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Geurts, T.

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Chapter 2

CONTACT BETWEEN GRANDCHILDREN AND THEIR GRANDPARENTS IN EARLY ADULTHOOD¹

Abstract Using cross-sectional data from the Netherlands Kinship Panel Study ($N = 1,231$), we examine the relationship between grandchildren and their grandparents across early adulthood. We use age as a proxy for change over the grandchild's life course and examine the influence of major life course characteristics. Our results indicate that the majority of young adult grandchildren have contact with their grandparents, but the average frequency is low. Furthermore, we observe age differences in contact frequency suggesting a decline in grandparent-grandchild contact across early adulthood. Multilevel analyses show that grandchildren's employment status, partner and parenthood status do not affect contact frequency with grandparents. Rather, the results point at the importance of the parental home for facilitating grandparent-grandchild contact as age-related differences are accounted for by whether grandchildren left the parental home. Furthermore, our results hint at the importance of familial characteristics; most of the variance in grandparent-grandchild contact is attributable to differences between family of the mother's and family of the father's side.

Authors' note

¹This chapter is co-authored by Theo van Tilburg (Department of Sociology, VU University Amsterdam), Anne-Rigt Poortman (Department of Sociology/ ICS, Utrecht University), and Pearl A. Dykstra (Department of Sociology, Erasmus University Rotterdam), and is published in *Journal of Family Issues* in 2009. We used data from the Netherlands Kinship Panel Study, a research program funded by grant 480-10-009 from the Major Investments Fund of the Netherlands Organization for Scientific Research (NWO), and by the Netherlands Interdisciplinary Demographic Institute (NIDI), Utrecht University, University of Amsterdam and Tilburg University.

Introduction

An increasing length of life and decreasing fertility in Western societies are assumed to elevate the role of grandparents in family life (Harper, 2005). The lives of grandparents and grandchildren overlap for a longer period of time than ever before (Hagestad, 1988). Furthermore, there are fewer grandchildren per grandparent. Both factors allow for a more intense relationship between grandparents and grandchildren for a longer period of time (Bengtson, Rosenthal & Burton, 1996).

The grandparent-grandchild relationship is considered to be most intense before the grandchildren have reached adolescence (Cherlin & Furstenberg, 1986). After adolescence, the relationship may continue to be personally meaningful and significant for grandchildren and grandparents (Kemp, 2005). However, there are two reasons to expect that the relationship becomes less intense when grandchildren grow older. First, the initiative for maintaining contact is likely to shift from parents and grandparents to grandchildren. During childhood and early adolescence, parents are most important, as they initiate and facilitate contact with grandparents (Brown, 2003). When grandchildren enter adulthood, however, the parental influence on the grandparent-grandchild relationship is assumed to become less important and grandchildren may re-establish the relationship on their own terms (Roberto & Stroes, 1992). Although the grandparents' need for family contact may increase, as these contacts are considered to be more emotionally rewarding at an older age (Carstensen, 1992), grandparents also believe they should not interfere in

the lives of younger generations and may be reluctant to contact their grandchildren (Kemp, 2004).

Second, grandchildren's priorities and opportunities for maintaining contact with grandparents decrease. Grandchildren in early adulthood are likely to prefer peer relationships over intergenerational relationships (Baranowski, 1982) because they place more emphasis on the potential for information gain and future contact (Carstensen, 1992). Moreover, grandchildren face more time restrictions as they take up adult roles such as starting their own families or pursuing careers (Mills, 1999).

The reduced importance of parents and grandparents, combined with grandchildren's weaker preferences and fewer opportunities for intergenerational contact, are assumed to weaken the grandparent-grandchild relationship when grandchildren enter adulthood. Cherlin and Furstenberg (1986) even go so far as to say that it evolves into a relationship with limited meaning and little content. Thus far, little is known about how the grandparent-grandchild relationship evolves when young adult grandchildren move through several phases of the life course. Most studies have focused on young grandchildren and showed a decline in contact frequency during adolescence (Creasey & Kaliher, 1994; Kornhaber & Woodward, 1981; Oppelaar & Dykstra, 2004; Silverstein & Marengo, 2001). The few studies that track grandchildren beyond adolescence also suggest such a decline (Field & Minkler, 1988; Mills, 1999; Silverstein & Long, 1998; Wenger & Burholt, 2001).

