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A COMPARATIVE PERSPECTIVE ON INTERGENERATIONAL SUPPORT

Responsiveness to parental needs in individualistic and familialistic countries[1]

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ABSTRACT: It has often been argued that Southern European countries are more familialistic in their culture than Western and Northern European countries. In this paper, we examine this notion by testing the hypothesis that adult children are more responsive to the needs of their elderly parents in countries with more familialistic attitudes. To test this hypothesis, we analyse the *Survey of Health, Ageing and Retirement in Europe* (SHARE). We focus on three indicators of need: (a) the partner status of the parent, (b) the health status of the parent, and (c) the education of the parent. Using Heckman probit models, we examine the effects of these variables on whether or not the parent receives instrumental support from children, thereby controlling for whether or not children live independently from their parents. We estimate effects of need on support and we compare these effects across 10 European countries, using both graphic devices and a multilevel probit model where individuals are nested in countries. We find significant cross-level interactions of need variables and the degree of familialism in a country. Our analyses, thereby provide more positive evidence for the hypothesis than earlier studies, which have focused largely on comparing aggregate levels of support among countries.
Key words: intergenerational relations; support; family values

1. Introduction

The ageing of the population is causing an increasing demand for care, even if at later ages. This demand is addressed both to family members and to social services or to the market. Within the family, in addition (and in a second position) to spouses, adult children are the main family care providers. Due to population ageing, which includes also kinship ageing and an increasing likelihood of three and sometimes four generation families, two phenomena are becoming widespread. First, mature adults well in their fifties and sixties are now more likely than ever to have at least one parent still living and needing some kind of caring help because of frailty. Second, the phenomenon of co-ageing, by which two generations age together at least for some time is becoming widespread as well.

Children can provide several types of support, including emotional and social support on the one hand, and practical and financial assistance on the other hand (Silverstein and Bengtson 1997). Many studies have shown that throughout Europe, families are highly involved in providing care to older people. At the beginning of the 1990s, for instance, British studies estimated that about 15 percent of the adult population provided regular support of some kind to a sick or older person (Sinclair *et al.* 1990). According to Eurobarometer data (Alber and Kohler 2004), at the beginning of 2000s, about 17 percent of all adults in EU 15 took care of a frail elderly or disabled person not living with them and the same percentage did this for a person living with them. In the new members states and in three Candidate countries (Bulgaria, Romania and Turkey), the percentages were slightly higher: 18 and 23 percent, respectively. Other, more detailed comparative studies on intergenerational exchanges confirm that intergenerational ties and solidarity remain strong across countries, irrespective of demographic and social differences (e.g., Daatland and Herlofson 2003; Attias-Donfut *et al.* 2005; Grundy and Henretta 2006; Ogg and Renaut 2006).

The co-existence of high levels of family care provision with varying levels of public and market care provision for the frail elderly has prompted the development of the twin concepts of 'social care' and of a 'mixed economy of care' (e.g., Daly and Lewis 1998). In no country, in fact, family care is fully substituted for either from public or from market provision. Rather, care giving and care receiving constitute a package: the social care package comprising both formal and informal care, private and public, family and non-family provided. What differs across countries, as well as across social groups and individual families, is the internal balance of the package.

In this contribution, we compare European countries in the support that elderly parents receive from their adult children. A general argument

in the literature is that southern European countries have stronger kinship ties and more generally a more familialistic culture than northern European countries (Reher 1998). Given this difference, it is often expected that there is a North–South gradient in the support that adult children give to elderly parents. To examine this hypothesis, previous studies have largely focused on the overall level of support (e.g., Attias-Donfut *et al.* 2005; Motel-Klingebiel *et al.* 2005; Ogg and Renaut 2006). These studies have found a North–South gradient in the proportion of those providing some kind of support, but an inverse pattern in the proportion of those providing it regularly. Studies of parent–child contact do find higher levels of face-to-face contact in more familialistic countries, but contact is not the same as support (Höllinger and Haller 1990; Tomassini *et al.* 2004).

A shortcoming, in our view, of previous analyses is that they ignore the role of need. After all, the degree to which children support their parents is first of all a function of the needs that parents have for that support. Hence, it is not only important to compare countries in the overall level of support, it is equally important to compare countries in the degree to which children respond to the needs of parents. We can expect that the effect of parents' need on the support received from a child will be stronger in countries that are more familialistic both in subjectively perceived intergenerational obligations and in implicit policy assumptions than in more individualistic countries on both levels (Saraceno 2001). This comparative hypothesis might help shed some light on the meaning of the two opposite North–South gradients shown in the incidence and the intensity of support. If proven, it also might offer some ground to those who suggest that even the understanding of what is support and when one is actually receiving or giving support, may differ cross-culturally.

We test this hypothesis by analysing effects of multiple indicators of parental need on the support that parents aged 65 and older receive from their children. We use data from 10 European countries in the *Survey of Health, Aging and Retirement in Europe*. The effects of the indicators of parental need are compared across countries, using both graphic devices and multilevel regression models which include cross-level interactions of cultural characteristics of countries and individual indicators of need.

1.1. Background and previous research on intergenerational support

Comprehensive comparative studies on intergenerational support are fairly recent and have only started to explore the normative and value frameworks that shape individuals' and families' responses to older people's care needs. Three dimensions seem particularly relevant in these

frameworks: (a) patterns of family formation and family living, (b) family norms concerning intergenerational solidarity, and (c) welfare state patterns.

With regard to the first dimension, European countries differ in the degree to which the 'nuclearization' of the family has been achieved and particularly in the degree to which the elderly live by themselves either as a couple or alone. The European Quality of Life Survey, performed on 28 European countries in 2003, found that 25 percent of all people over 65 still had a child in the household in Italy, and over 30 percent in Malta and Poland. In Hungary, Spain, Slovenia and Cyprus and Greece this situation concerned about 20 percent of the elderly. But in Denmark, Sweden, France and Germany, it did not reach 5 percent (Saraceno *et al.* 2005; Saraceno 2007; see also Iacovou 2000). A large part of these differences is due to differences in the age at exit from the parental household when young. But a small part is due to the incidence of extended or multiple households, where more than one couple live under the same roof. This incidence is minimal (around 2 percent) in 'old EU 15' countries, although it is slightly higher in the Southern ones. It is around 10 percent in Central and Eastern European countries. The presence of children in the household is not per se an indicator of care provided by the adult children. Adult children may be living in the parental household in order to receive financial and even caring support from their parents. But undoubtedly, as parents age, the balance at least in care giving may shift within the household.

