

# **Guilt in Adult Mother-Child Relationships: Connections to Intergenerational Ambivalence and Support**

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## **Abstract**

**Objectives:** The concept of guilt is often mentioned in studies on intergenerational ambivalence but its theoretical status in that literature is not clear and the concept is rarely measured. The current study examines how feelings of guilt that adult children have toward their ageing mothers are related to intergenerational ambivalence and support.

**Method:** Using representative survey data from the Netherlands (N = 2,450), adult children (average age 43) were asked to evaluate the relationship with their mother (average age 71). Principal component analysis was used to examine which underlying dimensions exist and regression models were estimated to examine the effects of ambivalence and support exchange on guilt.

**Results:** About one-fifth of adult children report feelings of guilt. Guilt constitutes a unique concept in the two-dimensional structure of children's emotions about the mother-child

relationship. There is a significant effect of the co-occurrence of positive and negative emotions on guilt, confirming the hypothesis that ambivalence leads to guilt in intergenerational relationships. Received support, infrequent contact, and filial obligations are also associated with feelings of guilt.

**Discussion:** Intergenerational ambivalence can be problematic for children because it may increase feelings of guilt. Feelings of guilt are also determined by a lack of reciprocity and by norms about intergenerational support.

**Keywords:** Intergenerational ambivalence, intergenerational solidarity, guilt, filial obligations.

## **Introduction**

Almost two decades ago, the flourishing literature on intergenerational solidarity (Silverstein & Bengtson, 1997) was criticized for having an overly positive view of the relationships between older parents and their adult children in western societies (Luescher & Pillemer, 1998). The criticism was not so much that overt conflict between the generations was underestimated, but rather that 'positive' parent-child relationships can comprise important negative elements. More specifically, Luescher and colleagues argued that many parents and adult children simultaneously have positive and negative feelings about each other and their relationship, a phenomenon coined intergenerational ambivalence (Luescher, 2002; Luescher & Pillemer, 1998). Since the criticism appeared, there has been much theoretical development and empirical progress and the concept of ambivalence is now widely accepted (Connidis, 2015; Fingerman, Hay, & Birditt, 2004; Sutor, Gilligan, & Pillemer, 2011; Van Gaalen & Dykstra, 2006).

In recent years, authors have proceeded to analyze the consequences of intergenerational ambivalence. One important hypothesis has been that the co-occurrence of positive and negative emotions has negative consequences for a person's emotional well-being (Fingerman, Pitzer, Lefkowitz, Birditt, & Mroczek, 2008; Kiecolt, Blieszner, & Savla, 2011; Lee & Szinovacz, 2016; Tighe, Birditt, & Antonucci, 2016). According to Fingerman et al. (2008), "experiencing a mixture of emotions may be more detrimental than experiencing negative emotions alone, because individuals may adjust to a generally negative tone and no longer react strongly or they may avoid negative social partners" (p. 363). Empirically, there is some evidence that ambivalence negatively affects psychological well-being (Fingerman et al., 2008; Kiecolt et al., 2011), but this evidence is not conclusive, in part because of problems in the measurement of ambivalence and in part because of differences in the design of the analysis (Gilligan, Sutor, Feld, & Pillemer, 2015; Sutor et al., 2011). Nevertheless, the notion that ambivalence is not only interesting for its own sake but also relevant for its impact on individuals provides an important avenue for further research.

One other potential negative consequence of ambivalence lies in the concept of guilt. While the literature on intergenerational ambivalence sometimes mentions guilt, it generally sees it as an indicator of ambivalence rather than as a separate construct (Luescher & Pillemer, 1998). Theoretically, however, the two concepts seem clearly distinct. Guilt can be defined as the negative feelings that arise from having done something that is – or is perceived to be – wrong (Baumeister, Stillwell, & Heatherton, 1994). Guilt is not the same as shame; guilt is the awareness that one has done something wrong, shame is the translation of that feeling to one's self-image, i.e., the feeling of not being a good person (Tangney, Stuewig & Mashek, 2007). Guilt has been considered as one of the primary moral emotions that people have (Tangney et al.,

2007) and is seen as an unpleasant feeling that may reduce individual well-being (O'Connor, Berry, & Weiss, 1999; Webb, Heisler, Call, Chickering, & Colburn, 2007). It has also been recognized that guilt is an emotion that often occurs in close relationships; in this context, guilt can be defined as the negative feeling that comes from the real or perceived harm that one has done to another person (Baumeister et al., 1994). Guilt is thus not only a moral but also a relational phenomenon.

