

1  
3 CHANGES IN CONTACT AND  
5 SUPPORT WITHIN  
7 INTERGENERATIONAL  
9 RELATIONSHIPS IN THE  
11 NETHERLANDS: A COHORT AND  
13 TIME-SEQUENTIAL PERSPECTIVE  
15

17 Suzan van der Pas, Theo van Tilburg and  
19 Kees Knipscheer

21  
23 **ABSTRACT**

25 *This study investigates whether the frequency of contact and support*  
27 *exchanged in relationships between parents and adult children declines*  
29 *over successive cohorts and over individual time in the Netherlands.*  
31 *Respondents included a birth cohort from 1928 to 1937 with data*  
33 *collected in 1992 (N=941) and in 2002 (N=574) and a birth cohort from*  
*1938 to 1947 with data collected in 2002 (N=884). We assessed cohort*  
*and time-sequential changes. Parents of the later cohort had more contact*  
*and support exchanges with their children than the earlier cohort,*  
*revealing that families have not declined in importance. Furthermore,*  
*longitudinally, contact and supportive exchanges with adult children*

35  
37 **Interpersonal Relations Across the Life Course**  
**Advances in Life Course Research, Volume 12, 243–274**  
Copyright © 2007 by Elsevier Ltd.  
All rights of reproduction in any form reserved  
39 ISSN: 1040-2608/doi:10.1016/S1040-2608(07)12009-8

1 *decreased, suggesting that parents and children devote less time to*  
2 *intergenerational relationships during this “empty nest” phase.*

## 5 INTRODUCTION

7  
9 One of the most profound and dramatic demographic changes that Western  
10 societies have witnessed during the 20th century has been the aging of the  
11 population, resulting in both longer years of linked lives between  
12 generations and longer lives as parents and adult children than ever before  
13 in human history. At the same time, birth rates have decreased in many  
14 Western countries, lowering the number of children available as potential  
15 supporters (De Jong Gierveld, 1998; Sutor, Pillemer, Keeton, & Robison,  
16 1995). Moreover, the impact of industrialization and modernization seems  
17 to have eroded the families’ traditional functions (Burgess, 1916), shifting  
18 responsibility from the family to a public solidarity system. The notion  
19 that in the past, parents were supported more by their offspring is based  
20 on the assumption that the disintegration of the family is an artifact of  
21 modernization (Aboderin, 2004; Hareven, 1995; Shanas, 1979). However, in  
22 the past century, research on intergenerational relationships beyond the  
23 nuclear household has indicated the continuation of family bonds (Troll,  
24 1971). Parents and children have frequent contact and continue to engage in  
25 mutually supportive patterns of exchange (Mancini & Blieszner, 1989).  
26 Despite this evidence, the notion of a “breakdown” of family support  
27 persists in both popular and professional perceptions (Aboderin, 2004).

28 Studies on social change and relationships between parents and adult  
29 children are scarce and have so far been done primarily on very old parents.  
30 One of the few examples of recent research on social change and  
31 intergenerational relationships is a cross-national, multisample study  
32 conducted by Silverstein, Burholt, Wenger, and Bengtson (1998). They  
33 compared parent–child relationships among very old parents (*M* age = 86) in  
34 Wales with those of parents (*M* age = 85) in Los Angeles and, nationally, in  
35 the United States. The data for the Wales, Los Angeles and U.S. National  
36 sample were collected between 1990 and 1995. Wales is characterized as  
37 being more traditional and generally more rural than the U.S., and the  
38 expected differences between Welsh and American parents were interpreted  
39 as being attributable to modernization. Contrary to expectations, only a few  
differences were observed. There were more geographically close relationships  
among the Welsh parents and the contact frequency was higher, but

1 there were no differences observed in the amount of support exchanged.  
2 Silverstein and colleagues explained this by assuming that the situations of  
3 both countries are similar and that the social and economical process of  
4 modernization in Wales could be compared to that of the United States.  
5 However, Aboderin (2004) casts doubt on the underlying assumption  
6 of uniform societal development, which predicts the same “breakdown” of  
7 family support within different countries and within different periods of  
8 time. She also questions whether the process is taking place in the same  
9 manner in different countries.

10 A European study by Vollenwyder, Bickel, d’Epinay, and Maystre (2002)  
11 compared changes in contact frequency between older people (65–79 years  
12 of age) and their families in two surveys carried out in Switzerland in 1979  
13 and 1994. Their findings showed an increase in contact across cohorts,  
14 which can partly be explained by structural factors, such as a decline in  
15 family size, an increase in proximity of children and improvements in means  
16 of communication (cars and telephones). The authors suggest that specific  
17 family cultures based on religious beliefs and practices may also play a role  
18 in family relations.

19 These studies depart from the argument that macrostructural trends  
20 within Western societies have changed the structure and therefore reduced  
21 the functions of families. Although societal factors are considered, studies  
22 supporting this argument only offer broad propositions to explain a decline  
23 in contact and support between parents and adult children. These  
24 explanations are primarily drawn from major transformations such as  
25 industrialization, urbanization, the spread of the market economy and the  
26 growing influence of values of individualization. What is lacking, however,  
27 is an explicit account of the individual consequences of the macrostructural  
28 trends that have taken place. Much of the attention that the relationship  
29 between parent and adult child has received has been focused on the  
30 influence of demographic changes such as the decrease in birth rate, increase  
31 in divorce and decrease in intergenerational coresidence. Less attention has  
32 been given to the relationship itself. Social and demographic changes may  
33 indeed weaken these relationships, but claims of a decline in intergenerational  
34 solidarity between parents and children call for careful and rigorous  
35 analysis of the evidence for trends in contact and support. Based on the  
36 predominantly held assumption of family decline, we derive and test the  
37 following hypothesis: *Social and demographic changes reduce the opportunities for contact and support exchange between parents and adult children.*  
38 This hypothesis requires that a family decline is evident in our data that will  
39 also be the subject of our study.

1 In this study, we focus on societal trends and apply a broader life-course  
perspective than has been done in previous studies. We examine changes in  
3 relationships between parents (aged about 60 years) and their adult children  
(aged about 30 years) using individual-level data on contact and support in  
5 the Netherlands in the 1990s. This category of middle-aged parents has been  
addressed less in previous research and is characterized by parents still  
7 in good health who are entering a period of (pre)retirement and an “empty  
nest” transition when children leave home. For adult children, this is a  
9 period in the life course characterized by ending schooling, getting married,  
having children and becoming a member of the labor force (White &  
11 Rogers, 1997). In this period, adult children are more focused on labor  
participation and the demands of their new families (Rossi & Rossi, 1990).

13 The main question of this article addresses whether, and if so, to  
which extent the individual consequences of macrostructural trends are  
15 related to contact and support exchange between parents and adult  
children. Specifically, we focus on the three major trends: divorce, labor-  
17 force participation and geographical proximity in parent–child residential  
location. In addition, we apply a cohort and time-sequential analysis of  
19 contact frequency and the exchange of instrumental and emotional support  
within relationships between parents and their children. Specifically, we  
21 compare two birth cohorts: The relationship characteristics of parents  
interviewed in 1992 were compared with those of parents of the same age at  
23 the time of the interview conducted in 2002 (reflecting *cohort* and *period*  
*effects*). Has contact and support increased or decreased in the population  
25 across time, displaying “period effects”? Do later generations (“cohorts”)  
receive more or less contact and exchange more or less support than earlier  
27 ones?

Trends, such as improved employment opportunities for women, that  
29 were in progress when the earlier cohort reached retirement age in the 1990s,  
were more firmly established a decade later at the beginning of the 21st  
31 century. Therefore, we assume that social circumstances have different  
effects on the two cohorts. Social developments not only affect the young  
33 but also those in later life, which is addressed by the longitudinal design of  
this study, in which changes were assessed over the 10 years the continued  
35 parent–child relationships were studied (*age* and *period effects*). Is more or  
less contact and support exchanged as people age? Trends in, for example,  
37 female labor-force participation might be related to developments in contact  
and support exchange. The pressure of combining employment and care  
39 giving responsibilities might lead to less contact and support between older  
parents and adult children.

1 By presenting more evidence on age, period and cohort effects, we hope to  
2 get a better understanding of changes in intergenerational relationships and  
3 provide more definite indications about what such changes might mean for  
4 our society. Drawing on prior research, we further develop the rationale for  
5 focusing on divorce, labor-force participation and geographical proximity in  
6 parent-child residential location.

7

9

*Consequences of Opportunities*

11 As in many other Western societies, there has been a strong increase in  
12 divorce in the Netherlands over the past decades. From the mid-1960s to the  
13 mid-1980s, the rate of divorce increased and still remains at a high level,  
14 with almost one in four contemporary marriages in the Netherlands  
15 eventually ending in divorce (De Jong, 1999). By international comparisons,  
16 the divorce rate in the Netherlands is at an intermediate level. Marriage  
17 cohort tables show that divorce increased from 2% after five years of  
18 marriage for couples married in 1960 to about 13% for couples married in  
19 the early 1990s (Kalmijn, De Graaf, & Poortman, 2004). Popenoe (1993)  
20 contends that this increase has major consequences, changing the structure  
21 and further reducing the functions of families, and divorce has been found  
22 to have an adverse effect on parent-child relationships (Aquilino, 1994;  
23 Eggebeen, 1992). Specifically, these studies suggest that divorce results in  
24 less contact and instrumental and emotional support between the divorced  
25 parent and the child.