The first aim of this study is to examine how contact between grandchildren and grandparents evolves in grandchildren's early adulthood. Although longitudinal data would be ideal, such data covering a long time-span are currently unavailable in the Netherlands. We therefore use cross-sectional data from the Netherlands Kinship Panel Study and assess changes in contact during grandchildren's early adulthood by looking at the effect of grandchildren's age on contact frequency between the age of 18 and 35 years old.

Our second aim is to understand why grandparent-grandchild contact changes as grandchildren grow older. As grandchildren are probably the most important actors in maintaining the relationship, we focus on the role of the adult grandchild's life course characteristics for contact frequency. We assume that major life course characteristics of young adult grandchildren are related to the intensity of intergenerational contact. Young adult's priorities and op-

portunities to keep in touch with their grandparents are likely to shift as a result of life course transitions (Mills, 1999). Empirical evidence for the role of young adult grandchildren's life course characteristics is scarce and findings are inconsistent (Mills, 1999). We address our second aim by looking at the effects of major life course characteristics on contact frequency.

We extend previous research by distinguishing between face-to-face contact and contact by other means, such as phone, letter or email contact—in short, remote contact. When time restrictions are important in explaining the effect of grandchildren's life course characteristics, we expect that diversity in life circumstances of adult grandchildren has a stronger effect on face-to-face contact than on remote contact, since the former is often more time-consuming than the latter. This distinction yields further insight into why changing life circumstances might affect grandparent-grandchild contact.

Furthermore, although our focus is on grandchildren's characteristics, our analyses take into account the role of the parental home and some grandparents' characteristics as well. As such, we are able to assess the relative importance of adult grandchildren in shaping the grandparent-grandchild relationship. The strong effects of parental characteristics observed in research among pre-adult grandchildren, such as parental divorce and the quality of the parent-grandparent relationship (King & Elder, 1995; Whitbeck, Hoyt & Huck, 1993), require an investigation into whether parents indeed become less important in adulthood. The role of the opportunity structure offered by parents and the grandparents' role is assessed by including whether or not grandchildren left the parental home as a life course characteristic, and by assessing the relative importance of unmeasured characteristics of each generation by means of multilevel analysis.

Changes in Grandchild's Early Adulthood

Grandchildren's time restrictions and their preferences concerning the intergenerational relationship are assumed to weaken the grandparent-grandchild relationship when grandchildren grow older. The available time for contact is expected to decrease because grandchildren's activities expand—most notably outside the family—when they go on to pursue their own lives (Mills, 1999). Kemp (2005) observed that adult grandchildren frequently use their busy lives

as a legitimate excuse for not contacting their grandparents, supporting the assumption that limited time restricts grandchildren to contact their grandparents. In addition, grandchildren's preferences for maintaining contact with grandparents are expected to weaken. Baranowski (1982) has argued that peer relationships gradually increase in salience as young people grow older and pursue unique identities. Carstensen (1992) argued that young adults perceive peer relationships as more rewarding in instrumental terms (e.g., career advancement) than intergenerational relationships. This relatively strong peer orientation may leave little room for grandparents in the lives of grandchildren (Baranowski, 1982). We hypothesize that older grandchildren have less often contact with their grandparents than younger ones.

Furthermore, we expect that the decline in contact is due to grandchildren's life course transitions. As grandchildren enter adulthood, they attain increasingly more adult roles and these new roles lead to changing preferences and opportunities for contact (Mills, 1999). The most important transitions in early adulthood are indicated by whether grandchildren have left the parental home, have a partner relationship, are cohabiting or married, whether they have children and whether they are employed. As the precise mechanisms vary according to the type of life course transition being studied, we discuss each phase in early adulthood separately.

