

# **Intergenerational Exchange of Time and Money: Short-term Reciprocity in Parent-Child Relationships**

Thomas Leopold\* & Marcel Raab\*\*

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\*Chair of Population Studies  
University of Bamberg  
[thomas.leopold@uni-bamberg.de](mailto:thomas.leopold@uni-bamberg.de)  
Phone.: +49-951-863-3440  
Fax: +49-951-863-3405

\*\* Chair of Population Studies  
University of Bamberg  
[marcel.raab@uni-bamberg.de](mailto:marcel.raab@uni-bamberg.de)  
Phone.: +49-951-863-3442  
Fax: +49-951-863-3405

## ABSTRACT

*Long-term concepts of parent-child reciprocity assume that the amount of support given and received is only balanced in a generalized fashion over the life course. We argue that reciprocity in parent-child relationships also operates in the short term. Our analysis of short-term reciprocity focuses on concurrent exchange in its main upward and downward currencies, time and money. Fixed-effects models with data from SHARE (N= 8,816 dyads) revealed that within a family, parents gave financial transfers to those children who supported them with time transfers of help and care. Reciprocal patterns emerged most clearly if parents were highly dependent, received intense support, and had sufficient financial opportunities to reciprocate. We conclude that short-term reciprocity eases the burden of late parent-child relationships.*

## Keywords:

ambivalence, cross-national research, families in middle and later life, intergenerational transfers, parent-child relations, reciprocity

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## INTRODUCTION

In Western economies, children can expect continuous financial support from their parents, who remain net givers after retirement and even at very old ages. Conversely, children provide several types of time transfers to their parents ranging from occasional help with daily activities to hands-on care (Rossi & Rossi, 1990). As a result, we observe a variety of transfers in both directions that constitute an overall pattern of support exchange in two main currencies: time and money (Soldo & Hill, 1993).

Accounting for the observed patterns of intergenerational support exchange becomes increasingly important as demographic aging raises the prevalence of parents' old-age dependency (e.g., Harper, 2006). This increases the pressure on adult children, who are, next to spouses, the most reliable source of support for old and frail parents. How will intergenerational relationships develop under conditions of higher need, dependency, and burden?

Recent empirical studies have drawn on the concept of reciprocity to account for exchange patterns of intergenerational support (e.g., Grundy, 2005; Henretta, Hill, Li, Soldo, & Wolf, 1997; Lennartsson, Silverstein, & Fritzell, 2010; Lowenstein, Katz, & Gur-Yaish, 2007; Silverstein, Conroy, Wang, Giarrusso, & Bengtson, 2002). The main idea of reciprocity in parent-child relationships refers to long-term exchange: Adult children feel indebted to their old and frail parents, who supported them earlier, and use time transfers of help and care as repayments for the earlier parental investments (Hollstein & Bria, 1998). Some analysts, however, focused on short-term patterns of concurrent giving and receiving and labeled these patterns reciprocal, although it remains unclear *why* the observed behavior constitutes a reciprocal exchange and how it differs from long-term reciprocity (e.g., Albertini, Kohli, & Vogel, 2007; Brandt, Deindl, Haberkern, & Szydlik, 2008; Grundy, 2005; Lowenstein et al., 2007). A theoretical concept of short-term reciprocity in parent-child relationships has not been offered to date.

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The present study aims to address this deficit. We outline a concept arguing why reciprocity in parent-child relations operates not only longitudinally, but also contemporaneously. Our analysis concentrates on the short-term dimension of reciprocity and the corresponding pattern of concurrent intergenerational exchange in its main upward and downward currencies, time and money. The key questions are as follows. Why can concurrent transfers be interpreted as reciprocal exchange? How can we identify short-term reciprocity? Which factors determine these exchanges of time and money?

Data come from the first wave (2004) of the *Survey of Health, Ageing and Retirement in Europe (SHARE)*, including respondents from 12 countries. As these countries represent different welfare regimes (Esping-Andersen, 1990; Ferrera, 1996) as contexts for intergenerational support exchange in families, *SHARE* allows for comparative analyses.

In the following section, we discuss theoretical accounts of, and empirical findings on, reciprocity in parent-child relationships. We develop a concept of short-term reciprocity and formulate five hypotheses that guide our subsequent empirical analyses.

## **THEORETICAL BACKGROUND AND PREVIOUS RESEARCH**

Gouldner (1960, p. 170) argued that reciprocity as a universal norm “defines certain actions and obligations as repayments for the benefits received.” If the recipient accepts a gift, he or she remains indebted to the donor until balance is restored by an equivalent return-gift. Equivalence is not confined to return-gifts in the same currency (homomorphic reciprocity), but can also be achieved with other types of transfers (heteromorphic reciprocity). Gouldner further assumed that balance can only be restored in symmetric relationships, where both parties have sufficient opportunities to make equivalent contributions to the reciprocal exchange. He concluded that reciprocity rarely occurs in parent-child relationships, where resources are distributed very unevenly for most of the shared lifetime of both generations. In

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early periods, children and adolescents cannot repay the benefits received; in late periods, old and frail parents are unable to reciprocate.

Despite this asymmetry, the concept of reciprocity has frequently been used for the study of support exchange in parent-child relationships. The main argument refers to the lasting character of parent-child relationships. Although asymmetric, these relationships can be balanced over the very long term (Finch & Mason, 1993; Hollstein & Bria, 1998). Accordingly, parent-child reciprocity has been studied from a longitudinal perspective.

### ***Long-term reciprocity***

The question of whether children repay earlier parental investments is basic to the idea of a *support bank* (Antonucci & Jackson, 1990). Here, parent-to-child transfers are “longer term deposits [that] can be drawn on in future times of need” (Antonucci & Jackson, 1990, p. 179). Parents supporting their children ‘buy in’ to a system of temporally generalized reciprocity without expecting an equivalent compensation. In this account, adult children’s later repayments of help and care are comparable to insurance benefits, being triggered if parental need arises.

