Linked Lives
Within Families and Across Generations

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Contents

Introduction

Dramatic improvements in life expectancy coupled with declines in fertility have profoundly changed the structure of families. The number of living generations has increased whereas the size of each generation has decreased. One of the most important implications of this transformation "from pyramids to beanpoles" (Bengtson, 2001) are longer years of shared lives between the generations. Today's duration of intergenerational relationships is unprecedented in human history. Most people can expect to spend three or more decades of their adult years with living parents. As a result, there is a remarkable increase in the availability of intergenerational kin as family resources and an extended period for supportive exchanges across the life course (Putney & Bengtson, 2003).

In sharp contrast to previous concerns about the weakening of intergenerational bonds in modern societies (e.g., Parsons, 1943), more recent scholarship has emphasized their stability and continued importance as a source of social integration and mutual assistance. Indeed, some analysts argue that intergenerational relationships may be more important today than ever before, representing a latent support network (Riley & Riley, 1993) that is activated in times of need and particularly adaptive to the uncertainties of contemporary life courses. As Swartz (2009, p. 193) notes, "[w]ith longer lives and fewer in the younger generation to share with, the older generation has more attention, time, and resources to give to each child and grandchild. Likewise, younger generations—with fewer children to care for and fewer active childrearing years—may have more time and resources to help aging parents." The vital importance of intergenerational relationships for ageing societies has also been recognized by policymakers. Recently, the European Commission (2005) highlighted solidarity between the generations as one of the crucial dimensions for Europe's development.

Thus, it is not surprising that scientific interest in intergenerational relationships, in particular those between parents and adult children, has grown rapidly in recent decades. Hundreds of studies examined the nature of these ties, seeking to identify patterns of contact,

shared activities, geographical proximity, emotional closeness, normative obligations, and functional support exchange. A number of consistent findings emerged from this literature. In Western economies, intergenerational relationships are largely portrayed as close, harmonious, and supportive. More than half of adult children, for instance, live within one hour of travel time from their parents, speak to them at least once a week, and report high levels of affection (see Swartz, 2009, for a review). With regard to functional assistance, parents remain "net givers" across many years. This functional support consists of various forms and is typically measured as flows of money and time (instrumental help, personal care, looking after grandchildren, etc.). The cascade pattern from the older to the younger generations is particularly strong where financial transfers are concerned, but it also holds for time transfers, albeit less pronounced. In fact, the balance of support exchange favors adult children until the onset of parents' health decline at ages over 70 or even 80 (Albertini et al., 2007; Rossi & Rossi, 1990). Subsequently, however, previously "overbenefited" adult children represent one of the most reliable sources of support for elderly parents. This is especially true for daughters who are more forthcoming in responding to parental need than sons, in particular with regard to caregiving (Spitze & Logan, 1990). Taken together, the empirical evidence paints a picture of "lifelong solidarity" (Szydlik, 2000) between the generations and highlights the continued importance of extended family ties for social integration and individual well-being.

These findings constitute an important baseline by which to assess the characteristics of intergenerational relationships and their current potential to serve parents' and children's needs. Yet they provide only limited information about how families will respond to changing conditions. It is clear that past and present demographic shifts will significantly alter the context for intergenerational relationships in future decades and pose new challenges to ageing societies. Extant research, however, is mainly based on older cohorts of parents that differ markedly from the baby boomers who are currently approaching the threshold of old age (Suitor et al., 2011). In their decade review of research on ageing and family life, Silverstein and Giarrusso (2010, p. 1039) emphasized that "relationships (…) have become more fluid and less predictable, as reduced fertility and increased rates of divorce, remarriage, and stepfamily formation have altered the microcontext in which intergenerational, spousal, and sibling relationships function."

Future cohorts of elderly parents will reach all-time record levels of longevity. These cohorts will be of greater size, in better health, and more diverse in their kinship structures. Their children will have experienced greater difficulty in attaining a stable financial position and benefited extensively from substantial amounts of parental assistance received across their adult years. Given the risks of contemporary life courses such as high levels of marital instability and labor market uncertainty in early careers (Blossfeld et al., 2005; 2011), parents as family safeguards represent a critical source of support for adult children, ensuring stability and assisting them both in building their lives and in recuperating from adverse events such as job loss or divorce.

On the other hand, adult children will more often face caregiving decisions in later life, in which case there will be fewer siblings to share the responsibility (Bengtson, 2001). Thus, a growing need for upstream assistance, albeit tempered and postponed by increases in parents' healthy life expectancy, will coincide with a shortage of potential providers. In the United States, the proportion of solitary caregivers increased by 50 percent already through the 1990s, indicating a weaker safety net for frail parents and greater burden on children who respond to their need (Wolff & Kasper, 2006). Moreover, an increasing number of daughters are part of the labor force, incurring greater opportunity costs of providing intergenerational assistance and possibly altering ideas of which child is supposed to shoulder the load. Indeed, some analysts have expressed concern about a decline in filial commitment to parental care (Silverstein & Giarrusso, 2010). Public policy, however, relies on the middle, "sandwiched" generation who must balance investments in careers and families of their own against responsibilities toward their ageing parents (Schneider et al., 2001; Schoeni & Ross, 2005).

These current and projected trends are changing the face of families and will possibly lead to shifts in the supportive behavior between the generations. This raises a variety of new questions about the nature and dynamics of intergenerational linkages, in particular with regard to the provision of instrumental assistance. How do family support systems adapt to future demographic, social, and economic conditions in ageing societies? More specifically, how do parents support their offspring's passage to independence and protect them against the risks of contemporary life courses? Conversely, can future cohorts of elderly parents rely on their children to provide help and care in later life?

Four Principles of Research on Intergenerational Relationships

What kind of research is needed to address these questions? Obviously, an empirical assessment of current intergenerational relationships and their covariates is not sufficient. Therefore, recent research has called for greater attention to four main issues: the complex nature of intergenerational ties, models of behavior in parent-child relationships, the family context in which they are embedded, and an expanded life course perspective which covers the middle years of intergenerational relationships and links earlier experiences to family outcomes in later life.

First, research on intergenerational relationships in ageing societies requires conceptual and empirical models that capture their *complexity*. The complex nature of these ties is reflected in the influential model of "intergenerational solidarity" (Bengtson and Schrader, 1982) which distinguished between six analytical components of cohesion and integration across generations. Starting with a seminal article on "intergenerational ambivalence" (Lüscher & Pillemer, 1998), further attention has been devoted to the complexity of later parent-child relationships in which solidarity and conflict coexist. This perspective highlights the importance of ambivalent feelings in both generations deriving from mixed emotions and contradictory role expectations. Ambivalence, rather than solidarity, is assumed to represent the fundamental feature characterizing intergenerational relationships (Pillemer & Suitor, 2008a). Although this line of research is developing rapidly, little is known to date about how ambivalence is related to family outcomes such as transfers of time and money.

Second, the study of intergenerational relationships calls for theoretical *models of individual behavior*. Such models are essential to understanding how family members respond to changing conditions (Becker, 1991). This point has long been recognized in the field of economics where the interest is mainly in how individuals' choices maximize their utility gained from family transactions. The economic study of intergenerational ties largely focuses on motives behind intergenerational transfers testing two models of behavior, altruism and exchange. Despite a large number of empirical studies, economic research on transfer motives did not yield conclusive evidence in support of one model. From a sociological vantage point, concentrating on a single motive represents an overly simplistic approach ignoring the actual plurality and variability of motives that are continuously

negotiated in the family context and shaped by cultural factors and social norms. In this respect, Bianchi and associates (2008, p. 17) stressed that "despite the multiplicity of motives, identifying when and why a particular model is operating is important for understanding intergenerational behavior."

Third, research on intergenerational relationships should reach beyond the dyadic view, considering other relationships *within the family*. In most studies, parent-child relationships are studied in isolation from the larger family context in which they are embedded. This focus on explaining between-family differences fails to account for the obvious variation of parent-child relationships within families: Parents, for example, frequently name favorite children (Suitor et al., 2008) and differentiate among them when providing or asking for assistance (Pillemer & Suitor, 2006). Furthermore, dyadic processes are profoundly influenced by other relationships in the family. Systemic approaches to studying parental care, for example, consider the surrounding network structure of siblings as alternative providers. In recent years, within-family designs have been increasingly recognized as a powerful tool for understanding intergenerational ties (e.g., Davey et al., 2009)

Fourth, since the 1990s there is a growing number of studies investigating intergenerational relationships from a *life course perspective*. This perspective highlights two increasingly important aspects in the study of intergenerational relationships: First, intergenerational relationships unfold across many years of development and the impact of experiences from earlier life may resurface even decades later. Second, the notion of "linked lives" (Elder et al., 2003) draws attention to the ways in which each generation's life events such as marriage, the birth of a child, divorce, or health decline affect family members of other generations. Neither of these two aspects, however, is well-understood in the current literature. The main reason for this is an "alpha-omega tendency" (Hagestad, 1987) of research focusing either on earlier or on later parent-child relationships (Bucx, 2009). Thus, only few studies (e.g., Parrott & Bengtson, 1999; Silverstein et al., 2002) have attempted to establish a link between these periods. We know relatively little, for example, about the long-term effects of support received in earlier life on children's later propensity to assist their elderly parents (Swartz, 2009). A further consequence of the alpha-omega tendency is that research has largely ignored the "middle years" of parent-child relationships (Bucx, 2009). As a result, the study of linked lives did not consider the intergenerational effects of

many important transitions, particularly those experienced by adult children who establish their lives after leaving the parental home.

Theoretical Background and Previous Research

These four principles constitute the basic conceptual framework of this dissertation. The following sections outline this framework in more detail, discussing previous research on each of the four principles.

The Complexity of Intergenerational Relationships: Solidarity and Ambivalence

Over the past three decades, the model of intergenerational solidarity (Bengtson & Schrader, 1982) has been the principal framework in the study of parent-child relationships. This model has guided much of the empirical analysis of intergenerational relationships and was incorporated into several research programs (Suitor et al., 2011). According to Bengtson (2001), the term solidarity "characterize[s] the behavioral and emotional dimensions of interaction, cohesion, sentiment, and support between parents and children, grandparents and grandchildren, over the course of long-term relationships" (p. 8). Bengtson and his colleagues formulated the solidarity model on the basis of data from the Longitudinal Study of Generations, an ongoing panel study of white Americans in which family members from different generations were repeatedly interviewed across several years. The model posits that intergenerational family solidarity consists of six interconnected dimensions: associational solidarity is indicated by the frequency of contact and shared activities; affectual solidarity by feelings of emotional closeness; consensual solidarity by perceived similarity and agreement on values, attitudes, and beliefs; functional solidarity by the exchange of instrumental transfers; normative solidarity by the degree of commitment to family roles and the strength of filial obligations; and structural solidarity by the opportunities for intergenerational interaction such as the presence of family members, their health, and geographical proximity (Bengtson & Roberts, 1991).

This comprehensive typology of feelings, values and attitudes, behavior, and structural opportunities for interaction has proven valuable for analyzing the nature, quality, and intensity of intergenerational ties. Suitor and associates (2011) distinguish between three directions of research guided by the solidarity model. First, studying a single component, for

instance functional support, as a predictor of parent and child outcomes such as health, well-being, and educational attainment; second, conceptualizing family solidarity as an outcome jointly measured by two or more of its components; third, investigating the interdependence of different components of solidarity. Particularly research from the second and third of these directions has demonstrated the benefits of the solidarity model for capturing the complexity of intergenerational relationships.

One notable application of this basic framework was the identification of five types of relations between adult children and their mothers and fathers in American families (Silverstein et al., 1997): tight-knit (high levels on all six dimensions), sociable (high levels of affection, proximity, and association – low levels of support), intimate but distant (high levels of affection and consensus – low levels of proximity, association, and support), obligatory (high levels of proximity and contact – low levels of affection and consensus), and detached (low levels on all six dimensions). Importantly, the authors found a very heterogeneous pattern in the distribution of these types of parent-child relationships. No dominant type emerged from the analysis and overall, the "variegated forms" were more prevalent than tight-knit and detached relationships. The latter types correspond to the notions of the traditional or corporate extended family (tight-knit) and the isolated extended family (detached). In contrast, the sociable, obligatory, and intimate but distant relationships are broadly consistent with concepts of the modified extended family (Litwak, 1960) and the "latent matrix of kin connections" (Riley & Riley, 1993) that lies dormant before being activated in times of need.

Despite its evident merits, the solidarity model was repeatedly criticized for an alleged bias in favor of positive characteristics of intergenerational relationships. For example, negative aspects such as tension, conflict, abuse, and caregiver stress could at best be inferred from the absence of solidarity. Furthermore, the solidarity model did not consider the complexity resulting from contradictory family roles and opposing feelings that may coexist in parent-child relationships. Against this background, Lüscher and Pillemer (1998) proposed intergenerational ambivalence "as a 'general orientation' to the subject of intergenerational relationships" (p. 414).

This concept posits that ambivalence, rather than solidarity, is the fundamental feature characterizing the ties between parents and adult children. The authors define intergenerational ambivalence as follows:

> "[T]he term (…) designate[s] contradictions in relationships between parents and adult offspring that cannot be reconciled. The concept has two dimensions: (a) contradictions at the level of social structure, evidenced in institutional resources and requirements, such as statuses, roles, and norms and (b) contradictions at the subjective level, in terms of cognitions, emotions, and motivations" (Lüscher & Pillemer, 1998, p. 416).

One example for ambivalence concerns the sustained provision of assistance to elderly parents. Adult children as caregivers adhere to norms of filial responsibility and experience positive feelings of loyalty towards their frail parents. At the same time, they are distressed by the imbalance of continuous giving, violating the norm of reciprocity. Parents at the receiving end also experience ambivalence as they benefit from their offspring's solidarity while feeling guilty about overburdening them and being unable to reciprocate (George, 1986).

By highlighting the presence of contradictory norms, roles, and feelings in family interactions, the ambivalence perspective contributes to understanding further aspects of complexity in parent-child relationships that research framed by the solidarity model had largely ignored. Still, it is a relatively recent addition that awaits further study, in particular with regard to the link between ambivalence and the decisions made to accommodate or relieve these feelings. Bengtson and colleagues (2002, p. 574), for example, called for research to demonstrate the utility of the concept by answering questions such as: "How does ambivalence predict the likelihood of providing support to an elderly parent?" Recently, the solidarity model has been expanded to incorporate intergenerational conflict and ambivalent relationships (Silverstein et al., 2010). Overall, solidarity and ambivalence can now be regarded complementary rather than competing perspectives in the study of intergenerational relationships (Bengtson et al., 2002; Silverstein & Giarrusso, 2010).

Models of Behavior in Parent-Child Relationships: The Study of Transfer Motives

Above and beyond these conceptual frameworks, research in the field of economics and, more recently, also in sociology, has concentrated on individual motives of behavior in parent-child relationships. These studies focus mainly on the provision of intergenerational

transfers as a behavioral manifestation of individual motives held by parents and adult children. Economists are particularly interested in modeling the situation in which an individual decides to transfer his or her resources to family members. This decision is assumed to be governed by individual transfer motives that lead to a certain evaluation of a situation and a specific behavioral response that maximizes the giver's utility. Importantly, these models allow predicting how actors will respond to changing conditions (e.g., pension cuts, increased taxation of private transfers, etc.) – under the condition that the motive for giving private transfers is known.

Economic research typically seeks to infer this motive from survey data on individual transfer behavior. This line of inquiry is generally predicated on the existence of a singular, well-defined motive (Kohli & Künemund, 2003). The literature is divided into two clear camps, one advancing altruism, the other exchange. As a result, these transfer motives are commonly viewed as competing and tested against each other. Such tests typically focus on how intergenerational transfers are distributed and divided with regard to the givers' and recipients' economic situation. In the altruistic model (Becker, 1974), givers are concerned about the receivers' well-being. Therefore, the receiver's utility is integrated into the giver's utility function. An important implication is that transfers will only occur in the presence of need (Becker, 1981). Altruistic parents, for example, always consider their children's current and anticipated needs, directing their resources to those who experience the greatest economic need and thus benefit most from the transfer. Consequently, altruistic models predict a negative relationship between children's economic means and their chances to receive parental transfers. Likewise, altruistic children are expected to provide care only if their older parents are in poor health.

In contrast to altruism, economic models of exchange assume that intergenerational transfers reflect self-interested behavior. Transfers are only given with the expectation of some return. Kotlikoff and Morris (1989), for instance, proposed that money transfers from parents to children represent a "bribe" buying their social support. Conversely, the anticipation of a future reward may be an incentive to support frail but well-off parents; that is, children initiate the exchange and parents balance the support accounts later. One prominent example is the model of "strategic bequests" (Bernheim et al., 1985), in which "parents threaten to disinherit miscreant offspring, or more subtle, (…) reward more

attentive children with family heirlooms" (p. 1046). A large number of studies tested the models of altruism and exchange against each other and numerous findings were presented in support of each motive (e.g., Cox, 1987; Wilhelm, 1996; McGarry & Schoeni, 1997). Overall, the empirical evidence remains inconclusive.

Sociological research on transfer motives differs from economic research in two important respects (Kohli & Künemund, 2003). First, it rejects the notion that each individual holds only one well-defined motive. Instead, this perspective considers the interplay of multiple motives that may be held simultaneously, compete or overlap, and change across the life course. The underlying idea is that the observable heterogeneity of transfer behavior reflects an actual plurality and variability of motives. Second, sociological research recognizes that intergenerational transfers can hardly be considered "pure" economic acts. Transfers within the family domain are assumed to be constrained by family norms and to entail additional qualities beyond individual utility functions which may affect intergenerational bonds. As Kohli and Künemund (2003) note,

> "it makes a difference whether transfers from (…) family members are motivated by self-interest (only) or (also) by love, benevolence, generosity, or a sense of personal obligation. For example, a gift of money has a different quality if given unconditionally, 'without strings attached,' or if given conditional on compliance with expectations of exchange, reciprocity, control, or status." (p. 126)

The motives discussed in the sociological literature belong to three broad categories that are assumed to jointly influence transfer behavior: affection, norms of responsibility, and norms of reciprocity (Doty, 1986).

The first category shares some affinity with the altruistic model as transfers are given without the expectation of any compensation. In contrast to the altruistic motive, however, the occurrence of these transfers is not predicated on the recipients' need. Transfers motivated by intergenerational affection are simply seen as an unconditional expression of love and benevolence given both in the presence and in the absence of need. The second category, norms of responsibility, refers to the generalized expectation that parents and children should support each other. These norms oblige family members to provide intergenerational assistance regardless of emotional closeness and without the expectation of compensation (Stein et al., 1998; Gans & Silverstein, 2006). Similar to the altruistic model,

transfer behavior that is governed by norms of responsibility depends on the recipient's need; that is, obligations to assist family members apply only to situations in which support is required.

Third, a sociological equivalent to the economic exchange motive is the norm of reciprocity. The analysis of reciprocity derives from Mauss's (1994[1923/24]) seminal essay on "The Gift". Mauss distinguished between three basic obligations that create and maintain bonds between members of primitive societies: giving, accepting the gift, and giving back. Recipients who accept a gift remain indebted to the giver until an equivalent return-gift restores the balance. Reciprocity as a universal norm, an idea later advanced by Gouldner (1960, p. 170), "defines certain actions and obligations as repayments for the benefits received." This notion of reciprocity has been applied to the longitudinal study of support exchange in parent-child relationships. Because of their intimate and lasting character, parent-child relationships were assumed to be balanced only over extended time spans covering several years or even decades between parents' earlier investments and children's later repayments (Hollstein & Bria, 1998). In contrast to the economic exchange motive, adherence to the norm of reciprocity, rather than self-interested behavior, is assumed to govern the exchange. This point is illustrated, for example, by the model of a "support bank" (Antonucci & Jackson, 1990). Parents who support their children do not expect future repayments but "buy in" to a generalized system of reciprocity. They draw on these deposits only in times of need – as adult children feel obliged to reciprocate the benefits received.

In sum, the perspectives described above, although not exhaustive, show that different disciplines have proposed a variety of conceptual frameworks and theoretical insights regarding intergenerational transfer behavior. Each singular model is limited in scope and none provides a general answer to the question of what motivates parents and children who transfer their resources to the other generation. Recent reviews, however, did not interpret this as an unfortunate lack of consensus reflecting a vague, ambiguous, and inconclusive state of research. Rather, the diversity of models was praised for reflecting the actual complexity of intergenerational relationships. For instance, Bianchi and colleagues (2008, p. 5) emphasize that "[n]one of these ideas is likely to explain all behaviors, but rather, we expect that they all play a role in comprising the complicated relationships observed among family members." In a similar vein, Silverstein and Giarrusso (2010, p. 1052) concluded

"that it is potentially healthier for the field to let many middle-level theories bloom than have a single perspective dominate in a hegemonic fashion."

The Context of Intergenerational Relationships: A Within-Family Perspective

Except for the few families in which only one parent and one child are alive, intergenerational relationships are embedded in a larger family context. The fact that two members of a dyad are influenced by relationships with third actors has long been recognized in sociology (Simmel, 1964) and social psychology (Heider, 1958). Nonetheless, extant research on intergenerational relationships does often not sufficiently account for the family as a small group structure surrounding dyadic interactions between parents and children.

For example, one widely used analytical strategy is to study a child's relationship to a parent in isolation from other family ties (e.g., Hogan et al., 1993; Silverstein et al., 1997). Other analysts use aggregated measures such as "distance to the closest living child" (e.g., Hank, 2007). Still others regard the fact that many families comprise multiple dyads between parents and children primarily as a statistical problem. These studies address the non-independence of observations in datasets containing more than one dyad from the same family by calculating robust standard errors or estimating multilevel models (e.g., Brandt et al., 2009). Although such approaches are appropriate to address a variety of research questions, they suffer from confounding dyadic and family characteristics. Analytically, a specific dyad from one family is compared to a dyad with different characteristics from a different family (Hofferth, 2005). Therefore, dyadic approaches implicitly assume that a parent's relationship with one child is independent of that parent's relationships with any other child (Pillemer & Suitor, 2008b). As a result, these designs are clearly limited in understanding various important intergenerational phenomena such as the distribution of transfers across children and the negotiation of parental care among siblings.

In contrast, within-family designs allow assessing the importance of individual or dyadic characteristics *relative to those of other* individuals and dyads in a family. This approach has two main analytical benefits for understanding intergenerational ties. First, it controls for all background characteristics that are constant within a family. In family fixed-effects models, these factors drop out of the estimation and are thus rendered inconsequential. Importantly, these models do not require that shared family factors are actually observed. All

characteristics, both observed and unobserved, are controlled – based on the assumption that they are common to all units within a family. This property of fixed-effects models is particularly valuable for family studies because many possible confounders are family-level factors that are very difficult to measure using standardized survey questions. Family norms arising from the interaction of its members, for example, are often unmeasured (Bianchi et al., 2008). Thus, one might for instance incorrectly infer parent-child reciprocity from the observation of support exchanged in both directions because shared family norms to unconditionally support each other are not controlled.

The second benefit of within-family designs is that they are often superior in modeling the substantive outcome of interest. One prominent example is parental care. Including all adult children into the unit of analysis enables the analyst to understand how the supportive link between an elderly parent and a particular child is affected by other children as alternative or complementary providers. This allows examining a specific caregiving arrangement as an outcome of the negotiation of responsibilities among siblings and as a team effort requiring coordination between different providers (Finch & Mason, 1993). As Silverstein and Giarrusso (2010, pp. 1051f) have noted, this approach is "most informative because they come closest to representing caregiving as it is actually experienced in families."

Within-family designs require large samples, however. Comparisons between parents or between siblings necessitate that at least two of them are present. In addition, the empirical analysis of binary family outcomes (e.g., provision of care: yes or no) draws on a conditional likelihood approach that drops all families without variation in the dependent variable from the estimation (Chamberlain, 1980).

A Comprehensive Life Course Perspective on Intergenerational Relationships

The life course perspective, widely considered the main theoretical advance in family research of the 1990s (Allen et al., 2000), is today one of the most common orientations in the study of intergenerational relationships. Its overarching principles draw attention to individual development and change over time, the historical and social contexts in which lives unfold, the timing of transitions into new positions and roles, the importance of individual agency, and the joint dynamics of interdependent lives (Elder et al., 2003). The life course

perspective highlights two aspects that are particularly relevant for understanding intergenerational ties, namely the notion of "linked lives" between parents and children and the later-life consequences of previous experiences in their relationships (Bucx, 2009).

First, the principle of "linked lives" pertains to the fact that intergenerational bonds are among the closest and most enduring of all social relationships. Consequently, parents' and children's life courses are intimately intertwined and profoundly affected by events experienced by the other generation. There are numerous examples for such linkages: children's transition to parenthood implies parents' transition to grandparenthood; the last child's move-out empties the nest, ending the parenting years; parents' divorce entails detrimental effects on the quality of relations to children; health declines initiate intergenerational caregiving; and so on. In Elder's (1985, p. 40) words, "[e]ach generation is bound to fateful decisions and events in the other's life course." The analytical implication is that individual decisions should not be studied in isolation from the context constituted by family members' interrelated lives. Instead, a focus on interdependent decisions is well-suited to account for the multiple connections by which changes in parents' lives may affect their children, and vice versa.

Second, the life course perspective provides a lens through which to view how previous experiences are carried over into later family life. This focus on long-term effects is particularly relevant for research on intergenerational relationships, as they often stretch over several decades. Obviously, understanding late parent-child relationships requires consideration of their rich history covering numerous life transitions and related experiences. Studies that focus only on current needs, for instance, miss the processes by which earlier levels of affection, geographical proximity, frequency of interaction, and functional support may have set the stage for supportive ties observed in later life. This concerns, for example, the idea of long-term reciprocity described above. Although it is generally recognized that family relations build on previous experiences, only a modest number of empirical investigations exist (e.g., Rossi & Rossi, 1990; Parrott & Bengtson, 1999; Silverstein et al., 2002). This is partly due to the scarcity of data covering family relationships over extended periods. A second reason is an "alpha-omega tendency" (Hagestad, 1987) of parent-child research which often focuses only on early relationships, the "parenting years", or on late relationships, the "ageing years" (Bucx, 2009).

This tendency is related to another major shortcoming of research on intergenerational relationships: Little is known about how these ties develop across the "middle years" of parents' and children's shared lifetime. The middle years begin with young adults' departure from the parental home and end when elderly parents become increasingly frail and dependent. Bucx (2009) describes this period as follows:

> [T]he 'middle years' can be characterized as a phase in which both generations are relatively free from clearly circumscribed responsibilities to provide care to each other (…) [and,] as children move into adult roles, this is also the period in which children and parents begin to establish adult-to-adult relations with each other." (p. 28)

A better understanding of these middle years is fundamentally necessary: First, with the dramatic gains in healthy life expectancy, this period has greatly expanded over the past decades and it is likely to continue expanding in the future. Today, parents and adult children in Western economies can expect this period to last 20 or even 30 years and longer. Thus, with regard to the total duration of cosurvivorship, the middle years currently account for roughly half of parents' and children's shared lifetime. Second, several key transitions typically fall into this period, including parents' retirement and grandparenthood as well as children's marriage, labor market entry, parenthood, and divorce. Importantly, with the increasing uncertainty of contemporary life courses (Blossfeld et al., 2011), parents' assistance in building and rebuilding lives is often indispensable to children who experience these transitions (Ploeg et al., 2004). Third, in keeping with the principle outlined above, this downward assistance may be an important factor conditioning late parent-child relationships. Thus, considering intergenerational life course linkages across the middle years contributes to understanding adult children's transfers of help and care in later life.