Somewhat surprisingly, few studies on personal relationships have systematically measured guilt (Baumeister et al., 1994). There is some research on equity in couple relationships which shows that partners who are in a position of overbenefiting experience feelings of guilt (Guerrero, La Valley, & Farinelli, 2009). There is also research on the guilt problem that some working mothers may experience when combining a demanding professional job with the raising of children (Guendouzi, 2006; Henderson, Harmon, & Newman, 2016). Empirical studies of guilt in intergenerational relationships are even rarer. One small-scale qualitative study (N = 13) of mother-child dyads in Israel has suggested a link between guilt and ambivalence (Rappoport & Lowenstein, 2007) but did not measure the concept of ambivalence. A quantitative study of a local random probability sample in Germany (N = 275) examined the determinants of guilt and found that adult children experienced guilt more often if they had little contact with their parents, if they had authoritarian parents, and if their parents had mental health problems (Boll & Filipp, 2002). Finally, a recent analysis of a small and select sample of caregivers of dement family members in Spain (N = 212) found a positive and significant correlation between feelings of guilt toward parents and feelings of ambivalence (Losada et al., 2018).

In the present paper, a large nationally representative survey is used from the Netherlands (N = 2,450) in which a module was developed that contained a series of positive and negative items about the mother-child relationship as well as an explicit question on guilt. Questions were asked twice, once about the relationship to the mother and once about the relationship to the oldest child, but here the focus is only on children's feelings about their mother. The first research question is: Do items measuring positive feelings, negative feelings, and feelings of guilt consist of one or more theoretical constructs? The hypothesis is that feelings of guilt are orthogonal to the positive and the negative dimensions of the mother-child relationship and hence, constitute a distinct dimension (H1).

The second research question is: How are positive and negative feelings about mothers associated with feelings of guilt? The hypothesis is that the co-occurrence of positive and negative emotions about one's parents – intergenerational ambivalence – leads to feelings of guilt (H2). There are two considerations motivating this hypothesis. First, there is the expectation that in a strong and generally positive relationship, parents will be upset if they would hear that their child has negative emotions about the relationship. Second, in positive, so-called communal relationships like that between parent and adult child, there is the normative expectation that one should not feel anger or other negative emotions toward each other (Gilligan et al., 2015, p. 263). Adult children thus may feel guilty if they have negative emotions about their parents and such feelings will be stronger when the child has more affection for the parent.

The third research question links feelings of guilt to patterns of intergenerational support. Many studies have shown that adult children and their parents provide each other with emotional, practical, and material support (Silverstein, Gans, & Yang, 2006; Szydlik, 2016). Support from adult children to parents increases as parents become older and experience more

need of support, but even at high ages, parents still provide several types of support to their children (Grundy, 2005). Studies further have shown that intergenerational support is governed by norms, in particular by filial obligations and norms of reciprocity (De Vries, Kalmijn, & Liefbroer, 2009; Gans & Silverstein, 2006; Silverstein et al., 2006). The third question is how these aspects of the intergenerational relationship affect feelings of guilt.

One hypothesis is that imbalances in intergenerational support exchange lead to guilt. Children who receive more than other children (holding constant what they give), and children who give less than other children (holding constant what they receive), are expected to feel more guilty (H3). This hypothesis is linked to the finding in previous research that people who receive more support in a personal relationship than they give, experience feelings of inequity (Liang, Krause, & Bennett, 2001; Sechrist, Suitor, Howard, & Pillemer, 2014; Sprecher, 2001). In the present paper, this idea is broadened to feelings of guilt. A related hypothesis is that children who adhere more strongly to norms about support giving to parents, feel more guilty, holding constant the support that they give and receive (H4). This hypothesis is based on the notion that guilt is a moral emotion, i.e., a response to transgressions of personal or social norms (Tangney et al., 2007). In addition, one would expect an interaction effect: imbalances in support exchange should affect guilt more strongly when norms about support giving are stronger (H5). Children who feel strongly obliged to support their parents but are unable to do so, for example because there are competing demands on their time, will feel that they have broken a social norm and hence, feel guilty about this behavior.

## **Method**

The data were collected from the Longitudinal Internet Studies for the Social Sciences (LISS) Family Module in March 2015. The LISS is an annual panel study of a register-based sample of Dutch households, which began in 2007. Respondents are paid to answer the Computer Assisted Web Interviewing web questionnaire; respondents without internet or computers were given computers and free internet access to enable participation. The study protocol included extensive measures to maximize response, resulting in an initial response rate of 48% of households (Scherpenzeel, 2009; Scherpenzeel & Toepoel, 2012). The family module began including items about ambivalence in 2015. From the participants in the family module (N = 6,098), I selected respondents who were not living at home and whose mother was alive and above age 55 (N = 2,450). Adults living at home were excluded since the measures of intergenerational contact and support only apply to children living independently. The median age of the children was 43 and the median age of the mothers was 71.