26 Another important change that has occurred is the increased labor-force  
27 participation of women, who are more often involved in maintaining  
28 intergenerational relationships than males (Spitze & Logan, 1990). In regard  
29 to the 1990s in the Netherlands, the increased labor-force participation of  
30 women is of special interest because it occurred relatively late. Female labor-  
31 force participation only started to increase in the 1970s, when 29% of the  
32 women between 15 and 64 years of age were employed (Social and Cultural  
33 Planning Office, 2000). Labor participation was stable at 30% up to 1985  
34 and increased after that to 39% in 1990 and 53% in 2001 (Portegijs,  
35 Boelens, & Keuzenkamp, 2002). The largest increase is observed within  
36 younger cohorts of women (25-54 years of age), compared to older cohorts  
37 (55-64 years of age). The current female employment rate in the Nether-  
38 lands is now higher than the European Union average; however, most  
39 female employment is part-time, and currently the Netherlands has the  
highest proportion of women working part-time, compared to other

1 Western countries (Portegijs et al., 2002). While past research is not clear  
2 on the effect that employment has on intergenerational support patterns,  
3 it has been found to have a negative effect on the quality of the relation-  
4 ship between adult daughters and their parents (Kaufman & Uhlenberg,  
5 1998).

6 Furthermore, geographical proximity in parent–child residential location  
7 is strongly associated with frequency of contact and exchange of support  
8 (Lawton, Silverstein, & Bengtson, 1994). Coresidence of parents with their  
9 adult children is associated with higher levels of interaction and more  
10 support exchange than living nearby (White & Rogers, 1997). Liefbroer and  
11 De Jong Gierveld (1995) calculated for the Netherlands that in 1965, 55% of  
12 men and 44% of women at age 60 were coresiding with one or more of their  
13 children; in 1990 these percentages were 33% and 22%, respectively. As data  
14 from the current study shows, in 2002 a further decline in intergenerational  
15 coresidence was observed: 23% and 16%, respectively. Furthermore, when  
16 parents and children do not coreside, geographic proximity concerns  
17 differences between children living nearby, for example in the same  
18 neighborhood, or children living at a large traveling distance. Although  
19 there are no data on historical trends in the Netherlands available in the  
20 period under study, the current study shows an increase in children’s  
21 geographical proximity concurrent with a decline in coresidence.

22

### *Control Variables*

23

24 Finally, there are a number of other parent and child characteristics that  
25 may have consequences for the contact and support between parents and  
26 children. The age of parents and children could be related to contact and  
27 support exchange (Morgan, Schuster, & Butler, 1991). The older one is, the  
28 more support one receives and the less support one gives to others,  
29 irrespective of changes in health (Van Tilburg & Broese van Groenou, 2002).  
30 Other characteristics we took into account were the number of children. It is  
31 plausible that parents with more children have less contact and support  
32 exchange with each of them. Also, educational level and functional capacity  
33 were taken into account. Older adults with a higher education have less  
34 contact (Greenwell & Bengtson, 1997), receive less instrumental support and  
35 give more support than those with a lower education (Broese van Groenou &  
36 Van Tilburg, 2003). Functional limitations provide fewer opportunities to  
37 give (instrumental) support and are an indicator of more need for  
38 (instrumental) support (Van Tilburg & Broese van Groenou, 2002).  
39

1 In addition to respondent characteristics, we examined the influence on  
2 contact and support exchange of a child's partner status and having children  
3 of their own. Previous studies show that children who are divorced or  
4 single have poorer relationships with their parents than married children  
5 (Kaufman & Uhlenberg, 1998). Past research is not clear what effect having  
6 a grandchild has on the contact and support exchange between parents and  
7 children, but we expect that the presence of grandchildren might reduce  
8 contact frequency and support exchange. We also included the influence of  
9 gender on contact and support exchange: In general, females are more  
10 involved than males in maintaining intergenerational relationships (Spitze &  
11 Logan, 1990). Also, same-sex dyads differ from cross-sex dyads. Children  
12 often identify more strongly with the parent of the same sex (Aquilino, 1994;  
13 Lee, Dwyer, & Coward, 1993); specifically, the mother–daughter relation-  
14 ship is found to be closer than other dyad types.

15

17

## METHODS

19

### *Respondents*

21 Data were obtained from two surveys of the aging population in the  
22 Netherlands. The first survey was carried out in 1992. Face-to-face  
23 interviews were conducted with 4,494 respondents in the research program  
24 “Living Arrangements and Social Networks of Older Adults” (Knipscheer,  
25 De Jong Gierveld, Van Tilburg, & Dykstra, 1995). The program used a  
26 stratified random sample of men and women born between 1903 and 1937.  
27 The sample was taken from the population registers of 11 urban and rural  
28 municipalities, regions that represent differences in religion and urbaniza-  
29 tion in the Netherlands. The oldest individuals in these areas, particularly  
30 the oldest men, were over-represented in the sample. Respondents were  
31 interviewed in their homes, and personal computer assistance (CAPI) was  
32 used in the data collection. Of the 6,107 eligible individuals in the sample,  
33 2,302 were unwilling to participate due to a lack of interest or time; another  
34 734 were ineligible because they had died or were too ill or cognitively  
35 impaired to be interviewed. The cooperation rate was 62%, which is  
36 relatively high compared to many surveys in the Netherlands where  
37 participation rates are low (Bethlehem & Kersten, 1982). For the second  
38 survey, conducted in 2002, the Longitudinal Aging Study Amsterdam  
39 (LASA) (Deeg, Knipscheer, & Van Tilburg, 1993) sampled a new cohort  
(birth years 1938–1947,  $N=1002$ ) from the same sampling frame as the

1 earlier cohort, with a cooperation rate of 57%. For the study reported here,  
2 from the 1992 data collection, the birth cohort 1928–1937 was used  
3 ( $N=1,137$ ), resulting in data from two consecutive birth cohorts within  
4 the same age range (55–65 years) with an interval of 10 years. We will  
5 refer to these cohorts as the *early* (born in 1928–1937) and the *late* cohort  
(1938–1947).

7 The following respondents were not included: those who had no children  
( $n=150$  for the early cohort and  $n=105$  for the late cohort), those who had  
8 children that were all younger than 18 years ( $n=12$  and  $n=4$ , respectively),  
9 and those whose interviews had to be shortened or broken off because of  
10 frailty ( $n=34$  and  $n=9$ , respectively). This resulted in 941 respondents in the  
11 early cohort with a total of 2,816 children ( $M=3.0$ ,  $SD=1.5$ ) and 884  
12 respondents in the late cohort with 2,211 children ( $M=2.5$ ,  $SD=1.2$ ) for  
13 whom data were available.

15 For the early cohort, follow-ups were conducted in the context of LASA  
16 in 1992–1993, 1995–1996, 1998–1999 and 2001–2002. Data on all the  
17 children were collected only at the 2001–2002 observation, which is used as  
18 T2 in the current study. The T2 interviews were conducted between 9.4 and  
19 10.6 years after T1 (9.9 years later, on average), resulting in data for 574  
20 respondents with 1,673 children ( $M=2.9$ ,  $SD=1.4$ ). Reasons for attrition  
21 (in total 39%) between T1 and T2 were the death of the respondent (12%  
22 of the original sample of 941), refusal (14%), severe physical or mental  
23 health problems (2%) or the respondent having moved to an unknown  
24 destination or abroad (2%). Missing data caused further exclusion: 6%  
25 of the respondents had a short interview by phone or by proxy and 3% of  
26 the interviews had to be shortened or broken off because of frailty.  
27 Furthermore, 12 children had died and two parents had lost their only child  
28 by death. The attrition caused by refusal resulted in a sample with a lower  
29 contact frequency ( $M=167$  days per year for the 1,673 relationships  
30 included in the longitudinal study, compared to  $M=187$  for the 403  
31 relationships of respondents who refused further cooperation,  $p<0.01$ ),  
32 emotional support given more often by the parent (76% versus 67%,  
33  $p<0.01$ ), instrumental support given more often (55% versus 47%,  
34  $p<0.01$ ) and instrumental support received more often by the parent  
35 (43% versus 34%,  $p<0.01$ ). No significant differences were observed for  
36 emotional support received (81% and 78%, respectively) and whether the  
37 child was identified as a member of the personal network (90% and 88%,  
38 respectively). This selection does not clearly indicate that respondents with  
39 poor intergenerational relationships ended their cooperation with the  
study.