The second dimension is cultural. Countries differ with regard to kinship traditions. Demographers and historians have long pointed out that differences between Southern European countries on the one hand and Western and Northern European ones on the other hand did not concern only, or even mainly, the incidence of the extended versus the nuclear pattern of household formation. It rather concerned the role of kinship. In the Mediterranean countries, irrespective of their structure (nuclear, stem, or extended), households have traditionally been embedded in a dense kinship network to a degree very different from Northern European households (Lesthaeghe and Meekers 1986; Reher 1998). These differences in turn have been interpreted as both the cause and the consequence of more familialistic versus more individualistic cultural attitudes and norms.

In most societies, there exists the norm that one should care for one's family members in times of need. Such norms are especially strong for one's own children; but norms to support one's own parents are only slightly less so (Rossi and Rossi 1990; Lee *et al.* 1994). These norms are believed to be stronger, or to have a stronger back up, in familialistic countries than in individualistic countries. Next to norms about giving,

there are norms about receiving. In most societies, older adults expect to rely on their adult children as sources of support and care in case of need (Rossi and Rossi 1990; Stein *et al.* 1998). Yet, in contemporary Western Societies, somewhat in contrast to the norm of filial obligation, there is also the norm that one should be independent and autonomous. Studies have shown that many elderly persons express a desire to remain independent as long as possible and not to be a burden to their children, even if and when they become frail (Silverstein and Bengtson 1994). Such norms of autonomy are probably stronger in individualistic than in familialistic countries (e.g., Lowenstein and Daatland 2006).

The third dimension is institutional. The various countries have different institutional arrangements for support, not only with regard to the traditional items included in welfare state analysis (Esping-Andersen 1993), but also with regard to legal norms concerning intergenerational obligations and the provision of care services. The pioneering study by Anttonen and Sipilä (1996) indicated already in the early 1990s that the provision of services for the frail elderly (together with those for young children) distinguished welfare states in ways that only partly overlapped with standard welfare state typologies. Overall, however, the public provision of services for the elderly is relatively high in the most individualistic and universalistic Nordic countries and in most of the continental ones, although in the latter subsidiarity plays a larger role than in the former. They are less well developed in countries where the welfare state relies more heavily on intergenerational solidarity, often enforced by legal norms, as in the case of Southern European countries.

Previous comparative research has often focused on the complex relationship between the welfare state and the family. Conventional wisdom, often incorporated in sociological theory, has for a long time assumed that the family and the welfare state substitute for each other. From this perspective, the development of a strong and universal welfare state weakens family solidarity, thus 'crowding out' family support. (e.g., Cox 1987; Cox and Jakubson 1995). This thesis, popular among economists, is also shared by those family sociologists who see in the development of the welfare state one of the causes of the weakening of the family (e.g., Donati 2002). The thesis was first challenged by feminist scholars who pointed out that, at least in the field of care, intergenerational family (time) transfers continue to play an important role also in the most developed welfare states (Lewis 1998; Sainsbury 1996). Subsequently, the crowding out thesis was criticized by the first comparative studies on intergenerational exchanges. Künemund and Rein (1999), for instance, showed that 'crowding in' effects were more evident than 'crowding out' ones. In their data, there was more evidence of a good provision of services encouraging family help than discouraging it. They argued, therefore, that

substantial formal services provision enables families to continue support-
ing their frail elderly members within an integrated and specialized
framework of 'mixed responsibilities', rather than of a delegation of
responsibilities. Similar conclusions were drawn by Kohli (1999) and then
by others on the basis of the larger comparative data set provided by the
SHARE study (Attias-Donfut and Wolff 2000; Attias-Donfut *et al.* 2005).
Analyses of the 2001 ISSP (International Social Survey Programme) data
also supported this conclusion (Ogg and Renaut 2005).

On the basis of these findings, scholars have shifted attention to the
demands' squeeze experienced within ageing kinships by the so-called
sandwich generation, particularly by women aged 55–69 years caught in
between demands from adult children (and young grandchildren) and
demands from frail elderly parents (e.g., Grundy and Henretta 2006).
Attention is also shifted to the risk that a weakening of the welfare state
may not be compensated for by an increased family effort, due to the
changing demographic balance within kinship networks (more frail elderly,
fewer able bodied adults) and increasing women's labour market
participation (Daatland and Herlofson 2003; Johansson *et al.* 2003).
Both these phenomena, in fact, shrink the traditional available pool of
care-givers (Saraceno *et al.* 2005).

Using the findings from the OASIS (Old Age Autonomy: the Role of
Service Systems and Inter-generational Family solidarity) study on five
countries, Motel-Klingebiel *et al.* (2005) have tested three alternative
hypotheses with regard to the relationship between intergenerational
family solidarity and the welfare state – substitution, mutual encourage-
ment, mixed responsibility. They too did not find any evidence of a
substantial 'crowding out' of family help by generous welfare states. They
found instead support of the 'mixed responsibility' thesis: in societies with
well developed services, help from families and welfare state services act
accumulatively, while in welfare regimes that rely more explicitly and
heavily on family provision this does not occur.

All these findings, therefore, seem to point out that welfare regimes
(and particularly caring regimes) make a difference not for the degree of
involvement of family members and particularly children in the provision
of care, but for the degree to which it is indispensable in the absence of
other resources. In this perspective, our focusing on the role of need may
offer further insights in this direction.

1.2. Data and methods

To test our hypothesis, we analyse the *Survey of Health, Ageing, and
Retirement in Europe* (SHARE). SHARE is based on nationwide

representative samples. In some countries, individuals were the sample units, in other countries, households were sampled. All persons aged 50 and over in a household were included in the sample. Household response rates are 55 percent on average. Respondents were interviewed with CAPI questionnaires at home. Descriptive analyses of the SHARE can be found in Börsch-Supan *et al.* (2005). The countries that we use in this analysis are Austria, Denmark, Germany, France, Greece, Italy, The Netherlands, Spain, Sweden, and Switzerland.

For the current analyses, we examined the respondents of SHARE in their role as (potential) receivers. For that reason, we selected respondents aged 65 and over with at least one adult (21+) child not living at home. The age limit of 65 was chosen because parents in the age group 50–64 are less likely to need help. The age limit of 21 was chosen because at the lower adult age of 18, the majority of children in all countries are still living at home. This yields a sample size of 6,409 older parents.

1.2.1. Measures: The unit of analysis is the parent–child dyad. The SHARE data have detailed background information on at most four children.[2] After selecting adult children living outside the household, the number of dyads with valid information on the support variable is 11,627. Because the dyads are not independent, the standard errors in the regression models in Tables 3 and 4 are corrected for clustering of cases within families. The clustering avoids the underestimation of standard errors which one would obtain if one were to treat each child as an independent observation.