Overview of the Five Studies

The following overview offers a brief look at the five studies contained in this dissertation. Each summary explains a study's theoretical background, analytical approach, and main results, discussing its contribution to research on intergenerational relationships and the sociology of families.

Study I: "The Legacy of Leaving Home: Long-Term Effects of Coresidence on Parent-Child Relationships"

Coresidence between parents and adult children is a ubiquitous phenomenon in Western economies. Children often benefit from their parental home as a home base and "feathered nest" until advanced ages. In fact, the majority of 22-year-olds in Europe still live with their parents. In Southern countries, the median age at home leaving is even above 25. Furthermore, in many industrialized countries such as the United States, the decline of intergenerational coresidence has reversed since the 1990s and the prevalence of this living arrangement increases (Fleck, 2009; Ruggles, 2007). In view of that, it is not surprising that numerous studies have investigated extended coresidence between the generations and the timing of leaving the parental home.

In contrast, almost nothing is known about the consequences of this transition although several analysts have speculated about possible long-term effects of extended coresidence on parent-child relationships. Swartz (2009, p. 201), for example, noted that the experience of living with parents "may change the way young adults think of and relate to their families once they establish financial independence" and stressed the importance of "understand[ing] better how extended support in young adulthood affects long-term intergenerational relations and exchange with parents later in life." In a similar vein, Mitchell (2006) discussed long-term reciprocity as a mechanism by which the time spent in the parental home may set the stage for late parent-child relationships:

> "Notably, young adult coresiders may want to provide more help to parents in later life (…) than non-coresiders in an attempt to "repay" parents for providing them with a home base and burdening them with extra household responsibilities in their time of need (…). In this way, extended coresidence has the potential to enhance

> intergenerational solidarity and facilitate the continuation of supportive relations across the life courses of parents and their children" (p. 88).

Other life course considerations, however, suggest a contrasting view that is consistent with popular accounts that portray late home leavers as "greedy and lazy children" (Mitchell, 2006, p. 86): Classical life course theory posits that because late home leaving does not fit with normative life course expectations, it may signal failure in children's passage to adulthood or even dysfunction of their family as a whole (Parsons, 1949). As a result, extended coresidence may entail deleterious effects on parent-child relationships, possibly extending into later years.

Study I addressed these issues by offering a comprehensive assessment of the long-term effects of extended coresidence on parent-child relationships. The study investigated how early, "on-time," and late home leavers differed in their relations to parents in later life. Fixed-effects models with data from the Survey of Health, Ageing and Retirement in Europe revealed the effects of previous coresidence on intergenerational proximity, contact frequency, and support exchange more than five years after children had left home. The empirical results of this study showed that, compared with siblings who moved out "on time," late home leavers lived closer to their aging parents, maintained more frequent contact, and were more likely to be providers as well as receivers of intergenerational support. These findings are consistent with the model of long-term reciprocity, suggesting that previous benefits constituted support debts that adult children repaid in later life. Because late leavers were also more likely to receive parental support, the results further suggest that extended coresidence promotes feelings of responsibility in both generations which later translate into higher levels of support exchange. Finally, the study found a mediating influence of geographical distance: Late home leavers stayed closer to their parents thus providing better opportunities for contact and support exchange in later life.

Overall, Study I demonstrates that the time spent with parents during the passage to adulthood does indeed affect intergenerational relationships and that this impact may resurface even decades later. It represents the first assessment of long-term effects of coresidence, showing how experiences related to a previous transition were carried over into later family life. In sum, the empirical evidence painted a positive picture of extended

coresidence, revealing its potential to promote intergenerational solidarity across the life course.

Study II: "How Far Do Children Move? Spatial Distances After Leaving the Parental Home"

Classical work on the emergence of the isolated nuclear family (e.g., Parsons, 1943) claimed that forces of modernization and the associated rise in geographical mobility would disrupt extended family ties. The authors who later refuted this thesis (e.g., Litwak, 1960; Bengtson & Roberts, 1991) argued that *despite* the increase in young adults' geographical mobility, intergenerational ties were maintained through modern means of transportation and communication (Bucx, 2009). That is, the premise that adult children disconnect from parents at least geographically was not explicitly rejected. Still, empirical evidence indicated surprisingly high levels of geographical proximity – at least in later life. Studies that analyzed spatial distances in later parent-child relationships consistently found that in the vast majority of families, at least one adult child resided within one hour of travel time to parents (Hank, 2007). These findings were commonly interpreted as reflecting a latent form of solidarity and indicating the potential for intergenerational support when parents reach old age (e.g., Riley & Riley, 1993; Silverstein et al., 1997).

From a life course perspective, however, this assessment is truncated because it concentrates on spatial distances only in later periods of parent-child relationships, ignoring how previous transitions were associated with increases and decreases in geographical distance between the generations. In fact, all existing empirical studies on parent-child proximity set in after geographical distance has already been produced. Thus, the literature does not offer an answer to the simple question "How far do young adults move when they leave their parental home?" The basic notion that characteristics of earlier transitions have lasting consequences for family life, however, suggests that initial spatial distances may profoundly affect young adults and the relationships to their parents.

For example, even though establishing the first own household creates physical independence from parents, active parenting may extend beyond this transition and prolong young adults' dependency. If parents continue to assist nest-leavers in their daily routines, the process of separation might be delayed or even remain incomplete. Considering the

availability of localized services such as cooking and cleaning, it is obvious that spatial distance matters. Furthermore, spatial distances after leaving home may not only reflect the quality of previous relations to parents, but also condition their future development, pointing to subsequent opportunities to maintain contact, share activities, and exchange support.

In view of these connections, *Study II* investigated the spatial distances of young adults' initial move-outs. Geocoded data from 11 waves of the German Socio-Economic Panel Study allowed analyzing these distances for a sample of more than 2,000 young adults who left their parents' homes between the years 2000 and 2010. Moving distances were predicted by factors at individual, family, household, and community level. The results showed that home leavers moved across strikingly small distances with a median value of less than 10 kilometers. About three of four home leavers relocated within one hour of travel time to parents. One of four even remained within walking reach, not exceeding a distance of 2 kilometers. Somewhat greater distances were found for well-educated and childless home leavers who moved out at relatively young ages from high-income households located in less-urbanized regions. But even among those young adults, longer-distance move-outs were the exception rather than the rule. Further results of this study supported developmental models of migration, showing that young adults relocated closer to parental households that were still located at the place where they spent their childhood.

The contribution of this research is twofold. First, the study addressed an important gap in the empirical knowledge about parent-child relationships, namely the lack of information on the spatial distances of initial move-outs. Second, the study introduced spatial distance as an outcome worthy of theoretical import, showing how consideration of this dimension in analyses of leaving home advances the understanding of individual passages to adulthood and intergenerational relations across the life course. The results revealed a remarkable prevalence of short-distance moves, corroborating previous research that has consistently reported high levels of intergenerational proximity. A life course perspective further suggests that the majority of short-distance leavers will continue to reside close to their parents, pointing to the potential long-term importance of distances produced by children's initial departures and a considerable temporal stability of high parent-child proximity. In this respect, there are clear links between the findings of this study and those reported in Study I. Taken together, this evidence shows that timing and distance of move-outs are interrelated

dimensions in the process of home leaving, both setting the stage for intergenerational support exchange in later life.

Study III: "Family Events and the Timing of Intergenerational Transfers"

After leaving home, most young adults experience a series of further transitions within a relatively short period. These include critical life events such as labor market entry, marriage and family formation, as well as job loss and divorce. In recent decades, macro-level forces such as globalization have increased the uncertainty that young adults experience across this period (Blossfeld et al., 2005). Thus, young adults who establish their lives are likely to experience particularly challenging times including "transitions into and out of financial self-sufficiency" (Remle, 2011, p. 179). The idea of the extended family as a latent matrix of kin connections (Riley & Riley, 1993) suggests that parental support is especially forthcoming during this phase of intergenerational relationships. In other words, the transition to the "middle years" launches a particularly illustrative period to investigate how family support systems constantly adapt to changes in adult children's lives, offering assistance when need arises.

The most obvious, and certainly the most thoroughly studied, type of parental support are financial transfers. As noted earlier, there is a burgeoning literature on the determinants of these transmissions. Concerning the provision of transfers inter vivos (i.e., during the lifetime of both generations), one recurring theme in this line of research is that these resources are targeted at children who are in economic need (e.g., McGarry & Schoeni, 1997). From a life course perspective, such situations are associated with specific need-related events. If parents, for example, support their offspring in "getting a start in life", financial resources will most likely be transferred at events such as marriage or the birth of a child. Conversely, parents are also expected to help children through adverse transitions such as a divorce which often generates immediate economic need.

Although these connections between life events and the timing of intergenerational transfers are obvious, they have largely been neglected in studies of financial inter vivos transfers. This lack of research represents an important gap not only in the empirical knowledge about financial transfers in families but also from a theoretical perspective on parents' transfer behavior. Against this background, *Study III* aimed at extending previous

research in three main ways: First, it analyzed intergenerational wealth transmission from a life course perspective, exploring the linkages between adult children's life events and the timing of their parents' financial transfers. Second, the study examined how the transfer of different types of wealth was related to specific transitions in children's lives, allowing for both material and non-material meanings of transfers and considering the related qualities of intergenerational ties. Third, it tested new hypotheses about the relationship between transfer motives and transfer timing thus contributing to a better understanding of parental transfer behavior.

The empirical analysis was based on event history data collected retrospectively by the German Socio-Economic Panel Study. Piecewise-constant exponential models (Blossfeld et al., 2007) were used to study the effects of adult children's marriage, divorce, and childbirth on the receipt of large gifts from parents. The results showed increased chances of receiving gifts of real estate (i.e., house, land, condominium) at marriage and in subsequent years, at childbirth, but not in the event of divorce. Large monetary gifts (cash or bank deposits) were received in the years of marriage and divorce, but not at childbirth. These findings on the timing and types of transfers are clear evidence that parents responded readily to their children's acute economic need, supporting economists' models of altruism and the sociological notion of transfer behavior guided by norms of responsibility. The results, however, are also consistent with characteristics of intergenerational ties that reach beyond economic need, pointing to a plurality of motives and meanings for parents, adult children, and their relationships.

This research contributes to the study of intergenerational ties by offering the first systematic analysis of the relationship between family events in adult children's lives and the timing and types of their parents' financial transfers. The study showed that considering this information advances the understanding of parents' transfer behavior. Overall, the empirical results provide a powerful illustration of how the support potential that lies dormant in intergenerational ties is activated in times of need and how the timing and type of assistance is adaptive to transitions in children's lives.

Study IV: "Short-Term Reciprocity in Late Parent-Child Relationships"

Moving on to later periods of intergenerational relationships, *Study IV* turns the tables to examine adult children as a safety net for their elderly parents. Current and projected demographic shifts have raised concerns about capacity of the younger generations to meet the needs of the ageing baby boomers. A growing need for parental care will be accompanied by a shortage of children as potential providers (Bengtson et al., 2003). This weakening of elderly parents' safety nets increases the pressure on those adult children who respond to their need. How do late parent-child relationships develop under conditions of higher need, dependency, and burden? Will the coming decades perhaps witness a decline in filial commitment?

According to previous research on reciprocity in parent-child relationships, the answer to the latter question is probably no. As described earlier, this line of inquiry posits that adult children's supportive behavior is governed by a norm that demands repayment of the benefits received in previous life. In this regard, the vast majority of adult children are undoubtedly "net receivers" of intergenerational support, even when the parenting years are disregarded. Consequently, adult children's provision of care is unlikely to erode if it is rooted in a stable and reliable norm that obligates repayment of these debts at the end of parents' lives. This idea of long-term reciprocity assumes that parents and adult children maintain ongoing accounts of the amount of support given and received and that indebtedness is balanced only in the long run, with time scales of repayment being many years. Gerontological research, however, has consistently found that it is psychologically straining for dependent elders to receive permanently without giving back (e.g., Lee, 1985). In fact, burdening their children is one of the prime fears of the elderly. Thus, even if they enjoy a large surplus of benefits given to children earlier, continuous receiving at later times of frailty may still evoke unpleasant feelings of dependency.

Based on these considerations, *Study IV* proposed short-term reciprocity as an arrangement of supportive exchange between the generations that eases the burden of late parent-child relationships. In contrast to previous accounts, the study argues that parent-child reciprocity does not only operate longitudinally, but also in the short term. The concept of short-term reciprocity pertains to situations that Lüscher and Pillemer (1998) have characterized as ambivalent: Adult children who care for their parents experience

simultaneous feelings of solidarity and distress. Conversely, elderly parents enjoy support from their adult children but at the same time fear to overburden them. If dependent parents, however, participate actively in the intergenerational support exchange, they may alleviate feelings of dependency, display autonomy, and preserve self-esteem. By supporting their children concurrently, they either repay benefits received or initiate reciprocal support exchange in the short term. Thus, short-term reciprocity can be viewed as means to relieve the ambivalence of late parent-child relationships, easing the burden of both parties. With regard to transfer currencies, the concept posits that frail parents who receive care rely primarily on financial transfers as own contributions.

The empirical analysis of short-term reciprocity in Study IV focused on concurrent exchange in these upward and downward currencies, time and money. Fixed-effects models with data from the Survey of Health, Ageing and Retirement in Europe revealed that within a family, parents gave financial transfers to those children who supported them with time transfers of help and care. As predicted, this reciprocal pattern emerged most clearly if parents were highly dependent, received intense support, and had sufficient financial opportunities to reciprocate. Overall, these results provided strong evidence in support of the concept, suggesting that short-term reciprocity represents an intergenerational transfer arrangement that relieves ambivalence and eases burden in late parent-child relationships.

The main contribution of Study IV is introducing and testing a new model of transfer behavior within families. It advances the understanding of intergenerational exchange, suggesting that parent-child reciprocity entails two corresponding patterns, long-term and short-term. Importantly, this concept makes sense of previous empirical findings on concurrent exchange which, in the absence of a theoretical model to guide the analysis, remained largely inconclusive (e.g., Brandt et al., 2008; Grundy, 2005; McGarry & Schoeni, 1997). In this respect, Study IV demonstrated the analytical benefits of family fixed-effects models, showing that although short-term reciprocity implies concurrent exchange, it cannot be identified by simply observing contemporaneous giving and receiving of intergenerational transfers. Furthermore, the concept of short-term reciprocity contributes to the developing line of research on intergenerational ambivalence. By proposing a specific link between ambivalence and transfer behavior, it addresses a call for research articulated in

the scholarly debate on the use of solidarity and ambivalence as guiding frameworks in the study of intergenerational relationships (Bengtson et al., 2002).

From a policy perspective, this study's findings point to the importance of parental cash holdings in late life. One possible implication is that pension cuts, for instance, may entail deleterious effects on the quality of late parent-child relationships, depriving the elderly of the opportunity to participate actively in the intergenerational exchange of functional support. Finally, it is important to note that understanding the motivation behind intergenerational transfer behavior enables predicting how families might respond to changing conditions. In this respect, short-term reciprocity can be expected to become more prevalent under future demographic conditions of increasing need, dependency, and burden in late parent-child relationships.

Study V: "The Temporal Structure of Intergenerational Exchange: A Within-Family Analysis of Parent-Child Reciprocity"

The final study is a follow-up to the previous investigation which had suggested that parent-child reciprocity operates both long-term and short-term. *Study V* attempted to integrate both dimensions into a common conceptual framework of support exchange in families. This framework built on a within-family perspective which had informed previous analyses both of long-term and short-term reciprocity.

In a widely-cited study, Henretta et al. (1997) argued that long-term reciprocity influences the selection of a caregiver among adult children. The authors claimed that children who had previously received more financial assistance from parents than their siblings were more likely to provide help and care in later life. This influence appeared to be substantial: In terms of effect size, previous parental transfers were almost as important as the child's gender in predicting a child's propensity to provide assistance. The analysis of short-term reciprocity in Study IV had also focused on differences between siblings, showing that children who provided care doubled their odds of receiving concurrent financial support from the parent. Instead of conditioning a child's selection into parental care, however, short-term reciprocity was assumed to ease a caregiving relationship that already existed.

Taken together, these considerations suggest a sequential interdependence of long-term and short-term reciprocity across the family life course, involving (long-term) selection and

(short-term) disburdening of caregiving relationships within families. This idea reflects a basic tenet of the life course perspective, linking past to present exchange: As parent-child relationships accumulate a history of interdependent transfers, their late characteristics are likely to be shaped by the incidence and quality of earlier transactions (e.g., Molm & Cook, 1995). Furthermore, a within-family perspective requires that characteristics of a parent-child dyad must be assessed relative to other dyads within the family. For that reason, Study V introduced the model of "intra-generational orientation on equivalence", proposing that reciprocal obligations of a child are interpreted and negotiated relative to those of siblings.

The empirical investigation was based on within-family fixed-effects models using data from the Asset and Health Dynamics Among the Oldest Old (AHEAD) study. The analysis proceeded in three steps: first, it replicated Henretta and colleagues' study on long-term reciprocity; second, it tested whether the AHEAD data supported the concept of short-term reciprocity; third, it examined the linkage between both dimensions of reciprocity. The key predictor variables were two measures of downward financial transfers referring to longer (past 10 years) and shorter (past 12 months) recall periods.

The empirical results did not support the idea of a sequential linkage between long-term and short-term reciprocity. Most importantly, the findings suggested that long-term reciprocity did not condition a child's selection into intense transfers of hands-on caregiving, but rather less time-consuming transfers of practical help. In contrast, short-term reciprocity was related to children's intense support, as predicted by the model. Thus, no evidence was found in support of a linkage between both dimensions of parent-child reciprocity. Instead, the findings indicated that the temporal structure of exchange is distinctly related to the intensity of children's time transfers. The finding that long-term reciprocity selected helpers rather than caregivers is consistent with an intra-generational orientation on equivalence: Children did not repay proportionally to prior parental investments. Instead, they appeared to balance their intergenerational support accounts relative to those of their siblings.

In an attempt to integrate previous research on parent-child reciprocity, Study V contributes to understanding how mutual support in families operates. Revisiting a past investigation (Henretta et al., 1997) yielded a critical qualification to previous conclusions. Namely, earlier parental transfers were repaid in the form of practical help, but not care. The latter is an important analytical distinction in view of the potentially far-reaching social,

mental, and physical consequences of intergenerational caregiving that do not apply equally to transfers of practical help (Robison et al., 2009). Furthermore, by proposing a model of intra-generational orientation on equivalence, the study offered a possible explanation for the empirical patterns observed and contributed to the developing line of research from a within-family perspective. Overall, the findings suggest that future studies of supportive exchange in families should focus more directly on internal negotiations among siblings, in particular with regard to intergenerational caregiving.

SUMMARY

Four analytical principles called for a comprehensive life course perspective on intergenerational ties, covering multiple actors within families, considering the complexity of their relationships, investigating the mechanisms that govern their supportive behavior, and attempting to specify the conditions under which a particular model of behavior operates. These principles constituted the basic conceptual framework of the five studies contained in this dissertation. Consequently, the studies examined multiple transitions across the family life course, from leaving home to parental caregiving, thus covering and linking early (Study 1, Study 2), middle (Study 3), and late (Study 1, Study 4, Study 5) periods of the relationships between parents and adult children; they used longitudinal designs to analyze event history and panel data as well as cross-sectional fixed-effects designs to compare siblings within families; and they were informed by a wide range of theoretical approaches including the solidarity typology, the concept of intergenerational ambivalence, and different models of transfer behavior. The studies were all ultimately concerned with the linked lives of parents and their adult children, focusing on manifest relational and behavioral outcomes including intergenerational proximity, contact, time transfers, and financial transfers.

The overarching goals of this series of studies were to enrich the theoretical models guiding the study of intergenerational relationships, to advance the understanding of supportive behavior within families, and to close important gaps in the empirical literature by analyzing multiple linkages across the shared lifetime of parents and their adult children. Table 1 provides a concluding overview of each study's specific contributions with regard to the four analytical principles of research on intergenerational relationships.

Table 1: *Overview of the Five Studies*

	Complexity	Models of Behavior	Family Context	Life Course Perspective
Study 1 *The Legacy of Leaving Home*	Joint analysis of three dimensions of solidarity (structure, association, and function) and their early-life antecedents		Linear and logistic fixed-effects models comparing home leavers within families	Linking previous experiences of coresidence and leaving home to intergenerational solidarity in later life
Study 2 *How Far Do Children Move?*		Individual-, family-, and community-level determinants of initial residential decisions	Multiple family and household factors predicting subsequent distances of move-outs	Longitudinal analyses using 11 waves of panel data; discussion of life-course implications of initial distances
Study 3 *Family Events and the Timing of Intergenerational Transfers*	Tests for a plurality of parents' transfer motives	Timing and type of transfers as indicators of motives		Analysis of adult children's life transitions and parents' functional res-ponse across the "middle years" of their relationships
Study 4 *Short-Term Reciprocity in Late Parent-Child Relationships*	Study of the link between ambivalence and supportive exchange in late parent-child relationships	Concept of short-term reciprocity as a transfer arrangement that eases burden in late parent-child relationships	Logistic fixed-effects models comparing the odds of giving and concurrent receiving between siblings	
Study 5 *The Temporal Structure of Intergenerational Exchange*		Common framework of support exchange within families; concept of siblings' intra-generational orientation on equivalence	Logistic fixed-effects models comparing the odds of current giving and earlier and concurrent receiving between siblings	Joint investigation of two temporal dimensions of reciprocity examining the linkage between earlier and later patterns of intergenerational exchange

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Study I

The Legacy of Leaving Home: Long-Term Effects of Coresidence on Parent-Child Relationships

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INTRODUCTION

The literature provides a fairly comprehensive understanding of parent – child coresidence as well as of the timing and pathways out of the parental home. Far less is known, however, about the long-term consequences of this transition. Most notably, there is an absence of research on the consequences of coresidence for parent – child relations in later life, although previous experiences are likely to set the stage for subsequent solidarity between the generations. For example, off-schedule departures that violate cultural norms around the "right" time to leave home may adversely affect the quality of parent – child relations. But the time young adults spend in the parental home may also strengthen intergenerational solidarity in later life. For instance, extended coresidence may promote later awareness of each other's needs or constitute an obligation for children to reciprocate in the long term.

In view of these connections, it appears worthwhile to include information on transitions out of the parental home into the analysis of intergenerational relations in aging families. In this study, I examined how early, "on-time," and late leavers differed with respect to intergenerational proximity, contact frequency, and support exchange in later life. A life course perspective was particularly well suited to guide this research: One of its basic tenets is that previous transitions are linked to outcomes in later life. Therefore, this perspective provided a lens through which to view how the experience of intergenerational coresidence and leaving home was carried over into late parent – child relationships. A life course perspective also emphasizes the importance of the sociohistorical and family context in shaping the meanings attached to life transitions. In keeping with this principle, my research design included within-culture, within-cohort, and within-family controls. I used pooled data from two waves (2004/05 and 2006/07) of the Survey of Health, Ageing and Retirement in Europe (SHARE)[1], comprising respondents from 14 European countries and Israel.

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BACKGROUND

A large body of literature suggests that an adverse family climate promotes early home leaving (e.g., Goldscheider & Goldscheider, 1999). In this sense, any influence of the time spent in the parental home on later parent – child relations may be attributable to pure selection effects; that is, problematic parent – child relations are carried over into later life, producing a spurious correlation between early departures and lower levels of intergenerational solidarity in aging families. Whereas early leavers are undoubtedly selected on the quality of relations with the parents, it appears unlikely that the reverse is true for late home leaving. Ward and Spitze (2007), for example, analyzed U.S. panel data and found that harmonious ties to parents did not predict coresidence at a later wave.

I argue that the duration of coresidence has an idiosyncratic influence on parent – child relations and is therefore more than a proxy for previous family climate, at least where late home leaving is concerned. With regard to "late" departures, it is important to note that age norms attached to life transitions are socially created within a specific cultural and historical setting (Hagestad & Neugarten, 1985). Thus, expectations concerning the appropriate time to leave home may vary considerably across countries and cohorts. In this article, the term *late leaver* refers to individuals who left their parental home at an advanced age *relative* to the sociohistorical context in which the transition occurred. Because I did not consider instances of home returning, the age at which one leaves home refers to the final move-out.

Concerning the long-term effects of late home leaving on parent – child relations, life course considerations suggest two contrasting views, both of which follow the basic notion that previous experiences have lasting consequences for family life. The first is in line with popular accounts that portray late leavers as "greedy and lazy children" (Mitchell, 2006, p. 86). This negative picture is consistent with classical life course theory, which predicts adverse outcomes if children are off schedule in their passage to adulthood: Late leavers violate cultural expectations, signaling failure in their transition to an adult role and even dysfunction of their family as a whole (Parsons, 1949). Extended coresidence may thus be experienced as increasingly burdensome, interfering with parents' and children's preferences and disrupting other relationships and activities (see Ward & Spitze, 1992). Empirical research on intergenerational coresidence suggests that such adverse effects on relations to parents transpire only if children remain too dependent and are unable to achieve an adult

status (White, 1994; White & Rogers, 1997). Thus, it appears that negative implications of extended coresidence may pertain only to the latest leavers. In other words, young adults who move regularly toward independence are unlikely to be among the latest leavers. Very late departures, however, are likely to signal difficulties in completing the passage to adulthood, which in turn may entail detrimental effects on the quality of relations to parents. Research on family relationships over time has demonstrated that changes brought about by developmental transitions possibly extend into later life (e.g., Elder, Caspi, & Downey, 1986). Considering the constructs examined in this study, such negative long-term effects may be reflected in lower levels of intergenerational contact and support provided to parents. Another possible implication is that children's lack of autonomy is carried over into later life, increasing the chance that they continue to rely on parental assistance.

A second, more positive view of extended coresidence emphasizes its potential to strengthen intergenerational bonds and promote solidarity in later life. One idea that has been advanced in the literature is that the investment of parental resources throughout previous family life represents a deposit in a "support bank" (Antonucci & Jackson, 1990); that is, parental investments in the course of extended coresidence build a sense of obligation in adult children. According to the principle of long-term reciprocity, late leavers may later assist their aging parents in order to balance intergenerational support accounts in a longitudinal fashion across the life course (Silverstein, Conroy, Wang, Giarrusso, & Bengtson, 2002). As Mitchell (2006) noted,

> Young adult coresiders may want to provide more help to parents in later life (…) than non-coresiders in an attempt to "repay" parents for providing them with a home base and burdening them with extra household responsibilities in their time of need. (p. 88)

This motive should pertain particularly to the latest leavers who benefited most extensively from a "feathered nest" and accumulated the largest support debt. If extended coresidence represents a debt to be repaid, I would expect that the latest leavers provide more support to their parents in later life than early or on-time leavers.

A related idea is to assume a bidirectional exposure effect; that is, extended coresidence not only obligates late leavers to reciprocate but also entails mutual socialization processes that promote feelings of responsibility in both generations. As a result, parents and children may monitor each other more closely and respond more readily to situations of need in later

life (Mitchell, 2006). If extended coresidence promotes mutual feelings of responsibility, I would expect to observe higher levels of intergenerational contact in later life, accompanied by an increase of support in both directions.

Finally, I propose geographical distance as an additional pathway that is likely to mediate the relationship between age at leaving home and later relations to parents. As a component of the structural dimension in the typology of intergenerational solidarity (Bengtson & Roberts, 1991), parent – child proximity reflects opportunities for contact and support exchange. A recent study suggested that timing and distance of move-outs are interrelated dimensions in the process of home leaving: Younger leavers moved across greater distances, whereas those who left later relocated closer to their parental home (Leopold, Geissler, & Pink, 2011). With respect to the above discussion, this evidence may point to late leavers' continued dependency, but beyond the family sphere it is also consistent with developmental models of migration that posit that a long duration of residence increases the emotional attachment to a region and facilitates access to its resources, such as the job and marriage market. In any case, if late leavers live closer to their parents in later life, proximity may mediate other dimensions of intergenerational relations, such as frequency of contact and exchange of support.