Grandchildren who left the parental home will often have less time available for contact with grandparents than grandchildren who still live with their parents because of the time consuming activities that come along with having a household of one's own. In addition, the parental home no longer functions as the obvious place to meet grandparents, and parents probably have less influence over their children's decisions whether or not to contact their grandparents when they move out (Silverstein & Marengo, 2001). Furthermore, grandchildren generally move out of the parental home at the age at which peer relationships are preferred, making it unlikely that contact will be re-established to its previous frequency. We hypothesize that grandchildren who have left the parental home have less frequent contact with their grandparents than grandchildren who still live with their parents.

Grandchildren who are in a partner relationship are assumed to have less time available for contact with grandparents than singles, as individuals who are in a romantic relationship probably spend a great deal of time together.

Furthermore, the partner relationship is probably more important and salient in the grandchild's life than relationships with family members. For those who have a partner, we further expect to find differences in contact to depend upon the type of partner relationship. The family of origin is likely to become even less important when partners become more involved with and committed to each other. In addition, time restrictions may increase with greater commitment, as more committed couples probably invest more time into their relationship than less committed couples. The change from dating to cohabitation to eventual marriage can be seen as a growth in commitment. We therefore hypothesize that grandchildren who have no partner will have the most contact with their grandparents, followed by those who have a dating partner and grandchildren who cohabit, respectively. Least contact is expected for married grandchildren.

It should be noted that some studies suggest that marriage is associated with greater rather than less contact with members from the family of origin (Aquilino, 1997; Belsky, Jaffee, Caspi, Moffitt & Silva, 2003; Mills, 1999). It is argued that involvement increases after marriage because the roles of younger generations grow more similar to those of older generations and this similarity will "ease the way for more adult-like mutuality in the relationship" (Aquilino, 1997, p. 674). Most of this type of research has focused, however, on parent-child relationships (e.g., Aquilino, 1997; Belsky et al., 2003), and because grandparents are often "distant figures" to grandchildren (Neugarten & Weinstein, 1964) (or at least more distant than parents), we persist in expecting a decline in contact after marriage.

Having children is also likely to increase time constraints. Rossi and Rossi (1990) argued that the available time and energy for intergenerational contact decreases after having children. Aquilino (1997) argued that parenthood is often a stressful and demanding role, in which parents become more focused on the demands of their new family and leisure time becomes more of a commodity. Although it could again be argued that increased social similarity after having children may increase rather than decrease contact with older generations, research on contact with parents (who are less distant than grandparents) consistently shows that parenthood negatively affects the quality and frequency of contact between adult children and their parents (Aquilino, 1997; Belsky et al., 2003; Rossi & Rossi, 1990). We hypothesize that

adult grandchildren who have children have less frequent contact with their grandparents than adult grandchildren who have no children.

Employment is also likely to influence intergenerational relationships (Belsky, 2003). Employment often leads to more time restrictions, as it involves time-consuming activities and responsibilities. In addition, employment may push the grandparents further into the background of the adult grandchild's social environment as age peers (i.e., colleagues) become more important for achieving instrumental goals (Carstensen, 1992) such as career development. Empirical evidence on the relationship between children and parents (Aquilino, 1997; Belsky, 2003) indeed suggests a negative influence of full-time employment, although evidence in the context of the grandparent-grandchild relationship is inconsistent (Mills, 1999). Here, we note that Belsky (2003) has argued that it is not employment *per se* that might influence intergenerational relationships, but rather productive activity in general. We therefore differentiate between those grandchildren who are unemployed, those who are enrolled in education or are employed part-time, and grandchildren who are employed full-time.

It should be noted that unemployment may lead to conflict with the parents (Aquilino, 1999) and might also negatively influence the grandparent-adult grandchild relationship. We assume, however, that the negative effect of conflict is less important than the positive influence of the greater availability of time in the case of unemployment. We hypothesize that adult grandchildren who are unemployed have the most frequent contact with their grandparents, followed by adult grandchildren who are enrolled in education or employed part-time, and the least contact is expected for adult grandchildren who are employed full-time.