*Measurements*

1

3 A question was posed about contact frequency in all the parent–child  
relationships: “How often are you in touch with X?” Contact frequency  
5 was classified into eight categories from less than once a year to daily, and  
was converted to number of days per year. It was assumed that there was  
7 daily contact between a child and a parent sharing the household. As  
Table 1 shows, intergenerational contact is frequent, on average. Questions  
9 on supportive exchanges were posed to a selection of the relationships  
(i.e., those with children included in the personal network). To obtain  
11 adequate information on their networks, the older parents were asked to  
identify their personal network members by name. The main objective of  
13 this was to identify a network that reflected the socially active relationships  
of the older adult in the core as well as the outer layers of the larger  
15 network (Van Tilburg, 1995). This procedure was adopted from Cochran,  
Larner, Riley, Gunnarson, and Henderson (1990). The following question  
17 was posed: “Name the people you have regular contact with and who are  
important to you.” Only people above the age of 18 could be named. For a  
19 subset of the identified network members (i.e., the 10 with the highest  
frequency of contact) questions were asked about support. The average  
21 network size was about 14, and the number of identified network members  
ranged from 0 to over 70. Restrictions in the data collection forced us to  
23 ask questions about support for a limited number of network members.  
The question about receiving instrumental support was: “How often in  
25 the past year did X help you with daily chores in and around the house,  
such as preparing meals, cleaning the house, transportation, small repairs,  
27 or filling out forms?” The question about receiving emotional support  
was: “How often in the past year have you told X about your personal  
29 experiences and feelings?” With respect to support given, the questions  
were reversed. The data structure required multilevel analyses (see below)  
31 and the logistic approach fitted best with the ordinal measurement level  
of the support exchanges. The answer categories “never” and “seldom”  
33 were contrasted to the categories “sometimes” and “often.” On average,  
emotional support is exchanged more often than instrumental support, and  
35 parents report that they provided instrumental support more often than  
they received this type of support.

37

In a secondary study, we investigated whether there were any differences  
between the reports of both parents and those of some of their children as  
39 respondents ( $n = 218$  relationship pairs). Correlations between the parents’  
and child’s reports on supportive exchanges were between 0.34 and 0.40,

**Table 1.** Means and Percentages of Variables Used in the Analyses for the Early and Late Cohort and Longitudinally for T1 and T2.

Cohort Observation	Early (1928–1937) T1 (1992)	Late (1938–1947) T1 (2002)	Early (1928–1937) T1 (1992)	Early (1928–1937) T2 (2002)
<i>Respondent characteristics</i>				
	<i>N</i> = 941	<i>N</i> = 884	<i>N</i> = 574 <sup>a</sup>	<i>N</i> = 574
Age	59.4	60.0***	59.2	69.0 <sup>b</sup>
Number of children	3.04	2.52***	2.94	2.91 <sup>b,c</sup>
Number of children aged 0–17 years	0.05	0.05	0.03	0.00
Number of children in household	0.45	0.26***	0.45	0.06***
<i>Marital history and status</i>				
Never married, currently no partner	0%	0%	0%	0%
First marriage	80%	73%	82%	71%
Ever divorced, currently married or partnered	5%	10%	5%	5%
Ever divorced, currently no partner	3%	8%	3%	3%
Ever widowed, currently married or partnered	5%	4%	3%	4%
Ever widowed, currently no partner	8%	5%	7%	17%
Educational level (years)	9.3	10.2***	9.6	<sup>d</sup>
<i>Employment</i>				
Not employed	69%	60%	65%	91%
Employed part-time	11%	17%	12%	7%
Employed full-time	21%	23%	24%	2%
Functional capacity (6–30)	29.2	28.6***	29.5	28.3***
<i>Child characteristics</i>				
	<i>N</i> = 2,816	<i>N</i> = 2,211	<i>N</i> = 1,673 <sup>a</sup>	<i>N</i> = 1,673
Age	30.0	31.4***	29.7	39.7 <sup>b</sup>
Partner (no, yes)	70%	75%***	69%	84%***
Children (no, yes)	41%	45%**	41%	72%***
<i>Employment</i>				
Not employed	28%	16%	28%	14%
Employed part-time	11%	19%	11%	23%
Employed full-time	61%	65%	61%	64%
<i>Relationship characteristics</i>				
	<i>N</i> = 2,816	<i>N</i> = 2,211	<i>N</i> = 1,673 <sup>a</sup>	<i>N</i> = 1,673
<i>Gender</i>				
Father and son	24%	23%	25%	25%
Father and daughter	22%	24%	23%	23%
Mother and son	27%	29%	22%	22%
Mother and daughter	26%	25%***	26%	26%
<i>Geographic proximity</i>				
Coresiding	15%	10%	16%	2%
No coresidence; within 15 minutes traveling time	41%	45%	41%	44%
More than 15 minutes traveling time	44%	44%	44%	54%
Contact frequency (days per year)	167.4	166.0 <sup>c</sup>	165.6	122.1 <sup>c</sup>
Emotional support received (no, yes)	78%	83% <sup>c</sup>	73%	67% <sup>c</sup>
Emotional support given (no, yes)	74%	86% <sup>c</sup>	71%	73% <sup>c</sup>
Instrumental support received (no, yes)	41%	48% <sup>c</sup>	41%	38% <sup>c</sup>
Instrumental support given (no, yes)	53%	65% <sup>c</sup>	53%	46% <sup>c</sup>

Note: (Paired) *t*-tests were applied for interval variables;  $\chi^2$ -tests for nominal variables.

<sup>a</sup>A subsample of the sample described in the first column.

<sup>b</sup>Difference not tested.

<sup>c</sup>For T1 including 12 children who died between T1 and T2.

<sup>d</sup>No T2 observation.

<sup>e</sup>Difference examined in the multilevel models.

\* $p < 0.05$ ;

\*\* $p < 0.01$ ;

\*\*\* $p < 0.001$ .

1 indicating the subjective nature of the measurements. Reports on frequency  
of contact were more highly correlated ( $r=0.71$ ) and the traveling time  
3 reported by the parents was strongly correlated ( $r > 0.79$ ) with the time  
reported by the child, as well as the distance in a straight line and traveling  
5 distance and time by car, as obtained from public databases.

Only adult children were included in the analysis because non-adult  
7 children predominantly live with the parent and, consequently, have daily  
contact, so no data are available on support exchange for children under  
9 18 years because these children were not included in the network. As a  
result, 44 children were excluded from the early cohort at T1, leaving 2,772  
11 relationships; 18 were excluded at T2, leaving a total of 1,655 children for  
the longitudinal analyses and 41 from the late cohort.

13 Data on support were not available for all relationships. A number of  
children were not identified within the network. Of the 2,772 adult children  
15 of the early cohort, 90% were identified as network members at T1, and  
94% of the 1,673 at T2 were so identified (the difference was significant at  
17  $p<0.01$ ). For the late cohort, who had 2,211 adult children, 94% were  
identified as network members (the difference with the early cohort was  
19 significant at  $p<0.001$ ). It is interesting to note that not all the children  
identified in the network were among the 10 with the highest contact  
21 frequency. Data on support were available for 2,239 relationships at T1, for  
1,302 relationships at T2, and for 1,804 relationships within the late cohort.  
23 Reasons for loss of children were that other network members were  
identified among the parents' 10 network members with the highest  
25 frequency of contact and, in a number of cases, respondents had more  
than 10 children. The reasons for not having support data differed  
27 longitudinally ( $p<0.001$ ): For the early cohort at T1, 10% of the children  
were not included in the network and 8% were not among the 10 with the  
29 highest frequency of contact; for T2, this was 7% and 16%, respectively.  
Therefore the analyses were restricted to relationships for which data on  
31 support exchange were available for both T1 and T2. The reasons for not  
having support data also differed between the cohorts ( $p<0.001$ ): For the  
33 early cohort, 11% of the children were not included in the network and 7%  
were not among the 10 with the highest frequency of contact; for the late  
35 cohort, these numbers were 6% and 10%, respectively. However, the  
proportion of children for whom data on support exchange was available  
37 did not differ (82% and 84%, respectively,  $p > 0.05$ ).

The following characteristics were included for each respondent: age,  
39 number of children and number of children in the household, marital  
history and status, employment status, education and functional capacity.

1 Marital status is time-specific and covers previous changes in marital status  
2 (divorce or widowhood) that might affect contact and support exchange  
3 with children. We distinguished between never married and not having a  
4 partner, being in the first marriage (including a small number of respondents  
5 who never married and lived with their partner), ever divorced or widowed  
6 and remarried or repartnered, and ever divorced or widowed and not having  
7 a partner relationship. We present the distribution in Table 1. Between the  
8 early and late cohort, a significant increase was observed in those who were  
9 ever divorced. Because of death, over time we observed a strong increase in  
10 widowed parents without a partner.

11 Educational level was measured in years. The late cohort had more  
12 years of education than the early cohort. Since it was expected that only a  
13 few respondents attended school after T1, the educational level at T2  
14 was not observed. The respondent's employment status was assessed with  
15 a single question: "Are you currently employed?" The working respondents  
16 were asked the number of hours a week they worked according to their  
17 employment contract. In the absence of a contract (e.g., because the  
18 respondent was self-employed), an approximation of the actual number of  
19 hours was asked (*full-time* was defined as 28 hours or more per week). An  
20 increase in both full-time and part-time employment was observed between  
21 the early and late cohorts. As would be expected, longitudinally we observed  
22 an increase in the number of respondents who were not employed.