In the interview, the respondents were asked if they received any help from members outside the household with (a) household tasks, (b) personal care, or (c) administrative and financial matters. The time frame was the last 12 months. Subsequently, it was asked who gave that help. Respondents could list up to three names. If a child was mentioned, we matched this information to one of the four children for which detailed demographic data were available (see earlier). It is possible that help was obtained from a child who is not included in the subset of four children for which there is detailed information. We checked this, and found that in 98 percent of the cases where a child was mentioned in the support questions, this child was also included in the subset of four children.

Next to making a distinction between receiving help or not, we consider the frequency with which parents receive help. If parents received help from a person, they were asked to specify whether they received help 'about daily', 'about weekly', 'about monthly', or 'less often'.

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2. If there were more than four children, the children who live closest to the parent were selected.

We use three indicators of need (means of these indicators are presented for each country in Table 1). The first need variable is based on information about marital history and living situation. We make a distinction between respondents living with a partner and respondents living alone. In more detailed analyses, we also make a distinction in whether or not the respondent was divorced/separated or widowed. Previous research confirms that parents who live alone receive more support from children, although these effects are clearest for widowhood and they are stronger for women (Eggebeen 1992; Silverstein *et al.* 1995; Roan and Raley 1996; Barrett and Lynch 1999; Kalmijn 2007).

The second measure of need of the parent (respondent) pertains to health. Two measures are used: (a) a subjective assessment of health by the respondent (ranging from 1 for 'excellent' to 5 for 'poor'), and (b) a scale of activities of daily living (ADL), which measures how many essential activities the respondent has difficulties in performing (e.g., getting out of bed, doing work around the house, showering). These are sometimes referred to as 'instrumental' tasks. Many studies have shown that such impairments are associated with increased support from children (Spitze and Logan 1990; Eggebeen and Davey 1998; Klein Ikkink *et al.* 1999).

The third variable is an indicator of the status position of the parent. We considered the (household) income of the parent and the level of education of the parent. As we will see, only the education of the parent has an effect on support; household income has no effect. We therefore proceed with education and include income as a control variable. Education is coded by SHARE into the 1997 *International Standard Classification of Education* (ISCED-97). The coding is rank order, from 0 (for no education) to 6 (second stage of tertiary education). To obtain an interval order, the ISCED levels are recoded to percentile scores in each country. Hence, the variable indicates the relative position of each respondent in the educational distribution *within* a country. Education can also be regarded as an indicator of need in that it is associated with financial, cultural and cognitive resources. It can be assumed that higher educated parents have more resources and this will make them less dependent on their children. For instance, higher educated parents may have more money to buy household support (e.g., domestic or care work) on the market and they have more knowledge and information to arrange financial and other administrative matters. Education is also correlated with filial norms. Higher educated parents seem to be less likely to endorse the statement that children should take care of their parents (Lee *et al.* 1994). This suggests that higher educated parents will ask for support from their children less often than lower educated parents.

We include several control variables. Since support is a dyadic phenomenon, we need to control for characteristics of both parents and

TABLE 1. Intergenerational coresidence and support and indicators of parental need in Europe

	Parents with child In household		Children living with parent		Children living in same building as parent		Parents receiving support from child		Children giving support to parent		Indicators of need			
	%	n	%	n	%	n	%	n	%	n	Parent alone	Health score	IADL score	
Italy	34.5	733	18.5	1436	9.7	1436	12.4	656	6.2	1170	0.35	3.11	1.11	733
Spain	38.6	803	18.6	1551	3.9	1551	14.1	729	7.3	1265	0.37	3.14	1.37	803
Greece	17.1	643	12.2	1027	13.7	1027	34.0	606	16.5	902	0.58	2.94	1.22	643
France	8.3	480	4.7	835	1.4	835	23.0	473	8.9	798	0.50	2.85	0.98	480
Sweden	2.1	889	1.0	1570	0.3	1570	21.0	885	7.7	1555	0.38	2.47	0.81	889
Denmark	2.9	453	1.0	748	0.7	748	24.6	451	11.7	745	0.57	2.52	0.99	453
Netherlands	5.4	698	2.6	1487	0.3	1487	16.1	695	6.1	1452	0.37	2.68	0.75	698
Switzerland	10.2	283	4.7	535	4.9	535	14.1	276	5.5	511	0.47	2.42	0.44	283
Germany	10.1	814	4.1	1403	7.7	1403	27.6	783	13.4	1353	0.36	3.07	0.81	814
Austria	16.0	613	7.6	1035	9.2	1035	23.2	585	10.3	960	0.58	2.80	0.94	613
All	15.5	6409	8.1	11627	5.1	11627	21.1	6139	9.2	10711	0.44	2.84	0.97	6409
Units	Parents		Dyads		Dyads		Parents		Dyads		Parents	Parents	Parents	

Note: SHARE data limited to parents 65 and over who have older children (21 +). Support items further limited to parents with older children living independently.

children. The characteristics of the parents are the following: (a) the age of the parent (ranging from 65 to 99), (b) the sex of the parent, (c) the household income of the parent (converted to purchasing power parity units and subsequently logged), (d) the number of children the parent has, and (e) whether or not the parent has children older than 21 who are living at home. The last variable is included because support from outside children is less likely when there are already other children living at home (Eggebeen 1992).

The characteristics of the child are the following: (a) whether the child is living with a partner, (b) whether the child has their own children, (c) whether the child is employed, (d) the child's sex, (e) the child's age, and (f) the child's education. The first three in this list indicate to what extent the child is able to provide support. It is expected that children who have their own family and who are working for pay will be less able to provide support to their parents (Ward and Spitze 1998). We also include the education of the child. Many previous studies have shown that education of parents and children has a strong negative effect on intergenerational contact (Kalmijn 2006).

1.2.2. Method and design: The analyses consist of two parts. In the first part, we analyse the 10 countries simultaneously in order to examine the effects of need on support. These effects are examined in several alternative ways. We present both models for whether or not the parent receives support (Table 3) and models for the frequency of support (Table 4).

The dichotomous support variable is estimated using probit models. Because the support variable is not observed for children who are living at home, we also checked to see how sensitive our estimates are for this form of selectivity. We do this in two ways. First, we use Heckman's (probit) model for sample selection. This model consists of two equations. The first step is a probit model for whether or not the child is living with the parent (the selection equation). The second step is a probit model for whether or not the child supports the parent, while controlling for the (expected) probability of living with the parent (the substantive equation). In order to identify the model, one variable is needed that is in the selection equation and that is not in the substantive equation. The identifying variable is the age of the child.[3] Second, we present a

3. The age of the child may be associated with support giving, but this will largely be due to the correlated age of the parent or to the life course stage of the child. Since the substantive equation includes the age of the parent as well as information on the life course stage of the child, there will be no net remaining effect of the child's age on support. Additional analyses also show that there is no net effect of child age on support (see later).

multinomial probit model in which the giving of support and coresidence are alternative choices that children can make. These two choices are approached in one probit model where not giving help and not living with the parent is the reference category. An advantage of the multinomial model is that it can be estimated without having to choose an instrument. A disadvantage is that the two choices – co-residence and support – each have their own specific elements, and children may follow different logics in making the two choices.

