of *liberation*, I do not expect that contact with relatives will increase.

However, though it hasn't actually been observed, it isn't implausible that 'dyadic withdrawal' could also occur in relation to a person's relatives. Though most if not all relatives would still be part of a joint network with the spouse, rather than part of one partner's exclusive network, it is plausible that contact with some relatives *will* suffer from time competition, as a partner effectively has two families that they need to split their time between, their own and that of their partner. Furthermore, a partner may come to serve as a substitution for the support a person receives from their relatives (Sarkisian & Gerstel, 2008). In the event of a divorce, a person may in turn substitute the lost support of the ex-partner with support provided by their relatives (Kalmijn, 2012).

Additionally, *liberation* proposes an increase in a person's *need* for social contact in the event of a divorce. Someone who's divorced will look for support in their network, and is likely to find it not only with their friends, but their relatives also, since family members are generally quite responsive to another family member's need for support (Kalmijn & Broese van Groenou, 2005). Therefore, a person is expected to increase their contact with relatives if they divorce.

ISOLATION

Contrary to having an exclusive relative network, it has been found that visiting family is actually especially something which couples do together (van Houdt & Poortman, 2018). Also, as people start living together and have children, an increasing portion of their time is spent on family-oriented social activities (Kalmijn & Bernasco, 2001; Munch, McPherson, & Smith-Lovin, 1997). This would suggest a high degree of overlap between couples in contact with their extended family. And certainly it will be of no surprise that in-laws generally spend a lot of time with the partner of their family member. Therefore it could be said that to a large degree there exists a joint relative network between couples. However, it is very unlikely that the account of the *isolation hypothesis*, which suggests that a person's joint network will experience loyalty conflicts over whom to continue seeing in the event of a divorce, will hold true in relation to a person's relatives. Though partners will have a joint relatives network as far as *contact moments* are concerned; a person's relatives always remain tied to them in a way that friends are not, and are therefore very unlikely to experience loyalty conflicts. Therefore, I do not expect that if a person divorces contact with relatives will decrease.

Because relatives are not expected to experience loyalty conflicts, but are expected to experience a degree of time competition; and because a person that has divorced is likely to look for support from their relatives, and relatives are likely to provide such support; I expect that contact with relatives will increase if a person divorces. However, to a lesser extent than contact with friends, as I expect that relatives will suffer less from time competition than friends, and will also suffer less from a person's 'dyadic withdrawal' than friends.

2.1.3 NEIGHBORS

LIBERATION

In relation to contact with neighbors, the *liberation hypothesis* would again work most clearly in relation to neighbors whom a person's partner didn't see, or only very infrequently. Such neighbors would then be part of a person's "exclusive neighbor network". However, as with relatives, it is very unlikely that a person could maintain such a network, though for a slightly different reason. Friends can be maintained relatively easily in an exclusive friendship network, since if a partner doesn't like them, tension can still be minimized by ensuring that a person always sees the friend in question at a time and place without the partner. In the slightly peculiar case where a partner *does* like a person's friends, but the person in question explicitly wanted to keep them separate, they could relatively easily achieve this in the same way. However, maintaining separate contacts with neighbors, because of either a (potentially) negative or positive tie to the partner, is a lot more difficult given the spatial circumstance that they are also the partner's neighbors. Therefore, this network aspect of the *liberation hypothesis* is expected not to apply to neighbors in any significant way. If a person is divorced, they are expected to look to their social network for an alternative to the lost support of the ex-partner (Kalmijn & Broese van Groenou, 2005), and may experience a stronger need for support as well (Amato, 2010).

However, these circumstances are not expected to increase contact with neighbors, since neighbors are generally not part of a person's core discussion network (McPherson, Smith-Lovin, & Brashears, 2006), and are therefore unlikely to be able to substitute the lost support of a spouse, or provide the support that a person needs after a divorce. Therefore, I do not expect contact with neighbors to increase on account of the *liberation hypothesis*.

ISOLATION

Given that a person's neighbors are also their partner's neighbors, the social network containing neighbors is expected to be very much joint for both partners. This means that on the account of *isolation*, when a person divorces, neighbors will experience loyalty conflicts over which partner to remain friends with. Also, in the case of one of the partners moving away, the relationship between them and the neighbors will be strained additionally (Kalmijn & Broese van Groenou, 2005).

Because it seems likely that neighbors will experience loyalty conflicts in the case of a divorce and because it is unlikely that there will be enough "exclusive" neighbors on which 'dyadic withdrawal' may take effect, I expect that contact with neighbors will decrease in the event of a divorce.

2.1.4 THE ROLE OF RESOURCES

Both the *liberation-* and the *isolation hypotheses* propose direct effects of divorce on social contacts as a consequence of both a network effect on a person's exclusive and/or joint network, and an effect on a person's need for social contact. Both primarily concern ex-partners' needs relating to interaction with relationships in their network. But divorce not only entails a change in the marital tie, it often also leads to a change in household composition and -income (De Vaus, Gray, Qu, & Stanton, 2014; Gadalla, 2009; Poortman, 2000). These changes can have an indirect effect on the social contact of people who have experienced a divorce. This is because social contact is not only determined by the respective needs of a person and the people in their network. It is also influenced by the opportunities and constraints which a person and their potential interaction partners experience. Such constraints predominantly concern time and money; since in order to participate socially one needs to have sufficient time available to do so, and also sufficient

financial resources, as participating in social activities often costs money (Kalmijn & Broese van Groenou, 2005). Therefore I expect that at least some of the positive or negative effect on social contact on account of either *liberation* or *isolation* is mediated by a person's resources.

For example, in the event of a divorce, especially women lose a significant proportion of their household income (De Vaus et al., 2014; Gadalla, 2009; Poortman, 2000). Consider the hypothetical situation in which a person had a large joint-network with their ex-partner, and after the divorce loses a portion of these friends. This would provide support for the *isolation-hypothesis*. However, it is also likely that such a step back in income will cause a person to have less contact, especially with friends, since contact with friends often involves spending money (Kalmijn & Broese van Groenou, 2005). This means that part of the total negative effect of divorce on contact with friends would in this scenario be due to losing income, rather than due to losing friends. Since particularly women have been found to lose household income due to a divorce, it is expected that women's resources partially mediate the negative effect of divorce on contact with friends. This effect is expected in particular for contact with friends, as there is some indication that more money is spent in contact with friends than in contact with relatives or neighbors (Bittman, 2002; Sletten, 2010).

On the account of the *liberation hypothesis* however, resources are expected to function as a suppressor. Though resources are expected to positively affect contact with friends, this effect is expected to have a relatively low ceiling, meaning that a person's resources become irrelevant after a certain point. Since both groups of men and women vary in how much resources they have available, taking resources into account should remove the variance in resources which diminishes the positive effect of divorce on contact with friends. Therefore, when taking resources into account, I expect that any positive effect on contact with friends on account of the *liberation hypothesis* will increase. Because neighbors are in such close proximity to people, and relatives are expected to be more likely to be willing to help bridge any gaps in contact that a lack of resources may create, these forms of social contact are not expected to be significantly mediated or suppressed by a person's resources.