In the empirical analyses, I controlled for a number of aspects that have been found to be associated with the key independent variable, age at leaving home, and one or more of the outcomes: intergenerational contact, support exchange, and proximity. A prominent factor is the gender of the child: Daughters not only leave home earlier than sons (Billari, Philipov, & Baizán, 2001), but they also maintain more frequent contact (Hank, 2007) and exchange more functional support (Rossi & Rossi, 1990) with their older parents. Further important covariates are family-related factors, such as the birth order of adult children (Sulloway, 1996) and the presence of grandchildren (Hank & Buber, 2009), as well as measures of marital status (Leopold & Schneider, 2011), education, and labor market activity (Sarkisian & Gerstel, 2004) as indicators for a child's need, opportunities, and time constraints.

METHOD

Data and Sample

I used data from SHARE (Börsch-Supan et al., 2005), a large-scale panel study representative of the population age 50 and over in 14 European countries (Austria, Belgium, Czech Republic, Denmark, France, Germany, Greece, Ireland, Italy, The Netherlands, Poland, Spain, Sweden, Switzerland) and Israel. There are three main reasons why the SHARE data were particularly well suited to address my research questions. First, these data offer comprehensive information on up to four children per family, including parents' retrospective reports on their offspring's age at leaving home. Second, the nested data structure (i.e., children within families) allowed me to control for shared family characteristics (see *Models* section). Third, the SHARE sample was large enough to apply a number of important restrictions. For the purpose of the present study, the latter points represented significant benefits in dealing with early and late leavers' potential self-selection on the quality of family relations.

My original sample consisted of 27,355 family respondents (henceforth *families*), including all individuals who entered SHARE in Wave 1 (2004 – 2005) or Wave 2 (2006 – 2007) and reported on living children at the time of the interview. I selected the analytic sample as follows. First, I constrained my sample to families who had between two and four children ($N = 19{,}967$). The minimum number of two children per family was necessary to estimate fixed-effects models. Because this analytical strategy focuses on explaining differences between siblings, at least two children were required to examine within-family variation. The upper bound was defined by the SHARE survey instrument because detailed information about children's characteristics was not collected above the parity of four. Second, estimates of within-family variation in the age at leaving home could be obtained only if this information was available for every child in a family. Therefore, I excluded all families ($N = 6{,}935$) that reported on children who never left their parental home.

Third, I removed another 3,161 families in which the last move-out of a child occurred less than 5 years before the interview date. This sample restriction served two purposes. First, it addressed one of the main ideas behind this research, namely, to study how previous experiences are linked to outcomes in later life. In this respect, introducing a 5-year interval

allowed me to capture longer term effects of previous coresidence on later parent – child relations. Second, this interval reduced unwarranted heterogeneity between siblings by excluding very recent transitions out of the parental home. Because the latter are typically followed by periods in which children establish own families and careers, they were not consistent with this study's focus on outcomes in aging families.

In a fourth step, I restricted the remaining sample to families without outliers or implausible values on the key predictor variable, children's age at leaving home. I removed all families in which at least one child stayed less than 15 years (N = 1,133) or more than 49 years (N = 26) in the reporting parents' households. The benefits of these exclusions were not only that extreme cases of extended coresidence were eliminated but also that they remedied, at least to some extent, the potential bias introduced by early departures that were most likely associated with family disruption. I further addressed the latter problem by a fifth sample restriction, removing all families (N = 679) that included at least one nonbiological (i.e., step-, foster, or adopted) child. In these families, the SHARE data did not allow one to determine clearly how long each child had coresided with the parents and how long each child had been exposed to a stepfamily. Step 6 of the sample selection removed families (N = 1,151) in which at least one child resided outside a geographical distance of 500 km (311 miles) to the responding parent. This restriction was aimed at ensuring that each child had the opportunity to be a provider or receiver of instrumental support. It also allowed me to generate a linear measure of geographical distance (see Table 1).

Another sample restriction was necessary to adequately deal with the historical and cross-national variation of the key predictor variable, children's age at leaving home. I excluded families in which at least one child was born before 1950 (N = 714) because case numbers in the SHARE data were not sufficient to reasonably compute cohort- and country-specific quintiles of coresidence duration (see *Measures* section). Finally, I removed 50 families with missing data on any of the control variables used in the analysis. After all restrictions, the analytic sample consisted of 6,118 families, comprising 14,739 parent – child dyads. Compared with the original sample, the analytic sample had a very similar proportion of family respondents who were male (44% vs. 45% in the original sample), single (both 31%), and reported on health problems (both 45%). The average number of children was slightly lower in the analytic sample (2.4 vs. 2.5). Because I removed families with coresident

children as well as those in which the last child left home less than 5 years ago, the mean age of family respondents (67.6 vs. 64.9) and of children (40.1 vs. 36.0) was considerably higher in the analytic sample. I tested the robustness of the multivariate findings using a less restricted sample (N = 11,296 families), excluding only families that had missing data on any of the variables used in the analysis. All effects of age at leaving home that I report in the multivariate analysis were robust.

Measures

The data in Table 1 present a descriptive overview of all variables used in the analysis as well as background information on the responding parents. I estimated two linear and three binary outcomes. The linear outcomes, geographical distance and contact frequency, were generated by coding schemes that maximized the information available in the data: I replaced original data on geographical distances by their interval means and original responses of contact frequency by a measure of days per year (see Table 1).

The remaining three outcomes pertained to support exchange. The first measured whether a non-coresident adult child had provided time transfers, such as paperwork assistance (e.g., filling out forms, settling financial or legal matters) and/or household help (e.g., home repairs, gardening, transportation, shopping, household chores) to the responding parent or his or her spouse within the past year. Note that this indicator was restricted to transfers of practical help. I did not consider personal care because other research based on SHARE data has shown that intergenerational caregiving corresponded to different determinants and should be analyzed separately (Brandt, Haberkern, & Szydlik, 2009). In my sample, however, the low prevalence of caregiving to parents (provided in less than 1% of all dyads) did not permit separate analyses. The measure of downward (i.e., parent-to-child) time transfers counted not only the types of practical help mentioned above but also providing care for grandchildren. Finally, I used an indicator variable for whether the parent had given a cash transfer of €250 or more to an adult child in the past year. I included no outcome measure for upward financial assistance because children barely provided such support in my sample (less than 2% of children).

Table 1. *Variables and Descriptive Statistics (N = 6,118 Respondents; N =14,739 Parent-Child Dyads)*

	M	*SD*	*Range*	Description
Characteristics of respondents				
Age	67.59	7.87	48 – 96	
Male	.44		0 – 1	
No. children	2.41	.63	2 – 4	Sample restricted to the range of 2 – 4 children
Single living	.31		0 – 1	1 = *parent was living as a single at the interview*
Health problems	.45		0 – 1	1 = *parent reported limitations in usual activities because of health problems*
Characteristics of children				
Age at leaving home	22.53	4.11	15 – 47	Calculated from parents' retrospective reports on the year in which a child left home
Age	40.10	7.09	20 – 57	
Male	.49		0 – 1	
Married	.67		0 – 1	1 = *child was married and living together with the spouse*; 0 = *child was single, living separated from the spouse, divorced, or widowed*
Young child	.26		0 – 1	1 = *child had own child <7 years*
Older child	.50		0 – 1	1 = *child had own child ≥7 years*
Employed full time	.67		0 – 1	1 = *child worked full time*
High education	.34		0 – 1	1 = *child had at least some post secondary education (ISCED >4)*
Last born	.42		0 – 1	1 = *youngest child in a family*
Characteristics of parent – child relations				
Distance (km)[a]	58.35	99.88	0 – 300	Geographical distance to the responding parent's household *In the same building* = 0 *Less than 1 km away* = 0.5 *1 – 5 km away* = 3 *5 – 25 km away* = 15 *25 – 100 km away* = 62.5 *100 – 500 km away* = 300
Contact (no. days)	180.53	131.49	0 – 365	Contact with the responding parent or his or her husband/wife/partner, either personally, by phone or mail *Never* = 0 *Less than once a month* = 6 *About once a month* = 12 *About every 2 weeks* = 26 *About once a week* = 52 *Several times a week* = 182.5 *Daily* = 365
Support: Child to parent (time)	.10		0 – 1	Practical household help or paperwork assistance given to the responding parent or his or her husband/wife/partner within the past year (1 = *yes*)
Support: Parent to child (time)	.33		0 – 1	Looking after grandchildren and/or providing practical household help or paperwork assistance to a child within the past year (1 = *yes*)
Support: Parent to child (cash)	.15		0 – 1	Cash transfer of at least €250 (~325 USD) given to a child within the past year (1 = *yes*)

Note: Data are from SHARE Waves 1 and 2, Release 2.5.0, unweighted. Respondents represent families with two to four non-coresident biological children who left home at least 5 years ago and lived less than 500 km (311 miles) from parents. ISCED = International Standard Classification of Education. [a]1 km ≈ 0.621 miles.

Table 2. *Characteristics of Children and Parent – Child Relations in 15 Countries (N = 14,739)*

	AT	DE	SE	NL	SP	IT	FR	DK	GR	CH	BE	IL	CZ	PL	IE	Total
Child characteristics																
Age at leaving home	22.24	22.51	20.25	21.96	25.24	26.08	22.41	19.92	23.87	22.11	23.52	22.11	23.22	24.06	22.71	22.53
Age	39.53	39.78	38.62	38.41	41.28	41.97	39.97	38.80	41.97	39.99	41.01	40.66	41.24	42.60	39.26	40.10
Male	.46	.50	.52	.50	.51	.50	.50	.49	.45	.47	.49	.50	.49	.44	.46	.49
Married	.61	.63	.45	.66	.87	.88	.62	.53	.81	.59	.69	.82	.75	.89	.66	.67
Has young child	.20	.18	.31	.33	.32	.26	.31	.31	.20	.21	.25	.39	.19	.17	.26	.26
Has older child	.50	.48	.42	.34	.56	.59	.46	.41	.63	.40	.56	.48	.68	.75	.38	.50
Employed full time	.70	.66	.68	.61	.69	.57	.74	.73	.59	.55	.65	.69	.77	.67	.64	.67
High education[a]	.37	.37	.33	.38	.24	.12	.39	.49	.26	.14	.48	.51	.16	.20	.63	.34
Last born	.43	.43	.43	.42	.43	.42	.42	.43	.45	.42	.40	.39	.46	.42	.35	.42
Parent – child relations																
Distance (km)[b]	66.66	73.52	81.44	58.91	39.62	27.47	65.27	81.11	46.03	62.94	30.61	62.35	42.36	39.52	90.45	58.35
Contact (days per year)	145.63	149.38	169.09	167.45	249.37	256.72	159.79	157.85	281.75	132.61	173.19	236.69	159.48	178.20	209.91	180.53
Parent received time transfer	.08	.13	.08	.06	.05	.06	.06	.10	.15	.07	.08	.08	.23	.09	.05	.10
Parent gave time transfer	.26	.27	.39	.37	.32	.30	.35	.43	.27	.30	.40	.26	.27	.22	.34	.33
Parent gave cash transfer	.18	.14	.22	.14	.04	.11	.13	.19	.10	.11	.14	.23	.11	.12	.06	.15
No. dyads	703	1,339	1,456	1,768	445	749	1,079	1,382	903	709	1,498	775	1,090	624	219	14,739

Note: Data are from SHARE Waves 1 and 2, Release 2.5.0, unweighted. Dyads represent parents and two to four non-coresident biological children who left home at least 5 years ago and lived less than 500 km (311 miles) from parents (N = 14,739). See Table 1 for details on the variables. AT = Austria; DE = Germany; SE = Sweden; NL = The Netherlands; SP = Spain; IT = Italy; FR = France; DK = Denmark; GR = Greece; CH = Switzerland; BE = Belgium; IL = Israel; CZ = Czech Republic; PL = Poland; IE = Ireland. [a]ISCED Level 4 or higher. [b]1 km ≈ 0.621 miles.

My key predictor variable, children's age at leaving home, was based on the following retrospective survey question: "In which year did [child's name] move from the parental household?" Parents were asked to count the last move-out, allowing for prior instances of home returning. This measure ranged from age 15 to 47 across the entire sample, averaging at 22.5 years. Of course, many characteristics of families and parent – child dyads varied considerably between the countries included in the sample. The data in Table 2 illustrate cross-country variation in all variables that were later introduced in the multivariate models.

For the present study, the most important aspect of cross-country variation was the diversity in the transition to adulthood. The countries represented in the sample were very heterogeneous with respect to a complex set of institutional and cultural factors, including characteristics of employment, family, and housing policy as well as cultural prescriptions regarding the appropriate time to leave home (Billari, 2004). As a result, there is also considerable variation in the social context associated with the transition out of the parental home. In southern Europe, for example, comparatively few children leave home before completing their education and entering their first union, whereas this is quite common in Nordic countries (Billari et al., 2001). This diversity is also reflected in the timing of transitions: Whereas departures past the age of 25 are extremely rare in northern Europe (quite similar to North America), they are considered perfectly normal in Italy, Spain, and Greece. Accordingly, the analytic sample revealed marked differences in children's mean age at leaving home, ranging from 19.9 in Denmark to 26.1 in Italy. These numbers were in line with results from a recent study that used an unconstrained sample of SHARE respondents (Angelini, Laferrère, & Pasini, 2011).

From a life course perspective, it was critical to assess which age of leaving home was "off schedule" and may thus have interfered with prevailing age norms, possibly straining parent – child relations or, alternatively, reflecting a support arrangement of an unusually long duration that may have obligated children to repay in later life. Obviously, this assessment had to be carried out relative to the specific sociohistorical context in which a transition took place. Apart from the considerable cross-country differences, it was important to allow for changes across cohorts. As Settersten (1998) noted, the "historical time in which one reaches adulthood, and the conditions associated with that time, are likely to play a significant role in (…) determining life-course experiences" (p. 1384). On the basis of these

considerations, I proceeded as follows to capture the sociohistorical context of home-leaving transitions. First, I constructed three birth cohorts of children (1950 – 1959, 1960 – 1969, and 1970 – 1979). Second, I defined five categories representing (a) earliest, (b) early, (c) average, (d) late, and (e) latest leavers. Because my sample represented a population selected on the basis of specific analytical reasons, whereas cultural prescriptions of what constitutes a typical or an atypical transition should instead be reflected in a country's general population, I took advantage of SHARE's large and representative samples of each country to specify these categories. On the basis of the entire SHARE sample of parent – child dyads (N = 54,571), I defined the process of leaving home starting at age 15 and censored (a) at the coresiding child's age at the interview or (b) at the age of 49 and estimated survivor functions of leaving home separately for each of the three cohorts within each country. From these functions, I computed quintiles of survival times that were matched to my sample with the corresponding country- and cohort-specific values assigned to each child. These quintiles represented my key predictors of later parent – child relations, indicating for each child whether he or she had left home very early (within the first quintile of cohort- and country-specific survival times), early (second quintile), on average (third quintile), late (fourth quintile), or very late (fifth quintile).

In Table 3 I present the quintiles for a number of selected countries, covering different geographical regions. These countries illustrate not only cross-country variation in the timing of leaving home but also different patterns of change across cohorts, including continuity (e.g., Denmark), moderate increase (France, Israel, Czech Republic), and more complex patterns, such as in Spain, where an increase in the first and second quintile was accompanied by a marked decrease in the upper quintile.

Models

In the multivariate analysis, I adopted a fixed-effects approach, using linear and conditional logit models to obtain within-family estimates of the effect of age at leaving home on parent – child relations in later life. As noted in the BACKGROUND section, a predominantly adverse or supportive family environment in previous life has an impact on the timing of leaving home and is also likely to be reflected in the quality of later parent – child relations. One analytical approach would be to simply treat the age at leaving home as a correlate, broadly

indicating how previous family climate was carried over into later life. My theoretical considerations, however, suggested a number of pathways by which the duration of coresidence itself may affect later parent – child relations.

Table 3. *Quintiles of Age at Leaving Home in Selected Countries (N = 54, 571 Parent – Child Dyads)*

	Quintiles of Survival Time			
	20%	40%	60%	80%
Denmark				
Birth cohorts 1950 – 59	18	19	20	22
1960 – 69	18	19	20	22
1970 – 79	18	19	20	22
France				
Birth cohorts 1950 – 59	19	21	22	25
1960 – 69	19	21	23	26
1970 – 79	20	22	24	26
Greece				
Birth cohorts 1950 – 59	19	22	25	30
1960 – 69	20	23	27	33
1970 – 79	23	27	30	36
Spain				
Birth cohorts 1950 – 59	22	25	29	39
1960 – 69	23	26	29	35
1970 – 79	24	27	29	33
Israel				
Birth cohorts 1950 – 59	20	22	24	28
1960 – 69	20	22	24	29
1970 – 79	21	23	26	30
Czech Republic				
Birth cohorts 1950 – 59	20	22	25	29
1960 – 69	20	22	24	29
1970 – 79	21	23	25	30

Note: Data are from SHARE Waves 1 and 2, Release 2.5.0,, unweighted. Survivor functions were calculated separately for each birth cohort within each country using an unrestricted sample. Process time started at age 15 and was censored at the interview or at age 49.

To estimate such effects, it was important to address the problem of selectivity. Concerning previous family conflict, I had already excluded individuals who had been exposed to parents' marital disruption and/or stepfamilies during childhood and adolescence. Even after these restrictions, however, it remained likely that families still differed considerably with regard to adverse or intimate and supportive relations during children's passages to adulthood. In this respect, the main idea pertaining to the use of fixed-effects models was that family climate in previous life represented a factor that all family members shared. In

fixed-effects models, all characteristics (both observed and unobserved) that are constant within a family drop out of the estimation equation and therefore do not affect the estimates. As a result, adverse family relations as well as a shared family culture of mutual support are rendered inconsequential. A further benefit of fixed-effects models is that they do not treat parent – child relations as isolated dyads but allow considering the experiences of other children. As Suitor and Pillemer (2000) argued, a "child's normative transitions, *relative to those of other children in the family*, will also affect the quality of parent–adult child relations" (p. 108). Family fixed-effects models correspond well to this idea, focusing on differences between siblings. Because this analytical strategy explains variation within families, fixed-effects models require at least two children per respondent (for a detailed account, see Henretta, Hill, Li, Soldo, & Wolf, 1997).

RESULTS

Descriptive Results

In Table 4 I present descriptive statistics regarding the outcomes and controls separately for each quintile of age at leaving home. Geographical distance to parents decreased markedly across the quintiles, from an average of 74 km (46 miles) for the earliest leavers to 42 km (26 miles) among the latest leavers. A similar pattern was observed for the frequency of contact with parents. Those who left earliest had an average of 172 days per year of parental contact—approximately 21 fewer days than the latest leavers. Compared with geographical distance, however, these differences were less pronounced, and no clear gradient was observed across the second, third, and fourth quintiles. Late leavers and latest leavers provided more practical help to parents, but they were also more frequently on the receiving end of parental time transfers. In contrast, the highest proportion of financial transfer receipt was found among the earliest leavers. The distribution of the controls across the five quintiles indicates that sons were clearly overrepresented among the late and latest leavers, whereas daughters represented the majority of earliest and early departures from the parental home.

Table 4. *Means of Variables by Quintiles of Leaving Home (N = 14,739)*

Variables	Country- and Cohort-Specific Quintiles of Age at Leaving Home					
	1st (Earliest)	2nd (Early)	3rd (Average)	4th (Late)	5th (Latest)	Total
Outcomes (parent – child relations)						
Distance (km)[a]	74.05	57.78	52.11	49.25	42.40	58.35
Contact (days per year)	171.95	182.27	179.72	186.76	193.06	180.53
Parent received time transfer	.09	.09	.09	.12	.12	.10
Parent gave time transfer	.31	.32	.33	.36	.35	.33
Parent gave cash transfer	.16	.15	.14	.14	.13	.15
Controls (child characteristics)						
Age	39.15	39.60	40.57	40.91	41.72	40.10
Male	.36	.44	.54	.61	.68	.49
Married	.63	.71	.70	.70	.59	.67
Has young child	.24	.26	.25	.31	.30	.26
Has older child	.52	.52	.52	.45	.39	.50
Employed full time	.61	.66	.69	.71	.75	.67
High education[b]	.33	.33	.35	.38	.35	.34
Last born	.41	.44	.43	.43	.39	.42

Note: Data are from SHARE Waves 1 and 2, Release 2.5.0, unweighted. Dyads represent parents and two to four non-coresident biological children who left home at least 5 years ago and lived less than 500 km (311 miles) from parents (N = 14,739). See Table 1 for details on the variables. [a]1 km ≈ 0.621 miles. [b]ISCED Level 4 or higher.

Multivariate Results

I used eight multivariate models, presented in Table 5, to estimate the five outcome variables. The three additional models (2b, 3b, and 4b) pertained to the fact that parent – child proximity may be endogenous to intergenerational contact as well as to the exchange of time transfers; that is, parents and adult children may move closer to each other in order to facilitate personal contact and/or the provision of location-specific support, such as household help or personal care (Silverstein & Angelelli, 1998). Therefore, I estimated each of the three corresponding outcomes (contact, upward time transfers, and downward time transfers) twice: once excluding (Models 2a, 3a, and 4a) and once including (Models 2b, 3b, and 4b) geographical distance as a control. Note that the case numbers varied considerably between the models, because in linear fixed-effects models (Models 1 and 2) all families enter the estimation, whereas a fixed-effects conditional likelihood approach (Models 3, 4, and 5) drops all families in which there is no variation in the dependent variable from the equation (Chamberlain, 1980). For example, in 5,083 families (83.1%), no child gave practical help to parents, and in 251 families (4.1%), all children were providers. The

corresponding models (3a and 3b) were estimated for the remaining 784 families (12.8%) in which there was within-family variation in children's provision of practical help.

Model 1 corroborates the descriptive findings on the gradient of geographical distance across the quintiles of leaving home. Earliest leavers (first quintile) lived farther from their aging parents than their siblings who left at average ages (third quintile). Conversely, those who were among the latest leavers (fifth quintile) resided closest to their parents in later life even when controlling for a variety of child characteristics. A largely similar pattern emerged with regard to the frequency of intergenerational contact (Model 2a). These effects did not change markedly after introducing geographical distance, controlling for structural opportunities of maintaining personal contact (Model 2b).

Model 3a shows that the latest leavers were more likely to provide practical help to their parents in later life than their siblings who left home at an average age. Although this effect was somewhat reduced after geographical distance was introduced into the equation (Model 3b), it remained statistically significant. Model 4a indicates that the late leavers as well as the latest leavers also received more parental support than their siblings. In analyses not shown here, I found that these differences concerned the provision of grandchild care rather than practical help given to an adult child. Again, the general pattern across the quintiles remained intact after controlling for structural opportunities to offer location-specific support (Model 4b). Finally, Model 5, concerning the receipt of financial transfers from parents, did not point to any differences between siblings with respect to their age at leaving home.

Overall, the results of the controls were largely consistent with those reported in previous studies. Full-time employment competed with intergenerational contact and reduced the need for financial support from parents, well-educated children were geographically more mobile and less likely to be supported financially than siblings who had lower levels of education, the presence of own children was strongly associated with receiving time transfers from parents (i.e., looking after grandchildren), and sons maintained lower levels of contact and received less practical as well as financial support from their parents than did daughters (Hank, 2007; Hank & Buber, 2009; Lennartsson, 2010).

Table 5. *Fixed-Effects Regression Models (N = 14, 739)*

	Parent – Child Relations in Later Life							
	Distance (km)[a]	Contact (days per year)		Parent received time transfer		Parent gave time transfer		Parent gave cash transfer
Predictors	Model 1	Model 2a	Model 2b	Model 3a	Model 3b	Model 4a	Model 4b	Model 5
Age at leaving home (reference: 3rd quintile)								
1st quintile	12.67***	−18.65***	−14.59***	−0.11	−0.10	−0.18	−0.10	−0.22
	(2.78)	(3.35)	(3.23)	(0.15)	(0.16)	(0.12)	(0.12)	(0.18)
2nd quintile	4.39	−6.60*	−5.20	0.12	0.07	−0.08	−0.06	0.05
	(2.78)	(3.35)	(3.23)	(0.16)	(0.16)	(0.12)	(0.12)	(0.18)
4th quintile	−2.61	5.54	4.70	0.32*	0.30	0.40***	0.41***	−0.09
	(2.92)	(3.51)	(3.39)	(0.15)	(0.16)	(0.12)	(0.12)	(0.18)
5th quintile	−15.85***	25.40***	20.32***	0.55**	0.48*	0.49**	0.43*	−0.22
	(3.97)	(4.78)	(4.61)	(0.21)	(0.22)	(0.16)	(0.17)	(0.25)
Controls (child characteristics)								
Male	2.96	−39.60***	−38.65***	−0.03	−0.05	−0.58***	−0.57***	−0.31**
	(1.90)	(2.28)	(2.20)	(0.10)	(0.10)	(0.08)	(0.08)	(0.11)
Age	1.19**	−2.58***	−2.20***	0.01	0.01	−0.13***	−0.12***	0.00
	(0.42)	(0.50)	(0.48)	(0.02)	(0.02)	(0.02)	(0.02)	(0.03)
Married	−3.61	−4.46	−5.61*	0.20	0.19	0.03	0.02	−0.89***
	(2.39)	(2.87)	(2.77)	(0.13)	(0.13)	(0.10)	(0.10)	(0.13)
Employed full time	4.04	−16.76***	−15.47***	−0.01	−0.01	0.04	0.07	−0.30*
	(2.15)	(2.58)	(2.49)	(0.12)	(0.12)	(0.09)	(0.09)	(0.13)
High education[a]	19.03***	−9.83***	−3.74	−0.07	0.06	−0.18	−0.04	−0.40**
	(2.48)	(2.98)	(2.88)	(0.14)	(0.14)	(0.10)	(0.11)	(0.15)
Has young child	−11.90***	18.48***	14.67***	−0.17	−0.21	4.12***	4.21***	0.37*
	(2.88)	(3.47)	(3.34)	(0.16)	(0.17)	(0.17)	(0.18)	(0.16)
Has older child	−17.25***	9.45**	3.93	0.04	−0.01	3.40***	3.38***	0.48**
	(2.93)	(3.53)	(3.41)	(0.16)	(0.16)	(0.18)	(0.18)	(0.18)
Last born	1.21	−0.36	0.03	0.03	0.00	−0.07	−0.09	0.22
	(2.36)	(2.83)	(2.73)	(0.12)	(0.13)	(0.10)	(0.10)	(0.15)
Distance (km)			−0.32***		−0.01***		−0.01***	−0.00
			(0.01)		(0.00)		(0.00)	(0.00)
Constant	10.76	315.16***	318.60***					
	(17.54)	(21.10)	(20.34)					
R^2 (within)	.02	.07	.13					
χ^2				18.96	120.89	1,867.71	2,013.88	94.10
df				12	13	12	13	13
No. dyads	14,739	14,739	14,739	1,977	1,977	6,011	6,011	1,630
No. families	6,118	6,118	6,118	784	784	2,394	2,394	640

Note: Numbers in parentheses are standard errors. Data are from SHARE Waves 1 and 2, Release 2.5.0. Linear regression coefficients (Models 1, 2a, and 2b) and logit coefficients (Models 3a, 3b, 4a, 4b, and 5) are shown. Dyads represent parents and two to four non-coresident biological children who left home at least 5 years ago and lived less than 500 km (311 miles) from parents (N = 14,739). See Table 1 for details on the variables. [a]ISCED. *p < .05. **p < .01. ***p < .001.