Table 4 contains the estimates where the frequency of help is the dependent variable. We present two alternatives. First, we recoded categories to numeric scores representing the approximate number of times a child offered help per year, ranging from 0 (no help) to 365 (about daily). Following earlier analyses of contact and help patterns, we subsequently transformed this variable into the natural logarithm. This recode has some degree of arbitrariness, but it is less arbitrary than a 0–4 coding scheme. Second, we present an ordered probit model where the distances between categories are not assumed but estimated by the model. This is a more valid approach, but the coefficients are more difficult to interpret and the model is not easily translated into a multilevel framework. We will see that the OLS model yields very similar estimates as the ordered probit model.

1.2.3. Method for testing the macro-level hypothesis: In the second part of the analysis, we focus on our comparative hypothesis. We first look at countries individually by estimating the probit model for each country. We explore how the effects of the need indicators vary among the 10 countries. To see if there is a pattern in these results, we relate the effects graphically to value characteristics of the countries. These value characteristics of countries are obtained from answers to attitude questions about family support in the 1998 Eurobarometer survey. These attitude questions can be used to measure the degree of cultural 'familialism' in a country. The graphs will give a first impression of whether effects of need vary with the degree of familialism in a country.

The concept of familialism, of course, is not strictly a matter of the norms of the inhabitants of a country. As explained earlier, several other elements play a role, such as patterns of family living, social policies toward the elderly and the family, and demographic differences. A recent study which has used a large number of indicators to understand patterns of family support to the elderly (Glaser *et al.* 2004), has found that attitudes and cultural values, measured in the same way as we do here, are the most important explanatory factor. The other two sets of indicators used by that study – socio-demographic variables and policy variables –

are important, but have a lower explanatory power. Moreover, they do not relate immediately to intergenerational support.

The percentage of the elderly receiving institutionalised care, as also presented by Glaser *et al.* (2004), might be an indirect indicator both of the degree to which families take upon themselves the responsibility to provide and of the availability of public support. Recent data, however, are not available for all the countries involved. According to an OECD study, among people of 65 years old and over, 3.6 percent were long-term care recipients in Austria, 6.2 percent in Belgium, 4.4 percent in Denmark, 6.3 percent in Sweden, 3.4 percent in Germany, 5.7 percent in The Netherlands, 8.0 percent in Sweden and 1.5 percent in Italy (OECD 2006). Countries, however, define this population differently, thus the data are not fully comparable. Moreover, long-term care in institution comprises only a fraction of policies that may be targeted to frail elderly people. This, indicator, therefore, is at best ambiguous and we prefer not to use it. Given the other results in Glaser *et al.* (2004), however, we feel confident that the cultural approach is a valid way of *measuring* the concept of familialism, although we do not claim that policy components are not part of the concept.

In the next step, we test the patterns observed in the figures with a multilevel probit model in which dyads are nested in countries.[4] These models include interaction effects of the individual need indicators and the country-level degree of familialism. The interactions tell us whether effects of need depend significantly on the country's context. Note that we use multilevel models here in order to not overestimate the contextual effects. There are only 10 contexts and if one would use regular (probit) individual regression models, the standard errors of the effects of contextual characteristics would be too low (e.g., Uunk *et al.* 2005). We estimate a multilevel probit model for the probability of support and a multilevel linear regression model for the frequency of support.[5]

1.3. Results

1.3.1. Description of country differences: In Table 1, we present descriptive information on the countries. Descriptive statistics are presented at the level of parents and at the level of children (dyads). For example, the first column presents the percentage of parents who have (at least one adult) child living in the household; the second column is based on dyads and

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4. We use STATA to estimate all the regression models, including the multilevel models.
5. These models are not controlled for clustering of dyads within families since this was not possible in the multilevel probit model. A three-level probit model would be an alternative, but this is not available in STATA.

represents the percentage of children who live with their parents. The two are directly related but the percentages for children will be lower than the percentages for parents.

We first see the expected differences in the prevalence of co-residence. Co-residence is quite common in Southern countries. For example, 35 percent of Italian parents and 39 percent of Spanish parents have an older child living at home. Co-residence is also common, albeit less, in German speaking countries. About 10 percent of German parents have an older child living at home. Another interesting feature is that in the Southern and the German-speaking countries, it is common that a child lives in the same building, although not in the same household as the parent. For example, 9 percent of the Austrian children and 14 percent of the Greek children live in the same building as their parent. Finally, we see that co-residence is rare in Northern countries such as Sweden and Denmark and also rare in The Netherlands.

The fifth and sixth column present figures on the support that children give to parents. The sample for these numbers is limited to parents with at least one independently living child, since (in the definition chosen here) support can only be given by outside children. In the analytical sample of parents, 21 percent received outside help from a child. At the dyad level, the number is lower. Of the children in the sample, 9 percent helped their parent in the last 12 months. Support patterns vary less systematically than coresidence patterns. Support is generally *not* more common in Southern countries than elsewhere. The exception is Greece, where support is the most common.

How do countries vary in their degree of (cultural) familialism? Table 2 shows that countries position themselves differently also with regard to attitudes and norms, as measured in the 1998 Eurobarometer survey. The first attitude item that we used is the statement that 'working adults should care more for elderly parents in the future'. Two Southern countries are most in favour of this statement, whereas Sweden and The Netherlands are least in favour of this statement. The second item concerns attitudes about children's co-residence with parents when the partner of the parent is no longer present. Co-residence receives very little support in Northern countries and in The Netherlands. Most support exists in Southern countries. The two German-speaking countries and France are in between. For attitudes about financial support of elderly parents, the results are more or less similar. In Southern countries, 24–30 percent say that children should pay for elderly parents, in Northern countries, virtually no one agrees with this. France and Germany take a middle position. The exception here is Austria, where financial support is as often approved of as in the south.

TABLE 2. Attitudes about upward intergenerational support in Europe

	Care more for elderly (1) %	Should live with family (2) %	Children should pay for parents (3) %	Overall (4)	N
Italy	76	52	23	0.43	1004
Spain	59	73	30	0.55	1000
Greece	89	71	27	0.78	1009
France	42	33	15	− 0.18	1002
Sweden	30	11	3	− 0.65	1000
Denmark	47	10	2	− 0.51	1010
Netherlands	38	14	7	− 0.49	1017
Switzerland	NA	NA	NA	NA	
Germany	49	40	10	− 0.11	1041
Austria	55	34	41	0.28	1085
All	53	38	17	0	9168

(1) The exact phrasing is: In the future, working adults may have to look after their parents more than they do nowadays. Is this a good thing or a bad thing?
(2) The exact phrasing is: Suppose you have an elderly parent who lived alone. What do you think would be the best if this parent could no longer manage to live on his/her own?
(3) The exact phrasing is: Who should mainly pay for taking care of elderly parents?
(4) The standardized sum of the standardized items.
Source: Eurobarometer 50.1 (1998).