2.2 THE MODERATING ROLE OF EDUCATION

There currently exists very little theory concerning the possibility of a moderation effect of a person's level of education on the effects of divorce on social contact. Though education is often controlled for in studies investigating the effects of marriage and divorce on social contact (Kalmijn, 2012; Rözer, Poortman, & Mollenhorst, 2017; Sarkisian & Gerstel, 2008), it is rarely the research focus. However, some studies were conducted which may give a clue as to the influence of education. Firstly, McPherson et al. (2006) have found that people with a higher level of education have larger networks, and larger discussion networks. They also find that people with a lower degree of education have a higher proportion of kin in their networks. Kalmijn (2003) finds that people with a higher level of education have a smaller proportion of overlap with their partner in the number of friends in their network, and less often see their friends together with their partner. In line with this, van Houdt and Poortman (2018) find that more highly educated partners have more separate lifestyles.

Since people with a higher level of education have less friends in common with their partner, they have more friends in their "exclusive" personal friendship network. Therefore, I expect that on the account of the *liberation-hypothesis* people with a higher level of education will have more opportunities to reverse the effects of 'dyadic withdrawal'. Once someone divorces, people with a higher level of education will have more friends to return to given that the time demands of the partner have fallen away. Furthermore, a person with a higher degree of education will be better able to find alternatives for the emotional support they lost with the ex-partner, since they will have more interaction partners to choose from. Therefore on account of the *liberation-hypothesis*, I expect that a higher level of education will increase the positive effect of being divorced on contact with friends. On the account of the *isolation-hypothesis*, people with a higher level of education are less at risk of losing friends due to loyalty conflicts, since they have less friends in common with their partner. They should also be less at risk of having interaction partners in their network whom are unable or unwilling to provide them with support, since they have larger discussion networks and more people to choose from. Therefore on account of the *isolation-hypothesis*, I expect that a higher level of education will decrease the negative effect of being divorced on contact with friends. Furthermore, a person's level of education is highly correlated with their income.

Therefore, I expect that any increase or decrease due to a person's level of education in the effect of being divorced on contact with friends will be lessened when taking a person's financial resources into account.

Concerning contact with relatives, it is unlikely that either those with a higher-, or those with a lower level of education would have an "exclusive" relative network. However, if a measure of 'dyadic withdrawal' due to time competition does occur in relation to relatives, those with a lower level of education possibly stand to win more after a divorce than those with a higher level of education, since they have a higher proportion of kin in their networks. Therefore I expect that having a higher degree of education will somewhat decrease the positive effect of being divorced on contact with relatives. Since there are no evident reasons to expect that a person's level of education will influence the effect of being divorced on contact with neighbors, I do not formulate a hypothesis in this regard.

3 METHODS

3.1 DATA

This study uses the Swiss Household Panel (SHP) to investigate its hypotheses (FORS, 2018). The SHP is a panel study which is quite unique in that it has annually collected quite extensive network data in the form of data on social contacts between 1999 and 2010. Starting from 2010 the SHP data collection still collected a core part of the data annually, but the module on respondents' social network and others were only included every three years following a rotation calendar. The population of reference consists of all individuals living in private households in Switzerland who had a telephone connection registered in the telephone directory (landline or mobile). The collection of the first sample started in 1999 with a nationally representative sample of 5,074 households, consisting of interviews with 7,799 individuals. In 2004 the first refreshment sample was added to compensate for attrition. This sample was representative and consisted of 2,538 households and interviews with 3,652 individuals. In 2013 a second representative refreshment sample was added. This last sample added 3,988 households and interviews of 6,088 individuals (FORS, 2018).

Information on the household was collected by interviewing a household reference person, while individual information was collected by interviewing each household member, including children from the age of 14. The household reference person could give information in the household questionnaire about household members who were not individually interviewed. Basic information was provided about these household members, such as their age, sex, relations, nationality, level of education, and occupational status. Additionally, the household reference person could fill out a proxy questionnaire for household members on household members younger than 14 years, who had been absent for a long period, or who were unable to respond due to illness or disability. In this study only respondents who themselves had filled out the individual questionnaire were included in the analyses.

Interviews were conducted by specially trained interviewers using a computer-assisted telephone interviewing (CATI) technique. In wave 15, which was the first wave for the SHPIII sample, the SHPIII sample respondents were also sent a paper and pencil biographical questionnaire and asked to send it back using a return envelope. The aim of this questionnaire was to collect individual retrospective biographical data, containing questions on geographical mobility, partner relationships and changes in civil status, family events and employment, amongst others (FORS, 2018). The information from this biographical questionnaire was used to partly construct the independent variables indicating marital status (for more information see the Measurements section).

Because the respondents from the SHPIII sample were asked to complete the biographical questionnaire in wave 15 (2013), these respondents did not complete the individual questionnaire in wave 15. This posed a problem, since the largest sample for which network data was available would be in wave 15, when the SHPIII sample was added. However, the SHPIII sample did not provide any network information in this wave, nor almost any of the information used in the models, except age. The next best option would be to use data from when the SHPIII sample did complete an individual questionnaire, which was the next year in 2014 (wave 16). However, since the SHP had started rotating the social network module every three years since 2010, wave 16 did not contain any information on social contact. I therefore decided to use the information from wave 18 (2016), since this was the first year in which respondents from all three samples completed the individual questionnaire, which also included questions on social contact.

The initial response rates for the three samples which collectively make up the SHP were 64% for SHPI (1999), 65% for SHPII (2004) and 60% for SHPIII (2013) at the household level, and 85%, 76%, and 81% respectively on the individual level. There has been a relatively high attrition rate. In 2016, 52% of households from SHPI, 49% from SHPII, and 59% from SHPIII were still participating. The proportion of individuals still participating is 65% and 52% and 63% respectively. This means that in wave 18 (2016) the total sample consisted of 6,261 households and 10,029 individuals (FORS, 2018). Though the attrition rate has been relatively high, by comparing results of analyses for many characteristics with and without using weights, a previous study using the Swiss Household Panel dataset has shown that any selectivity effects in the attrition were not strong enough to influence results (Kalmijn, 2012).

The data consisted of separate datasets for the different waves. Each wave consisting of a separate dataset for information from the household questionnaire (with information on households, provided by the household reference person), and for information from the individual questionnaire (with information on individuals, provided by individuals themselves). The individual datasets also contained information on individuals that had not themselves filled out an individual questionnaire, but of whom the household reference person had provided information through either a proxy individual questionnaire, or through the household questionnaire. There are also various auxiliary datasets containing information which span all the waves, including household- and individual master files with information on every household and individual that had ever participated in any of the waves. The master files include information on individual and household response statuses, as well as interview dates. The individual master file also includes time-invariant information such as gender and date of birth (FORS, 2018).