Finally, we expect the hypothesized effects of both the grandchildren's age and their life course characteristics to be stronger for face-to-face contact than for remote contact (i.e., contact by phone, letter or email). The reasoning behind this is that time restrictions are probably more strongly felt in case of in-person visits than in case of making a phone call, writing a letter or e-mail message, or sending a postcard.

Methods

Data

Data were drawn from the first wave of the “Netherlands Kinship Panel Study” (NKPS; Dykstra et al., 2005). The NKPS is a survey of a random sample of adults living in private households in the Netherlands and was held between 2002 and 2004. The sample consists of 8,161 persons aged 18 to 79. The overall response rate was 45%, which is similar to response rates of other Dutch family surveys, which vary between 40 and 50% (Dykstra et al., 2005). Compared to Dutch population statistics, the sample consists of a slight overrepresentation of women and persons with children at home, while underrepresenting the youngest and oldest (among women) age groups, single women who live alone, and young adults living with their parents (Dykstra et al., 2005). Through a Computer Aided Personal Interview (CAPI) and a self-administered questionnaire, information was obtained about respondents’ life course characteristics in the domains of work and family and about their family relationships, including the frequency of contact with their biological grandparents.

For the purpose of our analyses, respondents with no grandparents alive were excluded ($N = 6,698$). As our focus is on the transitional life-events in early adulthood which generally takes place until the age of 35, grandchildren who were older than 35 years ($N = 232$) were also excluded. There were no grandchildren who co-resided with their grandparents. After these exclusions, the sample consisted of 1,231 adult grandchildren, who had 2,064 living biological grandparents and 1,647 parents.

Measures

Face-to-face contact frequency was assessed for all four possible intergenerational ties by asking: “*How often have you seen your grandfather / grandmother on your father’s / mother’s side in the past twelve months?*” As for remote contact, respondents were asked: “*How often have you been in contact with your grandfather / grandmother on your father’s / mother’s side by phone, letter or e-mail in the past twelve months?*” For both questions, answering categories ranged from: 1 (*never*) to 7 (*daily*). Given the unequal distances between the

answering categories, values were recoded by assigning values that represent the approximate occurrences of contact during the past year. For example, the category “daily” was assigned the value of 365, “weekly” was recoded into 52, and “never” into zero days. This transformation is used because it allows for regression analysis. Because the distributions were skewed to the right, the two contact variables were transformed by taking the natural log ($y' = \ln(y+1)$). Both dependent variables now range from 0 to 5.9. To interpret the results, we sometimes transformed the scores back to its original occurrences a year (y) by usage of the formula $y = e^{y'} - 1$.

As a first and indirect indicator of the adult grandchild's life course, we used the age of the adult grandchild ($M = 26.9$; $SD = 4.8$; for a similar procedure, see Silverstein & Marengo 2001). Second, we also included the following life course characteristics of grandchildren in early adulthood: left the parental home (84%; reference = ‘lives at parents home’, 16%); parenthood (31%; reference = ‘no children’, 69%); partner status (‘partner for at least three months, but not married or cohabiting’, 15%; ‘cohabiting but not married’, 25%; ‘married’, 27%; reference = ‘no partner’, 33%). Finally, employment status is included. We distinguished between ‘studying or employed part-time’ (35%), that is, enrolled in daytime education or working more than 12 hours but less than 32 hours a week; ‘employed full-time’ (52%), that is, working 32 hours a week or more, with ‘unemployed’ (12%) as a reference, that is, working 12 hours a week or less and not enrolled in day time education.

The gender of adult grandchildren (62% granddaughters), parents (56% mothers) and grandparents (69% grandmothers) were included as control variables, because prior research has indicated that women tend to be more involved in kinship ties than men (Baranowski, 1982). In addition, we controlled for the marital status of the middle generation as parental divorce (21%) is known to negatively influence the frequency of contact between grandparents and grandchildren (Oppelaar & Dykstra, 2004). Finally, grandchildren's level of education is controlled for as well; more highly educated persons are expected to have less contact with their grandparents than their lesser educated counterparts because they tend to find their occupational role more rewarding than their familial role, whereas the opposite holds true for lesser educated persons (Silverstein & Marengo, 2001). The attained level of education is measured in formally required years of education, ranging from

5 to 21 years ($M = 12.5$; $SD = 2.7$).