The three indicators reveal some differences in the specific position of each country, so that it is important to assess more systematically whether they are correlated. Correlations for the indicators are high: $r = 0.81$ ($P = 0.01$) for the first two indicators, $r = 0.61$ ($P = 0.08$) for the first and the third, and $r = 0.70$ ($P = 0.04$) for the second and the third. The number of countries is small, but the level of agreement across indicators is encouraging.

To summarize the cultural differences, we constructed an index which combines information from the three items. In this way, the macro-level indicator is a multiple-item indicator, which improves the validity of our approach. The index is the standardized sum of the three items. Items were standardized first so that each item gets the same weight in the index. The ranking of the countries, from most familialistic to most individualistic, is as follows: Greece, Spain, Italy, Austria, Germany, France, The Netherlands, Denmark and Sweden. This ranking has considerable face validity. It has a North−South element, but it also points out the relatively familialistic position of the two German-speaking countries. Also noteworthy is that The Netherlands – which is usually denoted as a conservative welfare state (although skewed towards the elderly) – is as individualistic in its attitudes as the Northern countries.

1.3.2. Regression results: Our discussion of the regression results starts with the model for all countries combined, presented in Tables 3 and 4. As explained before, we start with a probit model, but also present models which take into account the selectivity of co–residence. All the indicators of need have the expected effect on support. Parents who live without a partner are more likely to receive support. Parents with poor physical health are supported more often, as are parents with limitations in their daily living capacities. Finally, we see that lower educated parents receive support more often than higher educated parents. All the effects are significant and in the expected direction.

To check how useful it is to control for selection bias, we also look at the effects of need in a Heckman probit model. The four effects of need remain significant and are of the same size as in Model 1. Hence, we conclude that selection bias does not alter the effects of need. The alternative approach, presented in the multinomial probit model reveals somewhat stronger effects of the need variables, but the direction and significance levels are similar. That the effects are stronger may have to do with the fact that the variable 'children at home', which was included in the substantive equation of the Heckman model, is not included in the multinomial logit model (where it is confounded with the dependent variable).

Do the indicators of need also affect co–residence? The Heckman model and the multinomial logit model allow us to answer this question. We generally see similar effects. A child is more likely to live with the parents when the parent is single and when the parent has limitations in his or her daily living capacities. Parental education also has a negative effect on coresidence: children live less often with higher than with lower educated parents. The health status of the parent, however, does not affect the chances that the child lives with the parent. The results from the Heckman approach and the multinomial approach are similar. Although the overall evidence for co–residence is weaker, the effects do suggest that coresidence is also affected by the needs of the parent.

Additional analyses were done to look at interactions with the gender of the receiver (i.e., the parent). To do this correctly, we make a distinction between divorce and widowhood (we can only make this distinction in the full European sample). We use the probit model for support received. The effect of divorce on support for mothers is 0.21. The effect is weaker for divorced fathers and even becomes negative (-0.23). Hence, divorced fathers receive less support than married fathers. The difference between these effects is significant ($P < 0.01$). This finding is consistent with what one would expect. For widowhood, the effect is 0.17 for mothers and 0.47 for fathers. The difference between these effects is significant ($P < 0.01$). This is not consistent with some previous studies (Ha *et al.* 2006). Perhaps

TABLE 3. Alternative regression models for the help a child offers to parents, with and without correction for sample selection

	MODEL I Probit model		MODEL II Heckman probit model				MODEL III Multinomial logit model			
	Help		Help		At home (selection)		Help		At home	
	B	p	B	p	B	p	B	p	B	p
Parent's age	0.021	0.00*	0.021	0.00*	0.014	0.01*	0.029	0.00*	0.025	0.00*
Parent lives without partner	0.239	0.00*	0.253	0.00*	0.311	0.00*	0.303	0.00*	0.470	0.00*
Parent poor health	0.093	0.00*	0.092	0.00*	0.035	0.22	0.132	0.00*	0.067	0.08
Parent limited IADL	0.073	0.00*	0.076	0.00*	0.058	0.00*	0.094	0.00*	0.104	0.00*
Mother versus father	0.268	0.00*	0.264	0.00*	0.139	0.01*	0.357	0.00*	0.242	0.00*
Parent's education	− 0.301	0.00*	− 0.309	0.00*	− 0.223	0.03*	− 0.442	0.00*	− 0.370	0.01*
Log household income	0.025	0.19	0.031	0.12	0.123	0.00*	0.029	0.25	0.174	0.00*
Children > 21 at home	− 0.265	0.00*	− 0.258	0.00*						
Number of children	− 0.073	0.00*	− 0.073	0.00*	− 0.018	0.28	− 0.105	0.00*	− 0.043	0.07
Daughter versus son	0.059	0.11	0.045	0.23	− 0.239	0.00*	0.058	0.25	− 0.300	0.00*
Child's education	− 0.081	0.29	− 0.095	0.22	− 0.413	0.00*	− 0.100	0.35	− 0.558	0.00*
Child cohabiting	− 0.052	0.27	− 0.124	0.04*	− 1.170	0.00*	− 0.175	0.01*	− 1.580	0.00*
Child has children	0.071	0.16	0.022	0.71	− 0.631	0.00*	0.012	0.87	− 0.859	0.00*
Child employed	− 0.060	0.23	− 0.085	0.09	− 0.356	0.00*	− 0.112	0.10	− 0.476	0.00*
Child's age					− 0.037	0.00	0.001	0.90	-0.050	0.00*
Austria (reference)										
Germany	0.237	0.01*	0.217	0.01*	− .402	0.00*	0.314	0.01*	− 0.472	0.00*
Sweden	− 0.056	0.54	− 0.092	0.31	− 1.081	0.00*	− 0.070	0.58	− 1.449	0.00*
Netherlands	− 0.191	0.04*	− 0.213	0.02*	− 0.580	0.00*	− 0.241	0.06*	− 0.825	0.00*
Spain	− 0.157	0.10	− 0.109	0.27	0.729	0.00*	− 0.195	0.13*	0.951	0.00*
France	− 0.295	0.00*	− 0.254	0.02*	0.689	0.00*	− 0.344	0.01*	0.879	0.00*
Italy	− 0.091	0.36	− 0.111	0.26	− 0.443	0.00*	− 0.106	0.44	− 0.605	0.00*
Denmark	0.112	0.27	0.071	0.50	− 1.167	0.00*	0.159	0.26	− 1.527	0.00*
Greece	0.189	0.03*	0.205	0.02*	0.405	0.00*	0.300	0.01*	0.614	0.00*