### Measuring Ambivalence and Guilt

Respondents were given nine statements about the relationship they had with their mother. One of these items was about guilt and was worded as follows: “I often feel guilty toward my mother”. For this (and all the other) statements, respondents could answer on a scale from 1 (“does not apply to me at all”) to 7 (“fully applies to me”). In the regression models, the scores are coded 0-6 to improve the interpretation of interaction effects. Existing measures of guilt could not be used as these often have too many items for a non-clinical setting (Jones, Schratte, & Kugler, 2000). Moreover, there is considerable disagreement about how to measure guilt and many scales have been criticized for ‘polluting’ the measure of guilt with various external constructs (Tilghman-Osborne, Cole, & Felton, 2010). In this sense, the approach in this paper –

even though based on a single item – has clear face validity: it is direct and it only asks about guilt. The measure is correlated in expected ways to other constructs. For example, Harder and Zalma found a correlation of  $r = .39$  between depressive feelings and the 6-item PFQ scale of guilt in a student sample (Harder & Zalma, 1990). In the LISS data, the correlation between the one-item guilt item and depressive feelings (using the MHI-5 scale (Rumpf, Meyer, Hapke, & John, 2001)) is  $r = .34$  when the sample is limited to a similar age group. This gives us confidence in the reliability of the one-item measure of guilt.

To measure ambivalence, I use a disaggregated approach. Three statements on negative feelings and four statements on positive feelings are identified using a principal component analysis, presented below. The positive and negative items are presented in Table 3. I take the mean of the items and create two scales, one for positive feelings ( $\alpha = 0.91$ ) and one for negative feelings ( $\alpha = 0.84$ ). The guilt item was not included in either scale. The scales for positive and negative feelings are included as parallel independent variables and the interaction effect of the two is used to test the effect of ambivalence (Gilligan et al., 2015). A positive effect of the interaction term would indicate that negative feelings toward parents are more strongly associated with guilt for children who have more positive feelings.

In my view, the interaction approach is conceptually and analytically more appropriate than the composite score that has been used in other work (Fingerman et al., 2008; Thompson, Zanna, & Griffin, 1995). In this other approach, the composite score (defined as  $\frac{1}{2}(\text{positive} + \text{negative}) - |\text{positive} - \text{negative}| + 1.5$ ) is applied without including the main effects of positive and negative feelings. Since the composite score is highly correlated to negative feelings (e.g.,  $r = +.85$  in the LISS sample), and hardly related to positive feelings ( $r = -.14$ ), it picks up a main effect of negative feelings. This problem has been noted recently (Gilligan et al., 2015) and is the

main reason why I use the interaction approach. To test the impact of ambivalence, effects of the underlying positive and negative emotions need to be partialled out and this is what the interaction approach accomplishes.

### Measuring Intergenerational Exchange and Filial Obligations

The next set of variables measures aspects of the support relationship between the mother and the adult child. First, I look at the frequency of face-to-face contact using the following categories: infrequent contact (never or a few times a year), monthly contact, and weekly contact or more (which served as the reference). Contact is considered as an aspect of support, even though this – more social – form of support is not necessarily only upward or downward.

Second, questions were used about three types of support, following earlier research on intergenerational solidarity (Silverstein et al., 2006): help with household tasks, help with other practical matters, and giving counsel or good advice. Children were asked to report about the past three months and could answer never (0), once or twice (1), and more often (2). Two scales were made, one for giving and one for receiving support ( $\alpha = 0.76$  and  $\alpha = 0.68$ ). The scales were the means of the standardized items. More nuanced approaches are possible as well (e.g., a series of dichotomous variables for all items) but this did not yield additional insights. Alternative scalings of the three categories did not change the effects either. A separate item was added indicating whether or not the child received money or valuable goods from the mother (or the mother and the father combined) in the past twelve months.

Third, a scale measuring filial obligations was used (De Vries et al., 2009; Gans & Silverstein, 2006). The scale consists of four items (“Children should care for their parents if

these are ill.”, “If parents are old, they should be allowed to live with their children.”, “Children who live close should visit their parents at least once a week.”, and “Children should take an unpaid leave to care for their ill parents.”). The items were measured in 2013, 2014, and 2015 and the resulting scale has adequate reliability ( $\alpha = 0.76, 0.76, 0.74$ ). All three years of data are used to improve the measurement. Specifically, the scale was constructed by taking the mean of the standardized items in each year and the mean of the available scales across the years.