23 Functional capacity was measured with six questions about having  
24 difficulty performing the activities of daily living, such as, "Can you walk up  
25 and down stairs?" The five possible answers were "not at all," "only with  
26 help," "with a great deal of difficulty," "with some difficulty" and "without  
27 difficulty," ranging from 6 (*poor*) to 30 (*good capacity*). The psychometric  
28 properties were satisfactory (Loevinger's coefficient of homogeneity  
29  $H \geq 0.46$ , reliability  $\rho \geq 0.79$ ). The early cohort had a slightly greater  
30 functional capacity than the late cohort. This could be because selection  
31 effects played a role (i.e., either selective dropout in our sample or in the  
32 population, which could be caused by some people, who might otherwise  
33 have died, surviving into the late cohort). Longitudinally, there was a  
34 decrease in functional capacity, most likely because the respondents were 10  
35 years older.

Information about the children's gender, age, whether they had children  
37 of their own, and partner and employment status was collected from the  
38 parent. Between the early and late cohorts, there was a small increase in the  
39 number of adult children with children of their own. An increase was also  
observed between the early and late cohorts and longitudinally in the

1 number of children with a partner. This might be related to the somewhat  
higher age of children in the late cohort. Employment of a child was assessed  
3 with a single question: “Does X have a job, and if so does s/he work full-  
time or part-time?” We found an increase in employment across both  
5 cohorts and longitudinally, with children working part-time more often.

To measure relationship characteristics, the gender of the parent and child  
7 were combined to distinguish between same-sex and cross-sex relationships.  
The distribution on the relationship level presented in Table 1 does not show  
9 the gender distribution of the parents. Of the parents, 53% among both  
the early and late cohorts were female. Longitudinally, 51% were female.  
11 Information was also collected on whether adult children shared a household  
with parents, and when they did not live with their parents, information was  
13 asked about the traveling time to a child. The geographic proximity was  
analyzed as a nominal variable with three categories: a child shared the  
15 household with a parent; lived nearby, arbitrarily chosen as a traveling time  
of 15 minutes or less; or lived farther away, a traveling time of more than 15  
17 minutes. Within the late cohort, a smaller number of children were sharing  
the household with a parent. More children lived nearby.

19 The distribution at the parental level was as follows: Within the early  
cohort, 30% of the parents coresided with one or more children, 47% did  
21 not share the household with a child and had at least one child living nearby,  
and 23% had no children living nearby. Within the late cohort, these  
23 percentages were 19%, 55%, and 26%, respectively. Longitudinally, almost  
all children had left the household. At T1, 244 children shared the household  
25 with a parent; 10 years later, most of them ( $n=216$ ) had left the parental  
home. There were a few children living independently at T1 who were  
27 coresiding with parents again at T2 ( $n=7$ ). In particular there was an  
increase in the percentage of children not living nearby. In contrast to the  
29 data on the relationship level, the data on the parental level shows an  
increase in having a child living nearby. Among the parents at T2, 5%  
31 coresided with one or more children (at T1 this was 31%), 64% did not  
share the household with a child and had at least one child living nearby  
33 (47% at T1), and 31% had no children living nearby (23% at T1).

35

### *Procedure*

37

To assess differences in contact frequency and support exchange, we  
39 applied a hierarchical multilevel regression analysis (MLn) (Rasbash &  
Woodhouse, 1995). We assume that relationships of the same respondent

1 will be more alike than relationships of different respondents. Applying  
ordinary regression analysis to this kind of data set would violate the  
3 assumption of independence of error terms. One consequence would be  
that we would overestimate the number of degrees of freedom and,  
5 consequently, the significance of effects, leading to a number of spurious  
significances. However, the number of degrees of freedom is not the only  
7 subject of concern. Using ordinary regression analysis, the effects of  
respondents with many relationships would dominate the effects since they  
9 have a relatively large number of representations on a lower level. In  
multilevel analysis, variables from different levels (e.g., parents and  
11 children) are analyzed simultaneously; the statistical model includes the  
various dependencies. Analyses were performed with the scores of contact  
13 frequency as the dependent variable in a linear model. The unstandardized  
regression coefficients are presented. Emotional support received, emo-  
15 tional support given, instrumental support received and instrumental  
support given were dependent variables in logistic models. Two coefficients  
17 are presented for each explanatory variable: the logistic regression  
coefficient (the effect on the log-odds) and the effect on the odds. The  
19 last coefficient indicates the factor by which a change in an independent  
variable changes the odds of support exchanged.

21 To assess sequential changes in cohorts, the early and late birth cohorts  
were compared, with children and the relationships with their parents nested  
23 within the parents. In Model 1, in order to assess the general association of  
the two cohorts with contact frequency and support exchange, the equation  
25 included a dichotomous variable indicating membership in the early or late  
cohort. To assess whether parent, child and/or relationship characteristics  
27 influenced the frequency of contact and support exchange, the equation was  
further extended in Model 2 with the specific variables described above.

29 To assess time-sequential changes, the early cohort was compared over a  
10-year period. Observations of contact frequency and support exchange at  
31 T1 and T2 are nested in the relationships, and the children and their relation-  
ships with parents are nested in the parents. The analyses were restricted to  
33 relationships for which data on contact frequency and support exchange were  
available for both T1 and T2. The two models were equal to the models for the  
35 cohort comparison, with the dummy for the cohort differences in the models  
replaced by the effect of time (i.e., the interval between T1 and T2).

37 Period and cohort effects are confounded in the cohort-sequential  
analysis; period and aging effects are confounded in the time-sequential  
39 analysis. It is assumed that the combination of both types of analysis  
contributes to the disentanglement of period, cohort and aging effects.

## RESULTS

1  
3 This study investigated whether there was a decline in frequency of contact  
5 and support exchanged between older parents and adult children in the  
7 Netherlands in the 1990s. First, a comparison was made between two birth  
9 cohorts and longitudinally over 10 years, assuming changes in both contact  
11 frequency and support exchanged. The results show that there was a  
13 decrease in frequency of contact between the early and late cohorts, from  
15 172 days of contact to 169 days ( $B = -2.9$ ; Table 2, Model 1); however, this  
17 difference is not significant. In contrast, parents in the late cohort exchanged  
19 significantly more support with their children than parents in the early  
21 cohort. We found that parents within the late cohort reported giving more  
support than they received. Specifically, the frequency of giving emotional  
support was higher than the frequency of giving instrumental support. What  
differences occur when we control for respondent, child and relationship  
characteristics in Model 2? With respect to contact frequency, we observed a  
difference of 11 days of contact per year in favor of the late cohort (Table 2,  
Model 2), whereas the estimates in Models 1 were not significant. The  
estimates of cohort effects in support exchanges were not strongly affected  
by the inclusion of parent, child, and relationship characteristics, except that  
receiving emotional support was no longer significant.

In comparison to the early cohort, the characteristics of respondents,  
children and relationships have the following effects on contact frequency  
(Table 2, Model 2) for the late cohort: In general, parents who have  
fewer children have on average more contact with their adult children; in  
other words, to a certain extent contact is spread among the children.  
Parents who were ever divorced, regardless of whether they are remarried or  
repartnered, and widowed parents who are remarried or repartnered have  
less contact with their adult children. Those who are widowed with no  
new partner have more contact with their children. Parents with a higher  
educational level have less contact with their children. The employment  
status of the parents has no significant effect. Furthermore, parents with  
younger or single children or children who have children of their own have  
more contact with their children. The employment status of the children has  
no significant effect. Mothers and daughters and parents with children who  
are coresiding or living within 15 minutes traveling time of parents have  
more contact.

There were some differences observed between exchanges of support and  
frequency of contact. Parents who have fewer children receive on average  
more emotional support but give more instrumental support. Ever-divorced

**Table 2.** Linear and Logistic Multilevel Model Results Predicting Intergenerational Contact and Support Exchange across Cohorts Using Full Maximum Likelihood Estimation ( $N \leq 4,938$  Relationships from 1,825 Parents).