TABLE 3 (*Continued*)

| | MODEL I Probit model | | MODEL II Heckman probit model | | | | MODEL III Multinomial logit model | | | |
| | Help | | Help | | At home (selection) | | Help | | At home | |
	B	p	B	p	B	p	B	p	B	p
Switzerland	− 0.283	0.02*	− 0.305	0.01*	− 0.453	0.00*	− 0.370	0.03*	− 0.670	0.00*
Constant	− 3.267	0.00*	− 3.127	0.00*	− 0.954	0.05*	− 4.330	0.00*	− 1.791	0.01*
N censored	nap		941				nap			
N uncensored	10711		10686				10711			
Model Chi-square	429		445				1511			

Source: Survey of Health, Ageing and Retirement in Europe (own calculations).
Note: Children age 21 and over, parents aged 65 and over. P values corrected for clustering.
For the selection equation, the signs were reversed so that effects are on child living at home.

TABLE 4. Alternative regression models for the frequency of help a child offers to parents

	MODEL I		MODEL II	
	OLS		Ordered logit	
Parent's age	0.016	0.00*	0.024	0.00*
Parent lives without partner	0.146	0.00*	0.239	0.00*
Parent poor health	0.041	0.00*	0.093	0.00*
Parent limited IADL	0.091	0.00*	0.080	0.00*
Mother versus father	0.094	0.00*	0.240	0.00*
Parent's education	− 0.178	0.00*	− 0.319	0.00*
Log household income	0.012	0.22	0.020	0.29
Children > 21 at home	− 0.131	0.00*	− 0.266	0.00*
Number of children	− 0.035	0.00*	− 0.068	0.00*
Daughter versus son	0.078	0.00*	0.092	0.01*
Child's education	− 0.061	0.15	− 0.115	0.13
Child cohabiting	− 0.021	0.41	− 0.052	0.25
Child has children	0.014	0.56	0.060	0.22
Child employed	− 0.066	0.04*	− 0.092	0.06
Austria (reference)				
Germany	0.141	0.01*	0.223	0.01*
Sweden	− 0.075	0.10	− 0.102	0.24
Netherlands	− 0.120	0.01*	− 0.221	0.02*
Spain	− 0.036	0.49	− 0.124	0.19
France	− 0.104	0.05*	− 0.264	0.01*
Italy	− 0.012	0.83	− 0.070	0.47
Denmark	− 0.014	0.80	0.055	0.56
Greece	0.169	0.01*	0.178	0.04*
Switzerland	− 0.121	0.02*	− 0.287	0.02*
Constant	− 0.957	0.00*		
N censored	nap		nap	
N uncensored	10711		10711	
Model Chi-square			480	

Source: Survey of Health, Ageing and Retirement in Europe (own calculations).
Note: Children age 21 and over, parents aged 65 and over. P-values corrected for clustering.

it has to do with the emphasis in the questionnaire on household help, which – as a consequence of the gender division of labour during marriage – is a form of support that widowed fathers generally need more than widowed mothers.

We have seen that indicators of parental need have the expected effects. Because support is a dyadic phenomenon, it is also important to look at characteristics of the child. Table 3 shows that, differently from parental (the receivers') characteristics, children's (the givers') characteristics have only weak effects on support. Children's education, family situation, and work situation do not affect the support that they give to parents.

Although child characteristics do not affect support, they clearly affect coresidence. Higher educated children are less likely to live with their parents. In addition, we find strong effects of life course transitions. Children who are living with a partner and with children are less likely to live with their parents than children who are single. This is a well-known fact and shows that multiple-family households are an exception in the part of Europe that we are considering. Finally, we find that children who are not employed are more likely to live with their parents. The age of the child has the strongest effect – the older the child, the more unlikely it is that he or she is still living at home. These last findings are generally consistent with the literature on leaving home and the literature on coresidence with the elderly (Wolf and Soldo 1988; Baizan *et al.* 2001; Aassve *et al.* 2002).

Our conclusion is that for co-residence, both child's and parent's characteristics are important, whereas for support primarily parent characteristics are important. This has been found before and suggests that co-residence is more a two-sided phenomenon than is support exchange (Wolf and Soldo 1988). Co-residence also depends on the needs and opportunities of the children, and not only on those of the parent, as many studies, particularly on Southern European countries, have indicated.

Table 4 presents the results from models where the frequency of help is the dependent variable. The results are fairly similar to the models for the probability of help. Some differences are noteworthy. For example, we find that the effect of gender is weak in the probit models, while it is significant in the linear model. Hence, daughters are not more likely than sons to offer 'any' support, but they are more likely to offer support when this is time demanding. A similar result is found for employment status. Employed persons support their parents less often than non-employed ones, but this is only visible when the frequency of support is the dependent variable. This effect is stronger for daughters than for sons (-0.02 vs. 0.09, a marginally significant difference, $P = 0.08$), showing that employment is a restriction only for daughters, since the support they

give is usually more time demanding. Finally, we note that the ordered logit and the OLS models yield similar conclusions.

We end our discussion of the effects for the pooled European sample by discussing our control variables. We see significant effects of the number of children. The more children the parent has, the lower the chance that he or she will receive help from a child. This effect is at the dyad level and does not imply that parents receive help from any child in larger families less often than parents with fewer children, but only that it is more likely that some of their children will not provide help. Moreover, we see an additional effect of adult coresident children on support received from outside children. When the parent has other adult children living at home, the nonresident child is less likely to support the parent. This is also in line with the notion that co-residence is a form of support to parents. In addition, we find significant positive effects of the parents' age on support received, which is also in line with expectations. However, since health and ADL are already controlled for, the question is what the age effect stands for. Perhaps the age effect picks up unmeasured health aspects. Finally, we see no significant effects of household income on support received. The status position of parents has an effect, as can be seen from the education effect, but it is not the financial aspects of that position which matter. We do see a significant income effect on co-residence, however. Children are more likely to live with richer parents than with poorer parents. This is consistent with the leaving home literature as well. Richer parents have more to offer in terms of living space and material comfort to children (De Jong-Gierveld *et al.* 1991).

We now turn to our analysis of differences in the effects of need across country contexts. We re-estimated the multivariate probit model presented in Table 3 for each of the 10 countries. We focus on the effects of parent's living status, health, ADL capacity, and education. In order to see if the differences can be interpreted in light of our hypothesis, we plot the effects against the degree of familialism, as measured in the Eurobarometer data (Figure 1). For each indicator of need, we present a separate scatterplot. We add the best fitting straight line in the plot. For the effect of parental living status on support, the figure does not reveal any systematic pattern. For the effect of parental health, we do see that the effect tends to be stronger in countries with higher levels of familialism. A somewhat stronger pattern is observed for the effect of ADL: the more familialistic the country, the stronger the effect of ADL on support. The last figure presents the effects of parental education. We see that the more familialistic the country is, the more negative (i.e., the stronger) the effect is. This is also in line with the hypothesis.