DISCUSSION

This study was designed to investigate how previous coresidence affected parent – child relations in later life. Classical life course theory postulates that extended coresidence entails long-term detrimental effects on intergenerational relations resulting from children's prolonged dependency and violation of age norms on leaving home. Other life course considerations offer a more positive view, proposing that extended coresidence may obligate late home leavers to repay or promote feelings of responsibility in both generations, strengthening intergenerational solidarity in later life.

I tested these hypotheses using family fixed-effects models to estimate the effects of age at leaving home on intergenerational proximity, contact, and support exchange in aging families. The empirical findings suggest that time spent in the parental home during young adulthood increased later levels of solidarity, controlling for shared family factors and a variety of child characteristics. The latest leavers were those who lived closest to their aging parents, maintained the most frequent contact, and offered more practical help than their siblings who left home "on time." The latter finding was consistent with the model of long-term reciprocity, suggesting that previous benefits received within a "feathered nest" constituted support debts that adult children repaid in later life (Silverstein et al., 2002). It is important to note that this effect could not be attributed to structural opportunities, although age at leaving home revealed a strong positive effect on later parent – child proximity. Late leavers were also more likely to be on the receiving end of intergenerational support. These patterns may support the claim that extended coresidence promoted mutual feelings of responsibility, which translated into higher levels of support exchange in later life, but the effect of downward intergenerational assistance may have also been a matter of multigenerational bonds (Bengtson, 2001). Because this effect pertained only to grandchild care, an obvious interpretation is that extended coresidence increased the chances that grandchildren were born into multigenerational households, quite possibly intensifying their relations to grandparents in later life.

Overall, these findings supported a positive view of extended coresidence, revealing its potential to strengthen intergenerational solidarity in aging families. It is important to note, however, that the outcome measures available in the SHARE data were restricted to the standard typology of solidarity (Bengtson & Roberts, 1991), covering its associational

(frequency of contact), functional (exchange of support), and structural (geographical distance) dimension. As a result, I could test only for the presence or absence of these types of solidarity. Considering the contrasting views regarding the effects of extended coresidence, it would have been conceptually desirable to use a more inclusive set of outcome measures, allowing the study of solidarity, conflict, and their coexistence in the form of intergenerational ambivalence (Lüscher & Pillemer, 1998). An interesting note in this regard is that previous research has linked ambivalence to both high levels of contact (van Gaalen & Dykstra, 2006) and support exchange (Leopold & Raab, 2011).

A second limitation concerns the key predictor variable: Age at leaving home represented a rather crude indicator for parent – child relationships in previous life that did not offer any direct information of how coresidence was actually experienced by parents and children. Extant research, however, has stressed that coresidence is mutually satisfying if it represents a voluntary arrangement, whereas the reverse may be true if it is forced on families, for example, by an economic crisis. In light of that, my results do not necessarily imply good prospects for aging societies that have experienced a recent rise in coresidence, such as the United States (Fleck, 2009). I was also unable to consider the diverse pathways out of the parental home (e.g., leaving home to take a job, to move in with a partner, to escape from family conflict, etc.) that may also affect parent – child relations in the long term. In addition, the data did not allow me to determine with absolute certainty that parents' retrospective reports on their children's age at leaving home were equal to the actual duration of coresidence. This problem concerns, for example, the issue of returning home (Mitchell, 2006). With regard to my data, however, I note that returning home is a comparatively uncommon phenomenon in Europe (Corijn & Klijzing, 2001).

Third, my claim that I controlled for family-level factors rested on the assumption that these characteristics did not vary among siblings. Although this appeared adequate with regard to a general family climate, it ignored the obvious within-family variation in levels of affection. The literature on parental favoritism, for example, has shown that favoring a child is a ubiquitous phenomenon both in earlier and later family life (Suitor, Sechrist, Plikuhn, Pardo, & Pillemer, 2008). Although the SHARE data enabled me to control for some correlates of parental favoritism, such as being a daughter, being the last-born child in a family, and residing close to parents, I lacked direct information on the quality of parent –

child relationships. This may therefore represent an omitted variable if late leavers were selected on positive relationships. This contention, however, was not supported in a recent study (Ward & Spitze, 2007). Furthermore, research from developmental psychology suggests that, in fact, on-time leavers were those who were most securely attached to parents and benefited from supportive relations that helped navigate their passage to adulthood (Seiffge-Krenke, 2006).

Fourth, an examination of gender differences in greater detail was beyond the scope of the present study. The experience of coresidence, however, is likely to vary with the gender of children and parents as well as the gender constellation of siblings. In this respect, Ward and Spitze (1992) noted that coresidence may be more consequential for daughters and mothers because women tend to invest more in family relationships, thus receiving more benefits but also experiencing greater costs. Family norms pertaining to extended coresidence may also be gender specific. Parents may, for example, attach greater importance to sons' transitions to adulthood, possibly increasing intergenerational tension if a son fails to achieve his developmental tasks on time.

There are good reasons to assume that the time spent with parents during the passage to adulthood affects intergenerational relations and that this impact may resurface even decades later. On the basis of this idea, I proposed a number of pathways by which the age at leaving home may set the stage for later patterns of proximity, contact, and support exchange. This study is the first to examine such long-term effects of coresidence, investigating from a life course perspective how experiences related to previous family transitions were carried over into later life. I consider it worthwhile to look more closely at these linkages in future research. An obvious improvement on the present study would be to include more direct information about the social situation surrounding the home-leaving transition. For example, which of the various pathways out of the parental home did children choose? How was extended coresidence perceived by parents and children and did it represent a voluntary arrangement? Also, more generally, how were age norms on leaving home played out in the family context? Addressing these questions would contribute to understanding the long-term effects of coresidence on parent-child relationships.

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Study II

How Far Do Children Move?
Spatial Distances After Leaving the Parental Home

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INTRODUCTION

How far do young adults move when they leave their parental home? Surprisingly, the rich literature on leaving home and parent-child proximity does not offer an answer to this straightforward question. Whereas research on leaving home mainly focuses on the timing and the destination, rather than the distance, of young adults' move-outs, studies of parent-child proximity typically set in after children have left the parental household and, thus, geographical distance has already been produced. This gap of research is partly due to a shortage of suitable data on the distances of residential moves. In recent years, however, large-scale panel surveys that follow individuals and their descendents across their lives have begun to make detailed geographical information available for scientific use. In the year 2000, the German Socio-Economic Panel Study (SOEP) started collecting data on the geo-coordinates of each sample household on an annual basis, allowing to calculate exact air-line distances of respondents' residential moves. Today, this information is available for a substantial number of young adults who left the parental household between the years 2000 and 2010.

These data present a unique opportunity to investigate the spatial distances of initial move-outs. In this study, we take an exploratory approach proceeding as follows. First, we discuss the relevance of spatial distance as an outcome worthy of theoretical import into analyses of leaving home. Then we review the literature on leaving home and parent-child proximity, considering what factors at individual, family, household, and local community level may affect the spatial distance of move-outs. In our empirical investigation, we estimate air-line distances (in log-meters) of young adults' residential moves using linear regression models (OLS).

BACKGROUND

Why Study the Distance of Move-Outs?

Leaving the parental home is widely considered a milestone in the passage to adulthood, representing an important marker that has profound implications in individual and family spheres. Most studies of leaving home, however, restrict their attention to the timing of exits

from the parental household without taking into account their spatial dimension (e.g., Aassve et al., 2002; Ward & Spitze, 2007; White, 1994, for a review). We propose that the latter represents a useful criterion for assessing how this transition may affect young adults and their families.

With regard to the individual passage to adulthood, social scientists typically endorse the view that leaving home constitutes a role transition that alters adult identities (e.g., Benson & Furstenberg, 2007; Liefbroer & Toulemon, 2010). This process, however, requires not only entering an adult role but also permanent acquisition and enactment of that role. In this respect, the implications of leaving home *per se* are rather unclear: On the one hand, establishing an own household constitutes a major change in young adults' lives in the sense that it creates physical independence from their parents. But on the other hand, active parenting may extend beyond this transition and prolong young adults' dependency. For example, if parents continue to assist nest-leavers in their everyday routines (e.g., cooking, cleaning, laundry), the process of separation might be delayed or even remain incomplete. Considering the availability of such localized services, it is obvious that spatial distance matters. Results from the Netherlands, for instance, showed that the chance of receiving support from mothers and fathers was substantially higher for young adults who lived within a geographical distance of five kilometers from parents (Knijn & Liefbroer, 2006; Mulder & van der Meer, 2009). Where the receipt of localized services is concerned, short-distance leavers may thus not differ markedly from those who still coreside with their parents. In contrast, young adults who move across greater distances and relocate outside the parental sphere are likely to experience more radical changes after leaving home. These changes not only concern the level of support received from parents but also the disruption of local ties and the challenge of adapting to a new social environment. Overall, these considerations suggest that the spatial distance of move-outs may serve as an indicator of the degree to which leaving home necessitates, and promotes, young adults' independence and autonomy.

From a family perspective, individual dimensions of residential choice are inextricably linked to the presence and quality of kinship ties. That is, "individual choices oriented towards reaching personal goals might compete or interfere with the desire to maintain family solidarity" (Michielin & Mulder, 2007, p. 656). Bengtson (2001) emphasized the increasing importance of intergenerational contacts in modern "beanpole" families. In the

typology of intergenerational solidarity, residential proximity is seen as a measure that reflects earlier and present parent-child relationships as well as a factor that conditions other dimensions of solidarity, pointing to future opportunities to maintain contact, share activities, and exchange support. In this respect, the relevance of young adults' initial residential decisions is twofold: First, the spatial distance of move-outs may reflect earlier and present family life, including characteristics of family members and of the parental household. Parents and siblings, for example, may serve as role models influencing young adults' initial residential decisions. They also represent "location-specific social capital" (DaVanzo, 1981) that increases the costs of moving far away, in particular when family relations are close.

Second, geographical distance in young adulthood may have profound long-term implications for the development of intergenerational relationships and their quality in later life. One of the basic tenets of life course research is the notion that characteristics of early transitions have lasting consequences. That is, experiences related to leaving home are likely to be carried over into later family life (Leopold, in press). Regarding geographical proximity, empirical findings indicated that with greater distances, young adults and their parents maintained less contact (Bucx et al., 2008). Over time, lower levels of intergenerational interaction and fewer shared experiences may entail detrimental effects on the strength of affective ties as well as the awareness of each other's needs, possibly reducing levels of functional support in later life (Rossi & Rossi, 1990). Importantly, children who moved across greater distances and established their lives in a different local context are later more likely to be tied to an area distant from their parents. This, in turn, may incur high opportunity costs once the issue of assisting elderly parents arises (Konrad et al., 2002). Overall, these life course considerations suggest that the spatial distance of young adults' initial move-outs may be an important predictor of parents' opportunities to receive intergenerational support toward the end of their lives.

Previous Research on Moving Distances

There are only very few studies that offer at least some information on the spatial distance of children's move-outs. Mayer and Schwarz (1989) examined self-reported categorical data on moving distances collected retrospectively by a West German life-history study; Mulder and

Clark (2000) analyzed US data from the Panel Study of Income Dynamics using a measure of whether the child relocated within or outside a state. Despite the limitations of these data, both studies clearly showed that long-distance move-outs are a rare phenomenon: Less than 15 % of the German respondents reported on moving distances of 300 kilometers or more (Mayer & Schwarz, 1989) and less than 15 % of the US sample left their state (Mulder & Clark, 2000). Similar results were reported in studies that did not look at initial departures from the parental home but at moves in general. Farley (1996), for example, found that 80 % of young adults' residential moves in the United States between the years 1985 and 1990 were local. In Germany, the prevalence of young adults' short-distance migration even increased between 1950 and 1980: By the beginning of the eighties, about 50 % of all residential moves by German adults aged 20 to 30 did not exceed a geographical of 20 kilometers (Wagner, 1989).

What are the reasons behind this predominance of local moves? Research on leaving home has largely neglected spatial distance as an outcome of young adults' initial residential decisions. As Mulder and Clark (2000, p. 426) noted, "the theory on spatial outcomes is relatively underdeveloped, especially with respect to the distances that nest-leavers move." As a result, we lack an integrative theoretical framework for understanding why most home leavers relocate close to their parental home and why some move across greater distances. There is a rich literature, however, on geographical proximity between parents and their nonresident children. This line of research has discussed a variety of exogenous factors at individual, family, household, and local community level (e.g., Cadwallader, 1992; Elder et al., 1996; Garasky, 2002). This classification provides a useful point of departure for the present study. Because we focus only on first move-outs that create spatial distance between the generations, we restrict the following discussion to factors that may be relevant for young adults' initial migration decisions.

Individual Characteristics

An individualistic perspective posits that spatial distance results from young adults' locational choices. In standard economic theory, individuals choose a location that maximizes their utility (Helderman et al., 2005). Young adults weigh the expected gains of alternative locations against their costs. Gains and costs are both financial and nonfinancial (Green-

wood, 1975; Sjaastad, 1962). For example, adult children may benefit from employment opportunities, but also from independence and privacy. Costs may be incurred from the loss of parents' provision of low-cost services, but also from fewer opportunities of face-to-face contact, which is often highly valued.

Considering such costs and benefits, a number of individual characteristics are likely to influence young adults' location decisions at their first move-outs. Several analysts have reported that age is an important correlate of parent-child proximity. Adult children typically leave the parental home between the end of their teenage years and the end of their twenties (Corijn & Klijzing, 2001; Goldscheider & Goldscheider, 1993). At this early stage, many young adults may still rely on their parents as a source of instrumental, emotional, and financial assistance, supporting the expectation that initial move-outs should rarely bridge greater distances. Regarding the fewer cases in which greater distances occur, one apparent motive is to move for educational or occupational purposes. According to human capital models, highly-educated individuals with more specialized abilities have higher propensities to migrate in order to make further progress and maximize their educational returns (Featherman & Hauser, 1978). Accordingly, numerous studies have shown that the spatial distance between the generations is positively associated with children's educational attainment (e.g., Malmberg & Pettersson, 2007; Silverstein et al., 1995).

With regard to gender differences, Fuguitt et al. (1989) proposed that daughters are more likely to "escape" to urban areas because their personal autonomy is more strongly restricted by traditional gender roles in rural communities. Alternatively, daughters may put more value on face-to-face contact to parents because on average, they invest more in family relationships than sons (Rossi & Rossi, 1990). Given these ambiguities, it is not surprising that empirical findings on gender differences in spatial distance to parents are mixed. Analyses of register data from the Netherlands (Michielin et al., 2008) and Sweden (Malmberg & Pettersson, 2007) showed that daughters lived farther away than sons in early and middle periods of adult parent-child relationships. Other studies found no gender differences in parent-child proximity (Lin & Rogerson, 1995; Fokkema et al., 2008).

The child's relationship status represents another prominent factor that is likely to influence leaving home and parent-child proximity. Along with education and employment, union formation has been discussed as one of the most important reasons for moving out

(e.g., Billari et al., 2001). Analysts of leaving home have argued that the routes to live with or without a partner in the new household are qualitatively different (Mulder & Clark, 2000). Move-outs to live with a partner, for example, are likely to reflect joint decisions considering the opportunities and constraints of both partners. With regard to the prevalence of leaving home for union formation, results from the Netherlands revealed a clear age gradient. Whereas leaving for independence (i.e., to live without a partner) represented the predominant pattern at younger ages, leaving for union formation became more prevalent after the age of 21 and represented the principal pathway of leaving home at more advanced ages (Zorlu & Mulder, 2011).

With regard to the spatial distance of residential moves, the direction of the expected effect is again unclear. According to the "commitment hypothesis" (Mulder & Wagner, 1993), married individuals are less mobile than singles because usually, both partners are committed to the same region. As most unions are formed within localized partner markets, leaving this area would incur high costs for the couple, disrupting two persons' local ties. A number of studies provided empirical support for this view. Wagner (1989), for example, found that 80 % of all moves that coincided with marriage did not exceed a distance of 20 kilometers. A contrasting account posits that long-distance moves are associated with greater sacrifices and, thus, more likely to be related to the event of union formation representing a major change in life (Guzzo, 2006). Furthermore, the presence of a partner in the new household may decrease the need for frequent contact with family members. These considerations were supported by data from the Netherlands and the United States, showing that transitions to marriage or cohabitation were associated with greater distances rather than local moves (Michielin et al., 2008; Guzzo, 2006).

Finally, migration background has been discussed as an individual attribute influencing parent-child proximity. Immigrants strongly rely on local networks of relatives and friends from their country of origin that often constitute the only sources of social support (Aslund, 2005). Therefore, immigrants' offspring are expected to move primarily to locations within the same local community. This reasoning is supported by research on immigrants' residential behavior, indicating higher parent-child proximity (e.g., Mulder, 2007).

Family and Household Characteristics

A number of cross-sectional studies examined parent-child proximity at different stages of the family life course, assuming that spatial distance reflects specific age-related needs of both generations. At a general level, one consistent finding from this research is that although residential proximity tends to decrease temporarily when adult children reach middle ages, at least one child lives within one hour from parents in most families (Hank, 2007; Lauterbach & Pillemer, 2001).

More specifically, a number of family and household characteristics have been related to different levels of parent-child proximity. Parents' education and economic resources, for example, were found to be positively correlated with spatial distance to adult children both in Germany (Lauterbach & Pillemer, 2001) and in the United States (Garasky, 2002). One possible reason is a motive of status maintenance, suggesting that parents from higher social strata are more inclined to accept greater distances resulting from children's moves to areas that allow maximizing educational attainment and returns to education. A related pathway is intergenerational transmission of behavior; that is, the distance of parents' own initial move-outs may constitute points of reference for their children's later residential decisions. With regard to parents' economic resources, the standard hypothesis refers to transferable versus location-specific types of intergenerational assistance. Local moves are expected particularly if parents lack the financial means to support their children across greater distances.

The marital status of parents indicates, on the one hand, whether young adults' families of origin are intact. Because marital disruption was consistently found to increase the tension between the generations, it appears straightforward to postulate greater distances when leaving the parent with whom the children remained. An alternative view is that the decision to leave behind a "lone parent", typically the mother, is more strongly restricted by feelings of affection and obligation, leading to short-distance moves that facilitate emotional support exchange. Another influential factor at family level is the presence of a child of their own, augmenting young adults' need for parental help. Regular childcare assistance from parents is a location-specific type of support that requires residential proximity. Accordingly, cross-sectional evidence indicated higher parent-child proximity in the presence of a grandchild (e.g., Malmberg & Pettersson, 2007).

Characteristics of siblings represent a further set of family-related factors that may influence residential decisions. One aspect is sibship size: If parents' resources are distributed over a larger number of siblings, the reduced supply of support may lower a child's expected utility of living near the parental home. Accordingly, studies have shown that the number of siblings is negatively correlated with parent-child proximity (e.g., Shelton & Grundy, 2000). A second aspect is birth order: One hypothesis that has been advanced in the literature is that first-borns are less constrained in their location decisions, whereas later-born children must consider residential choices of their siblings who moved out before (Konrad et al., 2002).

Characteristics of the Community

We consider two perspectives on the influence of the community in which the parental household is located (see Garasky, 2002; Goldscheider & DaVanzo, 1985). First, demographic push-pull models posit that individuals are attracted by prospering areas and pushed from regions that are less developed and/or in decline. In Germany, the standard of living remains considerably higher in the West of Germany compared to the new federal states (former GDR) even two decades after reunification. This suggests that the predominance of local moves may be less pronounced in Eastern regions. Furthermore, substantial gender differences in mobility were found among East Germans living in the periphery (Kroehnert & Klingholz, 2007). Young women frequently depart from these areas whereas men are left behind. The resulting surplus of young men has received a lot of attention in the public debate. The most common assumption is that women's higher levels of education drive this selective outmigration. Considering young adults' initial move-outs, the local youth unemployment rate is another relevant factor at community level. If the parental household is located in a district with a high level of youth unemployment, difficulties to find adequate jobs locally might require greater moving distances. A further aspect reflecting occupational and educational opportunities is the degree of urbanization. As discussed above, it is reasonable to assume that the relationship between urbanization and parent-child proximity is moderated by educational attainment and aspirations. That is, children from suburban and rural areas only move farther away if they have reached higher educational degrees. In more urbanized

areas, tertiary education and specialized job markets are available and thus do not necessitate moves across greater distances (Hektner, 1995).

Second, developmental models of migration emphasize the individual's familiarity with his or her home region. Young adults are not only emotionally attached to the local community where they grew up, but they also have better access to its resources, such as the job and marriage market, through dense networks of friends and relatives (Goldscheider & DaVanzo, 1989). If social capital is tied to the community of the parental home, it increases the costs of long-distance migration (Elder et al., 1996). The duration of residence at a specific location before leaving home should therefore reduce moving distances, in particular if the parental household is still located where young adults spent their childhood. A study by Lin and Rogerson (1995) supported this reasoning, reporting a negative relationship between the years that parents spent in their current residence and the spatial distance to their adult children.

METHOD

Our empirical analyses are based on data from the German Socio-Economic Panel Study (SOEP), which is a large, representative household and person study (Wagner et al., 2007). Each person in a household aged 17 or older gives his or her own answers. For children under 17, proxy information is available from the parents' and household questionnaires. In 1984, the SOEP started in West Germany with a sample of over 12,000 individuals in almost 6,000 households. Several new subsamples were added in the following years, notably a sample of East Germans in the year of reunification (1990) and a major enlargement in the year 2000. In the 2010 wave, the study population consisted of 22,870 individuals in 10,745 households. Since the year 2000, information on geographic coordinates is available for each household, allowing the calculation of exact air-line distances between households. Our analysis draws on these data from an observation period covering 11 waves between the years 2000 and 2010.

Sample Selection

We proceeded in five steps to define a study population. First, we selected a gross sample including all observations of children aged 16 and older who lived with one or both parents

in at least one of the twenty-seven SOEP waves conducted between 1984 and 2010 (N = 10,185). Those included not only biological children, but also adopted, step, and foster children. Second, we restricted this sample to 6,268 persons observed at least once between the years 2000 and 2010, removing 3,917 young adults who left the parental home or dropped out of the survey before the SOEP started to collect data on the geocodes of residential moves. Third, we further removed 812 individuals who were living in the parental household but were older than 20 years when *first* observed in the SOEP, confining the study population to individuals who entered the panel aged 20 or younger. This sample exclusion was aimed at selecting a homogeneous sample of *initial* home leavers. Some young adults might represent a qualitatively different population of "boomerang kids" who had already experienced their first move-out and had later returned to the parental home. Home returning is not an uncommon phenomenon although the rates are considerably lower in Germany than in the United States (Corijn & Klijzing, 2001). A threshold of age 20 when first observed in the SOEP reduced the probability of such unobserved instances in our sample, ensuring that young adults were actually "at risk" of experiencing their first move-out. This restriction also reduced the potential age bias in our sample towards children who still lived with their parents at advanced ages.

Fourth, we defined a further upper age bound because our focus is on residential mobility at earlier life course stages and the factors related to leaving home at older ages are distinctive. Even after the previous restriction, the theoretical maximum age of a child observed in the parental household between the years 2000 and 2010 remained rather high: A child who was first observed at age 20 in the year 1984 and never left the parental home would have entered our window of analysis in the year 2000 aged 36 and been followed up to the age of 46 in the year 2010. We therefore excluded further 30 individuals who crossed the age limit of 35 while living in the parental household between the years 2000 and 2010. After this exclusion, the study population consisted of 5,426 young adults at risk of initially moving out between 2000 and 2010. In a final step, we removed all home stayers, restricting the sample to those who actually moved out within our window of observation (N = 2,113). As our analysis focused on the distance of move-outs, data on the dependent variable were only available for home leavers.

Dependent Variable

The SOEP assigns a household identification number to each respondent. All persons living in the same household share one household number. If a person leaves a household between two waves, a new household number is assigned to this person. A change of household numbers between two waves therefore indicates a residential move.

We defined a move-out from the parental home between two waves if (a) the child shared a household number with at least one parent in the earlier wave, (b) the child's household number changed between the waves, and (c) the child's new household number did not equal the household number of any one parent in the later wave. Therefore, our definition did not only identify departures from a household shared with both parents, but also move-outs from only one parent. Furthermore, it is important to note that this definition applied to young adults who established own households. It did not cover move-outs to colleges for post-secondary undergraduate education or residential moves that were forced by military service obligations. Based on this identification strategy, we observed a total of 2,113 young adults leaving the parental home between the years 2000 and 2010. After the move-out had taken place, the dependent variable was calculated from the geographical coordinates of each household as an exact air-line distance in meters between the parental home and the child's new residence.

Independent Variables

The respondent's age, gender, education, relationship status, and migration background were included as individual characteristics hypothesized to influence the distance of move-outs. We defined quintiles from the age distribution over the entire sample of 2,113 move-outs to test for non-linear relationships. Young adults' education was measured by three indicator variables: education attained was equal or less than basic secondary school (9 or less years of education); education attained equaled intermediate secondary school (10 or 11 years of education); and education attained was equal or higher than upper secondary school (12 or more years of education). Relationship status was operationalized through a binary variable indicating whether the respondent had a non-coresident partner *before* leaving home. Finally, we used an indicator variable for migration background.

The survey design of the SOEP allowed combining individual data with detailed information on family members and household characteristics. First, we included the father's education, measured by three indicator variables analogical to the respondent's education. As an indicator for economic resources, we used the logged per-capita income (in Euros) of the parental household. Furthermore, a binary variable indicated whether the respondent lived with only one parent. This variable was coded one if the parent was widowed, divorced or separated from the other parent. Sibling characteristics were operationalized by two measures, the logged number of siblings and an indicator variable for first-born children. Finally, we introduced two measures of fertility, one indicating whether a respondent already had a child of his or her own living in the parental household, the other, whether a respondent was pregnant.

All individual and household data collected by the SOEP can be linked to regional information from external sources using the Nomenclature of Units for Territorial Statistics (NUTS) geocode standard that is developed and regulated by the European Union (Goebel et al., 2008). At the NUTS-3 Level, regional data is available for 441 German districts. This enabled us to introduce two measures reflecting the economic and demographic conditions of each household's local community. First, we used the local youth unemployment rate (i.e., the proportion of the youth labor force aged 15 to 24 that is unemployed), a continuous variable, ranging from 1.7 % to 26.8 %, as an indicator for labor market conditions of the district in which the respondent resided before moving out. Second, we measured the urbanization of the district by four indicator variables according to the definitions of the German Federal Institute for Research on Building, Urban Affairs and Spatial Development. *Nucleated towns* are cities of more than 100,000 inhabitants. Outside nucleated towns, the urbanization of districts is defined by residential area and population density. Urban areas include urban districts of more *(urban hinterland*) or less (*rural hinterland*) than 150 people per square-kilometer. *Rural areas* include rural districts of more or less than 100 people per square-kilometer. In addition to these measures, a binary variable indicated whether the parental household was located in Eastern Germany (new federal states). Finally, we operationalized the duration of residence in the local community using information from the biographical questionnaire. Respondents reported on whether they still lived at the place

where they spent their childhood. A binary variable was coded one if the parental household was no longer located at the respondent's place of childhood.