Variable	Contact Frequency (Days per Year)			
	Model 1		Model 2	
	B	SE	B	SE
Intercept	172.0***	3.4		312.8***
Cohort (0 = 1928–1937, 1 = 1938–1947)	-2.9	5.0	10.9**	4.2
Parent's age			-0.9	0.8
Parent's number of children			-11.0***	1.4
Parent's number of children aged 0–17 years			0.8	7.3
<i>Parent's marital history and status (first marriage omitted)</i>				
Ever divorced, currently married or partnered			-51.8***	7.7
Ever divorced, currently no partner			-20.7*	8.5
Ever widowed, currently married or partnered			-35.5**	11.2
Ever widowed, currently no partner			19.9*	8.0
Parent's educational level (years)			-2.8***	0.7
<i>Parent's employment (not employed omitted)</i>				
Employed part-time			-3.6	6.0
Employed full-time			2.3	5.7
Parent's functional capacity (6–30)			-0.7	0.7
Child's age			-2.1***	0.4
Child having partner (no, yes)			-19.1***	3.7
Child having children (no, yes)			20.3***	3.6
<i>Child's employment (not employed omitted)</i>				
Employed part-time			5.2	4.7
Employed full-time			-7.3	3.8
Gender				



Father and daughter	6.9	4.1
Mother and son	-6.3	5.2
Mother and daughter	27.9***	5.4
<i>Geographic proximity (&gt;15 minutes omitted)</i>		
Coresiding	236.3***	5.4
No coresidence; within 15 minutes traveling time	64.2***	3.1
Estimated parameters	1	
Deviance	61,742.6	

Variable	Emotional Support (no, yes)					
	Received			Given		
	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2
	B	SE	e <sup>B</sup>	B	SE	e <sup>B</sup>
Intercept						
Cohort (0 = 1928-1937, 1 = 1938-1947)	1.29***	0.07	3.61	-2.32	1.45	1.04***
Parent's age	0.31***	0.11	1.37	0.23	0.12	0.82***
Parent's number of children			0.03	0.02	0.02	0.11
Parent's number of children aged 0-17 years			-0.12**	0.04	0.04	0.02
<i>Parent's marital history and status (first marriage omitted)</i>						
Ever divorced, currently married or partnered			-0.02	0.20	0.20	0.04
Ever divorced, currently no partner			-0.15	0.24	0.24	0.04
Ever widowed, currently married or partnered			-0.34	0.25	0.71	0.17
Ever widowed, currently no partner			-0.08	0.34	0.92	0.26
Parent's educational level (years)			-0.50*	0.22	0.60	0.10
<i>Parent's employment (not employed omitted)</i>			0.09***	0.02	1.10	0.04
Employed part-time			0.19	0.18	1.21	0.02
Employed full-time			0.13	0.16	1.14	0.02
Parent's functional capacity (6-30)			0.04*	0.02	1.05	0.02
Child's age			-0.02	0.01	0.98	0.01
Child having partner (no, yes)			0.01	0.13	1.01	0.01
Child having children (no, yes)			0.12	0.12	1.12	0.01

**Table 2. (Continued)**

Variable	Emotional Support (no, yes)								
	Received				Given				
	Model 1		Model 2		Model 1		Model 2		
	B	SE	e <sup>B</sup>	B	SE	e <sup>B</sup>	B	SE	e <sup>B</sup>
<i>Child's employment (not employed omitted)</i>									
Employed part-time				0.27	0.17	1.31	0.37*	0.17	1.45
Employed full-time				0.18	0.13	1.19	0.17	0.13	1.18
<i>Gender</i>									
Father and daughter				0.34*	0.14	1.41	0.21	0.14	1.23
Mother and son				0.58***	0.15	1.79	0.31*	0.15	1.36
Mother and daughter				1.45***	0.18	4.25	1.10***	0.17	3.00
<i>Geographic proximity (&gt; 15 minutes omitted)</i>									
Coresiding				0.49**	0.18	1.62	0.02	0.18	1.02
No coresidence; within 15 minutes traveling time				0.08	0.11	1.08	-0.11	0.11	0.89
Estimated parameters	1			22			22		
Deviance	3,410.0			2,910.7			3,372.1		2,890.9
<i>Instrumental Support (no, yes)</i>									
<hr/>									
Variable	Instrumental Support (no, yes)								
	Received				Given				
	Model 1		Model 2		Model 1		Model 2		
	B	SE	e <sup>B</sup>	B	SE	e <sup>B</sup>	B	SE	e <sup>B</sup>
Intercept	-0.35***	0.06	0.70	5.25***	1.18	189.81	0.13*	0.06	1.14
Cohort (0 = 1928-1937, 1 = 1938-1947)	0.30***	0.09	1.35	0.40***	0.10	1.49	0.54***	0.09	1.72
Parent's age				-0.04*	0.02	0.96	-0.02	0.02	0.98
Parent's number of children				-0.05	0.03	0.95	-0.16***	0.03	0.85
Parent's number of children aged 0-17 years				-0.45*	0.21	0.64	-0.30	0.20	0.74

1  
3  
5  
7  
9  
11  
13  
15  
17  
19  
21  
23  
25  
27  
29  
31  
33  
35  
37  
39

<i>Parent's marital history and status (first marriage omitted)</i>		
Ever divorced, currently married or partnered	0.77	0.70
Ever divorced, currently no partner	1.03	0.70
Ever widowed, currently married or partnered	0.27	0.28
Ever widowed, currently no partner	2.34	0.18
Parent's educational level (years)	1.01	0.02
<i>Parent's employment (not employed omitted)</i>		
Employed part-time	1.07	0.14
Employed full-time	0.89	0.13
Parent's functional capacity (6-30)	0.91	0.02
Child's age	0.98	0.01
Child having partner (no, yes)	0.91	0.10
Child having children (no, yes)	0.95	0.10
<i>Child's employment (not employed omitted)</i>		
Employed part-time	1.23	0.13
Employed full-time	1.18	0.11
<i>Gender</i>		
Father and daughter	0.91	0.12
Mother and son	0.74	0.13
Mother and daughter	0.89	0.14
<i>Geographic proximity (&gt;15 minutes omitted)</i>		
Coresiding	4.47	0.16
No coresidence; within 15 minutes traveling time	1.60	0.09
Estimated parameters	22	22
Deviance	4,825.0	4,760.0
	5,272.7	5,165.1
	1	1

Note: e<sup>B</sup>, Exponentiated B.

\**p* < 0.05;

\*\**p* < 0.01;

\*\*\**p* < 0.001.

1 parents without a partner report giving less emotional support and widowed  
2 parents with no new partner receive more instrumental support but less  
3 emotional support. Educational level was only significant for emotional  
4 support. Although, employment status of parents has no significant effect  
5 on emotional support, parents who are employed give less instrumental  
6 support to their children. Parents with a higher functional capacity exchange  
7 more emotional support, give more instrumental support, and receive less  
8 instrumental support. Parents with younger children give less emotional  
9 and instrumental support. The partner status of the child has no significant  
10 effect on the exchange of emotional support; however, parents give more  
11 instrumental support to a child with no partner. Although having grand-  
12 children plays a role in contact frequency, it does not affect the exchange of  
13 emotional or instrumental support. Respondents give more emotional and  
14 instrumental support when children are employed part-time. Both mothers  
15 and fathers exchange emotional support more often with their children;  
16 however, mothers receive less instrumental support from sons. Finally,  
17 parents exchange more instrumental support when children are coresiding or  
18 living within 15 minutes' traveling time. More emotional support is received  
19 from children coresiding with parents.

20 Longitudinally, we observed a decline in contact frequency of 44 days per  
21 year (Table 3, Model 1), indicating that as parent's age, they have less  
22 contact with their adult children. For instrumental support given and  
23 received and emotional support received, there were also negative effects  
24 longitudinally, indicating that between 1992 and 2002, there was a decrease  
25 in support exchanged. However, we did find an increase in the emotional  
26 support given to children as parents aged. With the introduction of  
27 respondent, child and relationship characteristics, there is still a decline in  
28 contact frequency of 20 days per year (Table 3, Model 2). In general, the  
29 estimates of longitudinal effects in support exchanges were either not  
30 affected or not strongly affected by the inclusion of parent, child and  
31 relationship characteristics, except that instrumental support given was no  
32 longer significant.

33 Overall, the characteristics of respondents, children and relationships had  
34 the same effects longitudinally on contact frequency (Table 3, Model 2) as  
35 was found between the two successive cohorts. We no longer found an effect  
36 of ever-divorced parents with no partner on contact frequency. Also, the  
37 longitudinal analysis showed more contact between fathers and daughters.

38 There were some differences observed between exchanges of support and  
39 frequency of contact, which are divergent to those found between the two  
successive cohorts and which we mention briefly here. Older parents

**Table 3.** Linear and Logistic Multilevel Model Results Predicting Intergenerational Contact and Support Exchange over Ten Years Using Full Maximum Likelihood Estimation ( $N \leq 3,310$  Observations of 1,655 Relationships from 574 Parents).