The results in Figure 1 are descriptive and should not be considered a test of the hypothesis. To test the hypothesis, we estimate a multilevel
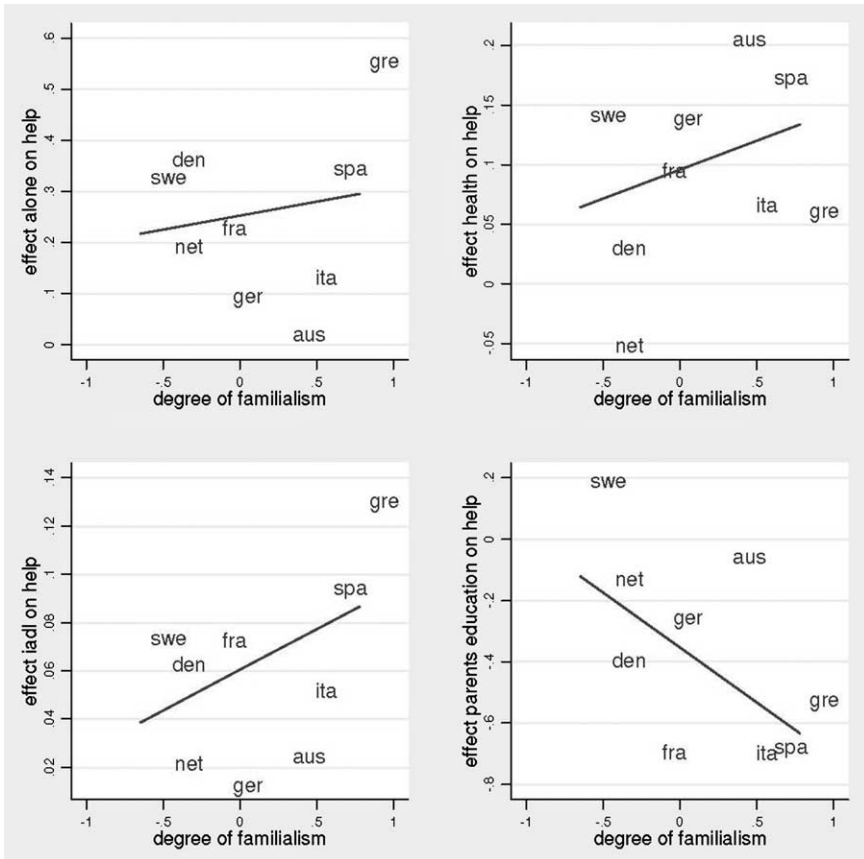
Figure 1.   Effects of parental need by level of familialism in nine European countries

model in Table 5. In this model, individual dyads are nested within countries, and the predictors are at the individual level and at the country level (i.e., the level of familialism). We include interaction effects of the level of familialism with the four need variables. These interactions tell us whether the effects of the need variables are significantly stronger or weaker, depending on the level of familialism. Note that the familialism scale is standardized (the mean is 0), so that all the main effects of need in the interaction models can be interpreted as the effects of need in a hypothetical country with an average score on the scale of familialism. One model is presented for each interaction effect and the results are presented for both the probit regressions (top panel) and the linear regressions for the frequency of support (bottom panel).

TABLE 5. Multilevel probit and linear regression including contextual effects and interactions with dyads nested in countries

	Model I		Model II		Model III		Model IV	
	B	p	b	p	b	p	b	p
Probit of child offers help (probit)								
Familialism context	0.028	0.82	−0.197	0.22	−0.033	0.78	0.147	0.25
Parent lives without partner	0.242	0.00*	0.245	0.00*	0.247	0.00*	0.242	0.00*
× familialism context	−0.045	0.55						
Parent poor health	0.091	0.00*	0.095	0.00*	0.095	0.00*	0.091	0.00*
× familialism context			0.071	0.06 ~				
Parent limited IADL	0.071	0.00*	0.069	0.00*	0.062	0.00*	0.070	0.00*
× familialism context					0.043	0.02*		
Parent's education	−0.296	0.00*	−0.298	0.00*	−0.300	0.00*	−0.329	0.00*
× familialism context							−0.390	0.01*
Constant	−3.359	0.00*	−3.642	0.00*	−3.342	0.00	−3.345	0.00*
Number of individuals	10198		10198		10198		10198	
Number of contexts	9		9		9		9	
Model Chi-square	446		448		449		449	
Frequency of help (linear)								
Familialism context	0.039	0.08	−0.119	0.05	0.036	0.13*	0.144	0.00*
Parent lives without partner	0.158	0.00*	0.159	0.00*	0.161	0.00*	0.156	0.00*
× familialism context	0.114	0.00*						
Parent poor health	0.044	0.00*	0.048	0.00*	0.049	0.00*	0.044	0.00*
× familialism context			0.073	0.00*				
Parent limited IADL	0.087	0.00*	0.085	0.00*	0.075	0.00*	0.087	0.00*
× familialism context					0.071	0.00*		
Parent's education	−0.171	0.00*	−0.175	0.00*	−0.174	0.00*	−0.185	0.00*
× familialism context							−0.161	0.04*
Constant	−0.944	0.00*	−0.971	0.00*	−0.942	0.00	−0.945	0.00*
Number of individuals	10197		10197		10197		10197	
Number of contexts	9		9		9		9	
Model Chi-square	789		795		819		786	

Source: Survey of Health, Ageing and Retirement in Europe (own calculations).

Controlled for independent variables listed in Table 3.

Model 1 confirms that the effect of the living status of the parent does not vary with the level of familialism. The interaction effect is not significant in the probit specification. In the linear specification, the main effect is positive and the interaction is positive and significant, showing that living alone has a stronger effect on help received in more familialistic countries. This is in line with the hypothesis. The main effect of health in Model 2 is positive, showing that parents in poor health receive more help. The interaction is positive as well and significant. Hence, the health effect on support is significantly stronger in more familialistic countries. This is true in the probit and the linear specifications. Model 3 shows that the main effect of ADL is positive and the interaction is positive and significant, in both the probit and the linear models. Model 4, finally, shows that the effect of parental education in an average country is negative. The interaction is negative and significant, showing that the educational effect is stronger in more familialistic countries. This interaction is also present in the linear model.

For a better understanding of the interaction effects, we present predicted probabilities in Figure 2. In these figures, we show how the probabilities of receiving support depend on a specific need indicator while holding all other variables constant at their means. We present predictions for the most individualistic and the most familialistic country, where both countries are assigned the same means for the other independent variables. Four figures are presented, one for each need indicator.