Quantitative tests for long-term reciprocity have concentrated on the effects of earlier parental transfers on adult children’s later support. Henretta et al. (1997) analyzed data from the *Asset and Health Dynamics of the Oldest Old Study* and reported a positive effect of past financial transfers from parents on a child’s current helping behavior. Silverstein et al. (2002) reached similar results with panel data from the *Longitudinal Study of Generations*: Receiving financial help in the past increased the rate at which children provided later support.

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***Recent research on concurrent exchange***

Longitudinal concepts of parent-child reciprocity assume that parents and adult children maintain ongoing accounts of the amount of support given and received. Indebtedness is only balanced in the long run, with timescales of repayment being many years. Yet, can parents and children also reciprocate straight away? This would imply an exchange pattern of concurrent, or only slightly deferred, upward and downward intergenerational transfers.

A number of analysts have interpreted findings on concurrent giving and receiving in parent-child relationships as evidence for reciprocity. Grundy (2005, p. 250) reported a “strong reciprocal element” from data of the *British Retirement and Retirement Plans Survey*: Parents who supported at least one child were about twice as likely to receive help from children. In analyses of *SHARE* data, Albertini et al. (2007, p. 329) found “some evidence for reciprocity”: Parents who received at least a small amount of support from their children had higher odds of giving downward financial transfers. Brandt et al. (2008, p. 375) defined simultaneous or slightly deferred giving and receiving in any currencies as “direct reciprocity” and concluded that this exchange pattern is a rarity, as it occurred in only 2% of all parent-child dyads.

In all these analyses, it remained largely unclear why, and under which conditions, concurrent giving and receiving constitutes reciprocity. This transfer pattern, for example, could also indicate an exchange governed by family norms of unconditional giving, rather than reciprocity. Or else, in Blau’s (1964) terminology, immediate repayments characterize an economic exchange where reciprocity is clearly defined by a contract. Accordingly, concurrent giving and receiving could indicate distanced relationships: Recipients avoid any further obligations to the donor by repaying immediately (Wentowski, 1981).

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*A concept of short-term reciprocity*

We argue, however, that reciprocal support exchange does include an important short-term dimension even in close and intimate parent-child relationships. In the following, we will call this dimension *short-term reciprocity* and argue why this intergenerational arrangement (a) eases the burden of aging and dependency in late parent-child relationships; (b) operates primarily as heteromorphic exchange of instrumental time transfers versus financial transfers; (c) occurs mostly if parents are highly dependent, receive intense time transfers and have sufficient financial opportunities to reciprocate.

Long-term reciprocity suggests that overbenefitted children repay debts from earlier decades at the end of their parents' lives. Why should short-term balancing complement this generalized long-term exchange? Lee (1985) argued that it is psychologically straining for the dependent party to receive permanently without giving back. Even if parents enjoy a large surplus of benefits given to children earlier, continuous receiving at later times of frailty may still evoke uncomfortable feelings of dependency. Finch and Mason (1993, p. 37) emphasized that, "individuals try to achieve 'the proper balance' (. . .) ensuring that no one becomes too frequently on the receiving end of assistance without also being in the position of a donor, and vice versa."

The pressure on adult children increases as parents gradually become dependent and in need of instrumental support. Time-consuming transfers of help and care might lead to the disruption of their previous daily routines and increase psychological distress (Savla, Almeida, Davey, & Zarit, 2008). Adult children who care for their parents experience simultaneous feelings of solidarity and distress. Conversely, elderly parents enjoy support from their adult children, but fear to burden them. Luescher and Pillemer (1998) introduced the concept of *intergenerational ambivalence* to characterize such situations, suggesting that contradictory feelings structurally coexist in late parent-child relationships. They argued that "feelings of ambivalence (. . .) have an impact on psychological well-being as well as on

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decisions made to relieve the ambivalence” (Luescher & Pillemer, 1998, p. 422). We view short-term reciprocity as a means to relieve the ambivalence of late parent-child relationships as it eases the burdens for both parties: Parents who participate actively in the intergenerational support exchange alleviate feelings of dependency and preserve their self-esteem (Wentowski, 1981). They display autonomy by supporting their helping children themselves and thus either repay benefits received or initiate reciprocal support in the short term. Recent findings from Thomas (2010) confirmed that older parents, who supported adult children, reported higher levels of well-being. From the children’s perspective, negative outcomes are attenuated if they receive concurrent reciprocation. Dwyer and Miller (1990, p. 180) reported that elders’ opportunity to give back eases the stress and burden of adult children “by reducing the primary caregiver’s total obligations, freeing that caregiver to perform other tasks, or by providing them with respite.”

Research on intergenerational support exchange has pointed to the complexity of transfer arrangements and the variety of corresponding transfer currencies (Swartz, 2009). Beyond the realm of functional solidarity, comprising monetary transfers and instrumental time transfers such as help and care, the importance of emotional support has frequently been emphasized (e.g., Merz, Schuengel, & Schulze, 2009). Which types of transfers constitute intergenerational arrangements of short-term reciprocity? Considering upward (i.e., child-to-parent) transfers, impaired parents clearly require instrumental help ranging from assistance with daily activities to hands-on care. But emotional support from adult children might be no less important when parents experience physical decline and increasing dependency. It has been shown, however, that receiving emotional support from adult children is less burdening for elderly parents than receiving instrumental support (Reinhardt, Boerner, & Horowitz, 2006). Presumably, parents do not feel that receiving emotional support reflects their dependency but rather empathy and affection within the parent-child relationship (Merz et al., 2009). Considering upward transfer currencies of short-term reciprocity, emotional support

from children does apparently not evoke parents' feelings of dependency. It is therefore unlikely that parents initiate or repay emotional transfers from children. Looking at the downward direction, however, receiving emotional transfers might be an important currency of short-term reciprocity. Emotional support from elderly parents, for example, could ease the psychological distress of caregiving children. A longitudinal study on patterns of support provision by Boerner and Reinhardt (2003), however, did not support this reasoning. Empirical evidence indicated that individuals did not compensate for greater instrumental need by providing more emotional support. Frail parents' opportunities to participate in the reciprocal support exchange thus appear to be confined to other transfer currencies requiring little physical involvement. As they can hardly provide instrumental time transfers, they rely primarily on financial transfers as their own contributions.