Variable	Contact Frequency (Days per Year)			
	Model 1		Model 2	
	B	SE	B	SE
Intercept	169.9***	3.9	272.3***	65.0
Interval (years divided by 10)	-44.2***	3.2	-20.2***	3.7
Parent's age			-0.7	1.0
Parent's number of children			-11.6***	1.8
Parent's number of children aged 0–17 years			-7.9	14.3
<i>Parent's marital history and status (first marriage omitted)</i>				
Ever divorced, currently married or partnered			-43.4***	11.9
Ever divorced, currently no partner			-17.4	13.9
Ever widowed, currently married or partnered			-26.1*	12.7
Ever widowed, currently no partner			34.8***	6.5
Parent's educational level (years)			-2.0*	0.9
<i>Parent's employment (not employed omitted)</i>				
Employed part-time			-1.6	6.6
Employed full-time			2.1	5.9
Parent's functional capacity (6–30)			0.3	0.8
Child's age			-2.5***	0.5
Child having partner (no, yes)			-17.5***	4.7
Child having children (no, yes)			12.7**	4.4
<i>Child's employment (not employed omitted)</i>				
Employed part-time			5.6	5.4
Employed full-time			-4.8	4.6
<i>Gender</i>				
Father and daughter			14.0*	5.5

**Table 3.** (Continued)

Variable	Contact Frequency (Days per Year)					
	Model 1			Model 2		
	B	SE	B	SE	B	SE
Mother and son			-7.8			6.8
Mother and daughter			25.1***			7.1
<i>Geographic proximity (&gt; 15 minutes omitted)</i>						
Coresiding			239.9***			7.1
No coresidence; within 15 minutes traveling time			59.6***			3.7
Estimated parameters	1		22			
Deviance	40,759.4		39,294.6			

Variable	Emotional Support (no, yes)											
	Received						Given					
	Model 1		Model 2		Model 1		Model 2		Model 1		Model 2	
B	SE	e <sup>B</sup>	B	SE	e <sup>B</sup>	B	SE	e <sup>B</sup>	B	SE	e <sup>B</sup>	
Intercept	1.56***	0.08	4.75	-3.16*	1.56	0.04	1.28***	0.08	3.60	-3.39*	1.60	0.03
Interval (years divided by 10)	-0.33***	0.11	0.72	-0.31*	0.14	0.73	0.33**	0.11	1.39	0.32*	0.14	1.38
Parent's age				0.06**	0.02	1.07				0.06*	0.03	1.06
Parent's number of children				-0.07	0.04	0.93				-0.05	0.04	0.95
Parent's number of children aged 0-17 years				-0.04	0.44	0.96				-0.71	0.42	0.49
<i>Parent's marital history and status (first marriage omitted)</i>												
Ever divorced, currently married or partnered				-0.65*	0.32	0.52				-0.61	0.33	0.54
Ever divorced, currently no partner				-0.28	0.40	0.76				-0.55	0.38	0.58
Ever widowed, currently married or partnered				-0.80*	0.35	0.45				-1.15***	0.35	0.32
Ever widowed, currently no partner				0.26	0.20	1.29				0.09	0.20	1.09

Variable	Received		Model 1		Model 2		Given		Model 1		Model 2	
	B	SE	e <sup>B</sup>	B	SE	e <sup>B</sup>	B	SE	e <sup>B</sup>	B	SE	e <sup>B</sup>
Parent's educational level (years)			0.07***	0.02	1.07					0.07**	0.02	1.07
Employed part-time			0.08	0.21	1.08					0.01	0.21	1.01
Employed full-time			0.22	0.20	1.24					-0.41*	0.19	0.66
Parent's functional capacity (6-30)			0.03	0.02	1.03					0.05*	0.02	1.05
Child's age			-0.04*	0.02	0.96					-0.04**	0.02	0.96
Child having partner (no, yes)			0.31	0.17	1.36					-0.04	0.17	0.96
Child having children (no, yes)			0.12	0.16	1.13					0.05	0.16	1.05
<i>Child's employment (not employed omitted)</i>												
Employed part-time			0.27	0.20	1.31					0.27	0.21	1.30
Employed full-time			0.15	0.17	1.16					0.10	0.17	1.10
<i>Gender</i>												
Father and daughter			0.22	0.17	1.24					0.22	0.18	1.24
Mother and son			0.64***	0.18	1.90					0.33	0.18	1.40
Mother and daughter			1.19***	0.20	3.28					1.13***	0.21	3.09
<i>Geographic proximity (&gt;15 minutes omitted)</i>												
Coresiding			0.40	0.25	1.49					0.33	0.25	1.39
No coresidence; within 15 minutes traveling time			-0.18	0.13	0.83					0.01	0.13	1.01
Estimated parameters	1		22			1			22			
Deviance	2,185.1		1,954.9		2,112.6				1,840.0			
Instrumental Support (no, yes)												
Received												
Given												
Intercept	-0.21***	0.06	0.81	1.38	1.27	3.98	0.31***	0.06	1.36	0.96	1.30	2.61
Interval (years divided by 10)	-0.14	0.09	0.87	-0.07	0.11	0.93	-0.24**	0.09	0.79	-0.10	0.11	0.91
Parent's age			0.00	0.02	1.00					-0.04	0.02	0.96
Parent's number of children			-0.02	0.03	0.98					-0.05	0.03	0.96
Parent's number of children aged 0-17 years			-1.09*	0.48	0.34					-0.35	0.39	0.71
<i>Parent's marital history and status (first marriage omitted)</i>												
Ever divorced, currently married or partnered			-0.15	0.30	0.86					-1.13***	0.31	0.32
Ever divorced, currently no partner			0.09	0.33	1.09					-0.29	0.32	0.75

**Table 3. (Continued)**

Variable	Instrumental Support (no, yes)											
	Received						Given					
	Model 1		Model 2		Model 1		Model 2		Model 1		Model 2	
	B	SE	e <sup>B</sup>	B	SE	e <sup>B</sup>	B	SE	e <sup>B</sup>	B	SE	e <sup>B</sup>
Ever widowed, currently married or partnered												
Ever widowed, currently no partner												
Parent's educational level (years)												
<i>Parent's employment (not employed omitted)</i>												
Employed part-time												
Employed full-time												
Parent's functional capacity (6-30)												
Child's age												
Child having partner (no, yes)												
Child having children (no, yes)												
<i>Child's employment (not employed omitted)</i>												
Employed part-time												
Employed full-time												
<i>Gender</i>												
Father and daughter												
Mother and son												
Mother and daughter												
<i>Geographic proximity (&gt;15 minutes omitted)</i>												
Coresiding												
No coresidence; within 15 minutes traveling time												
Estimated parameters												
Deviance												

Note: e<sup>B</sup>, Exponentiated B.  
 \*p < 0.05;  
 \*\*p < 0.01;  
 \*\*\*p < 0.001.



1 exchange more emotional support than younger parents. Although the  
2 number of children has an effect on contact frequency, no effect was found  
3 for support exchange. Ever-divorced parents with a new partner receive less  
4 emotional support from children and give less instrumental support.  
5 Widowed parents with no partner receive more, but give less, instrumental  
6 support, and those who are widowed with a new partner exchange less  
7 emotional support. Parents who work full-time give less emotional support  
8 to their children. Functional capacity had no effect on emotional support  
9 received. Parents with children receive less emotional support. Having  
10 grandchildren increases the instrumental support given to children.  
11 Children's employment has no effect on the support given by parents, nor  
12 was any effect found on support exchange between fathers and daughters.  
13 Mothers receive more emotional support from children and give less  
14 instrumental support to sons; however, no effect was found on emotional  
15 support given and instrumental support received. Also, no effect was found  
16 for parents coresiding with a child and emotional support received.

17 It can be concluded that within the late cohort, when the characteristics of  
18 parents, children and relationships are taken into account, there is more  
19 frequent contact between parents and their children. Supportive exchanges  
20 within the late cohort are equal to or more intense than those in the early  
21 cohort, particularly the support given by parents. Furthermore, the results  
22 of the longitudinal analysis show that over time, parents have less frequency  
23 of contact and receive less support from their children.

25

## DISCUSSION

27

28 Over the past few decades, sociologists and demographers have reinforced  
29 the idea that the macrostructural trends that have taken place in Western  
30 societies have been destructive to traditional family functions, family  
31 support, in particular. Previous studies have considered the effects of  
32 macrostructural trends on intergenerational relationships, focusing pre-  
33 dominantly on demographic changes. This article has taken a different  
34 approach and focuses on the extent to which individual consequences of  
35 macrostructural trends are related to contact and support exchange between  
36 parents and adult children. We tested the hypothesis that because of social  
37 changes in the Netherlands (which have influenced the life experiences of  
38 individuals and their families), parents and children would have had fewer  
39 opportunities for contact and support exchange in 2002 than they did in the  
beginning of the 1990s.

1 Our analyses first showed that contact and support exchange could only  
2 be partially explained by these opportunities. Parents who have divorced  
3 have less contact with their children. Those who have no new partner give  
4 less emotional support. Given that fathers who have divorced often become  
5 marginal in the lives of their children, this suggests that they may have less  
6 contact and receive less support when they age. The timing of the divorce,  
7 or re-partnering after widowhood, most probably also plays an important  
8 role in this process. Also, the quality of the early relationship between  
9 parents and children influences later contact and exchanges of support  
10 (Aquilino, 1999). Family structures have become more heterogeneous,  
11 with many divorced parents remarrying, thereby allowing a stable, child-  
12 supportive family context to develop (Bengtson, 2001). Hence, the full effect  
13 on parent-child relations of marital instability and new relationships  
14 after widowhood will not be seen until the cohorts in our study become  
15 dependent.

The effects of labor-force participation differed in the various analyses.  
17 Whereas no effect of employment of parents and the adult child was found  
18 on contact, we did find a negative effect from the parent's employment  
19 on instrumental support given and a positive effect from the adult child's  
20 part-time employment on support given. Therefore, in general, contrary to  
21 what might be expected, employment does not negatively influence the  
22 contact and emotional support exchanged between parents and children.  
23 Part-time work enables women to combine the tasks of work and support;  
24 however, this may change in the future if the full-time employment of  
25 women increases further in the Netherlands. Tension may then be placed  
26 on the equilibrium between work and family, which, in turn, may result in  
27 a decreasing capacity to provide support to aged parents. Considering  
28 that our study pertains to parents who have few functional problems, we  
29 might have found different results for the employment of children if  
30 we had included parents who were older and had more functional limi-  
31 tations.