The values of almost all predictor variables, including external data on the degree of urbanization and the youth unemployment rate, were obtained from the (year of) the earlier wave, that is, *before* a residential move took place. The only exceptions are the indicator variables for young adults' education: In Germany, educational degrees are mostly awarded in May and June. The annual data collection of the SOEP, however, is typically carried out in March. We therefore used the updated information on young adults' education from the later wave in which the move-out was observed.

Multiple Imputation of Missing Data

Three variables had substantial shares (i.e., more than 10 %) of missing data: Information on the respondent's education was missing in 23.9 % of all cases; information on the father's education in 30.1 % of all cases; and spatial distances could not be calculated for 19.3 % of all move-outs observed. Missing values on the outcome variable represent unsuccessful attempts to follow up respondents after residential moves within Germany. In such cases, the spatial distance of a move-out could not be calculated because geographical information on the location of the new residence was not available in the SOEP data. We imputed all missing data by a sequence of chained equations (Royston, 2009; van Buuren et al., 1999), generating 30 estimates for each missing value.

The imputation procedure was based on a background model that included all variables from the multivariate models as well as information on the residential status after leaving home (see below) as an auxiliary variable. Missing values on the metric measures, moving distance and parents' household income, were imputed by predictive mean matching. This procedure imputes empirically observed values from similar cases instead of regression estimates. Parameter estimates and standard errors in the multivariate analysis were calculated by Rubin's rules (Rubin, 1987). Multiple imputation adjusts for the fact that imputation involves uncertainty with regard to the missing values and avoids underestimation of standard errors by taking into account the variation between and within imputations. Table 1 presents descriptive information on all variables before and after imputation of missing data.

Table 1. *Descriptive Statistics Before and After Imputation (N = 2,113)*

	Before imputation		After imputation		
Variables	Mean	SD	Mean	SD	Range
Distance	68,350.93	121,639.20	67,195.95	121,054.90	1 - 688,883
Distance: missing	.19		*		
Age	22.58	3.55	=	=	16 - 35
Female	.53		=		0 - 1
Education[a]					
Low	.16		.20		0 - 1
Intermediate	.26		.35		0 - 1
High	.34		.45		0 - 1
Education: missing	.24		*		
In a relationship[b]	.56		.56		0 - 1
In a relationship: missing	.10		*		
Migrant[c]	.19		=		0 - 1
Father's education[d]					
Low	.25		.34		0 - 1
Intermediate	.24		.37		0 - 1
High	.21		.29		0 - 1
Father's education: missing	.30		*		
Per-capita household income[e]	890.06	505.60	890.05	504.85	100 - 6250
Per-capita household income: missing	.03		*		
Living with one parent	.23		.23		0 - 1
Living with one parent: missing	.02		*		
Number of siblings	1.39		=		0 - 11
Firstborn[f]	.58		=		0 - 1
Own child[g]	.03		=		0 - 1
Pregnant	.03		=		0 - 1
East Germany	.30		=		0 - 1
Local youth unemployment rate (%)	10.68	4.94	=	=	1.7 - 26.8
Moved from place of childhood	.14		.14		0 - 1
Moved from place of childhood: missing	.07		*		
District					
Nucleated town	.25		=		0 - 1
Urban hinterland	.42		=		0 - 1
Rural hinterland	.17		=		0 - 1
Rural area	.16		=		0 - 1

Note: SOEP, release 2011, own calculations. = no missing data. *all missing data imputed. [a,d] low = basic secondary school; intermediate = intermediate secondary school; high = upper secondary school. [b]Non-coresident partner present at the earlier wave (i.e., before the move-out); [c] First- and second-generation immigrants. [e] The Euro is the official currency in Germany since 2002; values in Deusche Mark (DM) from the years 2000 and 2001 were converted into Euros (1 DM = 0.5113 Euros); [f] Includes only children. [g] Own child living in the parental household.

Model

We used ordinary least squares regression models (OLS) to estimate the spatial distance of young adults' move-outs. Because the distance variable was skewed to the right (*M* = 67.2 km, *Median* = 9.3 km), we estimated its logarithmic calculus which was distributed approximately normal. The conventional estimator of variance in the OLS regression re-

quires that the observations are independent. This was not the case in our data, as we observed departures of two or more children from the same parental household in 984 of 2,113 cases (46.6 %). In the majority of these cases (N = 754), two children moved out from the same parental household. But we also observed 230 instances of three up to five children leaving the same household between the years 2000 and 2010. In technical terms, these observations are clustered within groups (i.e., households). Clustering affects the standard errors of the estimated coefficients as the error terms are not identically distributed across all move-outs observed. One strategy to analyze such data is to calculate robust standard errors that account for clustering at the individual level (Bye & Riley, 1989). In the present study, we used the clustered sandwich estimator that allowed for intra-household correlation and only required that move-outs were independent across households.

RESULTS

Descriptive Results

Table 2 presents descriptive information on the distribution of the dependent variable, the spatial distance of young adults' initial move-outs. The table shows the overall distribution of moving distance (left column) as well as two conditional distributions, separating the sample once into three groups according to their level of education (low, intermediate, high) and once into two groups according to their residential status *after* the move-out had taken place. The latter comparison pertains to the fact that our multivariate models did not allow considering one of the most pertinent issues in the literature on nest-leaving, namely different routes out of the parental home: First, our yearly-updated data on residential status were not sufficient to determine the actual pathway of leaving home. For example, if the respondent coresided with a partner at the later wave, we had no information about (a) whether the respondent had actually moved in with this partner when leaving the parental home, and (b) whether this partner was the non-coresident partner observed at the earlier wave (measured by the indicator variable for whether the respondent lived in a relationship). Second, data from the later wave could not be included as an exogenous variable predicting the distance of preceding moves. For these reasons, we only present descriptive results on the relationship between a home leaver's residential status at the later wave and the spatial distance of

the preceding move-out. The variable residential status comprised two categories. Those living "with partner" coresided with their partner at the later wave whereas young adults living "without partner" either had no partner or did not coreside with their partner.

The first column of Table 2 shows that overall, young adults moved across very small distances. Ten percent moved across an air-line distance of less than 500 meters, the first quartile amounted to less than 2 kilometers, and over half of the sample relocated less than 10 kilometers from the parental home. Even the 75 percentile (69.5 km) remained within one hour of travel time.

Table 2. *Distributions of Moving Distance*[a]

Percentiles	Total	Level of education[b]			Residential status[c]	
		Low	Intermediate	High	With partner	W/o partner
	N = 2,113	*n = 431*	*n =740*	*n = 942*	*n = 687*	*n = 1426*
5%	193	158	172	305	180	212
10%	476	364	360	808	375	547
25%	1,765	1,125	1,334	3,540	1,374	2,070
50%	9,285	4,832	6,446	24,635	6,821	11,647
75%	69,456	16,990	30,985	129,705	30,532	87,117
90%	245,720	89,087	181,411	298,765	166,438	267,992
95%	367,383	243,347	319,445	416,203	301,431	381,993

Note: SOEP, release 2011, own calculations. Analyses based on 30 sets of imputed data. [a] Distance of first move-out from the parental household (in meters). [b] low = basic secondary school; intermediate = intermediate secondary school; high = upper secondary school. [c] Coresident partner present at the later wave (i.e., after the move-out); with partner = shared household with a partner at the time of the interview; without partner = no partner or partner lived elsewhere.

Looking at different levels of education, we observed a clear-cut pattern reflecting the expected positive association between educational attainment and moving distance. This relationship held for almost each percentile displayed, but sizable differences appeared only in the upper half of the distribution. The 75 percentile, for instance, revealed a considerable educational gradient of moving distance. Three quarters of young adults with low levels of secondary education moved across less than 20 kilometers. At intermediate levels, the corresponding number was not much higher – but for respondents with upper secondary education it amounted to almost 130 kilometers. Note, however, that local moves represented the predominant pattern across all educational levels. Overall, we observed long-distance moves (i.e., 100 kilometers or more) for 9.4 % of low-educated respondents, compared to 14.9 % of those with intermediate secondary education and 29.6 % of young adults with upper secondary education.

A discernible pattern was also found for the relationship between a home leaver's residential status and moving distances. Those who lived with a partner in the new household relocated closer to their parental home compared to young adults who lived without a partner. Three of four young adults who lived with a partner, for instance, resided within 30 kilometers from their former home. For young adults who lived without a partner, the corresponding number amounted to almost 90 kilometers.

Multivariate Results

Table 3 presents unstandardized estimates predicting young adults' moving distance. The first equation (Model 1) includes only main effects of predictor variables at individual, family, household, and community level. The second equation (Model 2) builds upon this specification, adding two types of multiplicative terms to test for interactions: The first interaction tested whether women moved farther away than men in Eastern Germany; the second, whether high education increased spatial distances only if young adults moved out from less urbanized areas.

Model 1 shows that relatively young home leavers from the second quintile of the age distribution (aged 20) moved across greater distances whereas late leavers from the fifth quintile (aged 25 – 35) stayed closest to their parents. Overall, women and men did not differ in their moving distances. Not surprisingly, the estimates for the respondents' education resembled the descriptive results. We did not observe statistically significant differences between low and intermediate educational levels, whereas high levels of secondary education were associated with greater moving distances. Unlike the descriptive results on residential status after the move-out, having a partner before leaving home did not show any relationship to moving distance. Those who were single did not differ from those who had a partner. We also found no differences between the moving distances of immigrants and German natives.

Among the family and household variables, the estimate for highly-educated fathers was positive but did not reach conventional levels of statistical significance. Previous studies on parent-child proximity interpreted parental education mainly as a proxy for economic resources (e.g., Garasky, 2002; Lauterbach & Pillemer, 2001). We were able to measure the latter more directly using the logged per-capita income of the parental household. This

variable revealed a clear positive effect net of the indicators of father's and children's education, pointing to the importance of transferable (as opposed to location-specific) intergenerational assistance for young adults' spatial mobility.

With regard to the presence of one or both parents, spatial distances did not differ significantly between young adults who were living with a single parent compared to those living in intact families. The indicators of sibship size and birth order did not show any effects either, suggesting that sibling characteristics were not related to the spatial distances of initial move-outs. We tested a series of alternative specifications, introducing, for example, an indicator variable for only children, birth order as a continuous variable instead of an indicator variable for first-born versus later-born children, and an indicator variable for whether a sibling had moved out previously. All alternative specifications, however, led to a worse model fit (estimates not shown). Overall, no impact of sibling characteristics on moving distance was observed. With regard to the respondent's fertility, we found the expected relationships. Young adults who had a child of their own, increasing their need for location-specific support (i.e., parents' childcare assistance), relocated closer to the parental home. The indicator variable for pregnancy also pointed to smaller moving distances but was not statistically significant.

The results of the community-level measures suggested, first, that a district's youth unemployment did not appear to be a relevant push factor for initial migration decisions of young adults. We found marked differences, however, between the moving distances of East Germans and West Germans, revealing greater distances of young adults' initial move-outs in Eastern regions. We further observed the expected relationship between a district's urbanization and moving distances. Move-outs from rural areas bridged greater distances compared to departures from parental households that were located in nucleated towns. A sizeable effect was also found for the variable indicating whether the parental household was still located at the respondent's place of childhood. If this was the case, young adults moved across significantly smaller distances and thus were particularly likely to relocate within the same local community. This result is in line with previous studies from the United States (e.g., Lin & Rogerson, 1995) and supports developmental models of migration.

Table 3. *Ordinary Least Squares Regressions of Logarithmic Moving Distance (N = 2,113)*

	Model 1		Model 2	
Variables	b	s.e.	b	s.e.
Individual Factors				
Age quintiles (ref.: 3rd: 21 – 22)				
1st: 16 – 19	0.31†	0.17	0.30†	0.17
2nd: 20	0.57**	0.19	0.59**	0.19
4th: 23 – 24	-0.20	0.19	-0.22	0.19
5th: 25 – 35	-0.31†	0.17	-0.34*	0.17
Female (ref.: male)	0.13	0.13	-0.13	0.14
Education[a] (ref.: low)				
Intermediate	0.24	0.17	0.22	0.17
High	1.21***	0.17	0.89***	0.26
In a relationship[b] (ref.: *no*)	-0.18	0.12	-0.18	0.12
Migrant[c] (ref.: *no*)	-0.03	0.15	-0.04	0.15
Family and Household Factors				
Father's education[d] (ref.: low)				
Intermediate	-0.03	0.15	-0.03	0.15
High	0.34†	0.18	0.35†	0.18
Per-capita household income (log)	0.38**	0.14	0.39**	0.15
Living with one parent (ref.: both)	-0.14	0.14	-0.16	0.14
Number of siblings +1 (log)	0.15	0.15	0.16	0.15
Firstborn[e] (ref: *no*)	-0.09	0.13	-0.08	0.13
Own child[f] (ref.: *no*)	-0.57*	0.28	-0.63*	0.28
Pregnant (ref.: *no*)	-0.38	0.36	-0.38	0.36
Community Factors				
East Germany (ref.: West)	0.74***	0.19	0.28	0.25
East Germany x Female			0.89***	0.25
Local youth unemployment rate	-0.03	0.02	-0.03†	0.02
Moved from place of childhood (ref.: *no*)	0.64***	0.17	0.62***	0.16
District (ref.: nucleated town)				
Urban hinterland	0.15	0.16	-0.05	0.20
Rural hinterland	0.18	0.21	-0.01	0.26
Rural area	0.50**	0.19	0.19	0.24
Urban hinterland x Education high			0.37	0.28
Rural hinterland x Education high			0.34	0.37
Rural area x Education high			0.78*	0.35
Constant	5.73***	1.06	6.01***	1.07
R^2	.12		.13	
Adj. R^2	.11		.12	

Note: SOEP, release 2011, own calculations. Analyses based on 30 sets of imputed data. [a,d] low = basic secondary school; intermediate = intermediate secondary school; high = upper secondary school. [b]Non-coresident partner present at the earlier wave (i.e., before the move-out); [c] First- and second-generation immigrants. [e] Includes only children. [f] Own child living in the parental household.Number of clusters: *1,578*. †$p \leq 0.1$. *$p \leq .05$. **$p \leq .01$. ***$p \leq .001$.

Finally, we turn to the interaction effects presented in Model 2. The first interaction tested whether young women were more mobile than young men in Eastern Germany. This interaction term was highly significant and once it was introduced, the main effect of Eastern versus Western Germany faded. This result supports the contention of female outmigration from the East of Germany, suggesting that the surplus of men in the Eastern periphery is at least to some extent an outcome of initial migration decisions. The remaining set of interaction terms indicated, as expected, that the relationship between urbanization and parent-child proximity was moderated by educational attainment. The interaction terms showed that longer-distance moves from rural areas were more likely among the well-educated children. This interaction accounted entirely for the main effect of low urbanization and partly for the main effect of high education. The model fit was improved by the inclusion of interaction terms in Model 2. But overall, the low R-squares indicated that a substantial share of the variance of moving distance remained unexplained in our models.

DISCUSSION

The prime aim of this study was to shed new light on the initial migration decisions of young adults. Despite a considerable amount of research on the timing of exits from the parental home, only little was known about the spatial distance of these move-outs. Our exploratory investigation addressed this deficit. Panel data from 11 waves of the SOEP (2000 – 2010) enabled us to predict moving distances by factors at individual, family, household, and community level. Rich personal and contextual information was available in high resolution for a substantial number of move-outs, allowing the inclusion of regional indicators at the district level and an exact outcome measure of geographical distance in meters.

An important general finding from these data is that initial move-outs rarely bridged greater distances. Our results corroborate previous research pointing to the prevalence of short-distance moves (Mayer & Schwarz, 1989; Mulder & Clark, 2000). About three of four home leavers relocated within one hour of travel time to parents; over half of the sample relocated less than 10 kilometers from their parental home; and a quarter of home leavers even remained within walking reach, not exceeding a distance of 2 kilometers. Even among the highly-educated, longer-distance move-outs were the exception rather than the rule.

With respect to our initial discussion of how the transition out of the parental home affects young adults and their families, these results suggest, first, that most home leavers may not experience radical changes in their day-to-day lives after moving out. That is, short-distance movers do not face a new social environment and are unlikely to disrupt local ties. We proposed that spatial distance to parents after leaving home may, at least to some extent, affect the degree to which an adult role is subsequently acquired and enacted. In this respect, our findings demonstrated that "stay-at-home's" are accompanied by a sizeable group of "stay-in-town's". As shown in studies of proximity and support exchange, the latter are more likely to receive parental assistance (e.g., Mulder & van der Meer, 2009). Thus, we recommend that analysts of leaving home should distinguish between forming an independent household and separating from the parental sphere when assessing how this transition may affect individual passages to adulthood: Studies that focus on (the timing of) leaving home only capture young adults' transitions to an own household. While this is an appropriate strategy to address a variety of research questions, it implicitly assumes that moving next door is equivalent to relocating in a new local community outside the parental sphere. Studies that are particularly concerned with home leavers' autonomy should therefore consider the spatial distance of move-outs.

From a family perspective on the structural dimension of solidarity (Bengtson & Roberts, 1991), our investigation corroborates previous research that has consistently found high levels of intergenerational proximity. Importantly, life course considerations and developmental models of migration suggest that the majority of short-distance leavers will continue to reside close to their parents, setting the stage for intergenerational support in aging families. In this respect, it is interesting to compare our results with those of Malmberg and Petterson (2007) who analyzed Swedish register data using a study population that consisted mainly of adult children aged 40 to 50. Their study revealed that 38 % of these children lived less than five kilometers from at least one parent and 18 % even less than one kilometer. The similarity to our results on move-outs in earlier life points to the potential long-term importance of distances produced by children's initial departures, suggesting a considerable temporal stability of high parent-child proximity.

There are some limitations to this study that should be noted. First, some potentially important variables were not available in our data. For instance, we lacked information on

the strength of emotional ties in parent-child relationships. Although the SOEP collected information on the quality of parent-child relationships in the 2001 wave, valid responses were only available for a very small fraction of our sample. In terms of the model of intergenerational solidarity, these missing data precluded analyses on the relationship between the affective and the structural dimension of solidarity, investigating, for example, the early characteristics and emergence of "intimate but distant", "tight knit", or "detached" types of parent-child relationships (Silverstein et al., 1997).

Second, although we identified a number of predictors, a substantial share of the variance of moving distance remained unexplained in our models. As a result, our capacity of predicting the distances of initial move-outs is rather limited. This shortcoming calls for more refined modes that include additional explanatory variables. Furthermore, we consider it worthwhile to look more closely at different reasons for leaving home and, accordingly, at different routes out of the parental home. Our data and research design only allowed presenting some descriptive information on the residential status after the move-out. These results suggested that both partners are often tied to the same region, supporting the commitment hypothesis (Mulder & Wagner, 1993). In future research, it would be desirable to account more fully for the heterogeneity of move-outs with regard to the subsequent living arrangement, educational career, and employment status.

From a family life course perspective, future research should build upon this study to investigate long-term implications of spatial distances produced by initial move-outs. How does local mobility affect parent-child relations compared to long-distance moves? How predictive are spatial distances of initial move-outs for parent-child proximity in middle and later life? To answer these questions, information on initial move-outs should be combined with data on subsequent moves and later parent-child proximity as well as measures of intergenerational support, affection, association, and conflict.

Along with the SOEP, other large-scale panel surveys with genealogical designs such as the Panel Study of Income Dynamics now provide geographical data in sufficient detail to investigate the distance of initial move-outs as well as their long-term outcomes over the family life course. Future research should capitalize on this potential for comparative longitudinal analyses. Until now, only one cross-sectional study exists, showing that the determinants of parent-child proximity are surprisingly similar in Germany and the United

States, despite considerable institutional variation in public welfare provision (Lauterbach & Pillemer, 2001). Finally, we began by noting that little was known about the spatial distance of initial move-outs, whereas many studies examined the timing of exits from the parental home. In view of that, it seems like a natural step to incorporate both dimensions into joint decision making models of leaving home.

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Study III

Family Events and the Timing of Intergenerational Transfers

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INTRODUCTION

Numerous studies have examined financial transfers that parents and children exchange *inter vivos*. Interest in inter vivos transfers has surged for several reasons: Unlike bequests, they require a conscious transfer decision from the giver; they are flexible in timing; they are hardly restricted by legal regulations or cultural norms; and they are part of an ongoing parent-child relationship (Kohli, 2004). A number of consistent findings have emerged from the literature on financial inter vivos transfers. In Western economies, these transfers are given at considerable rates and follow a downward pattern from the older to the younger generations. Parents remain net givers after retirement and even at very old age. This financial aid often appears to be targeted at children in economic need (McGarry & Schoeni, 1997).

Concerning the latter finding, one recurring theme in the literature is that parental transfers inter vivos are linked to important need-related events in adult children's lives. These connections are obvious: If parents, on the one hand, are motivated to help adult children "get a start in life," financial transfers will most likely be given at events such as marriage, childbirth or the beginning of employment. On the other hand, parental support may also be triggered when adult children experience adverse life events such as divorce, the loss of employment or the onset of a serious illness. Most quantitative studies of financial inter vivos transfers, however, neglect these links between life events and transfer timing. In addition, previous research has not considered that offspring might receive certain types of wealth at different stages in life. A son or daughter who has just married, for example, may receive transmission of real estate, whereas those who divorce are more in need of liquid assets to ease the financial strain.

Research on these issues is not only required to close gaps in the empirical literature on financial transfers, but also from a theoretical perspective on transfer behavior within families. The present study aims to extend prior research in three main ways. First, we analyze wealth transmission in families from a life course perspective. This approach allows examination of the influence of events in adult children's lives on the timing of parental transfers. Second, we also study the type of wealth that is transmitted at different transitions and the meanings of these transfers for parents, adult children and their relationships. That is, we do not restrict the analysis to children's economic need but also consider how non-

material aspects of family ties may influence transfer behavior. Third, we relate the timing and types of transfers to the study of transfer motives. By considering these characteristics our study yields important additional information that contributes to the understanding of parents' motives.

BACKGROUND

Economic research on transfer behavior typically seeks to infer the giver's motive. It is assumed that transfer decisions maximize the giver's utility, either as part of a strategy in an exchange game or because utility is derived from the recipient's utility (altruism). The information if giving is motivated by altruism or by strategic exchange is considered essential to predict how individuals will respond to changing conditions. Economists usually view transfer motives as competing and test one against the other. Such empirical tests typically concentrate on the division or distribution of transfers, mainly analyzing the relationship between the recipients' incomes and transfer chances and magnitudes. A negative relationship is consistent with altruistic models, whereas testing the exchange model is more complex because it makes no clear prediction regarding the direction of this relationship. The empirical evidence on gifts and bequests is mixed with numerous studies supporting each motive (e.g., Bernheim et al., 1985; Cox, 1987; Wilhelm, 1996; McGarry & Schoeni, 1997).

In contrast, sociologists reject the assumption that each individual holds a singular transfer motive. Different motives may be held at the same time and these motives may compete or overlap. In addition, sociological research considers how the "quality" of transfers affects social bonds: "For recipients, it makes a difference whether transfers from their family members are motivated by self-interest (only) or (also) by love, benevolence, generosity, or a sense of personal obligation" (Kohli & Künemund, 2003, p. 126). As a result, theoretical predictions about intergenerational transfers incorporate both need-related aspects and aspects beyond need, such as commitment to family and emotional closeness. Motives listed in the sociological literature refer to three categories that are assumed to jointly influence transfer behavior: affection, reciprocity and norms of responsibility (Doty, 1986).

Motives and Timing of Transfers

In the following, we discuss two aspects that influence the timing of intergenerational inter vivos transfers: the recipient's need for support and the donor's wish to give. A third aspect refers to considerations of exchange, either strategic (Kotlikoff & Morris, 1989; Bernheim et al., 1985) or governed by norms of reciprocity (Silverstein et al. 2002; Leopold & Raab, 2011), presuming that the timing of giving depends on past, current or future receiving. Our retrospective data on receiving transfers, however, do not allow reconstructing exchange processes. We therefore disregard models of intergenerational exchange in the present study.

In altruistic models, the timing of transfers depends on the recipients' need. Financial aid is only provided if parents recognize that their children require such support. McGarry's (1999) altruistic model considers transfer timing within a two-period framework. If the child does not experience income need in the earlier period, parents delay transfers and gather additional information about the child's permanent income. If the child is in need, however, parents respond by giving inter vivos transfers. From a life course perspective, economic need often occurs at transitions in education, employment or family. Qualitative evidence suggests that most parents relate their provision of financial transfers explicitly to their children's economic need that occurs at events such as marriage, starting a family or divorce (Ploeg et al., 2004). Such findings support the altruistic model, indicating that transfers are triggered by recipients' needs.

From a sociological perspective on motives, the same observations point to transfer behavior that is governed by norms of responsibility. Such norms refer to a generalized expectation that parents and children should support each other (Gans & Silverstein, 2006). That is, parents feel obliged to help their children even in strained relationships and without expecting compensation. They will not make any transfers, however, unless the child requires support. As in altruistic models, the timing of intergenerational support that is motivated by norms of responsibility therefore depends on the recipients' need.

In contrast, transfers may also be triggered by the donor's wish to give. In economics, this alternative model has been termed "impure altruism."(Andreoni, 1989) The idea is that the parent derives utility from a "warm glow of giving," rather than from the child's improved well-being. The warm glow could either come as an internal reward for helping children (Sober & Wilson, 1998), or as social approval received from others for acting generously or

signaling income (Glazer & Konrad, 1996). In the sociological literature, giving that is not conditional on the recipient's need is primarily seen to reflect intergenerational attachment. In other words, material gifts convey love and appreciation towards children and thus entail qualities beyond individual utility functions.

If transfers are given in the absence of need, we may assume that parents are not concerned about timing their giving. From an economic perspective on social approval, however, the act of giving should be visible to others, for example, at events like a child's marriage or the birth of grandchildren. From a sociological perspective, these events may trigger the parents' wish to give out of "affective solidarity" (Bengtson & Roberts, 1991) toward the child's family.

Type of Wealth Passed Down

The simplest approach to deal with financial transfers of different types is to treat them all as substitutes and consider only their total present value (McGarry, 1999). Arrondel and Masson (2001) proposed a more refined life-cycle typology of early human capital investments, later cash assistance and eventual wealth transmissions that have different determinants and correspond to different transfer motives. This typology, however, refers to the age of the child rather than considering specific events in the child's life. In addition, parental transfers remain pure economic acts without meanings beyond the efficient distribution of resources within families.

The type of wealth that is passed down the generations, however, may serve as an indicator for transfer meanings beyond economic need. We therefore distinguish between two broad categories of larger financial transfers: gifts of money and gifts of real estate. Gifts of money, on the one hand, are the appropriate transfer currency to efficiently distribute family wealth across descendents with regard to their economic need. These gifts can be divided easily; they are not localized and they can often be used immediately without restraint. With regard to transfer meanings beyond need, money is a fairly anonymous currency rather than a tangible representation of family history. Gifts of real estate, on the other hand, may represent far more than just a monetary value. They symbolize family history and reflect processes of intergenerational reproduction as tangible family property is passed on (Gulbrandsen & Langsether, 2003). Beyond the economic act of giving, these

transmissions may represent affirmations of kinship and indicate the givers' wish to promote family cohesion, ensure continuity and maintain geographic proximity (Tomassini et al., 2003). Apart from these additional meanings, gifts of houses or land are localized and their (intended) usage is restricted. They are therefore less appropriate for easing a child's immediate financial strain.