### Control Variables

Two control variables for the mother are used: the age of the mother and whether the mother is living alone. More characteristics of the mother are not available in the data. Living alone creates a need for support and is often found to be associated with support exchange (Kalmijn & Saraceno, 2008). Health measures were also not available but maternal age should at least cover some of the health effects. Past caregiving studies have shown that severe health problems on the part of parents can coincide with feelings of ambivalence and guilt (Losada et al., 2018) but this is a more specific topic that cannot be addressed very well in the LISS survey. For the adult child, the following characteristics are used: the gender of the child, whether the child lives with a partner and whether the child is separated (never-separated single persons are the reference category), if the child has children, the child’s level of education and whether a child is employed. Education is included because intergenerational relations are affected by schooling differences (Kalmijn, 2006). Education is scaled in formal years of schooling that belongs to the educational degree. Dichotomous variables are coded 0 or 1.

There were a few missing values on some of the variables (ranging from 0.2% for mother's marital status to 3.3% for filial obligations). All the missing values except those for guilt and ambivalence were imputed using multiple imputation based on chained regression estimates (20 imputations) and Rubin's rules to estimate the imputed datasets (Royston, 2005; Rubin, 1996). The listed independent variables were used in the chained regression model for imputation. An overview of the variables and their means and standard deviations can be found in Table 1.

## **Findings**

### Descriptive Findings

In Table 2, I present the items and their percentage distributions. Many adult children are positive about the relationship they have with their mother. The large majority agrees with the three positive statements: 66% to 80% give scores of 5 or higher on the 1-7 scale (4 is the neutral category). Although positive emotions dominate, there are also negative emotions. Counting again scores 5 and higher as a confirmatory statement, 17% of the children are sometimes ashamed of their mother's behavior, 14% sometimes feel angry toward their mother, and 23% are irritated by their mother. Feelings of guilt are reported by about one-fifth of the children (21%).

### Principal Component Analyses

In Table 3, I present the results of the principal component analysis. Model 1 includes the positive items, the negative items, and the item on guilt. The goal is to examine how many

theoretical constructs are underlying these items. In the principal component model, the factors are assumed to be a weighted sum of the individual items where the factor loadings are the weights. The table shows that a two-component solution is optimal (Model 1). The first component accounts for 48% of the variance and is the dominant factor. The second component accounts for 22% of the variance. The unrotated matrix of loadings shows that the first factor consists of a negative-positive dimension, with the negative items loading strongly negatively and the positive items loading strongly positively. The second factor has positive loadings for all items but the loadings are modest. This minor factor can be regarded as representing ambivalence since all items load positively on this dimension.

How does the item on guilt fit in? Is guilt part of the negative dimension or is it a separate item? Table 3 shows that the item about guilt has a high level of uniqueness: 57% of the variance in guilt is not explained by the two components. Since most other items have considerably lower values of uniqueness, this suggests that guilt does not correlate highly with any factor, in line with the notion that guilt is a distinct concept that should be studied on its own. This confirms the first hypothesis.

The loadings on the left hand side of Table 3 are calculated in such a way that the two components are uncorrelated (orthogonal). If the factor structure is rotated, i.e., allowing the two components to be correlated, and the item on guilt is dropped, a clearer picture emerges (Model 2). The rotated factors reveal a dimension with positive items and a dimension with negative items. The negative items do not load on the positive dimension and vice versa. The correlation between the two factors, however, is strong and negative:  $r = -.41$ . In other words, there are two dimensions but these are not orthogonal. Note that these results are just another way to represent

the original pattern which consists of one major positive-negative dimension and one minor dimension which represents ambivalence.

Because there is a negative correlation, it is useful to examine the joint distribution of positive and negative feelings in more detail (Table 4). Table 4 first confirms the negative association: children with more positive feelings less often have negative feelings. However, the row percentages in the table also make clear that a sizable minority of children who have strong positive feelings about their mothers have moderate to strong negative feelings as well (18.1% and 3.5% respectively). An even more interesting result emerges when we look at the column percentages (printed in italics). Of the respondents with moderate negative feelings, 44.4% also have strong positive feelings and of the respondents with strong negative feelings, 32.6% also have strong positive feelings. In sum, the correlation is clearly negative but the combination of positive and negative feelings is not uncommon.

### Guilt and Ambivalence

Table 5 presents the regression results where feelings of guilt are the dependent variable. Model 1 includes the main effects of positive and negative feelings as well as the control variables.