The graphs show that parents in good health receive slightly more support in individualistic than in familialistic countries. When health deteriorates, this changes. Parents with the poorest health receive substantially more support (in relative terms) in familialistic countries than in individualistic countries. The graph for ADL is simpler and clearer. At the lowest level of ADL (parents without any daily living limitations), there are no differences between individualistic and familialistic countries. The poorer the daily living capacity, however, the greater is the difference. For the most vulnerable parents, there is substantially more support from children in familialistic countries than in individualistic countries. The educational figure shows that the effect of education is positive in individualistic countries, whereas it is clearly negative in familialistic countries. When focusing on the lower educated, we see that parents receive more support in familialistic than in individualistic countries.
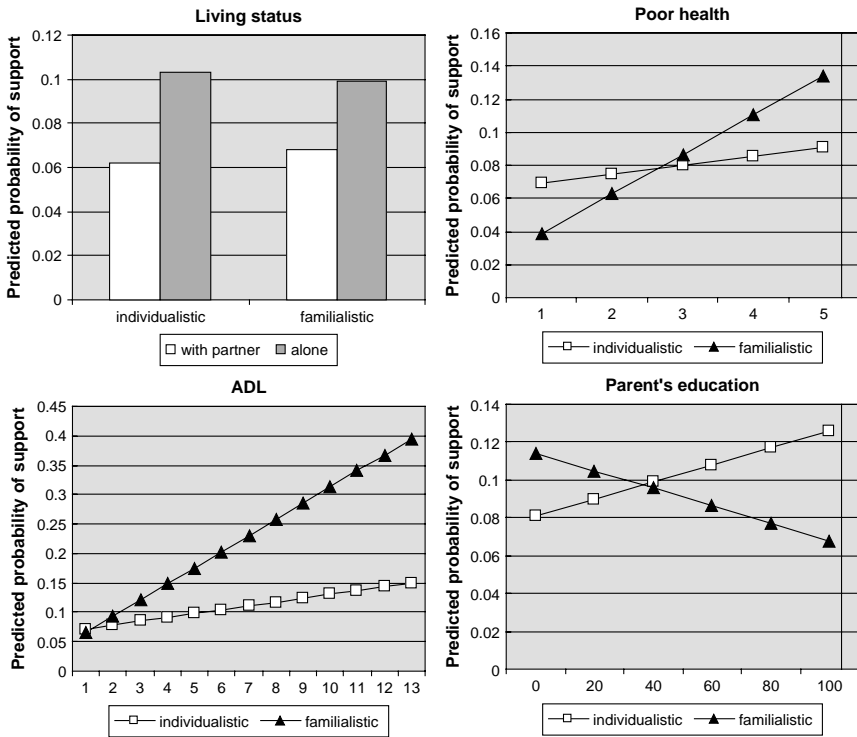
Figure 2. Predicted probabilities of receiving support by need indicator and degree of familialism

2. Conclusion

Our paper has developed a more refined test of the notion that family support is stronger in familialistic settings than in individualistic settings. Rather than comparing overall levels of support, we compare effects of need on support across countries. More specifically, we examine whether children's responsiveness to the needs of their parents is greater in familialistic settings. To test this hypothesis, we focus on the effects of parental health, parents' partner status, and parents' education. We compare countries one-by-one and relate effects from multivariate probit models to the level of familialism in a country. The level of familialism is measured with data obtained from an external source and consist of an index which is based on three different attitude questions. We subsequently use multilevel models to test whether the individual need effects depend systematically on the contextual degree of familialism.

Our analyses reveal positive evidence for the hypothesis. For health, we find that parents who are more in need of their children's support receive more actual support. More importantly, this effect is stronger in settings with more familialistic attitudes. Moreover, the interaction is present for two different indicators of health (an overall rating of health and an indicator of daily living limitations). For education, we also find an effect in the expected direction. Lower educated parents receive more support than higher educated parents. In more familialistic countries, this difference is stronger, in line with the expectations. The last indicator of need – parental living status – reveals mixed support for the hypothesis. The effect of living alone on a support measure that includes frequency is stronger in more familialistic settings, but the interaction is not present when a simple contrast between support and no support is used.

Like the analyses of others, using the same, as well as other, data, our analyses do not reveal any systematic differences across countries in the overall level of support. Hence, the *aggregate* results do not fit the hypothesis that children are a more important source of assistance in more familialistic settings. Our conclusion is more positive for the hypothesis, however, because we find that the level of familialism is related to effects of need on support. In other words, children are more important in familialistic countries in that they respond more strongly to the needs of their parents than in other countries. Thus, if the crowding out hypothesis once again is not proven, in so far that high levels of support exist in the most generous welfare states, the suggestion offered by recent research that in the Mediterranean countries the overall pool of supporters is more reduced than in the continental and Northern ones appears in need of qualification. On the one hand, in fact, we are considering only support provided by children living outside the parental household, who make up a different quota in the various countries. If also co-residing children were counted, cross-country differences in aggregate support would be smaller. On the other hand, children in the Mediterranean countries may be counted upon particularly when a parent is in serious need, possibly because they cannot rely on a mixed responsibility approach, given the weak level of social provision.

In comparing countries, we have taken a continuous approach. Many previous analyses in the social sciences have grouped countries using, for instance, welfare state typologies (e.g., Esping-Andersen 1993). Our view is that such typologies often lead to classification problems of specific countries. Moreover, groups of countries are often heterogeneous internally. For these reasons, typologies have also been criticized (e.g., Berthoud and Iacovou 2004). Some authors have solved these problems by focusing on specific countries that fit the typology. But this is not necessarily attractive, because it essentially throws away information –

data from 'problematic' countries are not used. An alternative solution to these problems is to treat the underlying concepts on which the typology is based as a continuous variable and to assign countries a score on this continuum. The continuous contextual variable can subsequently be used in both descriptive ways (using graphs) and in confirmatory ways (using multi-level models).

Our ranking of countries from familialistic to individualistic is based on external information obtained from surveys on the attitudes that people have about intergenerational support. We have shown that this yields a plausible ranking and we have shown that the different aggregate indicators are highly correlated. Although this strengthens our belief that the aggregate measue is valid, we want to emphasize that we did not (and cannot) separate the underlying theoretical mechanisms. Familialistic and individualistic countries differ for both cultural and institutional reasons, and these two dimensions are correlated (Glaser *et al.* 2004). We do not claim that the contextual variation we find is cultural in nature and not institutional – this would probably require more dynamic micro-macro analyses. But we do claim that there is more evidence for systematic country-level differences in the importance of children for support to elderly parents than hitherto has been found.

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