Method of Analysis

Given the hierarchical structure of the data set, with a maximum of four observations per grandchild, a multilevel regression was conducted by use of MLwiN (Rasbash, Steel, Browne & Prosser, 2004). Multilevel regression analysis takes the non-independent nature of hierarchical data into account and extends the multiple regression model, as it allows for a random intercept. The random intercept makes it possible to capture variation in the dependent variable among levels that are distinguished beforehand. Three levels are distinguished in the present study: the grandparents (lowest level 1), the parents (level 2), and the grandchildren (level 3). The decomposition of variance of the dependent variable across these levels shows the relative importance of (unmeasured) characteristics of grandchildren, parents and grandparents in explaining contact between grandparents and grandchildren. Because the data structure is such that parents are nested within a grandchild, the variance on the parental level refers to differences between the two parents, i.e. the family from mother's side and the family from father's side. The variance on the grandparental level refers to differences between the grandmother and the grandfather from mother's side, as well as between the grandmother and the grandfather from father's side. The two types of contact, face-to-face and remote contact, were analyzed separately. For both types of contact, we used forward modeling: taking the empty model (only the intercept and the variances per level) as a starting point, we successively add groups of variables based upon the theoretical model into the regression model. In Model 1, the dependent variables are being regressed against age, and this model includes the control variables. In preliminary analyses, we checked for the possibility that grandparents from the fathers' side are less frequently contacted after divorce (King & Elder, 1995) by including an interaction term between the gender of the parents and parental divorce, but this interaction effect was not significant. In Model 2, the grandchildren's life course characteristics are added to Model 1 to assess the extent to which these specific life course characteristics can explain differences in contact between young adult grandchildren and grandparents. We checked whether the effects of age and life course characteristics

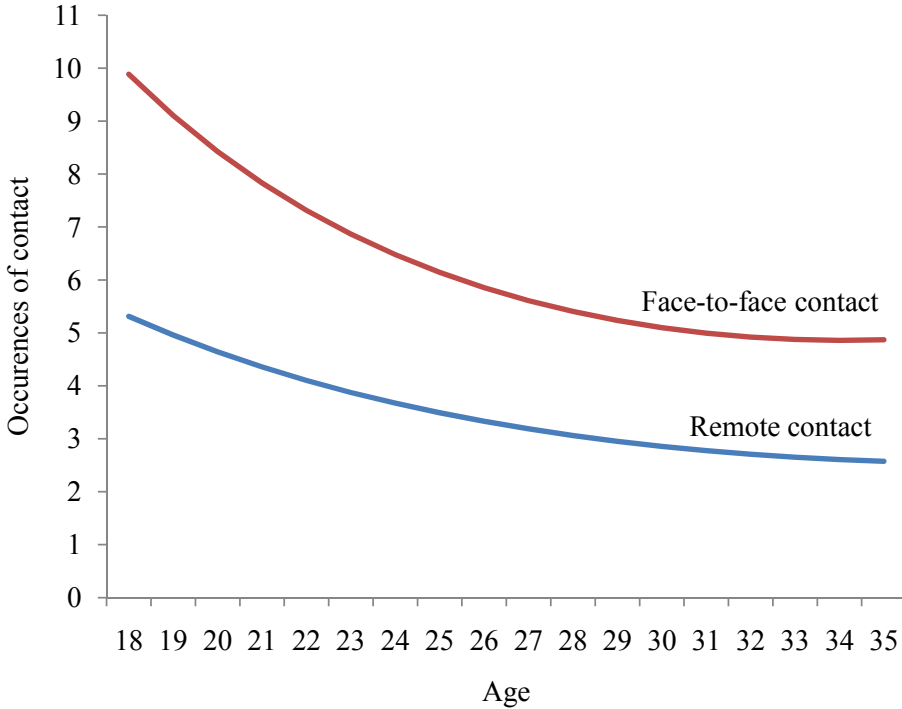
differed depending upon the grandchild's gender by adding interaction terms with gender to Model 2. Because no significant differences in the effects of age and life course characteristics between grandsons and granddaughters were observed, the models are estimated for the combined sample rather than for granddaughters and grandsons separately. The fit of the models was computed by calculating the deviance statistic.