In this study data from the 18th wave (2016) was used, since in this wave all three samples (SHPI, SHPII & SHPIII) completed an individual questionnaire including social network questions. This makes it the largest and most recent sample for which data on social contact was available. Individuals whom had not themselves filled in an individual questionnaire, but were reported on by the household reference person, were dropped from the dataset. Before any further variable construction, I performed a one to one merge of the dataset for individuals of wave 18 with the individual master file. To do this I used the unique personal identifier as a key, and only kept information on individuals who had

participated in wave 18. Since I am analyzing individuals, none of the household datasets was used, except the household dataset of wave 18 in order to construct a variable on the level of urbanization (for more information see the Measurements section). The individual master file included a variable with unique household identifiers which could be used to identify which individuals were living in the same household. In the analyses, this variable was used to control for the dependencies resulting from individuals being nested in the same household.

Because three different models were estimated using three different dependent variables that each had a different proportion of missing observations, three different final samples were analyzed in this study. After list-wise deletion of respondents whom had missing observations on any of the included variables in the models, information on 5,388 individuals was used to investigate the relationship between divorce and contact with friends (2,623 men and 2,765 women). Information on 5,362 individuals was used to investigate the relationship between divorce and contact with relatives (2,626 men and 2,736 women). And, finally, information on 3,985 individuals was used to investigate the relationship between divorce and contact with neighbors (1,944 men and 2,041 women).

3.2 MEASUREMENTS

3.2.1 DEPENDENT VARIABLES

The dependent variables I use in this study are those that measure how many times a month an individual has had contact with their relatives (mother, father, siblings), their close friends, and their neighbors. There were no specific answer categories; respondents were free to name any number of times that they had contact with relatives, friend or neighbors per month. For social contact with relatives information was present for contact with a respondent's father, mother and siblings. These three scores were used to calculate an average score, which was used as a measurement of frequency of contact with relatives.

On all three measurements of social contact responses were truncated to a maximum of 30 times contact per month to avoid the influence of outliers. Analyses were performed with and without including outliers, and results didn't change significantly. Descriptive statistics of these and other variables are presented in Table 1 for men and in Table 2 for women.

3.2.2 INDEPENDENT VARIABLES

I begin with giving general information on the variables used to construct the main independent variable. I will then describe how each category of this variable was coded.

The main predictor variable used in this study is a categorical variable indicating marital status with three different categories: 'married', 'divorced', or 'remarried'. People that were widowed; in a registered partnership; and those that were single were excluded from the analyses. Dummy variables were constructed from this marital status variable to include in the models, with 'married' being the reference category. To construct the marital status variable, a respondent's indication of their marital status in wave 18 was used. Respondents reported their marital status, choosing from the categories "single, never married", "married", "divorced", "widow/widower", and "registered partnership". For all three the SHPI, SHPII and SHPIII samples information was also used from earlier waves of the SHP than wave 18. This was necessary to differentiate between those who were in their first marriage, and those who were married multiple times ('remarried'). In order to use the information from previous waves to construct the marital status variable, all the variables concerning marital status from the datasets of the earlier waves were added to the wave 18 dataset by performing a one to one merge in a loop, using the unique personal identifier as a key. In all the waves the variables concerning marital status had the same answer categories. For respondents from the SHPI sample (sampled in 1999), information on marital status was used from the first 18 waves. For respondents from the SHPII sample (sampled in 2004), information on marital status was used from wave 6 (which was wave 1 for the SHPII sample) up to and including wave 18. For respondents from the SHPIII sample, information on marital status before wave 18 was used from wave 15 (2013), wave 16 (2014) and wave 17 (2015), since these respondents did not participate in the study before wave 15. This perhaps implies that I used multiple observations from the same individuals, which would violate the assumption of

independence of observations required for in the analyses. However, multiple observations from the same individuals were only used to categorize these individuals on a measure indicating whether they were in their first marriage, were divorced, or were in a second or later marriage in 2016 (wave 18). This means that in the analyses each individual also provided information only once, safeguarding the assumption of independence of observations.

Since the SHPIII sample did not participate before wave 15, there was little information on their marital status in the earlier waves. However, for the SHPIII sample, information on marital status before 2013 was available from the biographical questionnaire which SHPIII respondents filled out in wave 15. This biographical questionnaire contains retrospective information on SHPIII respondents' marital status. The biographical questionnaire dataset was put in a wide format to match the dataset on individuals in wave 18, and the relevant variables indicating marital status (and living together with a partner) were added to the wave 18 dataset by performing a one to one merge in a loop, using the unique personal identifier as a key. In the biographical questionnaire respondents reported retrospectively whether they had experienced a change in marital status, giving the date and using the answer categories "married", "registered partnership", "separated from spouse/partner", "divorced", "widowed", or "inapplicable". Respondents in the "inapplicable" category were set to missing.

Information from previous waves was also used concerning whether respondents were living together with a partner. For this information a variable was used on which respondents reported whether they had a partner with whom they were living together, using the answer categories "yes, living together", "yes, but not living together", "no", and "does not know". Respondents whom reported in the "does not know" category were set to missing. The answer categories remained the same for all waves. Again, for the SHPI sample (sampled in 1999) information on living together was used from the first 18 waves. For the SHPII sample (sampled in 2004), information on living together was used from wave 6 (which was wave 1 for the SHPII sample) up to and including wave 18. For the SHPIII sample, this information was available from wave 16 up to and including wave 18. It was not available for wave 15, since these respondents did not complete an individual questionnaire then. Since the SHPIII sample did not participate before wave 15 (2013), the retrospective biographical questionnaire was again used to gain information

on whether respondents had lived together with a partner before wave 15. On this questionnaire respondents were asked to indicate for categories of people when they had started and stopped living together, using the categories “your mother”, “your father”, “your sisters or brothers”, “your half-brothers or sisters”, “alone (without housemates, family, ...)”, “your partner / spouse”, “your child / children”, “other people of your kinship”, “other (institution, army, ...)”.

There were 4,181 respondents coded as ‘married’ in the pooled sample (2,149 men and 2,032 women). With the pooled sample I mean the sample which excludes respondents that have missing values on any of the independent variables, but includes respondents that have missing values on all but one of the dependent variables. Of these, 385 respondents are not actually married but cohabiting with a partner (193 men and 192 women). Respondents were coded ‘divorced’ if they were divorced in wave 18, and not living together with a partner. There were 652 respondents coded as ‘divorced’ in the pooled sample (215 men and 437 women). And finally, respondents were coded ‘remarried’ if they were married in wave 18, and had been married and divorced at least once in the previous waves. There were 875 respondents coded as ‘remarried’ (439 men and 436 women). Respondents were also coded ‘remarried’ if they were living together with a partner in wave 18, and had cohabited and not cohabited with a partner at least once in previous waves. This was also the case if respondents were divorced in wave 18 (and living together). Of these, 291 were not actually married, but cohabiting with a partner (131 men and 160 women). Descriptive statistics of these and other variables are presented in table 1 (men) and table 2 (women).