Based on these considerations, we assume that short-term reciprocity most likely operates as heteromorphic exchange in two currencies: Instrumental time transfers are directed upward from adult children to parents, whereas financial transfers flow downward from parents to children. Our first hypothesis is a general test for this type of short-term reciprocity: *Children who support a parent with instrumental time transfers are more likely to receive financial repayments from that parent; conversely, a parent who supports a child financially is more likely to receive instrumental time transfers from that child (Hypothesis 1).*

### ***Determinants of short-term reciprocity***

The previous section was aimed at introducing a concept of short-term reciprocity. A systematic analysis further requires specification of the key determinants for this dimension of intergenerational exchange. From the parents' perspective, we expect short-term reciprocity under three conditions. First, they must be in need: Frail parents who need assistance with activities of daily living are particularly inclined to unpleasant feelings of dependency. Remaining active in the intergenerational support exchange by giving concurrent

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reciprocation may alleviate these feelings. We therefore expect that *the greater a parent's need, the higher his or her propensity to reciprocate (Hypothesis 2)*. Second, elderly parents must depend on adult children as providers of instrumental time transfers. Such dependency occurs if they cannot rely on a spouse or partner living in the same household (see sample selection below). Third, parents must be able to reciprocate. We have argued that support from adult children can only be initiated or repaid if the parent can offer financial transfers. Short-term reciprocity therefore *requires sufficient cash holdings of elderly parents (Hypothesis 3)*.

From the children's perspective, the provision of help and care to elderly parents may interfere with competing demands of their own family- and working lives. Especially if instrumental transfers to elderly parents are very time-consuming, the wish to receive compensation might arise. A study by Walker, Acock, Bowman, & Li (1996) has shown that negative outcomes of helping and caring are associated with the intensity of such time transfers, rather than the elapsed time since the beginning of caregiving. Parents' concurrent reciprocation is a means to ease the burden of time-consuming transfers. We therefore expect that *the more time a child invests in parental support, the higher a parent's propensity to repay (Hypothesis 4)*.

Different levels of time transfer intensity correspond to a well-known European North-South divide across welfare regimes (Albertini et al., 2007). European countries differ substantially with respect to legal care obligations and the level of professional care services (Millar & Warman, 1996). In the Southern familialistic regime characterized by the principle of subsidiarity, elderly parents in need strongly depend on families as private providers of support. As a result, children's time transfers observed in these countries are often intense. In Nordic countries, family and state share a 'mixed responsibility' where public providers take over professional care services (Daatland & Lowenstein, 2005). Children's instrumental time transfers in these countries are less intense. Countries of the Continental regime range in

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between these two groups with medium intensity of children's time transfers. Accordingly, we expect the highest prevalence of short-term reciprocity in Southern countries where elderly parents depend most strongly on their children's instrumental time transfers and the lowest prevalence in Nordic countries where family support is complemented by professional care services. *The prevalence of short-term reciprocity corresponds to the North-South divide of children's support intensity across welfare regimes (Hypothesis 5).*

Apart from these factors, which related directly to the pattern of short-term reciprocity, other determinants have been found to influence intergenerational transfer exchange. Children in economic need, for example, have higher chances to receive financial transfers from their parents. This has been shown for different indicators of need, like income, marital status, employment status, raising own children, and age (McGarry & Schoeni, 1995). Considering the upward direction, the gender of the child is an important predictor for providing transfers of help and care to elderly parents (e.g., Bracke, Christiaens, & Wauterickx, 2008). In addition, a number of relationship characteristics are associated with supportive exchanges. Contact frequency between parents and children facilitates intergenerational exchange of time and money, being positively correlated with both downward financial and upward time transfers (Lawton, Silverstein, & Bengtson, 1994). Geographical closeness is a necessary precondition for receiving instrumental time transfers from children: Transfers of help and care require residential proximity (Mulder & van der Meer, 2009).

## **METHOD**

### ***Data and sample***

To test our hypotheses we used data from the first wave (2004) of the *Survey of Health, Ageing and Retirement in Europe (SHARE)*. This study was conducted in 12 countries (Austria, Belgium, Denmark, France, Germany, Greece, Israel, Italy, the Netherlands, Spain,

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Sweden, and Switzerland) and is representative for individuals aged 50 and above. In the first wave (release 2.0.1), information from 33,023 respondents was collected on a variety of topics, such as socioeconomic status, health, and social and family networks.

As previously noted, we expect short-term reciprocity if instrumental support cannot be provided by a partner. That is, if a partner is either not present or unable to provide time transfers of help and care. Although the *SHARE* data include information on the partner's health status, some questions on support given and received referred only to the household level. As a result, we cannot determine clearly which individual is giving or receiving transfers if a partner is living in the same household. For that reason, we restricted our sample population to respondents who were unmarried or living without a partner and provided information on living children. This restriction removed 77% of the respondents and reduced the sample size to 7,745 observations.

We adopted a within-family approach to test for short-term reciprocity that required at least two children per respondent to identify differences between parent-child dyads (see below). Because detailed information on the respondent's children was only collected for up to four children, we further excluded respondents with five or more children. After these restrictions, we arrived at a sample size of 3,466 families (= respondents; 10% of the original sample size) comprising 8,816 parent-child dyads. Based on this sample, our results can only be generalized to the population of single-living parents aged 50 and over with between two and four living children.