There is a strong and significant effect of negative feelings ( $b = .521, p < .05$ ): children who have negative feelings about their mother tend to feel more guilty about the relationship. Interesting is that there is also a significant, albeit weaker effect of positive feelings ( $b = .207, p < .05$ ). In other words, feelings of guilt are more common when adult children have stronger emotions, regardless of whether these are positive or negative.

There are some effects of the control variables in Model 1. Younger children feel more guilty than older children and higher educated children feel more guilty than lower educated

children. The age of the mother also has an effect. Children's feelings of guilt tend to increase when mothers are older.

In Model 2, the interaction between positive and negative feelings was added to test the ambivalence hypothesis. In line with the hypothesis, a significant and positive interaction is found between positive and negative feelings ( $b = .062$ ,  $p < .05$ ). The interaction effect implies that the impact of negative feelings on guilt becomes stronger when children have more positive emotions about their mother. Ambivalence, in the sense of experiencing positive and negative feelings toward one's parents at the same time, thus increases feelings of guilt.

To illustrate the nature and strength of the interaction, Figure 1 shows how negative feelings are related to expected levels of guilt for two categories of children: children who are positive about their mother and children who are not positive about their mother (using the scores of 0 and 6 respectively on the positive scale). The figure clearly shows that when children do not have positive emotions, the line is relatively flat: negative feelings hardly have an effect on guilt. When children are very positive, however, an increase in negative feelings is more strongly associated with more guilt. The highest levels of guilt are found for those who have both of these feelings.

### Guilt, Intergenerational Support, and Filial Obligations

To what extent do aspects of the support relationship play a role? In Model 3, I add support characteristics. The effects of positive and negative feelings as well as the interaction effect remain significant. In other words, the association between guilt and ambivalence is not confounded by support exchange. Still, relationship characteristics do have a clear impact. Adult children feel more guilty when they receive money from their parents ( $b = .254$ ,  $p < .05$ ). Adult

children also feel more guilty when they receive more support from their mother ( $b = .111, p < .05$ ). Since what children give to their mother is held constant, these effects confirm that differences in the degree of reciprocity in the mother-child relationship between children affect guilt, in line with the third hypothesis. Contact frequency has an interesting effect. Very little contact (vis-à-vis weekly) is not associated with guilt, but monthly contact is ( $b = .209, p < .05$ ). Children who have monthly contact feel more guilty than children who have weekly contact. Another important effect is that of filial obligations. Children who adhere more strongly to norms that one should support one's parents tend to feel more guilty ( $b = .119, p < .05$ ). This confirms the fourth hypothesis.

Finally, I tested whether the effects of support and contact depend on the filial obligations the child has, i.e., whether filial obligations moderate the effects of support. The four support and contact variables were interacted with the scale of filial obligations and added to Model 3. The estimates revealed one significant interaction effect (not reported in the table). The interaction of receiving support and filial obligations was  $b = .147 (p < .05)$ . Hence, receiving support increases guilt more for children who have stronger filial obligations. The moderator effect of filial obligations confirms the fifth and last hypothesis.

## **Conclusion**

The literature on intergenerational ambivalence has recently moved toward studying how ambivalence affects the well-being of parents and children. Although there is mixed evidence that ambivalence reduces well-being (Fingerman et al. 2008; Gilligan et al. 2015), the notion that ambivalence has consequences is plausible and important. This paper has broadened the literature by looking at another potential outcome of ambivalence, namely guilt. Feelings of guilt

play an important if somewhat implicit role in social science theories, for instance, in theories about social norms, theories about justice and equity, and theories about intimate relationships. Empirically, feelings of guilt have not often been measured in studies on personal relationships even though they are presumed to be common in such relationships (Baumeister et al., 1994).

According to nationally representative data from the Netherlands, about a fifth of adult children experience feelings of guilt toward their (ageing) mothers. This is not very common but also not rare. Using a principal component analysis for a large set of emotions about the mother-child relationship, it was found that the concept of guilt stands out. There are partly independent positive and negative dimensions in the emotions that children have about the mother-child relationship, but guilt does not belong to either of these dimensions.