MARRIED

For the SHPI and SHPII samples, respondents were coded ‘married’ if they were married in wave 18; were living together; and if they had never been divorced or separated in any of the previous waves, or in wave 15 – 17 for respondents from the SHPIII sample. This was done by first constructing a count variable, which counted how often respondents reported being married or divorced in the waves before wave 18. Together with the information from wave 18, the count variable was then used to construct a measure of marital status, indicating whether a respondent was in their first marriage, was divorced, or was in a second or later marriage. Missing information on marital status in any of the

waves did not affect this coding. For the SHPIII sample, which didn't participate before wave 15, respondents were coded as 'married' if they reported that they were married in wave 18; had not been divorced in waves 15 -17, and had not reported that they had been divorced or separated on the retrospective biographical questionnaire. Only the SHPIII sample could retrospectively indicate whether they had been separated, as opposed to being divorced. These categories imply different things, since one can separate from a spouse and yet never divorce. However, I collapse these categories because I want to exclude respondents from the 'married' category who are married in wave 18 to one partner, but who were previously living together with a different partner from whom they have separated. Similarly, I want to only include respondents in the 'married' category who are living together and have not lived together with someone else previously. Respondents from SHPI and SHPII were also coded as 'married' if they were living with a partner in wave 18, but only if they were not also married or divorced in wave 18 and had lived together with a partner in all previous waves. Concerning the variables on which respondents reported living together with a partner, I encountered the same problem as I did with the marital status variables: they indicated a state, not an event. This again ideally requires the identification of 'spells' to properly code a respondent as living together for the first time. Therefore, the solution was adopted to require that respondents lived together in all previous waves. Missing information on living together in any of the waves did not affect this coding. For the SHPIII sample, the retrospective biographical questionnaire was again used. Respondents reported for categories of people when they had started and stopped living together (see above for the answer categories). From these categories a variable was constructed that indicated how many times a respondent had lived with a partner. The variable included respondents who had lived with a partner *and* children, or a partner *and* any other category of person. Respondents from the SHPIII sample who were living together with a partner in wave 18; who were neither married nor divorced; who had lived together with only one partner before 2013 (wave 15) and had lived together with a partner in waves 15 - 17, were coded as 'married'. Missing information on living together did not affect this coding.

DIVORCED

Respondents from all three samples are coded as 'divorced' if they are divorced in wave 18 and are not living together with a partner. There are no further conditions. This entails that respondents who have been married and divorced or separated more than once, or who have lived together with a partner more than once before wave 18, are also included in the 'divorced' category. Missing information on marital status in any of the waves or in the biographical questionnaire did not affect this coding.

REMARIED

Respondents from all three samples were coded as 'remarried' if they were married in wave 18; were living together with a partner; and had been divorced or separated at least once before wave 18. Respondents were also coded as 'remarried' if they were living together with a partner; were not married; had lived together with a partner and *not* lived together with a partner before wave 18. Missing information on marital status or living together in any of the waves did not affect this coding.

CONTROL VARIABLES

In the analyses were included as control variables a mean centered measure of age; a mean centered measure of degree of urbanization; and a measure of number of years of completed education which was bottom-coded to 8, this being the lowest number of years of education in the sample. All these characteristics have been found to be related to social contact (Kalmijn & Broese van Groenou, 2005). The measure on urbanization concerned a question asked of the household reference person in relation to the household, since it is a measure which reflects a household characteristic. Therefore, this variable was not included in the dataset with the information on the individual questionnaires. I therefore added the relevant variable from the household questionnaire with the individual wave 18 constructed above by performing a many to one merge, using the unique personal identifier and the household identifier as a key. The measure for degree of urbanization is an ordinal variable that measures the degree of urbanization in one's neighborhood on a 9-point scale, running from 'peripheral agricultural communes' to 'center'. A mean centered measure of yearly personal net income is also included. All possible sources of income are taken into account on this variable, including income from (self-) employment;

family or child allowances; state pension; pension schemes; disability benefits; unemployment schemes; welfare; and gifts from individuals. The variable was constructed out of other variables on which respondents reported separately on each type of income by FORS staff (the Swiss Centre of Expertise in the Social Science). A measure for the number of hours a respondent spent working is also included. Respondents were asked, "How many hours do you usually work each week for your main job?" There were no predetermined answer categories. I coded respondents who were unemployed as having 0 working hours on this variable, using a variable on which respondents reported their occupational status. These two measures of income and work hours are together used as indicative of a person's resources: The measure of the hours a respondent spends working relates to how much time a respondent has available to spend on social contacts. And the measure of a respondent's yearly net income relates to how much financial resources they have available. Descriptive statistics of these and other variables are presented in table 1 (women) and table 2 (men).

3.2.3 ANALYTIC STRATEGY

In this study I estimated three OLS multiple regression models to investigate the effects of being either divorced or remarried on social contact, compared to respondents who are married. The analysis is done on a cross-section of a sample of the target population, which in principle makes the estimated effects susceptible to influences caused by respondents belonging to different birth cohorts. However, controlling for age should also control for most of these cohort effects (Kalmijn, 2003). The three different dependent variables were used to construct three different regression models. The models were first estimated without including the resource measures of income and hours spent working. The models were then estimated again, this time including the resource variables, to investigate whether the resource variables mediated any of the effects that were found in the first models. In all models I control for the dependencies in the data that occur between individuals of the same household, using the household identifier. Thirdly, the models without resources and the models with resources which were estimated one at a time, were then estimated simultaneously using the command 'suest' in Stata (Weesie, 1999), to test whether the differences in coefficients between the models were significant.

Since the independent variables measuring age, level of urbanization of the neighborhood and income are mean centered, the reported effects of being divorced or remarried are those assuming that these variables are at the mean.

A second series of models was also estimated, but now including interactions between being divorced and a respondent's years of education, and being remarried and a respondent's years spent on education. The main effects of being divorced, remarried, and years spent on education were also included in the models, as is required in OLS regression. Again a model was estimated for each of the three independent variables, and both with and without the measures of a respondent's resources. To investigate whether the years a respondent has spent on education has an influence on the effect that being either divorced or remarried has on the frequency of social contact, and thus improves the fit of the estimated models, adding the interactions is tested with the incremental F-test. Since men and women are expected to differ on most explanatory variables in the models, all models are estimated for men and women separately.

Finally, the models including the interaction terms which were estimated separately, once for men, and once for women, were then estimated simultaneously, one model for men, and one model for women using the 'suest' command in Stata (Weesie, 1999). This allowed me to test whether the differences between the coefficients in the models for men and women were significant.