### ***Measures***

*Transfer measures.* The key variables for our multivariate analyses of short-term reciprocity are two dichotomous measures of intergenerational transfers covering a period of the last 12 months before data collection. The first measure indicates if parents have given a financial or

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material transfer of 250 Euros or more to a child inside or outside the household, not counting any shared housing or shared food. The second measure indicates if parents have received help with personal care from a child living in the same household or any type of time transfer from a child living outside the household within the same period. *SHARE* differentiates between three types of instrumental time transfers: (a) personal care, like help with dressing, bathing or showering, eating, getting in or out of bed, or using the toilet; (b) practical household help, like home repairs, gardening, transportation, shopping, or household chores; (c) help with paperwork, such as filling out forms or settling financial or legal matters (Buber, Engelhardt, & Prskawetz, 2009, pp. 203 – 204). These three types cover a wide array of instrumental support, leading to substantial heterogeneity within the dichotomous measure of time transfers. Our theoretical considerations focused on ‘burdening’ time transfers, which we argued evoke the beneficiary’s feeling of indebtedness to the donor. As opposed to time transfers of personal care or practical household assistance, help with paperwork does not necessarily require a child’s attendance and can thus be reconciled more easily with competing demands. For that reason, we counted only the first two types of help as significant time transfers, and did not consider time transfers of paperwork assistance.

With data covering a 12-month period, we could not reconstruct the temporal sequence of giving and receiving. The empirical test of our account of short-term reciprocity, however, is only aimed at identifying heteromorphic patterns of mutual exchange between parents and adult children (Hypothesis 1). To this end, we introduced each of the variables, parents’ financial transfers and children’s time transfers, once as an independent predictor of short-term reciprocity, and once as a dependent outcome of short-term reciprocity. An empirical test of the heteromorphic pattern we suggested additionally required inclusion of downward instrumental transfers to allow for the possibility of homomorphic reciprocity (i.e., time versus time).

Although the existing empirical evidence suggested that emotional transfers do not play a major role in arrangements of short-term reciprocity, it would still be conceptually desirable to test this proposition empirically. Unfortunately, the *SHARE* data do not contain adequate measures of emotional support in parent-child relationships.

*Measures of need, opportunity, and intensity.* We used a dichotomous measure of parental need (Hypothesis 2) indicating whether a respondent has “been limited because of health problems in activities people usually do” (Buber et al., 2009, p. 22). The parent’s ability to reciprocate financially (Hypothesis 3) was measured by his or her cash holdings that were calculated by adding up the amount of money in the respondents’ bank, transaction and saving accounts (*Median* = 3096 Euros). For our multivariate analyses, we dichotomized this continuous variable into a dummy variable indicating cash holdings above the country-specific median value. To test Hypothesis 4 on support intensity, we used a measure of the volume of time transfers received during the past 12 months. This variable was again transformed into a dummy that indicated time transfer intensity above the median value of 150 hours. Information on the volume of time transfers, however, was only collected for dyads that did not live in a common household. This shortcoming particularly affected respondents from Southern Europe, where coresidence of parents and adult children is a ubiquitous phenomenon (Hank, 2007). As a result, data on intensity were missing for 27.1% of all instrumental time transfers observed in our sample. To impute these missing data, we used information on time transfer intensity of parent-child dyads that did not share a household but lived in the same house. All missing data were imputed by chained equations producing ten stacked sets of imputed data on which we ran our multivariate analyses. Our background model for the imputation included the respondent’s education, country of residence, number of grandchildren and all variables from our multivariate models. The imputation procedure not only imputed missing values of the transfer intensity measure, but all other missing data from the variables in our background model. A sequence of equations

imputed missing data for all variables in ascending order. That is, the variable with the greatest share of missings was imputed last. Apart from our measure of time transfer intensity, the only variable with a non-response rate above 10% was the indicator for a respondent's cash holdings (26.9%).

The parameter estimates and standard errors that are reported in our multivariate models were obtained by applying Rubin's rules (Rubin, 1987). Taking into account between- and within-imputation variation, this procedure avoids underestimating the magnitude of standard errors. For the imputation and the estimation of our models we used the Stata commands *ice* and *mim* (e.g., Royston, 2009).

### ***Analytical strategy***

A large body of empirical evidence suggested that exchange behavior in intergenerational relationships is influenced by family norms other than reciprocity (e.g., Ikkink, van Tilburg, & Knipscheer, 1999; Stein et al., 1998). These norms may interfere with the norm of reciprocity thus complicating any estimation of the 'net effect' of reciprocity. For example, concurrent giving and receiving of transfers could indicate reciprocity but also a shared family culture characterized by norms to unconditionally support each other. An appropriate strategy to identify reciprocal transfer patterns should control for such family characteristics that are, however, often unmeasured. If omitted variables are correlated with the predictors and the outcome variable, standard logistic regressions would lead to biased estimators. Using fixed-effects conditional logit models, we employ an idea by Henretta et al. (1997) to eliminate the effects of measured and unmeasured family characteristics. In fixed-effects models, characteristics shared by siblings within a family drop out of the estimation equation and only families with variation in the outcome variable are included. This strategy focuses on differences between siblings and thus requires at least two children per respondent to explain

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variation within families. Parental characteristics, however, are identical (= fixed) for all children within a family and therefore cannot be included as covariates (for a detailed account, see Henretta et al., 1997, pp. 116 – 117; for a recent application in this journal, see: Pudrovska, 2008, p. 173). We controlled for parental characteristics by estimating separate models for the following subgroups of respondents: limitations in activities of daily life (yes or no); cash holdings (below or above the country-specific median value); welfare regime (Nordic, Continental, or Southern).

## RESULTS

### *Descriptive findings*

All descriptive tables are grouped by welfare regimes representing Nordic (Denmark, Sweden), Continental (Austria, Belgium, France, Germany, the Netherlands, Switzerland), and Southern European (Greece, Italy, Spain) countries. This provides a useful classification as there are notable differences between these country groups on measures like contact frequency, geographical proximity, and transfer intensities. Table 1 describes selected characteristics of the sample population.

### *-Table 1-*

Our sample restriction to older, single-living individuals led to an uneven gender distribution of almost 80% female respondents. About half of the sample reported limitations in usual activities because of health problems. At the dyad level, Table 1 shows considerable cross-country differences in the characteristics of parent-child relationships. We observe a clear North-South divide in geographical proximity and contact frequency between parents and the adult children, which is consistent with empirical findings from numerous other

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studies (e.g., Hank, 2007). Our data thus indicated that parent-child relations are closer in Southern European countries, at least in a literal sense.