Hypotheses on Family Events and Parental Transfers

In the present study, we concentrate on three events in adult children's lives that we expect to be important triggers of larger financial inter vivos transfers: marriage, childbirth and divorce. The event of marriage, on the one hand, indicates the economic need associated with starting a family. This need often occurs immediately after marriage, for example, if wedding expenses must be covered, and/or if the spouses have a desire for homeownership. The latter, however, does not necessarily occur immediately after marriage, but may be delayed a few years. Gifts that respond to economic need are consistent with the altruistic model but may also reflect norms of responsibility that parents translate into transfer behavior if the child's new family is in need. On the other hand, newly married couples are not necessarily in economic need and gifts at the event of marriage do not always respond (only) to need. Therefore, the event of marriage may also generate the parents' wish to (selflessly) give out of affection towards the enlarged family or to (selfishly) benefit from a warm glow of giving. Overall, the types of wealth given at a child's marriage should reflect this heterogeneity of transfer motives. Some transfers may be monetary, need-related and given immediately at marriage. Others may be home and land, entailing meanings beyond need, and given at the event of marriage, but also in the course of the following years. The mix of motives associated with the event of marriage leads us to *expect increased chances of receiving large gifts from parents immediately after marriage (mainly gifts of money) and in the following years (mainly gifts of houses or land) (Hypothesis 1a)*.

Until now we presumed that parental gifts in the event of marriage are targeted both at the child *and* his or her spouse. Alternatively, parents may intend to support only their own child, for example if they are concerned about protecting family property against the risk of a child's later divorce. That is, parents try to ensure that the gift only belongs to their child and is not divided between the spouses in the case of a divorce. In Germany, most married

couples have legally regulated their wealth division according to the "community of acquisitions." That is, the increase in capital value of assets during marriage belongs to both partners. Wealth accumulated before marriage remains the property of the previous owner after divorce (if the wealth has not been consumed). If a child marries, parents can only avoid a later split if the gift is clearly targeted at their own child and if the child uses this transfer for saving purposes only. But a gift can only be assigned to the child's "starting capital" if it precedes the event of marriage. Therefore, parents' motives to keep family wealth within the own generational lineage should affect the timing of their transfers. Empirically, this implies that *the chances of receiving a gift should increase before the event of marriage (Hypothesis 1b)*.

Unlike marriage, the event of divorce should primarily concern motives related to immediate economic need. Children face divorce and lawyer costs; they lose household income and wealth; and they may experience the financial strain of single parenthood. Adverse consequences of divorce are most severe for women, who, on average, earn less and are more often granted sole custody. Financial aid from parents should be aimed at helping children through their divorce transition and at maintaining the former standard of living. We therefore *expect increased chances of receiving large gifts of money from parents immediately after divorce, and we expect a stronger effect on women than on men (Hypothesis 2).*

In the event of childbirth, we expect a constellation of parental motives similar to the event of marriage. The birth of a child, on the one hand, puts financial pressure on a household (direct costs, income loss due to a mother's reduced labor force participation, and the need for housing space) that could trigger gifts motivated by altruism or norms of responsibility. This pressure may even increase for subsequent births. Unlike in marriage, however, it appears less conventional to give a singular transmission of a large amount of money at childbirth. Parental gifts may instead be in kind or consist of a series of smaller, recurring financial transfers. With regard to less functional motives of giving, on the other hand, the birth of a child – in particular the first birth – guarantees the continuation of the generational lineage. Parental gifts could then symbolize a premium that represents the valuation of the generational lineage and the wish to strengthen kinship ties. In addition, gifts of houses at childbirth may be aimed at ensuring that the adult child's family stays

geographically close to the grandparents (Tomassini et al., 2003). In sum, both need-related aspects and less functional aspects lead us to expect that large gifts in the event of childbirth are primarily transmissions of real estate. In this respect, an alternative perspective comes from Evolutionary Biology: Older generations invest in offspring that further their genetic line (Clark & Kenney, 2010). Cox and Stark (2005) hypothesized that parents "purchase" grandchildren. For example, if children delay childbearing until they can afford their own home, parents might speed up the process by the gift of a house. This would imply a gift prior to childbirth. Based on these considerations, we expect *increased chances of receiving large gifts from parents in the year before a child is born and at childbirth. These gifts should primarily consist of transmissions of real estate (Hypothesis 3)*.

The standard set of covariates in most analyses of intergenerational transfers is comprised of factors at the individual and family level. First, a parent's resources are positively related to the provision of financial assistance (Hogan et al., 1993), whereas an adult child's declining economic need after the age of 30 is associated with a decrease in financial support received from parents (Cooney & Uhlenberg, 1992). Second, family structure shapes the assistance. The proportion of children receiving financial transfers decreases with increasing numbers of siblings as "competitors" for parental wealth (Killian, 2004).

The German Context

As our analysis uses data from Germany, it is important to understand the specific historical and societal dimensions in which private transfer behavior is embedded. First, parents' birth cohort profoundly affects the amount of financial resources available in a family. The oldest among today's aging parents in Germany were still affected by war and inflation whereas younger cohorts represent a generation that grew up in periods of peace and sustained economic prosperity and was therefore able to accumulate larger amounts of wealth. A further historical distinction concerns economic systems, as chances to build private property were significantly lower in the former East German Democratic Republic (1949-90) compared to the Federal Republic of Germany (since 1949). The FRG had a market economy right from the start whereas the GDR was a socialist state that, for example, expropriated farmers and entrepreneurs in its first years. Because of its completely different political context until 1990, the former GDR is left out of the present study.

Second, parents' decisions about the distribution and division of inter vivos transfers are hardly restricted by German law. Gifts are highly private and siblings cannot claim statutory shares if a brother or a sister is the single beneficiary of a large parental transfer.[2] In contrast, inheritance legislation restricts unequal division of bequests, and legal heirs can always claim 50 percent of their intestate share. With regard to taxation, German law treats inter vivos transfers similar to bequests, granting considerable allowances, currently of 400,000 EUR per child and donor that can be fully claimed every 10 years. This generosity is most pronounced where the transmission of houses or land (or the money to purchase them) is concerned. These transfers are taxed considerably below their market value. As a result, transferring real estate inter vivos is an effective way for wealthy parents to spend down their estate and avoid later taxation of bequests.

Third, studying transfers of real estate requires consideration of the specific characteristics of the German housing market. Compared to most Western European countries and to the United States, home-ownership rates in Germany are low. About 42 percent of West German households live in owner-occupied homes. Home ownership is more common in rural and suburban areas than in nucleated towns (Kurz, 2004), partly due to lower prices for developed sites. Major factors influencing the low overall rate of homeownership are strict legal requirements for the quality of buildings that produce high average construction costs and market prices of houses compared to the broad supply and relatively low prices in the rental market. As a result, becoming a home owner is a challenging financial task in West Germany that often requires long periods of saving and taking up high mortgages. Therefore, financial support from parents is particularly welcome and often indispensable for access to home ownership in Germany (Kurz & Blossfeld ,2004; Kurz, 2004). The taxation and further regulations favor inter vivos transfers of houses (Mulder & Wagner, 1998). German law allows parents to sign over their home to a child, retaining a lifelong right of habitation. Subsequently, the generations might share one household or live in separated spaces within the same building (e.g., parents reside in the "granny flat"). Coresidence of aging parents and their adult children is a common

[2] The only exception in the former German inheritance legislation concerned gifts that a child received less than 10 years before the parent's death. Those gifts were credited against the statutory share of the bequest.

phenomenon in Germany. According to data from the Survey of Health, Ageing and Retirement in Europe, almost one third of German parents ages 70 and older coresided with at least one adult child in 2004 (Hank, 2007).

METHOD

Our empirical analyses are based on data from the German Socio-Economic Panel Study (SOEP)[3], which is a large, representative household and individual study started in 1984 (Wagner et al., 2007). Several new subsamples were added in the following years, notably a major refreshment sample in the year 2000. SOEP covers a wide range of topics including careers, education, income, demographic developments, health, and use of time, as well as satisfaction and values. Each person in a household who is 17 years or older gives his or her own answers. In 2001, one page of the questionnaire was devoted to gifts and bequests. Respondents were asked: "Have you yourself ever inherited something or received a gift of great value? We are referring to gifts or inheritance of house or land, securities, investments, other forms of wealth or large amounts of money." Respondents who answered positively were further asked in which year the transfer was received; whether it was a gift or an inheritance; which type of wealth was transferred: (a) house, land, condominium,[4] (b) securities, (c) cash or bank deposits, (d) shares or ownership of a company, (e) other; its value at that time; and the giver: one or both parents, parents-in-law, grandparents, husband or wife, other. Information could be provided on up to three transfers.

A total of 22,351 respondents participated in the survey. For our analysis, we restrict this sample as follows. First, we exclude 7,338 respondents that lived in the GDR in 1989, removing 32.8 percent of the original sample size.[5] Inclusion of these persons would lead to substantial heterogeneity in the sample with respect to intergenerational transfer patterns: Parents had significantly lower chances of building personal wealth and the legal regulations

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[3] The data used in this publication have been made available by the German Socio-Economic Panel Study at the German Institute for Economic Research, Berlin.

[4] This category does not differentiate between transfers of building sites, transfers of farmland or forest, and transfers of houses. In Germany, the latter almost always coincides with land transfers.

[5] Due to oversampling of East Germans in the SOEP, this share is much higher than the proportion of East Germans in unified Germany.

on gift-giving and bequeathing differed from West Germany. The latter is also true in most immigrants' countries of origin. In addition, the main direction of financial transfer streams is less clear in migrant families. Financial support often flows upward, in particular if adult children living in industrialized countries help their parents in less developed countries of origin (Holst et al., 2010). Our second sample exclusion therefore concerns 1,857 respondents who immigrated to West Germany, removing another 8.3 percent of the original sample size. Finally, we exclude 3,193 respondents born before 1940 because selective mortality could lead to bias in estimating transfer chances of older birth cohorts. This restriction reduces our sample to 9,963 persons (44.6 % of the original sample size) ages 17 to 61.

Dependent Processes: Receiving a Transfer

As the year of transfer receipt was surveyed, we can reconstruct the age at which large inter vivos transfers were received. To analyze transfer chances, we construct episodes starting at birth and ending with an event at the age of receiving the first inter vivos transfer from parents. An episode is right-censored if a person has not received a transfer before the interview date. Furthermore, episodes are censored after the last parent has died. In our sample, a total of 777 first gifts were reported, 570 of which came from parents. The latter number refers to all parental gifts, regardless of which type of wealth was transferred. This includes each type of wealth mentioned or a combination of two or more of these types. To allow separate analyses of gifts of real estate and gifts of money, we construct episodes for two additional dependent processes: The first ends with an event if the first gift received from the parents consisted *only* of real estate (house, land or condominium; $N = 307$ gifts). The second ends with an event if the first gift received from the parents consisted *only* of money or bank deposits ($N = 189$ gifts). In addition to censoring at the interview date and after the death of the second parent, episodes of both processes are censored if a gift consisting of *any other* type(s) of wealth was received.

Independent Processes: Marriage, Divorce and Childbirth

Our hypotheses referred to family events in adult children's life courses. To allow a dynamic modeling of these events, we use a series of time-varying dummy variables. A marriage at the age of 25, for example, is recorded as follows. Initially, a person is single. During these

years, all dummy variables for the marital biography (married, divorced, widowed) are zero. Therefore, single is the reference category of the marital biography. At the age of 24, a dummy variable indicating "one year before marriage" goes from zero to 1. At the age of 25, this dummy variable is reset to zero, and a dummy variable indicating the "year of marriage" goes to 1. At the age of 26, this variable is again reset to zero, while an additional dummy variable "one year after marriage" is set to 1. Finally, from the age of 27 onwards, this variable is again reset to zero, and another dummy variable "married > one year" goes to 1. The latter variable remains at (1) until the process time ends, unless the marriage ends by a divorce or widowing. If a respondent, for example, divorces at the age of 40, the dummy variable "married > one year" is reset from 1 to zero, and the variable "year of divorce" is set to 1. The subsequent years are modeled analogically to the event of marriage. If the respondent remarries at the age of 48, the dummy variable indicating "one year before marriage" is again set to 1 at the age of 47, etc. Therefore, this modeling technique does not differentiate between how many times marital events occur. It only indicates if they occur and if they influence transfer chances. The birth biography is measured in a similar way, with one important exception: The first birth is modeled as a separate process because the timing of first births often co-occurs with marriage. So, we define two sets of dummy variables: one refers only to first births, the other to subsequent births.

Covariates

As an indicator for parental resources, we use the father's score on the International Socio-Economic Index of Occupational Status (Ganzeboom et al., 1992). The score on the ISEI scale, ranging from 16 to 90, is derived from information about the father's occupation when the respondent was 15 years old. In addition, we define a separate group of respondents who are daughters or sons of farmers. Although farmers score low on the ISEI scale, they often own property, a home and land. Concerning the number of siblings, the information surveyed in 2001 referred only to living siblings. As information on transfers was collected retrospectively, other siblings might still have been alive when the transfer was received. Therefore, we use the information collected two years later in 2003 which referred to all sisters and brothers even if deceased. As the distribution of this variable is right-skewed, we

take the logarithm of the number of siblings plus one. Variables for birth cohort (linear) and gender are introduced as further controls.

Table 1: *Percentages / Means at Three Points in the Life Course Before and After Imputation*

	Age 0		Age 20		Age 40	
	Missings Included	Imputed	Missings Included	Imputed	Missings Included	Imputed
Male	.49	=	.49	=	.49	=
Birth Cohort (-1900)	61.66	=	60.36	=	51.58	=
Father Farmer	.04	.04	.04	.04	.04	.04
ISEI Father	40.93	40.48	40.49	40.13	38.43	38.63
ISEI Father: missing	.38	*	.38	*	.45	*
No. siblings	1.56	1.55	1.57	1.56	1.64	1.63
No. siblings: missing	.14	*	.13	*	.13	*
Marital Status						
1 year before marriage			.07	=	.01	=
Year of marriage			.05	=	.01	=
1 year after marriage			.03	=	.01	=
Married (> 1 year)			.04	=	.77	=
Year of divorce			.00	=	.01	=
1 year after divorce			.00	=	.01	=
Divorced (> 1 year)			.00	=	.07	=
Widowed			.00	=	.01	=
Gap in marital biography			.00	=	.00	=
Fertility						
First birth						
1 year before first birth			.03	=	.00	=
Year of first birth			.02	=	.01	=
1 year after first birth			.01	=	.01	=
First birth > 1 year			.03	=	.79	=
Later births						
1 year before birth			.01	=	.01	=
Year of birth			.01	=	.01	=
1 year after birth			.00	=	.02	=
Last child born > 1 year			.01	=	.55	=
No. persons	9,963		9,293		4,072	

Note: SOEP release 2007, own calculations. = no missing data; * all missing data imputed. Episodes split after imputation.

Two variables have substantial shares of missing data. First, information about the father's occupation was not sufficient to assign ISEI scores in almost 40 percent of all cases. Second, information about the number of siblings could not be obtained from respondents who participated in the survey in 2001, but no longer in 2003 (13% of all cases). Listwise deletion of

these cases could lead to biased estimates. Except for the few gaps in the marital history, we imputed all missing data by chained equations, producing five stacked sets of imputed data on which we run our analyses. The background model for the imputation includes all time-constant variables from the multivariate models and a number of auxiliary variables from the SOEP data. 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 use the Stata commands *ice* and *mim* (Royston, 2009; Royston et al., 2009).

Table 1 presents means and percentages of all variables at three points in the respondents' life: at birth, at age 20 and at age 40. For each age, the first column shows the values before imputation and the second after imputation. The modeling of time-varying dummy variables is illustrated by the marital and birth biographies. At the age of 20, for example, 7 percent were in the year before marriage and 5 percent married. Another 3 percent were in the year after marriage and 4 percent had married two or more years before the age of 20. At the age of 40, the share of respondents who were married two or more years rises to 77 percent. Considering divorce, 1 percent were divorced at age 40 and 1 percent were experiencing their first year after divorce. Another 7 percent were divorced for two or more years at the age of 40.

Event History Analysis

For our multivariate analyses, we estimate transition rate models. The transition rate is the intensity of experiencing an event under the condition of not having experienced the event before (Blossfeld et al., 2007). That is, the transition rate of receiving a large gift from parents is estimated under the condition that a respondent has not received such a transfer before and is still under observation. In all models, we allow for a time-dependent transition rate by including variables for age in linear and quadratic form. These variables are updated every two years. Episodes are split if any time-varying independent variable changed its value (for example, from "married > one year" to "year of divorce"). We use an exponential function to link the estimates to the dependent variable, the transition rate, ensuring that estimates of the propensity to receive a transfer are always positive: $r(t) = \exp(A\alpha)$.

RESULTS

Figure 1 presents four survivor functions on the chances of receiving a transfer. These four curves represent different levels of parental resources: We assign respondents to three nearly equal-sized groups according to their father's ISEI: a lower (ISEI < 31), an intermediate ($31 \leq$ ISEI ≤ 43), and a higher (ISEI > 43) status group. In addition, we define a separate group for daughters and sons of farmers. The curves indicate the proportion of persons in each group who have not received a transfer up to a certain age.

People very rarely receive large gifts before the age of 25. Subsequently, all survivor curves start to fall. We observe the strongest decline, and therefore the best chances of receiving a gift, for sons and daughters of farmers. A strong decline can also be observed for the group with higher ISEI scores compared to those with intermediate or lower scores. More than 20 percent of respondents with a high-SES father receive a large gift, compared to about 10 percent in the low-status group.

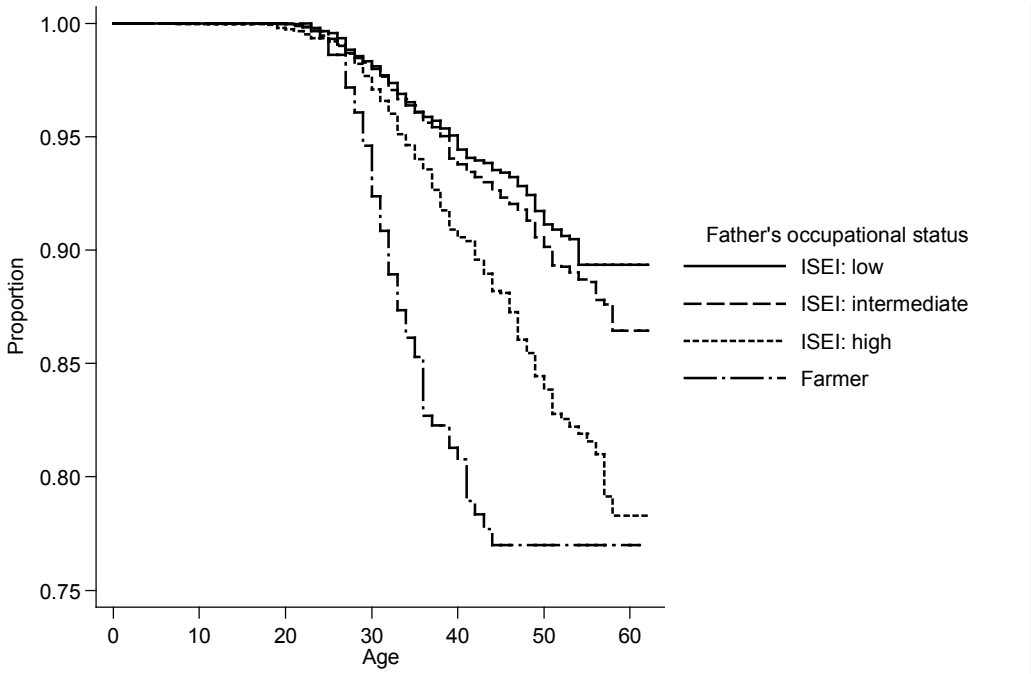

Figure 1. *Receiving a Large Gift by Father's Occupational Status. Survivor Functions (Kaplan-Meier)*
Note: SOEP release 2007, own calculations. Estimates based on five sets of imputed data.

Table 2 reports further descriptive information on the value of transfers. Considering large gifts from all sources, the median value is 31,500 Euros. Gifts from parents are larger than gifts from other sources, amounting to almost 45,000 Euros. With respect to different types

of wealth that parents pass downward, the values vary markedly. For gifts consisting only of house, land or condominium, the median amount is almost five times as high as the amount of gifts consisting only of cash or bank deposits.

Table 2. *Values of First Gifts*

	N	Value in Euros (Median)
Large Gift Received	777	31,500
From Parents:	570	44,900
Only house, land, condominium	307	106,200
Only cash, bank deposits	189	21,400

Note: SOEP release 2007, own calculations. Values converted into Euros (1 Euro = 1.95833 DM), adjusted for prices (reference year 2005); Median values obtained from five sets of imputed data. $N = 9.963$.

Our multivariate models on marital events and the timing of transfers are presented in Table 3. These models are organized as follows. Model 1a estimates the transition rate for all gifts, introducing all independent variables of the marital biography. In Model 1b, we add an interaction effect testing whether the effect of the "year of divorce" varies between men and women. Models 2 and 3 focus on different types of wealth: In Model 2, the dependent process is receiving the first parental gift consisting solely of real estate (house, land or condominium). Conversely, Model 3 only considers gifts of cash or bank deposits. For both models, we use the specification of Model 1a.[6] All models control for the respondents' age, gender and birth cohort, the father's occupational status, and the number of siblings. The age effects, modeled by linear and quadratic terms, point to a bell-shaped pattern in the dependent process in all models. The transition rate at first increases, peaks at the age of 43 years, and decreases afterwards. This maximum rate is calculated from the first derivative of age (Model 1a).

Hypothesis 1a posited elevated chances of receiving parental gifts after marriage. Furthermore, we expected that gifts of money are transferred immediately after marriage, whereas gifts of real estate also occur in the following years. The estimates from models 1a,

[6] When estimating this interaction effect for gifts of real estate, the standard errors became too large. For gifts of money, the interaction effect could be estimated, but it was insignificant. Therefore, we only present the more parsimonious specification in models 2 and 3.

2 and 3 support our hypothesis. Looking at all types of wealth (models 1a and 1b), we find a strong positive effect of the variable indicating the year of marriage. In this year, the transition rate is 3.2 times higher compared to single persons, all other things being equal.[7] In subsequent years, the effect size diminishes, but remains positive and highly significant even for respondents who are married more than one year. Models 2 and 3 present a more fine-grained picture of these effects.[8] As expected, gifts of real estate are received in the year of marriage, but also in subsequent years (Model 2). In contrast, increased chances of receiving monetary gifts occur only in the year of marriage (Model 3). In Hypothesis 1b, we further expected increased chances of receiving a large gift from parents *before* the event of marriage. Our corresponding estimates indicating the year before marriage point in the expected direction in all models. These effects, however, narrowly fail to reach the 5 % significance level.

After a child's divorce, we expected that parents respond immediately by giving large amounts of money (Hypothesis 2). Further, we assumed that this effect will be stronger for women. Looking again at all gifts (models 1a and 1b), our expectation regarding the immediacy of parental gifts is supported. Higher chances of receiving large gifts occur only in the year of divorce. In this year, the transition rate is 2.5 times higher compared to single persons. The results for different types of wealth also support our reasoning. In Model 2, we do not observe any effect of the year of divorce on the chances of receiving real estate, but Model 3 for gifts of money clearly reveals where the overall effect is rooted. Here, the effect of the year of divorce is strong and highly significant, indicating a transition rate that is 5.4 times higher compared to singles. Our expectation concerning gender differences, however, is not supported. The interaction effect in Model 1b is not significant, indicating that the increased chances of receiving gifts after divorce do not differ between men and women.

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[7] These multipliers are calculated by exp(β).

[8] In event history models, the significance of parameter estimates depends on the number of events. These numbers differ between Model 2 (307 events) and Model 3 (189 events). Therefore, we tested whether significant parameter estimates from Model 2 lose their significance when randomly drawing samples out of those surveyed in the ratio of 189 to 307. All effects observed remained significant. The same applies to the models presented in Table 4.

Table 3: *Continuous Transition Rate Models for Large Gifts Received From Parents*

	All Gifts				Real Estate		Money	
	Model 1a		Model 1b		Model 2		Model 3	
	b	s.e.	b	s.e.	b	s.e.	b	s.e.
Process Time								
Age	0.41***	(0.03)	0.41***	(0.03)	0.44***	(0.05)	0.39***	(0.06)
Age² (/100)	-0.48***	(0.05)	-0.48***	(0.05)	-0.57***	(0.07)	-0.39***	(0.08)
Marital Status (ref.: single)								
1 year before marriage	0.50	(0.26)	0.50	(0.26)	0.60	(0.35)	0.60	(0.45)
Year of marriage	1.16***	(0.20)	1.16***	(0.20)	1.15***	(0.28)	1.33***	(0.34)
1 year after marriage	0.79***	(0.22)	0.79***	(0.22)	1.10***	(0.28)	0.51	(0.45)
Married (> 1 year)	0.44**	(0.13)	0.44**	(0.13)	0.63***	(0.19)	0.37	(0.24)
Year of divorce	0.91*	(0.35)	1.04*	(0.44)	-0.51	(1.01)	1.68***	(0.43)
Year of divorce*Male			-0.22	(0.72)				
1 year after divorce	-0.22	(0.72)	0.31	(0.24)	-0.14	(1.01)	0.11	(1.02)
Divorced (> 1 year)	0.31	(0.24)	-0.26	(0.68)	0.28	(0.36)	0.45	(0.38)
Time-Constant Variables								
Male	0.24**	(0.09)	0.25**	(0.09)	0.45***	(0.12)	-0.17	(0.15)
Birth cohort -1900 (/10)	0.54***	(0.06)	0.54***	(0.06)	0.39***	(0.07)	0.83***	(0.11)
Father farmer	1.34***	(0.15)	1.34***	(0.15)	1.50***	(0.19)	0.66	(0.38)
ISEI father (/10)	0.15***	(0.03)	0.15***	(0.03)	0.08*	(0.04)	0.24***	(0.05)
No. siblings +1 (log)	-0.41***	(0.08)	-0.41***	(0.08)	-0.54***	(0.11)	-0.15	(0.15)
Constant	-17.60***	(0.68)	-17.60***	(0.68)	-17.30***	(0.93)	-21.3 ***	(1.31)
Log Likelihood (final estimate)	-1708.37		-1708.31		-1109.23		-729.94	
No. events	570		570		307		189	

Note: SOEP release 2007, own calculations. All analyses based on five sets of imputed data. See text for details. *p < .05. **p < .01. ***p < .001. $N = 9.963$.

Concerning the time-constant covariates, we find the expected effects for our indicators of parental resources and family structure: Respondents belonging to later birth cohorts have higher chances of receiving gifts in all models. These effects reflect the more favorable conditions under which their parents could accumulate wealth. These conditions seem to be particularly important for accumulating liquid assets, as the cohort effect is most pronounced in Model 3 for monetary gifts. The same applies for the father's occupational status (measured by ISEI scores). As already indicated by the descriptive results, occupational status is associated with increased chances of receiving large gifts. Again, this indicator for parental resources is most influential in gifts of money (Model 3), where the effect is three times larger compared to gifts of real estate (Model 2). These findings are consistent with the literature on wealth portfolios in different social strata which has shown that home-ownership is quite

common even in lower strata (Kurz, 2004), whereas the possession of large amounts of liquid assets is a privilege of higher strata (Spilerman, 2000). The number of siblings, as expected, is negatively correlated with the chances of receiving transfers from parents. The only unexpected finding concerns gender differences. The estimate indicates that daughters are clearly disadvantaged in processes of intergenerational gift giving. The overall observation of the higher chances of receiving for sons (models 1a and 1b) is apparently attributable to gifts of real estate (Model 2), where the effect is particularly strong and highly significant. Finally, the models presented in Table 4 test Hypothesis 3 on the effects of childbirth. Again, we estimate models for all gifts (4a, 4b), gifts of real estate (5a, 5b), and gifts of money (6a, 6b). In models 4a, 5a and 6a, we introduce the indicators from the birth biography instead of the indicators from the marital biography. In models 4b, 5b and 6b, all time-varying independent variables from the marital and birth biographies are included simultaneously. All models control for a common set of time-constant covariates and the time-varying information on age in linear and quadratic form (estimates not displayed in Table 4).