3.3 DESCRIPTIVES TABLE (MEN)

Table 1

Descriptives of dependent and independent variables for men

	Mean	SD	Min	Max	N
<i>Dependent Variables</i>					
Contact with friends	6.47	0.12	0.00	30.0	2623
Contact with relatives	4.96	0.10	0.00	30.0	2626
Contact with neighbors	8.92	0.17	0.00	30.0	1944
<i>Independent variables ^a</i>					
Married	0.77	0.01	0.00	1.00	2149
Divorced	0.08	0.01	0.00	1.00	215
Remarried	0.16	0.01	0.00	1.00	439
<i>Control variables ^a</i>					
Age	56.8	0.27	19.0	96.0	2803
Education (years)	14.8	0.06	8.00	21.0	2803
Urbanization	6.56	0.05	1.00	9.00	2803
Yearly income	93,321	1192	200	2,204,700	2803
Hours worked	28.4	0.41	0.00	90.0	2803

^a N of respondents with at least one observation on one of dependent variables

3.4 DESCRIPTIVES TABLE (WOMEN)

Table 2

Descriptives of dependent and independent variables for women

	Mean	SD	Min	Max	<i>N</i>
<i>Dependent Variables</i>					
Contact with friends	7.58	0.13	0.00	30.0	2765
Contact with relatives	6.78	0.11	0.00	30.0	2736
Contact with neighbors	9.08	0.16	0.00	30.0	2041
<i>Independent variables ^a</i>					
Married	0.70	0.01	0.00	1.00	2032
Divorced	0.15	0.01	0.00	1.00	437
Remarried	0.15	0.01	0.00	1.00	436
<i>Control variables ^a</i>					
Age	55.2	0.26	19.0	92.0	2905
Education (years)	13.5	0.06	8.00	21.0	2905
Urbanization	6.56	0.04	1.00	9.00	2905
Yearly income	45,877	851	100	1,504,000	2905
Hours worked	16.9	0.30	0.00	84.0	2905

^a *N* of respondents with at least one observation on one of dependent variables

4 RESULTS

4.1 MAIN EFFECTS

4.1.1 FRIENDS

Looking at model I we see that both divorced men and divorced women have significantly more contact with their friends than people who are married (See Table 3 for the results for men and Table 4 for the results for women). Men that are divorced have almost two ($b = 1.71$) contact moments per month with friends more than men who are married. Women that are divorced have a little over two ($b = 2.38$) contact moments more than married women. Estimating the models simultaneously and testing the coefficients for similarity shows that the difference in contact per month with friends between divorced men and divorced women is not significant ($\chi^2 = .36, p = .548$). Divorced men and women differ from married men and women to the same degree. Adding the resource variables to the model (model II) hardly changes the effect of being divorced on contact with friends for men. For women the effect increases somewhat, indicating that resources suppress the relationship between being divorced and contact with friends. However, the difference between the coefficients in the model for women without resource variables and the model for women with resource variables is not significant ($\chi^2 = .00, p = .983$). We also see that remarried men and women don't differ significantly in their contact with friends from married men and women. Adding the resource variables to the models does not change this. The results therefore indicate that marrying for a second or later time has the same effect on contact with friends as does marrying for the first time.

4.1.2 RELATIVES

Looking at model III we see that neither men nor women that are divorced differ significantly from married men and women in their contact with relatives. The significance of these effects didn't change by including resources in the model (model IV). Remarried men also did not significantly differ from married men in their contact with relatives. However, remarried women had significantly less contact with relatives than married women, to the effect of one contact moment per month ($b = -1.15$).

This indicates that for women, remarrying does not have the same effect on contact with relatives as marrying for the first time. The effect decreased very slightly by adding resources to the model ($b = -1.13$), indicating that resources mediate the effect on contact with relatives for remarried women, but the difference between the coefficients is not significant ($\chi^2 = .03$, $p = .865$). The models for men and women were also estimated simultaneously to see if the effect remained significant. However, if the models for men and women are estimated simultaneously, the effect of remarrying for women was not significant at the $p < 0.05$ level ($b = -1.16$, $p = .096$). Therefore, I can't conclude that the effect of remarrying is different for men and women.

4.1.3 NEIGHBORS

Looking at model V we see that men that are divorced do not differ significantly from men that are married in the contact they have with neighbors. Women that are divorced have significantly more contact with neighbors than women that are married, to the magnitude of almost two contact moments more per month ($b = 1.66$). Adding resources to the model (model VI) hardly changes the effect for men, but for women the effect becomes stronger ($b = 2.24$). The difference between the coefficients of divorce in the models for women with and without resources is significant ($\chi^2 = 10.74$, $p = .001$). This indicates that for women, resources suppress the effect of being divorced on contact with neighbors

Men that are remarried have more contact with neighbors than married men, to the magnitude of one contact moment more per month ($b = 1.34$). It indicates that remarrying for men does not have the same effect on contact with neighbors as marrying for the first time does. There is no difference for women between the effect of remarrying on contact with neighbors and that of being married for the first time. Adding resources to the models (model 6) does not change the effect of being remarried on contact with neighbors for either men or women.

4.2 INTERACTION EFFECTS

Concerning the hypothesized interaction of a person's level of education and the effect of being divorced on social contact I can be brief, as none of the interaction terms in any of the models are significant. The models were also estimated with the education variable upper-coded to 21, instead of bottom-coded to 8; 21 being the maximum years of education in the sample. However, this did not change the significance of any of the effects.

4.3 CONTROLS

Finally, I discuss the control variables that were included in the model. For women, a higher age decreases contact with friends and relatives, both with and without controlling for resources. But a higher age increases contact with neighbors, also with and without controlling for resources. A higher education decreases contact with friends, and a higher level of urbanization of a respondents place of residence increases contact with friends, both with and without controlling for resources. Lastly, more hours spent working decreases contact with neighbors. For men, a higher age and education decrease contact with friends and relatives, both in models with and without resources. A higher age increases contact with neighbors without controlling for resources, whereas a higher education decreases contact with neighbors both with and without controlling for resources. A higher level of urbanization of a respondent's place of residence decreases contact with relatives, both with and without controlling for resources. More hours spent working increases contact with relatives, and decreases contact with neighbors.

4.4 RESULTS TABLES

Table 3

Estimates of OLS regression coefficients and standard errors (in parentheses) for men's contact with relatives, friends, and neighbors.