**-Table 2-**

Table 2 presents descriptive findings on intergenerational transfer exchange. We distinguished here between the dyad level and the family level. The dyad level indicators counted upward, downward, and concurrent transfers in all dyads divided by the total number of dyads. The family level indicators counted these types of transfers in *any dyad within a family*, divided by the total number of families. In cross-country comparison, high contact frequency and geographical proximity were not accompanied by higher propensities to exchange transfers. At the dyad level, the proportion of parents who either received time or gave money was highest in Nordic countries. The family level measures showed that almost every fourth parent in our sample population from Denmark and in Sweden received help from, or gave financial support to, at least one adult child. The third column illustrates the incidence of any concurrent giving and receiving of downward and upward transfers. We observed a total of only 3.8% of all families in which the respondent gave and received at least one transfer within a 12-month period. At the dyad level, an even lower share of 1.6% of all parent-child dyads were characterized by concurrent giving and receiving. Both of these measures have been interpreted as evidence for short-term reciprocity (for the family level, Albertini et al., 2007; for the dyad level, Brandt et al., 2008), which thus appears to be a rare phenomenon in parent-child relationships.

**-Table 3-**

Table 3 presents a more fine-grained picture of concurrent giving and receiving, considering only dyads in which the parents received time transfers. In a total of 13.4% of

these dyads, we observed a concurrent parental transfer. Whilst still a crude approximation for the phenomenon, this result points to the relevance of short-term reciprocity in intergenerational transfer behavior. Both family and dyad level measures indicated higher levels of concurrent exchange in Nordic countries. Our multivariate analyses will demonstrate that a premature interpretation of this result as showing a higher prevalence of reciprocity in Nordic countries is misleading. Considering short-term reciprocity, the crucial drawback of Tables 2 and 3 is that they provide no information about whether a parent gave financial transfers to all children, or only to those children who supported him or her. The former would indicate adherence to transfer norms of unconditional giving, the latter short-term reciprocity.

### *Multivariate analyses*

Our multivariate models are organized as follows. The first two models, presented in Table 4, provide a general test for short-term reciprocity, as outlined in Hypothesis 1. In Model 1, receiving a time transfer from a child is predicted by giving a financial transfer. In Model 2, these variables are exchanged: Giving a financial transfer to a child is predicted by receiving a time transfer. The following models, presented in Table 5, address hypotheses 2, 3, and 4 on the determinants of short-term reciprocity. All these models predict financial transfers given to children as the outcome variable. We first calculate separate models for respondents with cash holdings above (Model 3a) and below (Model 3b) the country-specific median value. In the subsequent Models 4 and 5, we separate our sample by the level of parental need: Models 4a and 4b include only respondents without limitations, Models 5a and 5b only respondents who reported limitations. In the submodels 4b and 5b, we further control for the intensity of children's time transfers. Finally, each of the Models 6 and 7, presented in Table 6, comprises three sub-models representing respondents from the three groups of countries (Hypothesis 5). Models 6a-c predict financial transfers given to children as an outcome, Models 7a-c time

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transfers received from children. All models control for a common set of covariates that are classified into two categories, characteristics of children and of parent-child relationships (Ikkink et al., 1999).

*-Table 4-*

Hypothesis 1 is clearly confirmed. Models 1 and 2, shown in Table 4, provide strong and robust evidence for short-term reciprocity in parent-child relationships. Compared to non-helping siblings, a child who supported a parent with a time transfer doubled his or her odds to receive a financial transfer. Conversely, a parent who gave a financial transfer to a child had twice the odds of receiving a time transfer from that child, compared to transfers from those children who did not receive financial support.

We argued that short-term reciprocity in late parent-child relationships operates primarily as heteromorphic exchange with parents giving financial transfers and receiving instrumental time transfers, as opposed to homomorphic patterns. As expected, Model 1 shows no effect of parent-to-child instrumental time transfers as an indicator for homomorphic reciprocity.

Models 3a and 3b, shown in Table 5, point to the importance of parental cash holdings. Hypothesis 3 is confirmed as financial repayments of instrumental time transfers from children occurred more frequently when a parent had above-average cash holdings.

*-Table 5-*

We have further argued that parents in need are more likely to reciprocate (Hypothesis 2). The estimates for the corresponding indicators in Models 4 and 5 support this reasoning. The group of parents without limitations showed no evidence for reciprocal support exchange, whereas parents who reported limitations exhibited higher odds of reciprocating financially. A

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similar picture appeared with regard to the intensity of children's time transfers. Supporting Hypothesis 4, Model 5b illustrates that it was not only the parent's need, but also the intensity of the child's support that promoted the reciprocal exchange of time and money.

*-Table 6-*

The results from the remaining models, Table 6, point in the same direction. Given that different welfare regimes reflect different levels of need and support intensity, we expected the highest prevalence of short-term reciprocity in Southern European countries characterized by strong family ties and lower levels of welfare benefits. Consistent with Hypothesis 5, our estimates for Southern countries indicated the strongest effects of short-term reciprocity. Some evidence for reciprocal exchange in the short term also appeared in Continental countries. To complete this picture, Nordic welfare states did not show any short-term reciprocity in parent-child dyads. In sum, these results clearly contradict the initial descriptive findings from Table 3, which showed only the prevalence of concurrent giving and receiving, but did not provide the critical information of how the odds of giving or receiving transfers vary within families. By contrast, our multivariate findings suggest that in cross-country comparison, the prevalence of short-term reciprocity is inversely related to the prevalence of concurrent transfer exchange.

Although our analyses are based on a restricted sample of single-living elderly parents, all estimates for relationship characteristics and children's characteristics were consistent with previous findings from the literature on intergenerational transfers (Models 1 and 2). Contact frequency facilitated intergenerational exchange of time and money, whereas geographical distance was only important for receiving time transfers. Within families, adult children who had to care for their own young children (< 7 years old) were less likely to help their parents than children without such competing demands. Unemployed children as well as children still in education were more likely to receive financial support from their parents. By contrast,

married or cohabiting children were less likely to receive financial support. As expected, daughters gave more upward time transfers to their parents than sons. We further found that daughters did also have higher odds than sons to receive financial transfers from parents, which is consistent with recent results (e.g., Lennartsson, 2010).