Results

The empty models of the multilevel analyses (results not shown) show that the mean frequency of face-to-face contact is 6.0 occurrences a year ($SD = 1.7$). The mean frequency of remote contact is 3.4 occurrences a year ($SD = 1.9$). Additional analyses show that a vast majority (93%) of the adult grandchildren had contact with their grandparents in the year preceding the interview; about 90% had face-to-face contact and 75% had remote contact (17% solely 'face-to-face', 3% solely remote and 72% by both means). A substantial percentage of adult grandchildren had at least once a month contact with their grandparents (face-to-face contact: 34%; remote contact: 22%). Furthermore, the empty models show that most of the variance is on the level of the parents for both face-to-face contact (74%) and remote contact (59%). The variance on the level of the grandparents is quite low: 10% for face-to-face contact and 19% for remote contact. Only 16% of the variance in face-to-face contact is on the level of grandchildren, and this figure is 22% for remote contact. Consequently, only a small part of the differences in the frequency of contact in the subsequent models can be explained by characteristics of adult grandchildren or characteristics of the grandparents.

Figure 1 shows how contact frequency depends upon the age of the grandchild for both face-to-face contact and remote contact. The figure is based on the estimates from Model 1 in which we try to capture changes in contact over the grandchild's early adult life course. Face-to-face contact starts at an average of about ten occurrences of contact a year for adult grandchildren of 18, then declines at a fast rate as the grandchildren become older, and finally plateaus at an average of about five occurrences a year. Remote contact starts at a lower frequency: an average of about five occurrences a year for grandchildren of 18 years. At the age of 35, the frequency is estimated to be between

Figure 1 *The frequency of contact between grandchildren and their grandparents for different ages in early adulthood*



two and three occurrences of remote contact a year. Note that age-related differences are less pronounced for remote than face-to-face contact, suggesting that remote contact declines at a lower rate.

Table 1 shows the multilevel results concerning face-to-face and remote contact. Model 1, including control variables and age, is an improvement of the empty model for face-to-face contact ($\chi^2_{(6)} = 90.5; p < 0.001$) as well as remote contact ($\chi^2_{(6)} = 104.1; p < 0.001$). For both types of contact, gender differences are statistically significant, but effect sizes are small. Grandmothers are more often contacted than grandfathers (face-to-face: a difference of 1.1 occurrences; remote: 1.2 occurrences) and grandparents on the mother's side are more often contacted than grandparents on the father's side (face-to-face: a difference of 1.3 occurrences; remote: 1.4 occurrences). Adult granddaughters have more frequent contact with their grandparents than grandsons (face-to-

Table 1 Multilevel Model Results Predicting the Frequency of Face-to-Face and the Frequency of Remote Contact between Adult Grandchildren and Grandparents Using Full Maximum Likelihood Estimation