	Friends (I)	Resources Included (II)	Relatives (III)	Resources Included (IV)	Neighbors (V)	Resources Included (VI)
<i>Main Effects</i>						
Constant	5.68 (.306)	5.92 (.354)	5.94 (.283)	5.61 (.326)	10.205 (.538)	10.78 (.610)
Divorced	1.71** (.517)	1.72** (.518)	.695 (.439)	.670 (.440)	.436 (.846)	.384 (.835)
Remarried	-.291 (.288)	-.274 (.288)	-.078 (.278)	-.094 (.278)	1.34* (.573)	1.32* (.565)
<i>Control variables</i>						
Age	-.055** (.008)	-.064** (.010)	-.098** (.007)	-.087** (.009)	.070** (.015)	.035 (.019)
Education	-.39** (.037)	-.131** (.038)	-.155** (.033)	-.159** (.035)	-.309** (.067)	-.193* (.069)
Urbanization	.062 (.044)	.059 (.044)	-.133* (.044)	-.128* (.044)	-.070 (.081)	-.068 (.080)
Income		.000 (.000)		-.000 (.000)		.000** (.000)
Work		-.015 (.354)		.021* (.010)		-.038* (.018)
<i>Interactions</i>						
Divorced*Education	-.133 (.184)	-.136 (.184)	-.104 (.129)	-.103 (.130)	-.036 (.296)	-.069 (.290)
Remarried*Education	.057 (.096)	.060 (.097)	-.050 (.081)	.049 (.081)	-.138 (.189)	-.124 (.186)
<i>Post-Estimation^a</i>						
Marital Status * Education	.001	.001	.000	.000	.000	.000
N	2623 ^b	2.623	2626 ^b	2.626	1944 ^b	1.944

*a. Incremental F-test**b. Respondents of the pooled sample across models come from 2,803 households.**Note: p < .05; * p < .001; ** (two-tailed tests).*

Table 4

Estimates of OLS regression coefficients and standard errors (in parentheses) for women's contact with relatives, friends, and neighbors.

	Friends (I)	Resources Included (II)	Relatives (III)	Resources Included (IV)	Neighbors (V)	Resources Included (VI)
<i>Main Effects</i>						
Constant	6.18 (.291)	6.00 (.305)	6.87 (.293)	6.75 (.313)	8.96 (.454)	8.62 (.479)
Divorced	2.38** (.397)	2.46** (.409)	.202 (.384)	.332 (.398)	1.66* (.582)	2.24** (.593)
Remarried	.423 (.340)	-.445 (.341)	-1.15** (.333)	-1.13** (.334)	.175 (.523)	.251 (.521)
<i>Control variables</i>						
Age	-.062** (.010)	-.061** (.010)	-.115** (.010)	-.117** (.010)	.062** (.015)	.052** (.016)
Education	-.109* (.040)	-.094* (.043)	.029 (.044)	.046 (.046)	-.102 (.065)	-.030 (.067)
Urbanization	.170** (.049)	.173** (.049)	.089 (.051)	.091 (.051)	-.005 (.078)	.006 (.078)
Income		.000* (.000)		-.000 (.000)		.000 (.000)
Work		-.005 (.013)		-.011 (.012)		-.076** (.019)
<i>Interactions</i>						
Divorced*Education	.141 (.123)	.155 (.133)	.022 (.135)	.029 (.137)	-.077 (.198)	-.084 (.198)
Remarried*Education	.039 (.108)	.038 (.108)	.002 (.106)	.006 (.106)	.002 (.156)	.013 (.155)
<i>Post-Estimation ^a</i>						
Marital Status * Education	.001	.001	.000	.000	.000	.000
<i>N</i>	2765 ^b	2.765	2736 ^b	2.736	2041 ^b	2.041

*a. Incremental F-test**b. Respondents of the pooled sample across models come from 2,803 households.*Note: $p < .05$; * $p < .001$; ** (two-tailed tests).

5 CONCLUSION AND DISCUSSION

In this study I investigated the effect of being divorced on contact with friends, relatives and neighbors as compared to being married. Two main hypotheses were borrowed from the work of Kalmijn and Broese van Groenou (2005); a *liberation* hypothesis and an *isolation* hypothesis. The mechanisms of both hypotheses were evaluated as to their applicability to contact with friends, relatives and neighbors, and specific hypotheses were derived concerning the effect on each of being divorced. To test these hypotheses I have used a nationally representative dataset which is more recent than in the study of Kalmijn and Broese van Groenou (2005). Furthermore, the samples that were tested in this study were twice the size of the samples that were available then. Therefore, this study serves in part as a confirmation study of the work of Kalmijn and Broese van Groenou (2005). Additionally, I have derived two hypotheses concerning a potential moderating effect of education on the relationship between divorce and contact with friends, and one concerning contact with relatives.

I will first discuss the results in light of my hypotheses, and then discuss the limitations of this study.

5.1 DISCUSSION OF HYPOTHESES

FRIENDS

The results show that both men and women that are divorced have more contact with friends than married men and women do. This finding confirms that of Kalmijn and Broese van Groenou (2005). Therefore I find support for the *liberation hypothesis* in relation to contact with friends. Firstly, the results indicate that people experience an increased need for contact with friends, which is likely due to the need to replace the lost support from their ex-partner. And secondly, that they have more time available to spend with friends once the ex-partner no longer places time demands on them. Neither of these mechanisms were directly tested, however, so these results only entail an indication that they are in effect.

RELATIVES

The results show that neither men or women that are divorced differ from married men and women in their contact with relatives. This finding confirms that of Kalmijn and Broese van Groenou (2005). This indicates that 'dyadic withdrawal' does not apply to contact with relatives, and/or that people do not look to relatives to substitute the support that was lost along with the ex-partner. Furthermore, the results indicate that relatives do not experience loyalty conflicts over which partner to maintain relations with. However, again, these mechanisms were not tested directly, so the results supply only an indication that they are not in effect.). The results also show that remarried women have less contact with relatives than married women. This finding confirms that of Kalmijn and Broese van Groenou (2005). Since women that are divorced do not differ from women that are married in their contact with relatives, this finding would suggest that women start having less contact with relatives once they remarry. However, being of a cross-sectional design, the current study is not suited to answering that question.

NEIGHBORS

Men that are divorced do not differ significantly from men that are married in the contact they have with neighbors. This finding differs from that of Kalmijn and Broese van Groenou (2005), in that they do find a significant difference, with men that are divorced having less contact with neighbors. On account of the *liberation hypothesis* I did not expect a difference, but I did expect a decrease in the contact with neighbors on account of the *isolation hypothesis*. This result provides no support for this hypothesis. An interpretation is that either neighbors don't experience loyalty conflicts over which partner to remain in contact with, or that men don't often move away after a divorce. However neither explanation seems very likely.

The results indicate that women that are divorced have more contact with neighbors than women that are married. This finding differs from that of Kalmijn and Broese van Groenou (2005), whom found a negative effect of divorce for women on contact with neighbors. I also find that the positive effect of divorce on contact with neighbors for women is suppressed by resources. This is in accordance with Kalmijn and Broese van Groenou's (2005) finding that labor force participation has a negative effect on women's contacts

with neighbors. This result indicates that women do have an “exclusive” network of neighbors whom they only see without their partner, and whom suffered from time competition during the relationship. Additionally, this result indicates that women do seek and find support from neighbors to replace that of the ex-partner. However, these mechanisms are not tested directly, so this finding should be taken only as an indication of them being in operation.