## DISCUSSION

Prior research on reciprocity in parent-child relationships focused on long-term exchange, assuming that the amount of support given and received is only balanced in a generalized fashion over the life course. A number of recent empirical findings on concurrent exchange, however, have also been labeled reciprocity. These studies did not offer a theoretical concept of short-term reciprocity. Thus it remained unclear, why, and under which conditions, concurrent exchange is reciprocal and how it differs from long-term reciprocity. As a result, analytical strategies were not appropriate to identify short-term reciprocity, and the empirical evidence remained inconclusive.

The present study addressed these deficits. We began by proposing a concept of short-term reciprocity and its determinants. Short-term reciprocity, we argued, eases the burden of aging and dependency and provides an example of how parents and adult children deal with intergenerational ambivalence in their late relationships. Our hypotheses posited that short-term reciprocity operates primarily as heteromorphic exchange of time versus money, occurring mostly if parents are highly dependent, receive intense time transfers and have sufficient financial opportunities to reciprocate. Fixed-effects models with data from *SHARE* provided strong evidence that parents and adult children balance their support relations in the short term by giving concurrent or slightly deferred repayments for the benefits received (Hypothesis 1). Controlling for common characteristics within families, we found that parents gave financial transfers to those children who supported them with time transfers of help and care. Conversely, children who received financial transfers were more likely to provide time

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transfers to their parents than their siblings who did not receive financial support. The latter finding resembles results by Henretta et al. (1997) on past financial transfers from parents, suggesting that reciprocity in parent-child relationships operates both long-term and short-term. On the contrary, McGarry and Schoeni (1997) presented empirical evidence that did not support the model of contemporaneous exchange. Their findings, however, were based on simple correlations between transfer measures. Interestingly, although rejecting short-term reciprocity at large, they found a highly significant positive correlation between measures of downward financial transfers and upward time transfers when conditioning on the parents' ability to provide financial support. This result is consistent with our finding that reciprocal patterns emerged most clearly when parents had sufficient cash holdings to reciprocate financially (Hypothesis 2). With regard to further determinants of short-term reciprocity, our results suggested that two additional factors should be considered. First, this transfer pattern occurred only if parents reported limitations with activities of daily life (Hypothesis 3). Second, short-term reciprocity was observed only if adult children invested much time in help and care (Hypothesis 4).

In cross-country comparison, our initial descriptive results indicated the highest prevalence of concurrent exchange in Nordic countries and the lowest in Southern European countries. These findings are consistent with recent results from Brandt et al. (2008) who argued that reciprocity was crowded in by public welfare benefits and therefore occurred most frequently in Nordic countries. Their study, however, was based on a broader definition of reciprocity, analyzing four types of concurrent exchange in different currencies at the dyad level. By contrast, our multivariate strategy to identify short-term reciprocity focused on how the odds of giving and receiving vary within families. This approach allowed to separate short-term reciprocity from motives of unconditional giving and yielded different results: The prevalence of short-term reciprocity corresponded to the North-South divide of children's support intensity across welfare regimes (Hypothesis 5). We found the strongest effects in

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Southern countries, weaker effects in Continental countries, and no effects in Nordic countries. Our analysis therefore demonstrated that although short-term reciprocity implies concurrent exchange, it cannot be identified by simply observing contemporaneous giving and receiving of intergenerational transfers.

Even though all empirical findings were in line with our hypotheses and supported our concept of short-term reciprocity, some limitations of this study should be noted. First, we identified short-term reciprocity from cross-sectional data. This strategy precludes definitive conclusions with regard to causality and is accompanied by some loss of important information. As our analysis includes only transfers from the past 12 months, it is impossible to examine the onset of short-term reciprocity and to reconstruct the temporal sequence of these processes precisely: That is, to know for how long this transfer pattern already persisted, which party initiated the short-term reciprocal exchange, and who feels indebted to whom at which point in time.

Second, although *SHARE* provides rich data on parent-child relationships, some variables could not be included in our models. For example, the analysis was restricted to one specific transfer pattern and did not consider the multiple currencies of transfers, in particular emotional transfers from parents to children. With regard to omitted variables, we further note that controlling for alternative transfer motives and norms was only possible to a limited extent. Our fixed-effects approach controlled for shared norms of filial responsibility and family obligation, based on the assumption that these characteristics do not vary substantially within families. A desirable model would additionally include a measure of filial responsibility (e.g., Silverstein, Gans, & Yang, 2006), as well as important supplementary indicators for altruism, like children's incomes.

Third, our results suggested that short-term reciprocity is not a very common arrangement in parent-child relationships, but rather a rarity. It thus seems obvious to ask

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whether it is still necessary to study this phenomenon. We see two main reasons for exploring short-term reciprocity despite its current rarity.

First, it might shed new light on the link between relationship quality and transfer behavior. Do parents-child dyads that engage in short-term reciprocity differ from others? We argued that short-term reciprocity eases the burdens in late parent-child relationships. Our concept therefore suggested that these parent-child ties might be strained. Relationship quality, however, has been shown to be positively correlated both with downward financial and upward time transfers (Motel & Szydlik, 1999; Silverstein, Parrott, & Bengtson, 1995). A study by Schwarz (2006) further pointed to the strong association of relationship quality and intergenerational reciprocity between mothers and adult daughters. With regard to caregiving burden, Merz et al. (2009) argued that relationship quality is more important for children's well-being than support exchange. Short-term reciprocity, as we assessed it here, might therefore be rare because it reflects the transfer behavior that occurs in ambivalent relationships. An important omission thus concerns the construct of intergenerational ambivalence. Although our theoretical argument linked short-term reciprocity and ambivalence, our data did not include a measure of the latter (e.g., Pillemer & Luescher, 2004). As a result, this part of our reasoning is only theoretical and remains to be tested empirically in future research.