	Face-to-face contact (Range: 0 – 5.9)		Remote contact (Range: 0 – 5.9)	
	Model 1	Model 2	Model 1	Model 2
<i>Grandparent-level</i>				
Intercept				
Gender (0=female)	4.72(.89) ***	3.65(1.02) ***	3.19(.96) ***	2.33(1.14) ***
	-.07(.02) **	-.07(.02) **	-.19(.03) ***	-.19(.03) ***
<i>Parent-level</i>				
Gender (0=female)	-.26(.05) ***	-.27(.05) ***	-.32(.06) ***	-.32(.06) ***
<i>Grandchild-level</i>				
Gender (0=female)	-.18(.06) **	-.20(.06) **	-.25(.07) ***	-.26(.07) ***
Education (5 – 21 years)	.01(.01)	.01(.01)	.04(.01) **	.04(.01) **
Parents divorced (0=not divorced)	-.25(.07) ***	-.22(.07) ***	.00(.08)	.00(.08)
Age (18 – 35 years)	-.17(.07) *	-.07(.08)	-.11(.08)	-.04(.09)
Age ²	.00(.00)	.00(.00)	.00(.00)	.00(.00)
Moved out (0 = lives at parents' home)		-.43(.11) ***	.00(.00)	-.29(.12) *
Employment (0 = unemployed)				
Enrolled in education or employed part-time		-.14(.10)		-.08(.11)
Employed full-time		-.06(.10)		-.07(.11)
Partner status (0 = no partner)				
Partner (not cohabiting, not married)		-.07(.09)		.01(.10)
Cohabiting (not married)		-.11(.08)		.12(.09)
Married		.18(.10)		-.05(.11)
Parenthood (0= no children)		-.09(.09)		-.01(.10)
<i>Random Part</i>				
Variance level grandchild	.21(.06) ***	.20(.06) ***	.36(.07) ***	.36(.07) ***
Variance level parent	.95(.07) ***	.94(.07) ***	.87(.07) ***	.86(.07) ***
Variance level grandparent	.12(.01) ***	.12(.01) ***	.27(.02) ***	.27(.02) ***
-2*log likelihood	5644.6	5623.0	6194.0	6184.9

Note. N = 2,064 grandparents, 1,647 parents and 1,231 grandchildren
 ***p < .001 **p < .01 *p < .05

face: a difference of 1.2 occurrences; remote: 1.3 occurrences). Adult grandchildren of divorced parents have less face-to-face contact than adult grandchildren whose parents are still married, but no differences are observed for remote contact. The grandchild's level of education was observed to be positively associated with remote contact, but not with face-to-face contact. The difference between the more highly educated and less educated young adults was small (a difference of 1.1 occurrences in remote contact).

In line with our expectations, the frequency of face-to-face contact between young adult grandchildren and grandparents depends significantly on the age of these grandchildren. These results suggest that contact between grandchildren and grandparents declines during early adulthood. Considering the low average frequency of face-to-face contact (6.0 occurrences a year), the extent to which grandchildren's frequency of contact varies by age is quite large: the difference between the youngest and oldest respondents in our sample amounts to a difference of 6.0 occurrences a year. Contrary to our expectations, the frequency of remote contact is not observed to differ between grandchildren of various ages: the estimated effect of age on remote contact is statistically not significant. The weaker effect of age on remote contact as opposed to face-to-face contact confirms our hypothesis that time restrictions are more strongly felt in case of the latter type of contact.

Model 2, in which life course characteristics are added, is an improvement of Model 1 for face-to-face contact ($\chi^2_{(8)} = 21.5$; $p < 0.01$) but not for remote contact ($\chi^2_{(8)} = 9.7$; $p > 0.05$). As such, Model 2 does not explain differences in frequency of remote contact better than Model 1. Therefore, it is not surprising that most life course characteristics, i.e. employment status, partner status and parental status, are not related to the frequency of remote contact. Only the effect of having left the parental home is significant, showing that grandchildren who moved out have less remote contact with their grandparents. Similar results are obtained for face-to-face contact. Model 2 shows that grandchildren who left the parental home have on average 1.5 occurrences per year less contact with their grandparents than grandchildren who still live at home. This effect is greater than for remote contact, as expected on the basis of the greater role of time restrictions for in-person visits. Against our expectations, however, employment status, partner status and parenthood do not significantly influence the frequency of face-to-face contact between adult

grandchildren and their grandparents. As the effect of grandchildren's age is no longer significant, moving out of the parental home explains the observed decline (see Figure 1) in face-to-face contact to a large extent.