In Hypothesis 3, we expected increased chances of receiving large gifts before and after childbirth. Looking at all gifts, however, we do not observe any effects before or after the first birth (Model 4a). We find increased chances of receiving only in the year of later births. This coefficient remains highly significant even after controlling for the marital biography (Model 4b). Again, we find notable differences with respect to different types of wealth: First, parental transfers in the year of later births mainly consist of transmissions of real estate: The estimates for the year of later births are positive and significant in models 5a and 5b, whereas childbirth does not elevate the chances of receiving large monetary gifts (models 6a and 6b). Second, Model 5a also indicates increased chances of receiving real estate in the year before the first birth and in the year of the first birth. If the marital and birth biography are introduced simultaneously (Model 5b), however, these effects disappear, whereas the estimates of the marital biography remain almost unchanged compared to Model 2.

Table 4: *Continuous Transition Rate Models for Large Gifts Received From Parents*

	All Gifts				Real Estate				Money			
	Model 4a		Model 4b		Model 5a		Model 5b		Model 6a		Model 6b	
	b	s.e.	b	s.e.	b	s.e.	b	s.e.	b	s.e.	b	s.e.
Marital Status (ref.: single)												
1 year before marriage			0.50	(0.26)			0.55	(0.35)			0.67	(0.45)
Year of marriage			1.14***	(0.20)			1.03**	(0.29)			1.43***	(0.35)
1 year after marriage			0.78***	(0.23)			1.01**	(0.29)			0.62	(0.47)
Married (> 1 year)			0.54***	(0.15)			0.73**	(0.21)			0.48	(0.27)
Year of divorce			0.97**	(0.36)			-0.46	(1.01)			1.75***	(0.44)
1 year after divorce			-0.16	(0.71)			-0.07	(1.02)			0.17	(1.03)
Divorced (> 1 year)			0.37	(0.25)			0.34	(0.37)			0.52	(0.39)
Fertility (ref.: no child)												
First Birth												
1 year before first birth	0.44	(0.24)	0.06	(0.24)	0.80**	(0.27)	0.41	(0.28)	-0.23	(0.59)	-0.66	(0.60)
Year of first birth	0.39	(0.24)	0.05	(0.24)	0.56*	(0.30)	0.16	(0.30)	0.18	(0.47)	-0.15	(0.48)
1 year after first birth	-0.23	(0.34)	-0.45	(0.35)	-0.42	(0.51)	-0.75	(0.51)	-0.17	(0.59)	-0.31	(0.60)
First birth > 1 year	-0.13	(0.14)	-0.25	(0.15)	-0.16	(0.19)	-0.35	(0.20)	-0.11	(0.24)	-0.20	(0.25)
Later Births												
1 year before birth	0.30	(0.25)	0.15	(0.25)	0.60	(0.30)	0.38	(0.30)	-0.02	(0.52)	-0.13	(0.53)
Year of birth	0.68**	(0.21)	0.59**	(0.21)	0.77*	(0.29)	0.63*	(0.29)	0.43	(0.42)	0.38	(0.42)
1 year after birth	0.20	(0.27)	0.13	(0.27)	0.43	(0.34)	0.31	(0.34)	0.08	(0.49)	0.06	(0.49)
Last birth > 1 year	-0.00	(0.14)	-0.03	(0.14)	0.05	(0.19)	-0.01	(0.19)	0.03	(0.23)	0.03	(0.23)
Log Likelihood (final est.)	-1719.36		-1701.59		-1113.31		-1101.71		-739.97		-728.53	
No. events	570		570		307		307		189		189	

Note: SOEP release 2007, own calculations. All analyses based on five sets of imputed data. See text for details. *p < .05. **p < .01. ***p < .001.
N = 9.963. All models control for process time and time-constant variables (see Table 3).

DISCUSSION

Prior research on financial inter vivos transfers largely neglected the links between life events and transfer timing. To the best of our knowledge, the present study is the first to systematically examine the relationship between family events in adult children's life courses and the timing of parental transfers. Our theoretical approach allowed for a plurality of givers' transfer motives and considered the meanings of different types of wealth for givers, receivers and their relationships. Our hypotheses posited that parents give financial transfers at the events of marriage, divorce and childbirth. First, we expected that parental wealth will be passed on before and after a child's marriage. We found support for Hypothesis 1a as transfer chances increase markedly in the year of marriage and remain at elevated levels in subsequent years. Higher chances of receiving large gifts of money are only observed in the year of marriage whereas real estate is also transferred with some delay. These findings cannot be linked to one specific transfer motive. Instead, they are broadly consistent with altruistic motives or norms of responsibility (assuming that marriage indicates economic need), as well as a warm glow of giving or intergenerational affection (assuming that the transfer relates to aspects beyond economic need). Hypothesis 1b focused on the year before a marriage, suggesting that parents transfer prior to their child's marriage in order to protect family wealth against the risk of divorce. The findings indicate that such considerations may play a role, although the estimates do not reach conventional levels of statistical significance.

Second, we expected in Hypothesis 2 that chances of receiving large gifts from parents will increase immediately after divorce, and that the majority of these gifts will consist of money. Our empirical findings provide strong support for this hypothesis. We observe a substantial increase in chances of receiving only in the year of divorce. Further consideration of different types of wealth indicates that intergenerational wealth transmission in response to a divorce consists of liquid assets, such as gifts of money or bank deposits. These findings on the timing and type of transfers are clear evidence that parents respond to their children's economic need. Compared to the event of marriage, the plurality of possible motives is narrowed down considerably: Parental gifts of money in the year of a child's divorce are consistent with economists' models of altruism and the sociological notion of transfer behavior guided by norms of responsibility.

Our findings on marriage and divorce corroborate previous research on the timing of parental transfers. Qualitative evidence indicated that, in fact, the majority of financial transfers occur at transitions that motivate parents to help their children "build and rebuild secure lives and futures."(Ploeg et al., 2004, p. 131). Our hypothesis on elevated chances of receiving before and after childbirth, however, is only partly supported. We observed a robust effect only for the year of later births. As these transmissions appeared to consist mainly of real estate, one possible explanation is that parental gifts address adult children's need for living space. Regarding gifts of real estate, our estimates also pointed to increased chances of receiving before the first birth and in the year of the first birth. These effects, however, were less robust and disappeared after including the indicators of the marital biography. Nonetheless, the temporal proximity of marriage and first births do not allow to rule out the possibility that parental gifts are jointly triggered by an adult child's marriage and (the expectation of) the birth of a grandchild.

There are some limitations to this study that should be noted. First, we analyzed the event of marriage but omitted consensual unions. As in many other industrialized countries, Germany has experienced a steady increase in consensual unions in recent decades. Consensual unions may be a prelude to marriage or, in particular in the United States, an alternative to marriage (Heuveline & Timberlake, 2004). Eggebeen (2005) found lower levels of support exchange between cohabiting adult children and their parents. Possible reasons are that parents might be reluctant to invest in children who live in fragile and unstable unions or that consensual unions lack the wedding ritual at which transfers are given. Our data did not allow investigating whether children's consensual unions reduced transfer rates and whether such effects vanished with the increasing acceptance of consensual unions.

Second, further potentially important variables were not available in our data. For example, we lacked longitudinal information on relationship characteristics, although it has been suggested that emotional closeness and residential proximity influence functional support in intergenerational relationships (Silverstein et al., 1995; McGarry & Schoeni, 1997). With regard to transfer motives, one important omission concerns children's economic resources. For example, data on children's income and wealth at the time of marriage could help disentangling need-related motives such as altruism from motives that

are not related to need. Although the SOEP collects data on income at each survey year, our analyses using retrospective data would have required information about income and wealth from the years of receiving transfers.

Third, we had to draw on yearly-based data. More differentiated information on the temporal sequence of events and transfer receipt could alter our conclusions regarding Hypothesis 1b. We were only able to control for the year before a marriage. A large gift from parents, however, could still precede the event of marriage even if marriage and transfer receipt occurred within the same year.

Overall, the prevalence of large inter vivos transfers appears to be rather low. Survivor function estimates indicate that only about a sixth of children receive a major gift from parents until the age of 60. These numbers suggest that although large inter vivos transfers are more likely to be given at family events, they are still rather uncommon. Possibly, the actual prevalence of major gifts is higher because financial assets – in particular "unearned wealth" such as gifts and bequests – might be underreported in surveys. However, it is important to note that our focus on major financial gifts does not imply that large inter vivos transfers represent the predominant type of intergenerational support at family events. The majority of parental transfers are given in a series of smaller and more frequent transfers. Those are typically measured by survey questions referring to all transfers received within a recall period of 12 months. Such measures include more comprehensive information on a variety of parental support arrangements that are related to family events as well. For example, Bhaumik (2006) used cross-sectional data from the 1996 wave of the SOEP to find that marriage, divorce and childbirth co-occurred with the receipt of smaller financial transfers. But parents may also provide alternative forms of social support instead of financial transfers, such as temporary housing support after a divorce or looking after young grandchildren. Using data from SHARE, Kohli and Albertini (2008) found that the presence of young children stimulated help from parents that was predominantly social support or a combination of financial and social support.

Additional research is needed to further test and refine the conceptual model linking events in adult children's lives and the timing of intergenerational transfers. In the present study, we focused on family events. Other events that should be considered in future research include, for example, the end of education, leaving home and the beginning of

employment, but also adverse life events such as unemployment and the onset of chronic illnesses. In addition, other dimensions influencing the distribution of transfers within families require further investigation. For example, our analysis revealed that women had lower chances of receiving large gifts than men, at least in the case of receiving real estate. These differences, however, may be leveled out by processes not observed in the present study. Unequal gift giving, for example, could be later compensated for by the division of bequests. Testing such considerations requires expanding the life course perspective. Most importantly, analyzing the period after transfers are received would present an opportunity to investigate processes of intergenerational exchange. The most promising approach, we believe, is using data from long-term panel studies providing yearly-updated information on a variety of transfers in both directions. This would allow for the exploration of patterns of intergenerational transfers over the entire shared lifetime of parents and their adult children from a comprehensive life course perspective.

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Study IV

Short-Term Reciprocity in Late Parent-Child Relationships

This chapter is coauthored by Marcel Raab.

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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 do 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.

The present study aims to address this deficit. We outline a concept 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 analyses.

BACKGROUND

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 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 who support 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 later provided support.

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).

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 s*hort-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 overbenefited 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. Lüscher 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 decisions made to relieve the ambivalence" (Lüscher & 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 result in 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

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 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, and 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 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 that have been found to influence intergenerational transfer exchange will be introduced as covariates in the empirical analyses. 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, 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 if he or she is 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

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 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.

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 (i.e., occupying two flats within one 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 nonresponse 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 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. *Characteristics of Respondents*[a] *and Parent-Child Dyads*[b]

	Welfare Regime[c]							
	Nordic		Continental		Southern		Total	
Variables	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[d]: Yes	.52	.50	.51	.50	.51	.50	.51	.50
n	670		1,863		933		3,466	
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
n	1,691		4,811		2,314		8,816	

Note: SHARE 2004 release 2.0.1; unweighted. [a]Respondents who are unmarried, widowed or living without a partner and have 2-4 living children (*N = 3,466*). [b]Dyads between parents who are unmarried, widowed or living without a partner and 2-4 adult children (*N = 8,816*). [c]Nordic: Denmark and Sweden; Continental: Austria, Belgium, France, Germany, the Netherlands, and Switzerland; Southern: Greece, Italy, and Spain. [d]Limitations in usual activities because of health problems.

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

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 2. *Patterns of Intergenerational Transfers at the Family Level (FL)[a] and the Dyad Level (DL)[b]*

Welfare regime[c]	Time transfer[d] received (%)		Financial transfer[e] given (%)		Concurrent giving and receiving[f] (%)		*n*	
	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	3,466	8,816

Note: SHARE 2004 release 2.0.1. Own calculations; unweighted. [a]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*). [b]Dyad level indicators count these types of transfers in all dyads divided by the total number of dyads (*N = 8,816*). [c]Nordic: Denmark and Sweden; Continental: Austria, Belgium, France, Germany, the Netherlands, and Switzerland; Southern: Greece, Italy, and Spain. [d]Personal care or practical household help received during the past 12 months. [e]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. [f]Heteromorphic exchange of parent's financial transfers and children's time transfers.

Table 3 presents a finer 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. Although 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.

Table 3. *Share of Parent's Concurrent Giving of Financial Transfers*[a] *When Receiving Time Transfers*[b] *From Adult Children*

Welfare regime	Family level[c]		Dyad level[d]	
	%	*n*	%	*n*
Nordic	29.6	98	20.7	237
Continental	15.0	220	11.6	578
Southern	11.3	106	9.3	301
Total[e]	17.5	424	12.9	1,106

Note: SHARE 2004 release 2.0.1; unweighted. [a]Personal care or practical household help received during the past 12 months. [b]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. [c]Family level indicators count upward, downward, and concurrent transfers in any dyad within a family, divided by the total number of families ($N = 424$). [d]Dyad level indicators count these types of transfers in all dyads divided by the total number of dyads ($N = 1,116$). [e]Dyads between parents who are unmarried, widowed or living without a partner and 2-4 adult children.

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 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. *Conditional Logistic Regression Results for Intergenerational Transfers*

	Parent receives time transfer[a]		Parent gives financial transfer[b]	
Predictor	Model 1		Model 2	
Reciprocity				
Parent receives time transfer			2.19**	(0.62)
Parent gives financial transfer	2.35**	(0.73)		
Parent gives time transfer	1.13	(0.22)		
Child characteristics				
Male	0.67***	(0.07)	0.71*	(0.10)
Age	0.99	(0.01)	0.95**	(0.02)
Married or cohabiting	1.09	(0.15)	0.65*	(0.12)
Years of education	1.05†	(0.03)	1.00	(0.03)
Activity (ref.: full-/part-time employed)				
Unemployed	1.73*	(0.45)	2.18*	(0.74)
Still in education	0.46	(0.23)	4.00***	(1.30)
Has own child < 7 years	0.64*	(0.13)	1.18	(0.24)
Dyad characteristics				
Contact frequency				
At least once a week	5.93***	(1.01)	2.73***	(0.54)
Proximity				
Within a radius of 5 km	3.04***	(0.44)	1.03	(0.18)
χ^2	411.63		125.78	
df	12		11	
Number of dyads[c]	2,069		1,119	

Note: SHARE 2004 release 2.0.1. Own calculations based on 10 sets of imputed data; unweighted. Odds ratios (standard errors) are shown. [a]Personal care or practical household help received during the past 12 months. [b]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. [c]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. †$p < .10$. *$p < .05$. **$p < .01$. ***$p < .001$.

Hypothesis 1 is clearly supported. 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 further 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 supported as financial repayments of instrumental time transfers from children occurred more frequently when a parent had above-average cash holdings.

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

	Parent gives financial transfer[a]					
	Cash holdings[b]		Limitations with daily activities[c]			
	< Median	> Median	No		Yes	
Predictor	Model 3a	Model 3b	Model 4a	Model 4b	Model 5a	Model 5b
Reciprocity						
Parent receives time transfer[d]	1.72 (0.81)	2.50* (1.00)	1.79 (0.77)		2.68* (1.09)	
Parent receives time transfer: hours < Median				1.43 (0.79)		2.17 (1.09)
Parent receives time transfer: hours > Median				2.50 (1.73)		3.56* (2.13)
χ^2	58.57	82.30	70.43	71.01	70.48	71.18
df	11	11	11	12	11	12
Number of dyads[e]	446	586	664		455	

Note: SHARE 2004 release 2.0.1. 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). [a]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. [b]Amount of money in the respondents' bank, transaction and saving accounts. [c]Limitations in usual activities because of health problems. [d]Personal care or practical household help received during the past 12 months. [e]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. $^{\dagger}p < .10$. * $p < .05$. ** $p < .01$. *** $p < .001$.

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 similar picture appeared with regard to the intensity of children's time transfers. Support-

ing 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. *Conditional Logistic Regression Results for Intergenerational Transfers*

	Parent gives financial transfer[a]			Parent receives time transfer[b]		
	Welfare regime[c]					
	Nordic	Cont.	Southern	Nordic	Cont.	Southern
Predictor	Model 6a	Model 6b	Model 6c	Model 7a	Model 7b	Model 7c
Reciprocity						
Parent receives time transfer	0.76 (0.49)	2.25† (0.97)	5.20* (4.40)			
Parent gives financial transfer				1.44 (0.97)	1.81 (0.88)	13.94** (14.31)
χ^2	27.04	51.76	45.64	71.05	192.56	202.29
df	11	11	11	11	11	11
Number of dyads[d]	214	482	257	362	990	552

Note: SHARE 2004 release 2.0.1. 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). [a]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. [b]Personal care or practical household help received during the past 12 months. [c]Nordic: Denmark and Sweden; Continental: Austria, Belgium, France, Germany, the Netherlands, and Switzerland; Southern: Greece, Italy, and Spain. [d]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. $^{\dagger}p < .10$. $^{*}p < .05$. $^{**}p < .01$. $^{***}p < .001$.

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 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. In contrast, our multivariate strategy to identify short-term reciprocity focused on how the odds of giving and receiving vary within families. This approach helped separating 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 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 precluded definitive conclusions with regard to causality and was accompanied by some loss of important information. As our analysis included only transfers from the past 12 months, it was 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 felt 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 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 concerned 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 was only theoretical and remains to be tested empirically in future research.

The second reason is that 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, & 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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Study V

The Temporal Structure of Intergenerational Exchange: A Within-Family Analysis of Parent-Child Reciprocity

This chapter is coauthored by Marcel Raab.

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INTRODUCTION

The principle of reciprocity is widely regarded a fundamental mechanism governing intergenerational transfers of time and money. The literature has investigated two temporal patterns of reciprocal exchange in parent-child relationships, long-term and short-term. Research on long-term reciprocity has conceptualized earlier parental support given to children as investment strategies or insurance policies (Silverstein et al., 2002) and, from a *within-family* perspective, as a factor influencing the selection of a caregiver among siblings (Henretta et al., 1997). These perspectives share the premise that earlier parental support is exogenous to a child's later transfers of help and care. In contrast, the idea of short-term reciprocity relates to situations in which a child already provides time-consuming support to an infirm parent (Leopold & Raab, 2011). This concept proposes contemporaneous exchange as a disburdening arrangement in which elderly parents give financial support more often to those of their children who provide care.

In this study, we attempt to include both temporal dimensions of reciprocity into one framework. Investigating the nature of their linkage integrates previous research on reciprocity in parent-child relationships and, at a more general level, contributes to understanding how mutual support in families operates. Our conceptual approach suggests a sequential interdependence of long-term and short-term reciprocity across the family life course. From a within-family perspective, this sequence of exchange patterns involves (long-term) selection and (short-term) disburdening of a caregiving relationship.

We draw on data provided by unmarried respondents from the first wave of the Asset and Health Dynamics Among the Oldest Old (AHEAD) study. Using within-family fixed-effects models, these data allow to jointly investigate long-term and short-term reciprocity in parent-child relationships. Our empirical analysis proceeds in three steps. First, we reproduce a study on long-term reciprocity by Henretta and associates (1997). Second, we investigate whether the AHEAD data support the concept of short-term reciprocity (Leopold & Raab, 2011). Third, we test hypotheses on the linkage between both temporal dimensions of reciprocity.

BACKGROUND

The long-term definition of reciprocity in parent-child relationships refers to their intimate, stable, and lasting character. Although at any one point in time, parent-child relations may appear asymmetrical, the balance of exchanges is achieved over the long term according to an implicit contract that demands equivalent compensation of the benefits received. In this sense, adherence to the norm of reciprocity guides a child's later repayment of debts to parents accumulated earlier in life. Dyadic analyses of panel data supported this idea, revealing that earlier financial support from parents produced a time-contingent repayment from an adult child (Silverstein et al., 2002). This exchange pattern of money versus time pointed to an insurance mechanism triggered by parental health decline. A related finding emerged from within-family analyses of support provision to an infirm parent. Henretta and associates (1997) posited that reciprocity operates as a selection mechanism determining which child will provide assistance. Their study showed that those children who previously received more financial support than their siblings were more likely to provide later help and care. In terms of effect size, earlier parental transfers appeared to be almost as important as gender in predicting a child's propensity to provide support.

A recent study on "short-term reciprocity" (Leopold & Raab, 2011) proposed a different temporal structure of exchange in late parent-child relationships. The analytical strategy drew on several ideas from Henretta et al. (1997), using a sample of infirm, single-living parents and estimating fixed-effects models to examine transactional patterns within families in the currencies of money versus time. But the purpose of reciprocal exchange was conceptualized differently: Rather than conditioning selection into caregiving, short-term reciprocity was assumed to ease a caregiving relationship that already existed. The corresponding pattern of exchange involved gifts and return-gifts that co-occurred within a time window of less than a year. The idea was that an elderly parent who provided concurrent reciprocation eased stress and burden for a caregiving child and alleviated feelings of dependency in times of physical decline. In contrast to long-term reciprocity, equivalence was of less importance here because parents' contributions were not assumed to be proportional to the assistance received. For parents who required support, the issue was contributing to the best of their abilities rather than engaging in balanced exchange. In their empirical analyses with data from the Survey of Health, Ageing, and Retirement in Europe

(SHARE), Leopold and Raab (2011) found that children who provided assistance to a frail parent more than doubled their chances of receiving concurrent financial transfers from that parent compared to non-helping siblings. Importantly, this effect was distinctly related to the intensity of a child's support as an indicator for stress and burden, emerging most clearly if a child provided time-consuming assistance.

In this study, we propose a common framework for both patterns of intergenerational exchange. Two basic tenets from the sociological literature on exchange suggest that long-term and short-term reciprocity can be linked both substantively and analytically. The first pertains to a within-family perspective, stating that analyses of intergenerational exchange must reach beyond the dyadic view and recognize the family as a small-group structure that represents the proximate context of transfer behavior (Henretta et al., 1997). The second relates past to present exchange. Enduring social bonds accumulate a history of interdependent transfers. Therefore, late characteristics of a supportive parent-child relationship are shaped by the incidence and quality of earlier transactions (e.g., Molm & Cook, 1995). The following discussion is informed by both principles.

A Within-Family Perspective: Intra-Generational Orientation on Equivalence

Fundamental to a within-family perspective on intergenerational exchange is the notion that characteristics of a parent-child dyad are assessed relative to other dyads within the family. That is, reciprocal obligations of a child are interpreted and negotiated relative to those of siblings (Finch & Mason, 1993; Pillemer & Suitor, 2006). This implies that the "traits and behaviors of brothers and sisters within the pool also affect who bears primary responsibility for the care of a disabled parent" (Henretta et al., 1997: 112). Implicit in this view is that siblings are aware of what each of them has received and contributed in the past and evaluate obligations to parent care with respect to their relative position. As a result, the question is not how much support each child owes to the parent in absolute (i.e., dyadic) terms but whether siblings who received more than others are expected and feel obliged to repay the *difference*. Considering long-term reciprocity, this is an important theoretical distinction because it concerns the principle of equivalence which states that repayments should be proportional to debts. If a long-term support debt to parents is defined in a strictly dyadic way (*inter*-generational orientation on equivalence), most adult children must be considered sub-

stantially overbenefited when parents have reached old age, at least in western economies. A child's later selection into time-consuming transfers of care may therefore be regarded a proportional repayment to earlier parental support. A within-family perspective, however, implies that support debts to parents are assessed relative to those of siblings (*intra*-generational orientation on equivalence). As a result, the "baseline amount" of support given equally to each child is disregarded. This point is illustrated by a simple example in Figure 1.

The figure presents support accounts of a parent (G1) and two adult children (G2) at two points in time. The two bars in the left panel indicate each child's support debt to the parent ("inter-debt") from earlier and middle periods of the family life course. The shaded part of the upper bar shows that Child 1 has received more support than Child 2 ("intra-debt"). For the purpose of the present study, this difference may be thought of as a sizeable financial transfer which only Child 1 received. Note that the difference between both children is small when compared to the amount of baseline support which both children received. The right panel illustrates a late-life situation in which Child 1 has selected into caregiving. Schematically, we may assume that this transfer constitutes a proportional repayment to earlier parental support ("inter-repayment"). The relative debt compared to the inactive Child 2, however, is clearly overcompensated for.

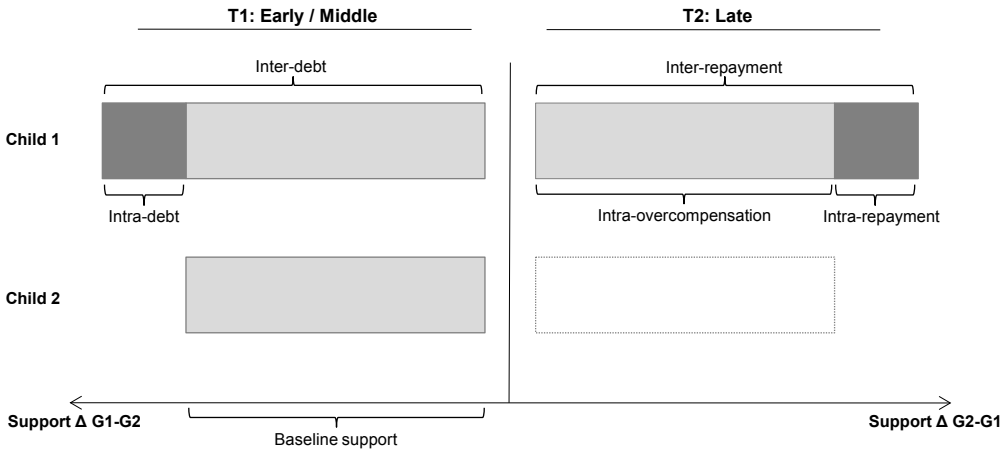

Figure 1. *Intra-generational orientation on equivalence*

Assuming an intra-generational orientation on equivalence, it therefore appears unclear why relatively small differences between siblings in terms of previously received support influ-

ence the selection into care along with its potentially far-reaching social, mental, and physical consequences for the caregiving child (Robison et al., 2009; Savla et al., 2008). Instead, less-demanding help such as assistance with household chores could constitute an equivalent repayment relative to an underbenefited sibling. In this respect, it is important to note that the outcome measures used in previous analyses of long-term reciprocity were not restricted to intense transfers but covered a wide array of children's support activities (Henretta et al., 1997; Silverstein et al., 2002). Specifically, Henretta et al. (1997) operationalized children's support by a dichotomous measure ranging from occasional practical help to hands-on caregiving.

As discussed above, the principle of equivalence only applies for the long-term definition of parent-child reciprocity, whereas short-term reciprocity was argued to be associated only with intense time transfers for which frail parents usually cannot offer proportional repayments. In view of this distinction, we propose that a more differentiated consideration of support intensity provides insights into how long-term and short-term reciprocity are linked across the family life course.

A Linkage Between Long-Term and Short-Term Reciprocity?

As already mentioned, a sociological perspective on support exchange considers late-life patterns of intergenerational transactions within families as evolving from the history of the relationships between each sibling and their parents. This view suggests a *sequential interdependence* of long-term and short-term reciprocity. That is, parent-child reciprocity operates both longitudinally and contemporaneously, each temporal pattern serving a specific purpose: Long-term reciprocity functions as a within-family selection mechanism exogenous to a child's support whereas concurrent reciprocation responds to the selected child's stress and burden, easing the caregiving relationship.