Second, short-term reciprocity might become more prevalent in aging societies. Its rarity in our sample could simply reflect a very restricted set of conditions. We referred to late relationships, parental need for instrumental support, and children providing time-consuming transfers of help and care. However, with respect to our initial question of how intergenerational relationships will develop under conditions of higher need, dependency, and burden, the prevalence of these conditions will most likely increase in aging societies. A growing number of frail and elderly people will be accompanied by a shortage of 'kin supply' available to meet future needs of instrumental help and care (Bengtson, Lowenstein, Putney,

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& Gans, 2003). Understanding the motivation behind intergenerational transfer behavior allows predicting how families will respond to such changes (Kohli & Künemund, 2003). Accordingly, we might expect that an increasing number of parent-child dyads will engage in arrangements of short-term reciprocity under future demographic conditions.

From a policy perspective, our study complements previous findings on long-term exchange indicating that family support is, at least to some extent, promoted by private incentives within intergenerational relationships. If stable and reliable norms to repay influence the intergenerational exchange, private support will probably not erode even in rapidly aging populations that burden families with increasing demands for help and care. It would be premature, however, to conclude from our results that time-consuming instrumental support from children depends on frail parents' capacity to reciprocate financially. We cannot tell from our data if parents with insufficient cash holdings simply resort to different transfer currencies, like emotional transfers. In addition, it is impossible to determine whether a child's time transfer depends on reciprocation in the short term and would not take place if the parent fails to initiate or repay instrumental support. We investigated only one specific aspect of parent-child reciprocity whereas the literature has clearly shown the complexity of transfer norms and motives (e.g., Kohli & Künemund, 2003).

In sum, we hope our study has contributed to understanding transfer patterns of concurrent giving and receiving in late parent-child relationships. Noting that parent-child reciprocity entails two corresponding patterns of exchange, long-term and short-term, we consider it worthwhile to develop a conceptual model that includes both aspects. Analyses of long-term panel data would allow investigation of the onset and progress of short-term reciprocity, how it relates to previous transfers and longitudinal balancing of support accounts, and, eventually, how the division of bequests closes the circle of parent-child reciprocity.

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Table 1: *Characteristics of Respondents<sup>a</sup> and Parent-Child Dyads<sup>b</sup>*

Variables	Welfare Regime <sup>c</sup>							
	Nordic		Continental		Southern		Total	
	M	SD	M	SD	M	SD	M	SD
Characteristics of respondents								
Age	70.16	11.66	69.83	10.88	71.98	11.06	70.47	11.12
Female	.68	.47	.77	.42	.84	.37	.77	.42
Number of children	2.55	.70	2.60	.73	2.49	.68	2.56	.71
Limitations with daily activities <sup>d</sup> : Yes	.52	.50	.51	.50	.51	.50	.51	.50
<i>n</i>		670		1,863		933		
Characteristics of parent-child dyads								
Proximity:								
Child lives within a radius of 5 km (%)	.30	.46	.42	.49	.63	.81	.45	.60
Contact frequency:								
At least several times a week (%)	.49	.50	.54	.50	.48	.39	.50	.49
<i>n</i>		1,691		4,811		2,314		

Note: SHARE 2004 release 2.01. Own calculations; unweighted.

<sup>a</sup>Respondents who are unmarried, widowed or living without a partner and have 2-4 living children ( $N = 3,466$ ).

<sup>b</sup>Dyads between parents who are unmarried, widowed or living without a partner and 2-4 adult children ( $N = 8,816$ ).

<sup>c</sup>Nordic: Denmark and Sweden; Continental: Austria, Belgium, France, Germany, the Netherlands, and Switzerland; Southern: Greece, Italy, and Spain.

<sup>d</sup>Limitations in usual activities because of health problems.

Table 2: *Patterns of Intergenerational Transfers at the Family Level (FL)<sup>a</sup> and the Dyad Level (DL)<sup>b</sup>*

Welfare regime <sup>c</sup>	Time transfer <sup>d</sup>		Financial transfer <sup>e</sup>		Concurrent giving and receiving <sup>f</sup> (%)		<i>n</i>	
	received (%)		given (%)				FL	DL
	FL	DL	FL	DL	FL	DL	FL	DL
Nordic	24.9	14.0	24.2	15.8	6.7	2.9	670	1,691
Continental	23.3	12.0	16.2	10.2	3.4	1.4	1,863	4,811
Southern	25.8	13.0	14.5	7.8	2.7	1.2	933	2,314
Total	24.3	12.7	17.3	10.6	3.8	1.6		

*Note:* SHARE 2004 release 2.01. Own calculations; unweighted.

<sup>a</sup>Family level indicators count upward, downward, and concurrent transfers in any dyad within a family, divided by the total number of families ( $N = 3,466$ ).

<sup>b</sup>Dyad level indicators count these types of transfers in all dyads divided by the total number of dyads ( $N = 8,816$ ).

<sup>c</sup>Nordic: Denmark and Sweden; Continental: Austria, Belgium, France, Germany, the Netherlands, and Switzerland; Southern: Greece, Italy, and Spain.

<sup>d</sup>Personal care or practical household help received during the past 12 months.

<sup>e</sup>Financial or material transfer of 250 Euros or more given to a child inside or outside the household during the past 12 months, not counting any shared housing or shared food.

<sup>f</sup>Heteromorphic exchange of parent's financial transfers and children's time transfers.

Table 3: *Share of Parent's Concurrent Giving of Financial Transfers<sup>a</sup> When Receiving Time Transfers<sup>b</sup> From Adult Children*

Welfare regime <sup>c</sup>	Family level <sup>d</sup>		Dyad level <sup>e</sup>	
	%	<i>n</i>	%	<i>n</i>
Nordic	29.6	98	20.7	237
Continental	15.0	220	11.6	578
Southern	11.3	106	9.3	301
Total <sup>f</sup>	17.5		12.9	

*Note:* SHARE 2004 release 2.01. Own calculations; unweighted.

<sup>a</sup>Personal care or practical household help received during the past 12 months.

<sup>b</sup>Financial or material transfer of 250 Euros or more given to a child inside or outside the household during the past 12 months, not counting any shared housing or shared food.