Lastly, I also find that men that are remarried have more contact with neighbors than do men that are in their first marriage. This finding is again different from that of Kalmijn and Broese van Groenou (2005), whom find no difference.

INTERACTION WITH EDUCATION

The results do not confirm my hypotheses concerning an interaction between a person’s level of education and the effect of being divorced on social contact. The results do provide support for the *liberation hypothesis* concerning contact with friends of men and women that are divorced. If this was the case, I expected to find a positive interaction effect of a person’s level of education, since people with a higher level of education have a lower proportion of friends shared with their partner during the relationship. However, the results do not support this hypothesis. Concerning contact with relatives, the results do not show that there is a difference between people that are divorced and people that are married. If there had been a difference between people that are divorced and people that are married, I expected that people whom are divorced with a lower level of education would have more contact with relatives than people whom are divorced and have a higher level of education. However, the results do not confirm this.

In sum, I find that there is a relationship between being divorced and some forms of social contact. Compared to being married, divorce leads to having more contact with friends for both men and women. Therefore there is support for the *liberation hypothesis* in relation to contact with friends. I do not find that there is a relationship between being divorced and contact with relatives. However, women that are remarried have less contact with relatives than women that are in their first marriage. All the findings of Kalmijn and Broese van Groenou (2005) in relation to contact with friends and relatives are therefore confirmed. Lastly, I do not find a difference between men that are divorced and men that are married in relation to contact with neighbors for men. However, I do

find that women that are divorced have more contact with neighbors than women that are married. This is contrary to my expectation, as on the account of the *isolation hypothesis* I expected that women would have less contact with neighbors. This hypothesis is therefore not supported. The results do show that there is a relationship for women between being divorced and contact with neighbors, and for men that there is a relationship between being remarried and contact with neighbors.

5.2 LIMITATIONS

DEPENDENT VARIABLES

One of the limitations of this study is that it used only the frequency of contact with a respondent's friends, relatives and neighbors. Other often used indicators are the number of contacts, and the degree to which a respondent receives practical and emotional support. Both hypotheses could have been used to make predictions on the size of these networks, and in fact the *isolation hypothesis* does assume that a person loses a significant part of their (joint) network. Furthermore, both hypotheses involved a person's *need* for social contact, and rather than with the frequency of contact, this aspect of the hypotheses would have been more suitably tested by use of a persons' perceived practical and emotional support. To incorporate these measures, one approach would have been to estimate multivariate models. This however would have been beyond the scope of this study. More realistic would have been to construct one measure of "general contact" which incorporates all three measures of frequency, number, and support, and would have constituted an improvement over the study of Kalmijn and Broese van Groenou (2005). However, due to time limitations, the strategy of using only frequency of contact was adopted.

PREVIOUS LITERATURE

Another limitation of this study is the rather limited degree to which it has been informed by relevant previous findings in the literature. To an extent this is due to the fact that research into divorce and social contact itself has been relatively limited. However, there have been some significant studies done on the topic beyond this study's main inspiration – the study by Kalmijn and Broese van Groenou (2005). Better use of earlier, especially more recent, findings in the literature would have aided the specification of hypotheses,

and could have helped to locate and focus on areas which have a higher chance of yielding interesting results and perhaps novel findings. As it stands, this study has mainly focused on confirming the results of Kalmijn and Broese van Groenou (2005), and - concerning their most important findings - has succeeded. However, there are also some divergent findings.

DIVERGENT FINDINGS

There are some possible explanations for the divergence of the findings in this study from those of Kalmijn and Broese van Groenou (2005) concerning the contact with neighbors of men and women that are divorced. Firstly, Kalmijn and Broese van Groenou (2005) make a distinction between people that are recently divorced (less than five years), and people that have already been divorced for a longer period of time (more than five years). In their study there is a significant difference in contact with neighbors between these categories, though all categories are in the direction of less contact with neighbors. Whereas I find no difference for men, and a positive difference for women that are divorced. Therefore, not making this distinction in this study seems unlikely to explain the difference in findings. A different possible cause is that Kalmijn and Broese van Groenou (2005) take housing conditions into account. This significantly influences the results, especially for women, and so is likely the reason for the divergent findings between this and their study.

GENDER DIFFERENCES

A rather conspicuous limitation of this study is that none of the hypotheses are differentiated between men and women. Theoretically I therefore effectively treat them as being the same, yet proceed to test the hypotheses for men and women separately. Since men and women differ significantly on most of the measures that are investigated in studies in the field of family sociology, it is very common to test effects separately. And usually the separate tests are guided by differentiated theoretical considerations. Similarly, there are also relevant distinctions to be made in the hypotheses I used. However, I made the decision to test men and women separately too late to include them. This is certainly something to take into account in future research.

PROBLEMS WITH THE MEASURE OF MARITAL STATUS

Concerning the measure that was used for marital status, it bears reporting that there are some problems with respondents not being categorized correctly which result from the coding of the variable.

Firstly, In relation to the 'married' category: because respondents reported that they were married in every wave in which this was (still) the case (and in which they participated), therefore reporting on a state and not an event, the count variable was used not to identify respondents that had married, but respondents who had divorced. Respondents that were married in wave 18, but had previously been divorced, were then excluded from the 'married' category. This means that respondents in the 'married' category are properly not those that have married once and remained married, but effectively those that are married and have never divorced. To properly identify respondents that have married only once using the available variables would require identifying 'spells' in the data, which is beyond the scope of this study. Therefore, the imperfect solution was adopted to require that respondents had not divorced in any of the previous waves.

Furthermore, respondents that live together with a partner at the time of wave 18, but are not married, should nevertheless be categorized as 'married' considering my operationalization. However, the method of coding as detailed in the Measurements section excludes from the 'married' category respondents who started living together for the first time *after* they were first included in the sample (in either 1999, 2004, or 2013). As in such a case they would have reported not living together with a partner at least once in one of the previous waves, which was an exclusion criterion for this category. This imperfect solution was adopted because doing otherwise would require identifying 'spells', which is beyond the scope of this study. Because of the coding of the 'remarried' category, these respondents are included in the 'remarried' category.

Another problem that results from this method of coding, which does not take into account the unicity of respondents' potentially different partners. Respondents from the SHPI and SHPII samples (and SHPIII samples starting from wave 16) that stopped living together with one partner, and started living with a different partner in the same year, will potentially have reported living together in all waves and therefore be coded as 'married', whereas they should properly be coded as 'remarried'. However, this is

expected to occur in only a minority of cases. A third problem concerns respondents who started living together with a partner for the first time in wave 18. These respondents will have reported not living with a partner in the waves prior to wave 18, and so are coded as 'remarried', instead of 'married'.