Discussion

We aimed to gain insight into how and why contact between grandchildren and grandparents changes across early adulthood. We examined to what extent the frequency of contact with grandparents is contingent upon the age and life course characteristics of adult grandchildren. A major observation was that almost all adult grandchildren had contact with their grandparents. On average, however, the frequency of contact was low, only about six occurrences a year for face-to-face contact and three occurrences a year for remote contact. Furthermore, we observed that contact frequency is lower for older than younger grandchildren, particularly in case of the more time-consuming activity of face-to-face visits. Although our cross-sectional design does not allow for definite conclusions, these results suggest that contact declines between the ages of 18 and 35. When the grandparent-grandchild relationship is evaluated on the basis of contact frequency, our results support the idea of Cherlin and Furstenberg (1986) that the relationship evolves into one with little content. Young adult grandchildren and grandparents presumably contact each other only at family events such as birthdays and Christmas. The observed low frequency of contact does not necessarily mean that the relationship is of no meaning whatsoever. In particular for grandparents, the intergenerational contact is often a source of pleasure, and it probably does not matter if it is irregular or infrequent. For example, the successes of adult grandchildren are often a source of pride for grandparents and are highly valued (Wenger & Burholt, 2001).

A second major observation is that life course characteristics of adult grandchildren have little impact on contact with grandparents, contrary to earlier suggestions (Kemp, 2005; Roberto, Allen & Blieszner, 2001) and the findings of Mills (1999). This is not to say that preferences and time constraints that are related to these life course characteristics are not important for intergenerational contact in general. Rather, the weak impact of life course factors is likely to be due to the fact that the intergenerational relationship has already

developed into one with little contact; the already low frequency of contact leaves little room for circumstances to affect the grandparent-adult grandchild relationship. One exception should be noted: having left the parental home did matter for grandparent-grandchild contact and appeared to be the driving force behind the age-related differences in contact. Although this effect could be due to changing time restrictions and preferences, a more plausible explanation (given the average low level of contact and the insignificance of other, even more time-consuming transitions) is that the opportunities provided by parents to meet with grandparents at the parental home are reduced once grandchildren live independently. Because co-residence with parents explains most of the age differences in contact frequency, we tentatively conclude that contact with grandparents declines when grandchildren leave the parental home and remains constant at a low level after that.

Besides the importance of the parental home in facilitating contact between grandchildren and grandparents, the high variance in frequency of contact at the level of the parents points at the centrality of broader familial characteristics. Contact between young adult grandchildren and grandparents is for a large part attributable to (unobserved) differences between the family on the mother's side and the family on the father's side. Variation in intergenerational solidarity and conflict between families might explain these differences. It appears that contact with grandparents is a matter of 'it runs in the family' as some families may be more oriented towards family relationships than others.

The observed development of the intergenerational relationship may be typical for the Netherlands. Compared to other European countries, the Netherlands ranks low on the amount of time that is made available by grandchildren for their grandparents (Attias-Donfut, Ogg, & Wolff, 2005). Compared to the United States, the frequency of contact between Dutch adult grandchildren and their grandparents is low: Mills (1999) indicated that between the ages of 19 and 31, the sum of face-to-face and remote contact in the US declines from an average of 35 occurrences a year to about 22 occurrences.

Our study was one of the first studies to examine grandparent-grandchild contact in adulthood, and our multi-level approach improved upon the few earlier studies by showing the relative importance of the role of grandchildren, parents and grandparents. However, there are limitations to the present study

that could be improved upon in future research. The first limitation is that our findings are based on cross-sectional data. Consequently, the observed decline in contact with increasing age could be biased by possible cohort effects. Panel data following several birth cohorts are needed to disentangle age and cohort effects. Another limitation is that we lack information about the geographic proximity of grandparents to the grandchild, and this might have biased our results. However, we not only analyzed face-to-face contact but also remote contact, and the lack of information on geographic proximity is not likely to have biased the estimates found for remote contact. A final limitation is that life course characteristics were used as an indicator of the amount of available time and preferences with regard to the intergenerational contact. As we did not directly measure time availability and preferences, any statement in the conclusion about time and preferences should be read with this limitation in mind. Future research could address the role of time restrictions and preferences more conclusively.

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