<sup>c</sup>Nordic: Denmark and Sweden; Continental: Austria, Belgium, France, Germany, the Netherlands, and Switzerland; Southern: Greece, Italy, and Spain.

<sup>d</sup>Family level indicators count upward, downward, and concurrent transfers in any dyad within a family, divided by the total number of families ( $N = 424$ ).

<sup>e</sup>Dyad level indicators count these types of transfers in all dyads divided by the total number of dyads ( $N = 1,116$ ).

<sup>f</sup>Dyads between parents who are unmarried, widowed or living without a partner and 2-4 adult children.

Table 4: *Conditional Logistic Regression Results for Intergenerational Transfers*

Predictor	Parent receives		Parent gives	
	time transfer <sup>a</sup>		financial transfer <sup>b</sup>	
	Model 1		Model 2	
<b>Reciprocity</b>				
Parent receives time transfer			2.19**	(.62)
Parent gives financial transfer	2.35**	(.73)		
Parent gives time transfer	1.13	(.22)		
<b>Characteristics of child</b>				
Male	.67***	(.07)	.71*	(.10)
Age	.99	(.01)	.95**	(.02)
Married or cohabiting	1.09	(.15)	.65*	(.12)
Years of education	1.05 <sup>†</sup>	(.03)	1.00	(.03)
<b>Activity</b>				
(ref.: full-/part-time employed)				
Unemployed	1.73*	(.45)	2.18*	(.74)
Still in education	.46	(.23)	4.00***	(1.30)
Has own child < 7 years	.64*	(.13)	1.18	(.24)
<b>Characteristics of dyad</b>				
<b>Contact frequency</b>				
At least once a week	5.93***	(1.01)	2.73***	(.54)
<b>Proximity</b>				
Within a radius of 5 km	3.04***	(.44)	1.03	(.18)
$\chi^2$	411.63		125.78	
<i>df</i>	12		11	
Number of dyads <sup>c</sup>	2,069		1,119	

Note: SHARE 2004 release 2.01. Own calculations based on 10 sets of imputed data; unweighted.

Odds ratios (standard errors) are shown.

<sup>a</sup>Personal care or practical household help received during the past 12 months.

<sup>b</sup>Financial or material transfer of 250 Euros or more given to a child inside or outside the household during the past 12 months, not counting any shared housing or shared food.

<sup>c</sup>Dyads between parents who are unmarried, widowed or living without a partner and 2-4 adult children; only families with variation in the outcome variable are included in the estimation.

<sup>†</sup> $p < .10$ . \* $p < .05$ . \*\* $p < .01$ . \*\*\* $p < .001$ .

Table 5: *Conditional Logistic Regression Results for Intergenerational Transfers*

Predictor	Parent gives financial transfer <sup>a</sup>					
	Cash holdings <sup>b</sup>		Limitations with daily activities <sup>c</sup>			
	< Median	> Median	No		Yes	
	Model 3a	Model 3b	Model 4a	Model 4b	Model 5a	Model 5b
Reciprocity						
Parent receives time transfer <sup>d</sup>	1.72 (.81)	2.50* (1.00)	1.79 (.77)		2.68* (1.09)	
Parent receives time transfer: hours < Median				1.43 (.79)		2.17 (1.09)
Parent receives time transfer: hours > Median				2.50 (1.73)		3.56* (2.13)
$\chi^2$	58.57	82.30	70.43	71.01	70.48	71.18
<i>df</i>	11	11	11	12	11	12
Number of dyads <sup>e</sup>	446	586		664		455

Note: SHARE 2004 release 2.01. Own calculations based on 10 sets of imputed data; unweighted.

Odds ratios (standard errors) are shown. All models control for characteristics of children and of parent-child dyads (see Table 4).

<sup>a</sup>Financial or material transfer of 250 Euros or more given to a child inside or outside the household during the past 12 months, not counting any shared housing or shared food.

<sup>b</sup>Amount of money in the respondents' bank, transaction and saving accounts.

<sup>c</sup>Limitations in usual activities because of health problems.

<sup>d</sup>Personal care or practical household help received during the past 12 months.

<sup>e</sup>Dyads between parents who are unmarried, widowed or living without a partner and 2-4 adult children; only families with variation in the outcome variable are included in the estimation.

<sup>†</sup> $p < .10$ . \*  $p < .05$ . \*\* $p < .01$ . \*\*\* $p < .001$ .

Table 6: *Conditional Logistic Regression Results for Intergenerational Transfers*

Predictor	Parent gives financial transfer <sup>a</sup>			Parent receives time transfer <sup>b</sup>		
	Welfare regime <sup>c</sup>					
	Nordic	Cont.	Southern	Nordic	Cont.	Southern
	Model 6a	Model 6b	Model 6c	Model 7a	Model 7b	Model 7c
Reciprocity						
Parent receives time transfer	.76 (.49)	2.25 <sup>†</sup> (.97)	5.20 <sup>*</sup> (4.40)			
Parent gives financial transfer				1.44 (.97)	1.81 (.88)	13.94 <sup>**</sup> (14.31)
$\chi^2$	27.04	51.76	45.64	71.05	192.56	202.29
<i>df</i>	11	11	11	11	11	11
Number of dyads <sup>d</sup>	214	482	257	362	990	552

Note: SHARE 2004 release 2.01. Own calculations based on 10 sets of imputed data; unweighted.

Odds ratios (standard errors) are shown. All models control for characteristics of children and of parent-child dyads (see Table 4).

<sup>a</sup>Financial or material transfer of 250 Euros or more given to a child inside or outside the household during the past 12 months, not counting any shared housing or shared food.

<sup>b</sup>Personal care or practical household help received during the past 12 months.

<sup>c</sup>Nordic: Denmark and Sweden; Continental: Austria, Belgium, France, Germany, the Netherlands, and Switzerland; Southern: Greece, Italy, and Spain.

<sup>d</sup>Dyads between parents who are unmarried, widowed or living without a partner and 2-4 adult children; only families with variation in the outcome variable are included in the estimation.

<sup>†</sup> $p < .10$ .  $*$  $p < .05$ .  $**p < .01$ .  $***p < .001$ .