For the SHPIII sample, besides the information on living together in waves 16 – 18, the biographical questionnaire was also used to categorize respondents as either 'married' or 'remarried'. To the extent that information from this biographical questionnaire was used, the coding does not suffer from the same problems, since respondents reported every separate instance of living together only once, instead of reporting on it in each wave. However, the coding as detailed in the Measurements section does exclude from the 'married' category people who lived together with a partner; who then lived apart from that partner; and finally again started living with the same partner again, since the coding for the SHPIII sample also does not take the unicity of partners into account. This could occur if one of the partners moves to a foreign country for a time. However this is excepted to occur in a small minority of cases. Due to the coding of the 'remarried' category, these cases would be included in the 'remarried' category.

I suspect that there will not have been a large number of respondents that were incorrectly categorized due to the above mentioned problems. However, the cross-contamination of the 'married' and 'remarried' categories could potentially explain why I find a significant difference between married men and remarried men in contact with neighbors, whereas Kalmijn and Broese van Groenou (2005) do not.

References

- Albeck, S., & Kaydar, D. (2002). Divorced mothers: Their network of friends pre-and post-divorce. *Journal of Divorce & Remarriage*, 36(3-4), 111-138.
- Amato, P. R. (2000). The consequences of divorce for adults and children. *Journal of Marriage and Family*, 62(4), 1269-1287.
- Amato, P. R. (2010). Research on divorce: Continuing trends and new developments. *Journal of Marriage and Family*, 72(3), 650-666.
- Aughinbaugh, A., Robles, O., & Sun, H. (2013). Marriage and divorce: Patterns by gender, race, and educational attainment. *Monthly Lab.Rev.*, 136, 1.
- Bittman, M. (2002). Social participation and family welfare: The money and time costs of leisure in australia. *Social Policy & Administration*, 36(4), 408-425.
- Bracke, P. F., Colman, E., Symoens, S. A., & Van Praag, L. (2010). Divorce, divorce rates, and professional care seeking for mental health problems in europe: A cross-sectional population-based study. *BMC Public Health*, 10(1), 224.
- Broese van Groenou, M. (1991). *Gescheiden netwerken: De relaties met vrienden en verwanten na echtscheiding* Thesis Publishers.
- Centraal Bureau voor de Statistiek. (2018a). Hoeveel huwelijken eindigen in een echtscheiding? Retrieved from <https://www.cbs.nl/nl-nl/faq/specifiek/hoeveel-huwelijken-eindigen-in-een-echtscheiding->
- Centraal Bureau voor de Statistiek. (2018b). Marriage dissolutions; due to divorce and death. Retrieved from

<https://statline.cbs.nl/Statweb/publication/?DM=SLEN&PA=37425eng&D1=3,7&D2=0,5,10,15,20,25,30,35,40,45,50,55,60,65-67&LA=EN&HDR=G1&STB=T&VW=T>

- De Vaus, D., Gray, M., Qu, L., & Stanton, D. (2014). The economic consequences of divorce in australia. *International Journal of Law, Policy and the Family*, 28(1), 26-47.
- FORS. (2018). *Swiss household panel: User guide (1999-2017)*. Lausanne: University of Lausanne.
- Gadalla, T. (2009). Impact of marital dissolution on men's and women's incomes: A longitudinal study. *Journal of Divorce & Remarriage*, 50, 55 - 65.
- Gerstel, N. (1988). Divorce, gender, and social integration. *Gender & Society*, 2(3), 343-367.
- Heider, F. (1958). *The psychology of interpersonal relations* Psychology Press.
- Jacobson, G. F. (1983). *Multiple crises of marital separation and divorce* Grune & Stratton.
- Johnson, M. P., & Leslie, L. (1982). Couple involvement and network structure: A test of the dyadic withdrawal hypothesis. *Social Psychology Quarterly*,
- Kalmijn, M. (2003). Friendship networks over the life course: A test of the dyadic withdrawal hypothesis using survey data on couples. *Social Networks*, 25(3), 231-249.
- Kalmijn, M. (2012). Longitudinal analyses of the effects of age, marriage, and parenthood on social contacts and support. *Advances in Life Course Research*, 17(4), 177-190.
- Kalmijn, M., & Bernasco, W. (2001). Joint and separated lifestyles in couple relationships. *Journal of Marriage and Family*, 63(3), 639-654.
- Kalmijn, M., & Broese van Groenou, M. (2005). Differential effects of divorce on social integration. *Journal of Social and Personal Relationships*, 22(4), 455-476.

- Leopold, T. (2018). Gender differences in the consequences of divorce: A study of multiple outcomes. *Demography*, 55(3), 769-797.
- McKenry, P. C., & Price, S. J. (1991). Alternatives for support: Life after divorce-A literature review. *Journal of Divorce & Remarriage*, 15(3-4), 1-19.
- McPherson, M., Smith-Lovin, L., & Brashears, M. E. (2006). Social isolation in america: Changes in core discussion networks over two decades. *American Sociological Review*, 71(3), 353-375.
- Milardo, R. M. (1987). Changes in social networks of women and men following divorce: A review. *Journal of Family Issues*, 8(1), 78-96.
- Munch, A., McPherson, J. M., & Smith-Lovin, L. (1997). Gender, children, and social contact: The effects of childrearing for men and women. *American Sociological Review*, , 509-520.
- Poortman, A. (2000). Sex differences in the economic consequences of separation: A panel study of the netherlands. *European Sociological Review*, 16(4), 367-383.
- Rözer, J., Poortman, A., & Mollenhorst, G. (2017). The timing of parenthood and its effect on social contact and support. *Demographic Research*, 36, 1889-1916.
- Sarkisian, N., & Gerstel, N. (2008). Till marriage do us part: Adult children's relationships with their parents. *Journal of Marriage and Family*, 70(2), 360-376.
- Sbarra, D. A., Law, R. W., & Portley, R. M. (2011). Divorce and death: A meta-analysis and research agenda for clinical, social, and health psychology. *Perspectives on Psychological Science*, 6(5), 454-474.
- Sletten, M. A. (2010). Social costs of poverty; leisure time socializing and the subjective experience of social isolation among 13-16-year-old norwegians. *Journal of Youth Studies*, 13(3), 291-315.

- Terhell, E. (2004). *Changes in the personal network after divorce* (Doctoral Dissertation).
- Terhell, E., Broese van Groenou, M., & Van Tilburg, T. (2004). Network dynamics in the long-term period after divorce. *Journal of Social and Personal Relationships*, 21(6), 719-738.
- van Houdt, K., & Poortman, A. (2018). Joint lifestyles and the risk of union dissolution: Differences between marriage and cohabitation. *Demographic Research*, 39, 431-458.
- Weesie, J. (1999). Seemingly unrelated estimation and the cluster-adjusted sandwich estimator, STATA technical bulletin, STB 52, 34-47. *T Able A*, 1