The results of our study also show that family support goes beyond the  
33 nuclear household. Consistent with earlier findings (Cooney & Uhlenberg,  
34 1992), the results confirm that the process of children leaving the parental  
35 home is a major transition in the life of the parents. In particular, parents  
36 with children coresiding have more contact, exchange more instrumental  
37 support and receive more emotional support than those who do not coreside  
38 with children. According to Aquilino (1997), leaving home reduces the  
39 intensity of the parents' relationships with adult children. Both the parent  
and adult child are entering a new stage of the life course, and roles and

1 expectations are reevaluated. However, although parents and children  
2 coreside less (both between cohorts as well as longitudinally), they more  
3 often live nearby. We find that parents who have adult children living  
4 nearby have more contact and exchange more instrumental support with  
5 their children than those who live farther away.

6 There are also other effects of the characteristics of the respondent, child  
7 and relationship on contact and support exchange: Parents with fewer  
8 children have on average more contact (which will be discussed below).  
9 Consistent with previous research, parents with a higher education have less  
10 contact but exchange more emotional support with their children. Although  
11 functional capacity had no effect on contact frequency, consistent with  
12 prior research, parents with a higher functional capacity give more support  
13 than those with less functional capacity. Parents with younger or single  
14 children have more contact with their children. These children are still in  
15 the launching phase of their life course and often have not yet committed  
16 themselves to labor participation and a new family, so their attention  
17 is probably still directed towards the family of origin. In contrast to our  
18 expectations, having grandchildren has a positive effect on contact. The  
19 increased participation of women in the labor force may require grand-  
20 parents to help to care for their grandchildren. Finally, confirming the well-  
21 known role of women as kin keepers, mothers and daughters have more  
22 contact with each other and exchange more emotional support.

23 This study shows that, when respondent, child and relationship character-  
24 istics are controlled, the contact was more frequent and more support was  
25 exchanged between parents and children in 2002 than in 1992. These results  
26 reflect both cohort and period effects, controlled for age effects. It may be  
27 argued that our results show, on the one hand, that contact and support  
28 exchange increase per child and, on the other hand, that parent-child  
29 relationships actually become less important over historical time because  
30 there are fewer of them. On the basis of our results, it is indeed not possible to  
31 conclude whether there is an increase of contact and support at the family  
32 level. Calculations at the family level cannot be made because we do not  
33 know whether the children all visit at the same time or separately, and our  
34 measurements of support exchange are not exact.

35 Given that the pattern for increased contact and exchange of support  
36 over historical time can only be partially explained by opportunity, how can  
37 this increase be explained? We believe that the changes that have taken  
38 place in attitudes towards the family have had a more profound effect on  
39 parent-child relationships than social developments such as the increase of  
40 female participation in the labor market or an increase in divorce and

1 remarriage. Hence, the hypothesis that contact and exchanges of support  
2 between parents and children have decreased because of social change  
3 cannot be confirmed. Part of the late cohort can be characterized as  
4 the protest generation (compare the Vietnam-generation in the U.S.), who  
5 were in their so-called formative years during the cultural revolution of  
6 the 1960s and 1970s (Sanders & Becker, 1994). In this respect Inglehart  
7 (1977) has argued that socialization during the formative years leads to  
8 value orientations that remain relatively stable during the life course.  
9 In comparison to the early cohort, the attitudes and behavior of the late  
10 cohort are guided more by principles of equality and autonomy (Stacy,  
11 1993). Consequently, the greater autonomy in these relationships allows  
12 for relationships based on individual “commitments” rather than “fixed  
13 obligations” (Finch, 1989). We can assume that this has an effect on  
14 the parenting of this cohort, accentuating freedom, companionship and  
15 negotiation. An important characteristic of negotiation is intensive  
16 communication about differing opinions among parents and children (Du  
17 Bois-Reymond, 1998), which ultimately results in more contact. Still, there  
18 might also be other explanations for the increased contact between parents  
19 and adult children, such as the technological advances that allow new  
20 forms of communication. Frequency of contact is no longer confined to  
21 face-to-face contact but also includes other forms of contact such as  
22 telephoning or emailing.

23 Longitudinally, we find that as parents age (from about 60 until they are  
24 around 70), there is less contact with their adult children and less support is  
25 exchanged. This agrees with earlier research confirming that both parents  
26 and children tend to devote less time and energy to intergenerational  
27 relationships during this “empty nest” phase, which is confirmed by our  
28 results. Moreover, this finding provides an explanation for the persistence of  
29 the notion of a “breakdown” of family support. The idea that contact and  
30 support decline over time is genuine; however, it may only hold for certain  
31 periods in one’s life, such as when children go through the transition from  
32 young adulthood to mature adulthood and become more independent.  
33 When comparing our two cohorts, we find no evidence for the myth of  
34 family decline, confirming, the reasoning that the “good old days” are not  
35 earlier periods in our social history, but a period in the history of each  
36 individual and family (Brody, 1985). The combination of a cohort and  
37 longitudinal analysis in this study has allowed us to study intergenerational  
38 relationships from different perspectives. However, we were not able to fully  
39 address the different effects because we could not apply a cohort-sequential  
40 design. From the cohort analysis, it is therefore difficult to disentangle

1 whether the effects were primarily related to cohort or period; within the  
longitudinal analysis, we cannot be conclusive about the age and period  
3 effects. We believe that the reverse results – an increase between cohorts and  
a decrease longitudinally – suggests that the longitudinal results show an  
5 effect of aging and not of period.

A number of limitations of the study should be noted. We had no  
7 information on the attitudes towards the family, such as norms on filial  
obligation and which qualities the family environment should encourage in  
9 children. Consequently, we have no empirical evidence about how family  
attitudes have changed or what possible connections there might be between  
11 attitudes towards family and intergenerational relationships. We also did  
not assess any changes that might have taken place in the attitudes people  
13 have towards divorce, labor-force employment or geographical proximity,  
in relation to contact and support within family relationships. On the  
15 individual level, for example, women may choose to either participate in the  
labor force or to commit themselves to family care. On the societal level,  
17 changes may take place concerning norms about the combination of work  
and care giving to kin. Another limitation is that the information on contact  
19 frequency and support exchanged was obtained from the parents. As  
outlined in the descriptions of the measurements, there is low veridicality  
21 of the reports of parents and those of their children on relationship  
characteristics, in particular on the instrumental support exchanged and,  
23 even more, on the emotional support exchanged. There are always different  
perspectives in a personal relationship, especially if it concerns the parent–  
25 child relationship. However, the results of a previous study by Klein Ikkink,  
Van Tilburg, and Knipscheer (1999) show numerous congruencies across  
27 the parents' and children's reports with respect to the factors that influence  
the support parents receive.

29 In sum, our results show that the functions of families have not been  
reduced. They support the existence of a family in which parents and adult  
31 children maintain frequent contact and exchange support while residing in  
separate households. Moreover, we find that across cohorts, parents have  
33 more contact and exchange more support with their adult children when we  
take into account the decline in coresidence. Macrostructural changes  
35 have had a less destructive influence on parent–child relationships than we  
initially thought. Our results show only a small snapshot of a larger picture  
37 of family change within a post-modern era. Whether smaller families are  
characterized by improved relationships will be even more evident within  
39 future cohorts and requires further research. We therefore encourage future  
research over longer periods and with later cohorts.

## ACKNOWLEDGMENTS

This study is based on data collected in the context of the research programs “Living Arrangements and Social Networks of Older Adults in the Netherlands” and “Longitudinal Aging Study Amsterdam,” which are conducted at the VU University in Amsterdam and the Netherlands Interdisciplinary Demographic Institute in The Hague. They are funded by the Netherlands Program for Research on Ageing (NESTOR) and the Ministry of Health, Welfare and Sports.

## REFERENCES

- Aboderin, I. (2004). Modernisation and ageing theory revisited: Current explanations of recent developing world and historical Western shifts in material family support for older people. *Ageing and Society*, *24*, 29–50.
- Aquilino, W. S. (1994). Later life parental divorce and widowhood: Impact on young adults’ assessment of parent–child relations. *Journal of Marriage and the Family*, *56*, 908–922.
- Aquilino, W. S. (1997). From adolescent to young adult: A prospective study of parent–child relations during the transition to adulthood. *Journal of Marriage and the Family*, *59*, 670–686.
- Aquilino, W. S. (1999). Two views of one relationship: Comparing parents’ and young adult children’s reports of the quality of intergenerational relations. *Journal of Marriage and the Family*, *61*, 858–870.
- Bengtson, V. L. (2001). Beyond the nuclear family: The increasing importance of multi-generational bonds. *Journal of Marriage and Family*, *63*, 1–16.
- Bethlehem, J. G., & Kersten, H. M. P. (1982). Nonresponse in Dutch sample surveys. *Statistical Journal of the United Nations*, *1*, 253–268.
- Brody, E. M. (1985). Parent care as a normative stress. *The Gerontologist*, *25*, 19–29.
- Broese van Groenou, M. I., & Van Tilburg, T. G. (2003). Network size and support in old age: Differentials by socio-economic status in childhood and adulthood. *Ageing and Society*, *23*, 625–645.
- Burgess, E. W. (1916). *The function of socialization in social evolution*. Chicago: University of Chicago Press.
- Cochran, M., Larner, M., Riley, D., Gunnarson, L., & Henderson, C. R. (1990). *Extending families: The social networks of parents and their children*. Cambridge, UK: Cambridge University Press.
- Cooney, T. M., & Uhlenberg, P. (1992). Support from parents over the life course: The adult child’s perspective. *Social Forces*, *71*, 63–84.
- De Jong A. (1999). Trouwen en scheiden: Lichte restauratie op komst. *Maandstatistiek van de Bevolking*. [Marriage and divorce: Recovery in sigh.], *47*, 8–16.
- De Jong Gierveld, J. (1998). Intergenerational relationships and solidarity within the family. In: K. Matthijs (Ed.), *The family: Contemporary perspectives and challenges* (pp. 31–49). Leuven: Leuven University Press.