In examining which characteristics of the mother-child relationship affect guilt, I first addressed the link between ambivalence and guilt. It was found that ambivalence – the co-occurrence of positive and negative emotions – tends to increase feelings of guilt. There are also effects of the underlying positive and negative dimensions, but on top of these main effects, there is a significant and positive interaction effect on guilt. This effect is consistent with theoretical notions of guilt. People feel guilty toward another person if they fear that they (may) harm this person and this feeling is more problematic when ties are closer and more intimate (Baumeister et al., 1994, p. 245). The harm that is done is primarily indirect since it refers to the way parents would respond in case they become aware of the negative feelings a child has about the relationship. A related mechanism lies in the social norm that the parent-child relationship should be good and supportive and that negative feelings threaten that relationship. Important to emphasize is that one of the strongest effects in the model is the main effect of negative feelings. More negative feelings are associated with more feelings of guilt. What the ambivalence effect

shows is that such feelings are more strongly associated with guilt when children also have more positive feelings about their mother. This is a new finding in the existing literature on intergenerational ambivalence. One earlier small-scale study found an effect of ambivalence on guilt as well but without controlling for the main effects of negative and positive feelings (Losada et al., 2018).

Another important finding of this study is that feelings of guilt are linked to intergenerational exchange and to the norms children have about this exchange. The findings show that children who receive more support from their mother and who receive more money from their parents feel more guilty than children who receive less. This effect is adjusted for the amount of support that children give and therefore indirectly measures differences in the degree of balance or reciprocity in the relationship (direct measures of imbalance based on behavioral scales are difficult to construct). This finding is in line with other research showing that a lack of reciprocity in personal relationships can lower well-being (Liang et al., 2001). In a similar way, it is found that children who visit their mother monthly feel more guilty than children who visit weekly. Unlike support exchange, contact does not have an ‘upward’ or ‘downward’ direction but there is evidence that mothers perceive the relationship as more imbalanced when the child visits less often (Kalmijn, 2013). In this sense, the effect of contact is also consistent with the hypothesis about balance and reciprocity. Finally, the norms that children have about support exchange are associated with guilt. Children who have stronger norms – as measured by filial obligations – tend to feel guilty more often and the effect of receiving support on guilt is stronger when children have stronger norms. These findings are in line with the notion that guilt has an important moral dimension (Tangney et al., 2007).

The guilt that arises from intergenerational ambivalence may be problematic for the parent-child relationship. In theories about guilt in interpersonal relationships, guilt is often seen as a factor that motivates positive behavioral change. For example, guilt that arises from not doing one's fair share in household tasks may motivate spouses to contribute more (Baumeister et al., 1994; Felmlee & Sprecher, 2000). When guilt arises from negative emotions such as anger and irritation, both of which are measured in this study, it is less clear which behavioral changes a person could make. Guilt that stems from ambivalence may therefore be perceived as more awkward. For example, adult children may visit their parents more often or offer more support when they feel guilty, but changing the way they feel about their parents is a different matter. Children may begin to feel more positive or less ambivalent if they do change their behavior – for example by visiting their parents more or helping more – but to the extent that these feelings do not result from the amount and type of support that is given to the parents, it will be a more difficult problem to solve.

Feelings of guilt are clearly unpleasant and several studies found that guilt is positively related to depressive feelings and other measures of emotional well-being (O'Connor et al., 1999; Webb et al., 2007). Later studies argued that not guilt but only shame predicts depression (Orth, Berking, & Burkhardt, 2009), but this does not rule out that guilt has indirect negative consequences on well-being via its effect on shame (Tangney, Stuewig, & Mashek, 2007). In so far as guilt reduces well-being, it may also be relevant in understanding the presumed effect of intergenerational ambivalence on well-being. People who have conflicting emotions about their parents or children may have lower emotional well-being in part because they feel guilty about having these feelings (Losada et al. 2018).

There are some limitations of the present study. First, a single-item measure of guilt was used, whereas psychological (often clinical) studies use more items, sometimes 50 or more (Tilghman-Osborne et al., 2010). Including such a scale was not possible in the LISS panel. To the defense of the measure, it can be said that it is direct and one-dimensional and does not include constructs that are external to the concept of guilt, a disadvantage that some other scales have (Tilghman-Osborne et al., 2010). Moreover, the measure is correlated in predicted ways with important outcome variables such as depressive symptoms. The limits of a single-item measure are clear, but it is doubtful that the hypotheses would have been refuted had a more extensive scale been used. An additional limitation of the measure is that it only applies to mothers, hence it remains to be seen whether the same patterns apply to fathers. The effect of the child's gender was small, however. Another limitation of the data is the absence of information on mother's health.