Based on the above discussion of intra-generational orientation on equivalence, we propose two models of this sequential process. The first posits a direct linkage between long-term and short-term reciprocity (*Hypothesis 1a*): Among siblings, the overbenefited assume caregiving responsibilities to a parent in need whereas those who received less do not (cf. Henretta et al., 1997). Caregiving may constitute a proportional repayment to earlier parental support, but the required investment of time is likely to overcompensate for previous

differences between siblings' support accounts (see Figure 1). Therefore, parents may seek to reduce this imbalance at least to some extent by providing concurrent reciprocation to caregiving children (i.e., short-term reciprocity).

An alternative specification assumes an indirect linkage (*Hypothesis 1b*). This idea is based on an analytical separation between caregiving and instrumental help (e.g., Brandt et al., 2009). The latter category includes activities that are not related to bodily care, such as aid with shopping, transportation, and household tasks. To an aging parent, this type of assistance is less reflective of dependency on the child; to an adult child, instrumental help is, on average, less demanding, less time-consuming and therefore less associated with stress and burden. If orientation on equivalence is intra-generational, instrumental help may constitute a proportional repayment relative to underbenefited siblings: Once a parent starts to require such assistance, long-term reciprocity influences the selection of an initial helper among siblings. An initial helper, in turn, may be more likely to become a caregiver. Some empirical evidence for the latter assumption exists, suggesting that aging parents are more likely to expect future caregiving from those children who already provided assistance (Pillemer & Suitor, 2006). Note that in contrast to the direct linkage model, this specification comprises two steps, initial selection into help and subsequent transition into care, of which only the first is directly influenced by long-term reciprocity. Short-term reciprocity, however, requires that the second step is complete. In this model, both temporal dimensions of exchange are therefore only interrelated to the extent to which initial helpers become later caregivers.

These models of (direct or indirect) sequential interdependence suggest that despite its different temporal shapes, reciprocal exchange is distinctly structured within families across the life course. That is, earlier patterns of giving and receiving translate into later patterns, reinforcing reciprocal exchange within specific parent-child dyads, as opposed to others. However, intra-generational orientation on equivalence leaves room for an alternative view, suggesting the absence of a (sequential) linkage between long-term and short-term reciprocity (*Hypothesis 2*). Similar to the model of an indirect linkage, long-term reciprocity is assumed to influence the selection of an initial helper. The supporting child, however, does not overcompensate by investing far beyond what is necessary to restore the support balance relative to siblings. Once requirements for parental support become more

demanding, responsibilities are renegotiated among siblings. Consequently, long-term reciprocity appears unlikely to bear on the process by which an adult child becomes a caregiver to an infirm parent. The latter may rather be viewed as a separate process. In this respect, compelling evidence exists on a number of alternative models that conceptualize caregiving as *unconditional*, need-driven support governed by norms of filial responsibility (Silverstein et al., 2006), attachment (Collins & Feeney, 2000), and similarity (Pillemer & Suitor, 2006).

METHOD

Sample

We used data from Wave 1 (1993) of the AHEAD study comprising 8,222 noninstitutionalized individuals aged 70 and over (i.e., born 1923 or earlier). The AHEAD data were particularly well suited to address our research questions because they included parents' retrospective reports on earlier financial transfers given to children within the past 10 years as well as information on more recent transfers from the past 12 months. Following Henretta and associates' (1997) analysis of these data, we restricted the sample to respondents who were living without a partner, had between 2 and 10 living children, and were "at risk for care". The first restriction to single-living respondents removed 4,460 individuals, focusing the analysis on elderly persons among whom, in absence of a partner in the household, assistance from adult children was especially important. The second restriction, excluding further 1,419 cases, was motivated by a within-family perspective that examines differences between siblings. Calculation of fixed-effects estimates requires at least two children per family and within-family variation in child characteristics (see below). The third restriction was based on the "risk for care" definition by Henretta et al. (1997), removing another 1,307 individuals. This exclusion restricted the sample to those who satisfied at least one of the following criteria: (1) receiving help; (2) using equipment; (3) experiencing health-related difficulties in performing activities of daily living (ADLs) or instrumental activities of daily living (IADLs). Finally, we removed further 26 respondents who did not report on the receivers of transfers. After all restrictions, our analytic sample consisted of 1,010 families (= respondents; 12.3 % of original sample size) comprising 3,768 parent-child dyads.

Measures

We used five measures for intergenerational transfers in the multivariate analyses (see Table 1). First, we replicated both transfer measures used by Henretta and associates (1997: 113) to investigate long-term reciprocity. Earlier financial transfers from parents to children were measured by a dichotomous indicator focusing on financial gifts of greater size given within a 10-year window before data collection. This indicator was coded one if the parent answered positively on at least one of the following questions: (1) "In the past 10 years did you [or your (husband/wife/partner)] give a child (or grandchild) a deed to a house?; (2) "Please think about the past 10 years. Not counting any shared housing or shared food, have you [and your (husband/wife/partner)] given financial help or gifts, including help with education, of $5,000 or more to any child (or grandchild)?"

Affirmative responses were followed up by questions on the name of children or grandchildren who received the transfers. If the recipient was a grandchild, the transfer was indexed to his or her parent (i.e., one of the respondent's children). A second dichotomous indicator was used to measure time transfers received from children. This variable was coded one for dyads in which the child provided assistance with ADLs and/or IADLs in the past 12 months. Helpers with ADLs (bathing, dressing, eating, toileting, bed transference, and walking across a room) were identified as follows. First, respondents reported on each of the six ADLs whether anyone ever helped them to perform that activity during the last year. Positive responses were followed up by a question on how often they received help. Only if it was received "most of the time", a specific helper was identified by the question of "who most often helps?" In cases of assistance with IADLs (preparing hot meals, grocery shopping, using a telephone, taking medications, and managing money), the AHEAD survey used a different strategy to identify helpers. Respondents who reported on any level ("most of the time, some of the time, only occasionally") of receiving assistance with at least one of the IADL tasks were asked to name the two persons that most often helped. Both for assistance with ADLs and IADLs, time transfers were indexed to the respondent's respective child if the helper was a child-in-law or a grandchild.

Note that the indicator for time transfers covers a wide range of support activities and support intensity. Testing our hypotheses, however, required more differentiated measures of children's time transfers. In this respect, the above definitions of ADL and IADL helpers

provided a straightforward rationale to generate an indicator for time-consuming, "burdening" time transfers as well as an indicator for less-demanding support unrelated to bodily care. According to the AHEAD identification strategy, an ADL helper was the person who *most often* helped with one or more tasks related to *bodily care*. In addition, a helper was only named if the parent was in *great need* of support, receiving assistance most of the time when performing the activity. In contrast, persons named as IADL helpers were not necessarily the primary providers of support and their activities did not involve hands-on caregiving. Furthermore, identification of these helpers was not restricted to situations in which the respondent required assistance most of the time, but also if support was received only occasionally or some of the time.

Based on these considerations, we divided the time transfer measure used by Henretta et al. (1997) into two additional indicators. The first ("care") was coded one for dyads in which the child was named as the person who most often assisted with at least one ADL. The second ("help") was coded one for dyads in which the child was among the two named persons who helped with at least one IADL. Finally, we used an indicator for parents' financial transfers of more than $500 that were given to a child in the past 12 months. This measure concerned the analysis of short-term reciprocity that required consideration of downward (i.e., parent-to-child) financial transfers from the same recall period as upward time transfers (Leopold & Raab, 2011: 110). Again, transfers given to children-in-law or grandchildren were indexed to the respective child of the respondent.

All models controlled for a common set of socio-demographic covariates (see Henretta et al., 1997: 113). Most prominently, daughters are heavily overrepresented as providers indicating that siblings divide caregiving responsibilities along gender lines. Being married, an indicator for an own family's competing demands, was found to reduce the likelihood of providing care (e.g., Dwyer & Coward, 1991; Laditka & Laditka, 2001). With regard to a child's age and education, results are less conclusive (e.g., Dwyer & Coward, 1991; Henretta et al., 1997; McGarry & Schoeni, 1995).

The share of missing data on respondents' children was 0.6 % for gender, 4.1 % for age, 1 % for marital status, and 6.1 % for years of education. Before conversion into dyadic data, we imputed missing values on these covariates using a background model that included all variables from the multivariate models and a number of auxiliary variables at family level.

We used multiple imputation by a sequence of chained equations (Royston, 2009; van Buuren, Boshuizen, & Knook 1999), generating ten estimates for each missing value. In the multivariate models, parameter estimates and standard errors were calculated by Rubin's rules (Rubin, 1987). In contrast to single imputation, this procedure adjusts for the fact that imputation involves uncertainty with regard to the missing values and avoids underestimation of standard errors by taking into account the variation between and within imputations.

Fixed-Effects Models

We used fixed-effects conditional logit models to investigate patterns of reciprocal exchange within families. Because this analytical strategy focuses on differences between siblings, estimates are only obtained for characteristics that vary among siblings. There are two important advantages of a fixed-effects approach for the purpose of the present study. First, it controls for unobserved factors at family level. For example, a shared family culture to unconditionally support one another may govern intergenerational transfers in both directions. If this is the case, the omitted variable is correlated with predictors and outcomes, potentially leading to biased estimates. In fixed effects models, all characteristics (observed and unobserved) that are constant within a family drop out of the estimation equation and do therefore not affect the estimates. Second, fixed-effects models are well suited to analyze intra-family processes (Silverstein et al., 2008). As discussed, intra-generational orientation on equivalence in the process of negotiating responsibilities to help and care among siblings implies that earlier support received equally by each child is disregarded. A fixed-effects approach corresponds well to this idea because parents' "baseline amount" of support is a factor shared among siblings and thus conditioned out of the models (see Figure 1).

RESULTS

Descriptive Analysis

Table 1 presents a descriptive overview of the sample and all measures used in the analyses. As a result of our sample restrictions, male respondents were heavily underrepresented; average age and the number of surviving children were at relatively high levels; and health

problems with ADLs and IADLs were widespread. The proportion of transfers given and received is presented at family level and at dyad level. The family level measure represents the proportion of families in which at least one transfer was recorded whereas the dyadic indicator is calculated by the total number of transfers divided by the number of dyads. Approximately every second parent received help or care from at least one child in the past 12 months and about 16 % of all children provided such assistance. The separate measures for help and care indicate that the former represents the predominant type of support that parents received. Downward financial transfers of greater size were given in 15 % of all families within the past 10 years; among all children, approximately 7 % received this type of parental support. Fairly similar numbers are found with regard to downward financial transfers of $500 or more given in the past year.

Multivariate Analysis

Our multivariate models are presented in Tables 2, 3, and 4. These models are organized as follows. First, we reproduced the multivariate model used by Henretta et al. (1997: 117) to investigate long-term reciprocity within families (Model 1, Table 2). This model represents the baseline specification for all subsequent models in the sense that these models share a common set of covariates and vary only with regard to the transfer measures used. In the remaining models from Table 2, the outcome variable is replaced by the more differentiated outcomes "help" (Model 2) and "care" (Model 3). These models pertain to the concept of intra-generational orientation on equivalence, testing whether the effect of earlier parental transfers varied with regard to the distinction between help and care. The second set of models, presented in Table 3, test for short-term reciprocity. Because the temporal sequence of upward time transfers and downward financial transfers within the recall period of 12 months is unclear, each variable is introduced once as a predictor and once as an outcome in Models 4a and 4b (see Leopold & Raab, 2011: 113). The latter model is specified in the same way as Model 1 except that earlier financial transfers are replaced by current financial transfers as a predictor of children's support. Similar to the first set of models from Table 3, the remaining models separately predict the differentiated outcome variables help and care.

Table 1. *Descriptive Statistics and Variable Descriptions*

Variable	*M*	*SD*	*Range*	Description
Characteristics of respondents				
Male	.17			
Age	80.67	6.76	69-103	
Number of children	3.73	1.97	2-10	
Health problems with instrumental activities of daily living (IADLs)	1.44	1.50	0-5	Number of IADLs respondent needs help with or does not do because of health problems; IADLs: preparing hot meals, grocery shopping, using telephone, taking medication, managing money
Health problems with activeties of daily living (ADLs)	1.91	1.68	0-6	Number of ADLs for which the respondent is receiving assistance or using special equipment or having difficulty performing; ADLs: bathing, dressing, eating, toileting, bed transference, and walking across a room
Characteristics of children				
Male	.49			
Age	50.89	9.75	11-84	
Married	.65			Coded 1 if the child is married; 0 if the child is single, cohabiting, divorced, or widowed
Education	12.25	2.96	0-17	Education measured in years: 0 No formal education; 1-11 Grades; 12 High school; 13-15 Some college; 16 College grad.; 17 Post college
Transfer behavior				
Parent gave large financial transfer (past 10 years)				
Dyadic Level	.07		0-1	Coded 1 for dyads in which the parent gave a deed to a house and/or financial help or gifts, including help with education, of $5,000 or more to the child (or child's spouse, or grandchild) in the past 10 years; not counting shared housing or shared food
Family Level	.15		0-1	Coded 1 if the corresponding dyadic indicator equals 1 in at least one dyad within the family
Parent gave financial transfer (past 12 months)				
Dyadic Level	.06		0-1	Coded 1 for dyads in which the parent or his/her partner gave a financial transfer of at least $500 to the child (or child's spouse, or grandchild) in the past 12 months
Family Level	.13		0-1	Coded 1 if the corresponding dyadic indicator equals 1 in at least on dyad within the family
Parent received help (past 12 months)				
Dyadic Level	.15		0-1	Coded 1 for dyads in which the child, the child's partner, or one of the child's children are among the two persons who most often helped with IADLs in the past 12 months
Family Level	.48		0-1	Coded 1 if the corresponding dyadic indicator equals 1 in at least on dyad within the family
Parent received care (past 12 months)				
Dyadic Level	.03		0-1	Coded 1 for dyads in which the child, the child's partner, or one of the child's children most often helped with at least one of the six ADLs in the past 12 months
Family Level	.11		0-1	Coded 1 if the corresponding dyadic indicator equals 1 in at least on dyad within the family
Parent received help and/or care (past 12 months)				
Dyadic Level	.17		0-1	Coded 1 for dyads in which at least one of the above indicators (help / care) equals 1
Family Level	.51		0-1	Coded 1 if the corresponding dyadic indicator equals 1 in at least on dyad within the family

Note: [a]Sample of unmarried parents of 2 to 10 children who were "at risk for care" (i.e., received assistance and/or used special equipment and/or had difficulty performing any of the ADLs and/or had difficulty performing any of the IADLs and/or not performed these activities because of a health problem). (n = 1010 respondents; n = 3768 parent-child dyads).

The final set of models, shown in Table 4, simultaneously includes earlier and current financial transfers from parents as predictors for time transfers received from children. Again, initial estimation of the broad outcome measure of time transfers (Model 7) is complemented by more differentiated models for help (Model 8) and care (Model 9). The rationale behind this specification is as follows: Suppose that infirm parents give concurrent financial reciprocation to those children who provide time transfers. In a within-family fixed-effects model for time transfers, current financial transfers from parents will therefore "predict" the outcome. If those children who provide assistance were selected on earlier parental transfers, the latter would represent an omitted variable correlated both with the predictor and the outcome. In this case, the effect of parents' current financial transfers on receiving time transfers should decrease markedly after inclusion of information on earlier giving. That is, the effect of the current distribution of financial transfers among adult children is explained, to a certain extent, by earlier patterns. Considering our hypotheses, this result would indicate that long-term and short-term reciprocity were sequentially linked, either directly or indirectly via instrumental help.

Table 2. *Conditional Logistic Regression Results for Long-Term Reciprocity*

	Parent received help and/or care (past 12 months) Model 1		Parent received help (past 12 months) Model 2		Parent received care (past 12 months) Model 3	
	B (SE)	OR	B (SE)	OR	B (SE)	OR
Long-term reciprocity						
Parent gave large transfer (past 10 years)	1.10** (0.37)	3.01	1.14** (0.39)	3.14	0.58 (0.74)	1.79
Characteristics of child						
Age	-0.02* (0.01)	0.98	-0.02* (0.01)	0.98	-0.04+ (0.02)	0.96
Male	-1.01*** (0.11)	0.36	-0.93*** (0.12)	0.39	-1.60*** (0.31)	0.20
Married	-0.51*** (0.12)	0.60	-0.46*** (0.13)	0.63	-0.82** (0.28)	0.44
Years of education	0.04 (0.03)	1.04	0.03 (0.03)	1.03	0.08 (0.07)	1.09
χ^2	134.01		109.13		55.84	
df	5		5		5	
Pseudo R^2	0.09		0.08		0.19	
n	2033		1953		460	

Note: See Table 1 for details on measures; standard errors (SE) in parentheses; OR = Odds Ratio. $^{\dagger}p < .10$. $*p < .05$. $**p < .01$. $***p < .001$.

Model 1 (Table 2) shows that we were able to reproduce the main finding from the study by Henretta et al. (1997: 117). Children who received large parental gifts in the past 10 years were more likely to give time transfers to a frail parent. The marginal effect indicates that earlier parental transfers were no less important than the child's gender in predicting the propensity of providing support. Models 2 and 3 reveal that this effect differed markedly with respect to the type of time transfer, suggesting that long-term repayments from children take the form of help rather than care.

The results on short-term reciprocity, shown in Table 3, are similar to those reported by Leopold and Raab (2011) with European data from the SHARE. In comparison to inactive siblings, children who supported a parent almost tripled their odds of receiving a financial transfer from that parent in the same year (Model 4a). Conversely, giving money to a child tripled the odds of receiving assistance from that child (Model 4b). As suggested by the concept of short-term reciprocity, these patterns were related to the intensity of children's support, emerging most clearly if the child was a primary caregiver (Model 6). Note, however, that differences with regard to the help-care distinction were not as clear-cut as for long-term reciprocity, indicating the presence of short-term reciprocity even if the child did not provide support with ADLs (Model 5).

Despite the evidence for long-term and short-term reciprocity in Tables 2 and 3, these results do not support the idea of a sequential linkage between both patterns of reciprocal exchange. As expected, short-term reciprocity was associated with caregiving. However, earlier parental transfers predicted a child's selection into providing help rather than care, contradicting the model of a direct linkage. If selection into help was the precursor to caregiving (indirect linkage), earlier parental transfers should still predict caregiving, even though the transition from help to care could not be observed from cross-sectional data. In view of these results, it is not surprising that the findings from Table 4 also point to the absence of a linkage between long-term and short-term reciprocity. Model 7 shows that compared to Model 4b, the effect of current financial transfers decreased only slightly when controlling for the distribution of earlier transfers among siblings. The remaining models suggest that the findings from the previous models are robust to simultaneous inclusion of the indicators for long-term and short-term reciprocity. In short, the former predicted assistance with IADLs whereas the latter was primarily associated with caregiving.

Table 3. *Conditional Logistic Regression Results for Short-Term Reciprocity*

	Parent gave financial transfer (past 12 months) Model 4a		Parent received help and/or care (past 12 months) Model 4b		Parent received help (past 12 months) Model 5		Parent received care (past 12 months) Model 6	
	B (SE)	OR	B (SE)	OR	B (SE)	OR	B (SE)	OR
Short-term reciprocity								
Parent received help and/or care (past 12 months)	1.01* (0.44)	2.73						
Parent gave financial transfer (past 12 months)			1.14** (0.43)	3.14	0.97* (0.43)	2.63	1.70* (0.77)	5.47
Characteristics of child								
Age	-0.08** (0.03)	0.92	-0.02+ (0.01)	0.98	-0.02* (0.01)	0.98	-0.04+ (0.02)	0.96
Male	-0.23 (0.29)	0.8	-1.01*** (0.11)	0.36	-0.93*** (0.12)	0.39	-1.58*** (0.31)	0.21
Married	0.13 (0.34)	1.14	-0.52*** (0.12)	0.59	-0.46*** (0.13)	0.63	-0.91** (0.29)	0.4
Years of education	-0.18* (0.08)	0.84	0.05+ (0.03)	1.05	0.04 (0.03)	1.04	0.10 (0.07)	1.11
χ^2	25.05		131.98		105.24		60.53	
df	5		5		5		5	
Pseudo R^2	0.12		0.09		0.08		.21	
n	287		2033		1953		460	

Note: See Table 1 for details on measures; standard errors (SE) in parentheses; OR = Odds Ratio. $^{\dagger}p < .10$. $*p < .05$. $**p < .01$. $***p < .001$.

The results on the covariates are consistent with the literature on intergenerational transfers. Daughters were more likely to support their parents than sons, in particular with regard to caregiving. Those who were married – an indicator for competing demands – had lower propensities of assisting their parents. Again, the difference was more pronounced in the models predicting care provision. Schooling is a more ambiguous proxy, possibly indicating both higher opportunity costs of supporting parents as well as personal resources that allow better availability. In our analysis, education did not affect a child's propensity of assisting an infirm parent. Finally, the age effect shows that within families, older children were less likely to provide support than their younger siblings.

Table 4. *Conditional Logistic Regression Results for Long-Term and Short-Term Reciprocity*

	Parent received help and/or care (past 12 months) M7		Parent received help (past 12 months) M8		Parent received care (past 12 months) M9	
	B (SE)	OR	B (SE)	OR	B (SE)	OR
Reciprocity						
Long-term	0.95*	2.58	1.04**	2.83	0.18	1.20
Parent gave large transfer (past 10 years)	(0.38)		(0.40)		(0.79)	
Short-term	0.92*	2.52	0.79+	2.19	1.66*	5.26
Parent gave financial transfer (past 12 months)	(0.44)		(0.44)		(0.79)	
Characteristics of child						
Age	-0.02+	0.98	-0.02*	0.98	-0.04+	0.96
	(0.01)		(0.01)		(0.02)	
Male	-1.01***	0.36	-0.93***	0.39	-1.58***	0.21
	(0.11)		(0.12)		(0.31)	
Married	-0.52***	0.59	-0.46***	0.63	-0.90**	0.41
	(0.12)		(0.13)		(0.29)	
Years of education	0.04	1.05	0.03	1.03	0.10	1.10
	(0.03)		(0.03)		(0.07)	
χ^2	138.55		112.34		60.59	
df	6		6		6	
Pseudo R^2	0.10		0.08		0.21	
n	2033		1953		460	

Note: See Table 1 for details on measures; standard errors (SE) in parentheses; OR = Odds Ratio. $^{\dagger}p < .10$. $^{*}p < .05$. $^{**}p < .01$. $^{***}p < .001$.

DISCUSSION

This article proposed a common framework for analyzing different temporal shapes of reciprocal exchange in parent-child relationships. Drawing on basic principles from social exchange theory, we took a within-family approach, assessing whether long-term and short-term reciprocity operate as interdependent mechanisms that initially select and subsequently relieve intergenerational caregiving relationships. Data from AHEAD on previous and current transfers allowed considering late-life patterns of support exchange in families as well as their historical antecedents, measured by large parental transfers given to children within the past 10 years.

Using fixed-effects models, we were able to reproduce previous findings on long-term reciprocity (Henretta et al., 1997) and on short-term reciprocity (Leopold & Raab, 2011). The results, however, did not support our hypotheses which posited either a direct

(Hypothesis 1a) or indirect (Hypothesis 1b) sequential linkage between both temporal patterns of parent-child reciprocity. Instead, the intensity of adult children's time transfers, operationalized by the distinction between instrumental help and care, emerged as the key feature that separated long-term from short-term reciprocity. Our findings indicate, first, that children who were overbenefited with regard to previous parental support were more likely than their siblings to provide instrumental help, but not hands-on care. These results are consistent with an intra-generational orientation on equivalence, suggesting that children did not repay proportionally to prior parental investments but balanced their support accounts relative to siblings. Second, short-term reciprocal exchange was primarily associated with caregiving (i.e., children's intense time transfers).

Overall, our findings are in line with Hypothesis 2 which stated that within-family selection of a caregiver is influenced by factors other than long-term reciprocity. We did not explicitly test alternative models of caregiver selection in this investigation, but even the few covariates included in our estimation already pointed to a number of relevant factors. For example, married children were generally less likely to support their parents and in particular to provide care. This finding is consistent with previous research (e.g., Dwyer & Coward, 1991), indicating how competing demands, in this case an own family, constrain the time available for providing intergenerational assistance. The issue of availability and structural constraints also pertains to the marked gender differences which emerged as a key predictor of support provision, again particularly with regard to caregiving. In this respect, Sarkisian and Gerstel (2004) explained the gender gap in support intensity by structural differences in rates of employment and job characteristics. Further ideas that have been advanced in the literature are also related to the gender effect. For example, earlier intergenerational affection was found to motivate social support provided to parents, particularly between mothers and daughters (Silverstein et al., 1995). Daughters also appear to be more forthcoming in translating norms of filial responsibility into supportive behavior (Silverstein et al., 2006). Finally, Pillemer and Suitor (2006) identified similarity of gender as an important factor influencing the within-family selection of a caregiver (in this respect, note that over 80 % of parents in our sample were female).

There are several limitations to this study. First, we attempted to investigate a sequential process using cross-sectional data. This design precludes the analysis of transitions across

caregiving careers. In particular, it was not possible to accurately test Hypothesis 1b (indirect linkage) because we were unable to observe the transition from intergenerational help to caregiving. Furthermore, we relied on retrospective reports that referred to slightly overlapping recall periods ("the past 10 years" versus "the past 12 months"), introducing some ambiguity in the temporal sequence of "earlier" and "current" transfers (Henretta et al., 1997: 118). Despite these shortcomings, we maintain that the patterns we found suggest a distinctive structure that is unlikely to be observed if long-term and short-term reciprocity were sequentially linked.

Second, our analysis relied on dichotomous transfer variables but an adequate depiction of how siblings actually divide responsibilities requires more differentiated information on each child's contributions. Our measures correspond to the rather simplistic view that specific children occupy the role of a primary helper or caregiver whereas others do not. The recent literature, however, has highlighted the fact that informal help and care is most often shared among siblings (Davey & Szinovacz, 2008). Consequently, between-sibling variation is better captured by a design that allows identifying more than one or two helpers and includes gradual rather than dichotomous measures on each child's contributions. With regard to intra-generational orientation on equivalence, we further note that we had to infer sibling negotiations on which we lacked any direct information.

Third, our models controlled for relatively few child-level and dyadic factors. Despite the obvious benefits of using fixed-effects models to deal with unobserved heterogeneity, omitted variable bias may still exist if unobserved characteristics that vary between parent-child dyads within a family were correlated with predictors and outcomes. Examples are the extent to which children endorse norms of obligation toward parent care (Gans & Silverstein, 2006) and intimacy in parent-child relationships (Schwarz, 2006). Our models, however, would hardly benefit from cross-sectional information on these characteristics because it would remain unclear if they were exogenous or endogenous to supportive exchanges (Henretta et al., 1997: 118).

In conclusion, our attempt to jointly investigate two temporal dimensions of parent-child reciprocity pointed to the importance of analytical distinctions rather than substantive linkages. Namely, the temporal structure of exchange appeared to be distinctly related to the intensity of children's time transfers. Short-term reciprocity has already been proposed as a

disburdening arrangement associated with time-consuming assistance, but analysts of long-term reciprocity did not explicitly consider different levels of time transfer intensity. In this respect, we view intra-generational orientation on equivalence as a supplementary idea to the study by Henretta and associates (1997). This principle corresponds well to a within-family perspective and our findings using differentiated measures of time transfers indicated that children appear to evaluate long-term support obligations relative to their siblings. In view of that, future studies should focus more directly on internal negotiations among siblings, in particular with regard to intergenerational caregiving.

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