- 1 Deeg, D. J. H., Knipscheer, C. P. M., & Van Tilburg, W. (1993). *Autonomy and well-being in the*  
2 *aging population: Concepts and design of the longitudinal aging study Amsterdam*. Bunnik,  
3 The Netherlands: Netherlands Institute of Gerontology.
- 4 Du Bois-Reymond, M. (1998). Negotiation strategies in modern families: What does it mean for  
5 global citizenship? In: K. Matthijs (Ed.), *The family: Contemporary perspectives and*  
6 *challenges* (pp. 57–71). Leuven, Belgium: Leuven University Press.
- 7 Eggebeen, D. (1992). Family structure and intergenerational exchanges. *Research on Aging, 14*,  
8 427–447.
- 9 Finch, J. (1989). *Kinship obligations and family change*. Cambridge: Polity Press.
- 10 Greenwell, L., & Bengtson, V. L. (1997). Geographic distance and contact between middle-aged  
11 children and their parents: The effects of social class over 20 years. *Journal of*  
12 *Gerontology, 52B*, S13–S26.
- 13 Hareven, T. K. (1995). Historical perspectives on the family and aging. In: R. Blieszner &  
14 V. Hildebrandt Bedford (Eds), *Handbook of aging and the family* (pp. 13–31). London:  
15 Greenwood.
- 16 Inglehart, R. (1977). *The silent revolution: Changing values and political styles among Western*  
17 *publics*. Princeton, NJ: Princeton University Press.
- 18 Kalmijn, M., De Graaf, P. M., & Poortman, A. (2004). Interactions between cultural and  
19 economic determinants of divorce in The Netherlands. *Journal of Marriage and the*  
20 *Family, 66*, 75–89.
- 21 Kaufman, G., & Uhlenberg, P. (1998). Effects of life course transitions on the quality of  
22 relationships between adult children and their parents. *Journal of Marriage and the*  
23 *Family, 60*, 924–938.
- 24 Klein Ikkink, K., Van Tilburg, T. G., & Knipscheer, C. P. M. (1999). Perceived instrumental  
25 support exchanges in relationships between elderly parents and their adult children:  
26 Normative and structural explanations. *Journal of Marriage and the Family, 61*, 831–844.
- 27 Knipscheer, C. P. M., De Jong Gierveld, J., Van Tilburg, T. G., & Dykstra, P. A. (Eds). (1995).  
28 *Living arrangements and social networks of older adults*. Amsterdam: VU University  
29 Press.
- 30 Lawton, L., Silverstein, M., & Bengtson, V. L. (1994). Affection, social contact, and geographic  
31 distance between adult children and their parents. *Journal of Marriage and the Family,*  
32 *56*, 57–68.
- 33 Lee, G. R., Dwyer, J. W., & Coward, R. T. (1993). Gender differences in parent care:  
34 Demographic factors and same-gender preferences. *Journal of Marriage and the Family,*  
35 *56*, 57–68.
- 36 Liefbroer, A. C., & De Jong Gierveld, J. (1995). Living arrangements, socio-economic  
37 resources, and health. In: C. P. M. Knipscheer, J. De Jong Gierveld, T. G. van Tilburg &  
38 P. A. Dykstra (Eds), *Living arrangements and social networks of older adults* (pp. 15–36).  
39 Amsterdam: VU University Press.
- 40 Mancini, J. A., & Blieszner, R. (1989). Aging parents and adult children: Research themes in  
41 intergenerational relations. *Journal of Marriage and the Family, 51*, 275–290.
- 42 Morgan, D. L., Schuster, T. L., & Butler, E. W. (1991). Role reversals in the exchange of social  
43 support. *Journal of Gerontology, 46*, S278–S287.
- 44 Popenoe, D. (1993). American family decline, 1960–1990: A review and appraisal. *Journal of*  
45 *Marriage and the Family, 55*, 527–555.
- 46 Portegijs, W., Boelens, A., & Keuzenkamp, S. (2002). *Emancipation monitor 2002*. Den Haag,  
47 The Netherlands: SCP/CBS.

- 1 Rasbash, J., & Woodhouse, G. (1995). *MIn command reference*, version 1.0. University of  
London, Institute of Education, Multilevels project.
- 3 Rossi, A. S., & Rossi, P. H. (1990). *Of human bonding: Parent-child relations across the life  
course*. New York: Aldine de Gruyter.
- 5 Sanders, K., & Becker, H. A. (1994). The transition from education to work and social  
independence: A comparison between the United States, the Netherlands, West  
Germany, and the United Kingdom. *European Sociological Review*, *10*, 135–154.
- 7 Shanas, E. (1979). The family as a social support system in old age. *Gerontologist*, *19*, 169–174.
- 9 Silverstein, M., Burholt, V., Wenger, G. C., & Bengtson, V. L. (1998). Parent-child relations  
among very old parents in Wales and the United States: A test of modernization theory.  
*Journal of Aging Studies*, *12*, 387–409.
- 11 Social and Cultural Planning Office. (2000). *Social and cultural Report 2000: The Netherlands in  
a European perspective*. Rijswijk/Den Haag, The Netherlands: SCP/VUGA.
- 13 Spitze, G., & Logan, J. (1990). More evidence on women (and men) in the middle. *Research on  
Aging*, *12*, 182–198.
- 15 Stacy, J. (1993). Is the sky falling? *Journal of Marriage and the Family*, *55*, 555–559.
- 17 Suitoer, J. J., Pillemer, K., Keeton, S., & Robison, J. (1995). Aged parents and aging children:  
Determinants of relationship quality. In: R. Blieszner & V. Hilkevitch Bedford (Eds),  
*Handbook of aging and the family* (pp. 223–242). London: Greenwood.
- 19 Troll, L. E. (1971). The family of later life: A decade review. *Journal of Marriage and the Family*,  
*33*, 263–290.
- 21 Van Tilburg, T. G. (1995). Delineation of the social network and differences in network size.  
In: C. P. M. Knipscheer, J. De Jong Gierveld, T. G. van Tilburg & P. A. Dykstra (Eds),  
*Living arrangements and social networks of older adults* (pp. 83–96). Amsterdam: VU  
University Press.
- 23 Van Tilburg, T. G., & Broese van Groenou, M. I. (2002). Network and health changes among  
older Dutch adults. *Journal of Social Issues*, *58*, 697–713.
- 25 Vollenwyder, N., Bickel, J., d'Epainay, L., & Maystre, C. (2002). The elderly and their families,  
1979–94: Changing networks and relationships. *Current Sociology*, *50*, 263–280.
- 27 White, L., & Rogers, S. J. (1997). Strong support but uneasy relationships: Coresidence and  
adult children's relationships with their parents. *Journal of Marriage and the Family*, *59*,  
62–76.
- 29
- 31
- 33
- 35
- 37
- 39



1 **AUTHOR QUERY FORM**

3

 ELSEVIER	<b>Book: ALCR-V012</b> <b>Chapter: 12009</b>	<b>Please eail or fax your responses and any corrections to:</b> <b>Email:</b> <b>Fax:</b>
---	---	--

5 Dear Author,

7 During the preparation of your manuscript for typesetting, some questions may have arisen. These are listed below. Please check your typeset proof carefully and mark any corrections in the margin of the proof or compile them as a separate list\*.

11 **Disk use**

Sometimes we are unable to process the electronic file of your article and/or artwork. If this is the case, we have proceeded by:

- 13  Scanning (parts of) your article     Rekeying (parts of) your article  
 Scanning the artwork

15 **Bibliography**

17 If discrepancies were noted between the literature list and the text references, the following may apply:

- 19  The references listed below were noted in the text but appear to be missing from your literature list. Please complete the list or remove the references from the text.  
 *Uncited references*: This section comprises references that occur in the reference list but not in the body of the text. Please position each reference in the text or delete it. Any reference not dealt with will be retained in this section

23 **Queries and/or remarks**

25

Location in Article	Query / remark	Response
AU:1	The author name "Keeten" has been changed as "Keeton" in order to match with the reference list. Please check if this is OK?	

27

29

31

33

35

37

39