A limitation of the design is that causal interpretations are difficult to substantiate with cross-sectional data. Only few studies on ambivalence and wellbeing have been longitudinal (Kiecolt et al., 2011) and as far as I could detect, there are no studies that have analyzed guilt in a longitudinal fashion. Given the state of the art, a cross-sectional approach to the link between ambivalence and guilt in a general population survey is a step forward. There may be common factors that affect both ambivalence and guilt, but adding support variables did not reduce the effect of ambivalence. This suggests that the effect of ambivalence on guilt is not confounded by intergenerational support. It is still possible that the causality flows in the other direction, from guilt to ambivalence. Future longitudinal studies can assess this scenario.

More elaborate studies of guilt in intergenerational relations may be fruitful. I have demonstrated a link with ambivalence and aspects of support exchange, but it is important to

look for a broader set of determinants that also includes more psychological variables (Abe, 2004; Fayard, Roberts, Robins, & Watson, 2012). The topic of guilt is also important in more specific settings. One context lies in intensive caregiving situations where parents are severely ill and where children do not provide the care that they themselves or others expect from them (Losada, Pillemer, Marquez-Gonzalez, Romero-Moreno, & Gallego-Alberto, 2017). Another context lies in parent-child relationships in immigrant families. In these families, parents may have strong norms about support exchange but children may not always be able or willing to provide support to their ageing parents (Treas & Mazumdar, 2002). Finally, the explicit measurement of guilt could help us in testing existing theories more directly. Many theories about intergenerational relationships and ageing assume the existence of norms (e.g., the norm of reciprocity, filial obligations) and the violation of such norms is assumed to lead to feelings of guilt. Authors have studied many consequences of deviations of reciprocity such as depression and life satisfaction (Dwyer, Lee, & Jankowski, 1994; Liang et al., 2001; Lowenstein, Katz, & Gur-Yaish, 2007; Silverstein, Chen, & Heller, 1996), but guilt seems a more obvious outcome to study.

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**Table 1.** Descriptive Statistics of Independent Variables

	mean	sd	min	max	count
Positive feelings	4.290	1.596	0	6	2,450
Negative feelings	1.516	1.414	0	6	2,450
Feelings of guilt	1.792	1.775	0	6	2,450
Mother 55-64	0.301		0	1	2,381
Mother 65-74	0.321		0	1	2,381
Mother 75+	0.378		0	1	2,381
Mother alone	0.377		0	1	2,444
Child female	0.565		0	1	2,450
Age	43.262	10.682	18	74	2,450
Child lives with partner	0.754		0	1	2,450
Child divorced and single	0.091		0	1	2,450
Child has children	0.505		0	1	2,450
Child unemployed or disabled	0.123		0	1	2,450
Child's years of schooling	12.588	3.007	6	18	2,445
Weekly contact mother	0.485		0	1	2,450
Monthly contact mother	0.307		0	1	2,450
Rarely contact mother	0.208		0	1	2,450
Support received from mother	0.000	0.782	-0.786	2.164	2,450
Support given to mother	0.000	0.823	-1.102	1.571	2,450
Received money from mother	0.306		0	1	2,450
Child's filial obligations	0.021	0.706	-1.860	2.340	2,369

Source: LISS Panel Family Module 2015.

**Table 2.** Percentage Distributions of Adult Children’s Feelings About the Mother-child Relationship (N = 2,450)

	1 Does not apply at all <sup>a</sup>	2	3	4 (neutral)	5	6	7 Applies completely <sup>a</sup>	total
I am very fond of my mother (P)	4.3	2.8	3.9	8.7	15.5	24.2	40.7	100.0
My mother and I have a close relationship (P)	5.4	4.2	6.3	11.9	19.7	23.9	28.7	100.0
I feel closely connected to my mother (P)	7.2	5.9	7.1	13.5	16.4	24.6	25.3	100.0
I am irritated by mother’s behavior (N)	30.3	20.8	11.3	14.5	12.9	6.8	3.6	100.0
I am often angry at my mother (N)	41.8	24.0	9.8	10.6	7.7	3.5	2.6	100.0
I am ashamed of what my mother says/does (N)	44.5	19.7	9.0	10.0	9.3	4.7	2.8	100.0
The relationship with my mother is rocky (N)	50.0	18.5	5.9	13.5	5.6	3.9	2.6	100.0
I sometimes feel guilty toward my mother (G)	33.9	21.1	9.8	14.2	11.8	6.6	2.6	100.0

P is positive, N is negative, G is guilt.

<sup>a</sup> The question was: “The next statements are about how you feel about your mother. Please indicate for each statement to what extent it applies to you.” The endpoints 1 and 7 were labeled, the other scores were not labeled. In the analysis, the scale is recoded to a 0-6 metric to improve the interpretation of the main effects in the interaction model.

Source: LISS Panel Family Module 2015.

**Table 3.** Principal Component Analysis of Children’s Feelings About the Mother-child Relationship (N = 2,450)

	Model 1			Model 2		Rotated solution of Model 2 <sup>a</sup>	
	Factor 1	Factor 2	Uniqueness	Factor 1	Factor 2	Factor 1	Factor 2
I am very fond of my mother (P)	-0.756	0.533	0.146	-0.778	0.512	-0.022	0.922
My mother and I have a close relationship (P)	-0.781	0.509	0.131	-0.801	0.498	-0.048	0.922
I feel closely connected to my mother (P)	-0.699	0.560	0.199	-0.723	0.543	0.040	0.920
I am irritated by mother’s behavior (N)	0.742	0.317	0.349	0.729	0.381	0.797	-0.059
I am often angry at my mother (N)	0.736	0.370	0.321	0.721	0.432	0.838	-0.007
I am ashamed of what my mother says/does (N)	0.723	0.359	0.348	0.710	0.431	0.830	-0.001
My relationship with my mother is rocky (N)	0.695	0.375	0.377	0.679	0.433	0.812	0.018
I sometimes feel guilty toward my mother (G)	0.272	0.598	0.569				
Proportion explained	0.480	0.215		0.541	0.216		
Correlation between factors	0			0		-0.408	

<sup>a</sup> Without the guilt item.

P is positive, N is negative, G is guilt.

Source: LISS Panel Family Module 2015.

**Table 4.** Crosstabulation of Positive and Negative Feelings of Children Toward Their Mothers: Row and Column Percentages (in italics)

	Almost no negative feelings	Moderate negative feelings	Strong negative feelings	Total	N
Almost no positive feelings	35.7 <i>5.1</i>	41.0 <i>13.7</i>	23.4 <i>29.8</i>	100.0 <i>9.3</i>	227
Moderate positive feelings	36.9 <i>12.9</i>	51.1 <i>41.9</i>	12.1 <i>37.6</i>	100.0 <i>22.7</i>	556
Strong positive feelings	78.5 <i>82.1</i>	18.1 <i>44.4</i>	3.5 <i>32.6</i>	100.0 <i>68.0</i>	1,667
Total	65.1 <i>100.0</i>	27.7 <i>100.0</i>	7.3 <i>100.0</i>	100.0 <i>100.0</i>	
N	1,594	678	178		2,450

Source: LISS Panel Family Module 2015.

Note: Scales recoded in three intervals: 0-1.9, 2-3.9, and 4-6.

**Table 5. OLS Regression Models for Feelings of Guilt of Adult Children Toward Their Mothers**

	(1) Model 1	(2) Model 2	(3) Model 3
Positive feelings (0-6)	.207* (.023)	.106* (.032)	.091* (.035)
Negative feelings (0-6)	.521* (.026)	.282* (.059)	.299* (.059)
Ambivalence (positive x negative)		.062* (.014)	.057* (.014)
Mother 65-74 vs. 55-64	.373* (.104)	.363* (.104)	.330* (.104)
Mother 75+ vs. 55-64	.589* (.151)	.574* (.150)	.513* (.151)
Mother alone	.088 (.078)	.080 (.077)	.075 (.078)
Child female	.117 (.067)	.125 (.067)	.154* (.067)
Age	-.023* (.006)	-.023* (.006)	-.016* (.006)
Child lives with partner	-.172 (.088)	-.160 (.088)	-.128 (.088)
Child divorced and single	.012 (.126)	.003 (.125)	.015 (.125)
Child has children	-.063 (.072)	-.063 (.072)	-.040 (.072)
Child unemployed or disabled	-.059 (.102)	-.071 (.102)	-.096 (.102)
Child's years of schooling	.044* (.011)	.044* (.011)	.033* (.012)
Rarely vs weekly contact mother			.164 (.104)
Monthly vs weekly contact mother			.209* (.081)
Support received from mother			.111* (.055)
Support given to mother			-.005 (.051)
Child's filial obligations			.119* (.049)
Received money from mother			.254* (.075)
Constant	.286 (.296)	.735* (.311)	.428 (.322)
Observations after imputation	2,450	2,450	2,450
Observations before imputation	2,371	2,371	2,296
Adjusted R <sup>2</sup>	.164	.169	.179
<i>BIC</i>	9108.0	9100.0	8834.9

Standard errors in parentheses

\*  $p < 0.05$ 

Source: LISS Panel Family Module 2015.

**Figure 1.** Predicted Guilt As a Function of Negative Emotions Toward the Mother-child Relationship

[see separate file]