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Intergenerational transmission of kinship norms? Evidence from siblings in a multi-actor survey ☆

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ABSTRACT

Many studies on family solidarity emphasize the importance of norms for understanding why people help family members. The question of where kinship norms come from, however, is underanalyzed. This study examines the influence of the family of origin on the development of kinship norms using models of sibling resemblance estimated on a large-scale multi-actor survey. Analyses show that a quarter of the variance in filial norms can be explained by the family of origin. The family of origin has a smaller influence on normative obligations toward children and other family. Part of the total family influence can be explained by the filial norms that parents have themselves and the emphasis parents put on obedience. Family background characteristics are less important.

1. Introduction

Many recent studies have examined to what extent generations within the family support each other (Grundy, 2005; Ha et al., 2006; Kalmijn, 2007; Ogg and Renaut, 2006; Silverstein et al., 2002, 2006; Van Gaalen and Dykstra, 2006). Parents and adult children can support each other by providing practical and financial assistance and by providing emotional and social support. A potentially important explanation of intergenerational support lies in norms. Several authors have argued that people help their parents or grown-up children in part because they feel a normative obligation that they should help family members (Gans and Silverstein, 2006). These norms can be called 'kinship norms,' which, following Rossi and Rossi (1990) can be defined as 'culturally defined rights and duties that specify the ways in which any pair of kin-related persons is expected to behave toward each other' (Rossi and Rossi, 1990, pp. 155–156). Rossi and Rossi (1990) make a further distinction between 'filial norms' (normative obligations toward parents), 'parental norms' (normative obligations toward children) and general kinship norms (normative obligations toward family in general). Together, we call these norms kinship norms.

Past studies have described kinship norms in detail (Burr and Mutchler, 1999), sometimes using elaborate vignette methods (Ganong and Coleman, 2005; Rossi and Rossi, 1990). Other studies have examined effects of kinship norms on behavior, usually in a cross-sectional fashion (Bengtson and Roberts, 1991; Klein Ikkink et al., 1999), and occasionally in a longitudinal fashion (Silverstein et al., 1995, 2006). Few studies, however, have examined where kinship norms come from. Although

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kinship norms may indeed partly explain support giving to family members, such an explanation is less informative without knowing the origin of norms. For that reason, the explanation of (variations in) kinship norms warrants more attention than it has hitherto received.

If the aim is to explain kinship norms, the family of origin seems a natural place to start. After all, the family is a primary socializing agent and hence, an important source for many important norms and values in society. For kinship norms, the family may be especially important because such norms in part prescribe how children should behave toward parents when the parents are older and potentially in need of support. Hence, parents may be especially motivated to socialize their children in this respect. The first question of the present paper is: *To what extent are people's kinship norms affected by their family of origin*?

So far, only a few studies have paid attention to the influence of the family of origin on kinship norms. Mangen and Westbrook (1988) have studied the correlation between familial norms between children, parents and grandparents using data from the Southern Californian Three Generations Study. They observe low correlations between the kinship norms of different generations (0.22 between parents and children, 0.15 between grandparents and parents, and −0.01 between grandparents and children). Sabatier and Lannegrand-Willems (2005) have studied the transmission of filial obligations among a sample of 95 French three-generation families. They find that adolescents' kinship norms are not significantly influenced by the kinship norms of either their mother or their grandmother. These studies appear to lead to the conclusion that the influence of the family of origin on the kinship norms of its members is relatively limited.

In our view, such a conclusion would be premature. One reason for this is that the modest correlations between parents' and children's attitudes can result from random error in measuring kinship norms. Another reason is that the influence of the family of origin is assessed using the measured attitudes of the parents. This ignores the various other ways in which the family of origin may influence the attitudes of the children. A design which addresses these problems is the so-called sibling model. Because siblings share their parents and the circumstances in which they are raised, similarities between siblings at a later age in terms of their behaviors or norms can be attributed to the family of origin (Hauser, 1988; Hauser and Mossel 1985). The more siblings are alike in their attitudes, the stronger the influence of the family of origin has been. The main advantage of sibling models is that they yield estimates of the total influence of the family of origin, thereby including influences of both measured and unmeasured characteristics of the family of origin. Using data from a multi-actor survey, we apply sibling models to assess the total influence of the family of origin on children's kinship norms. In addition, we use LISREL-models to estimate sibling models, which in part reduces the negative influence of possible measurement error on the correlations among siblings.

In the past, sibling models have often been applied to family effects on children's educational and occupational attainment (Kuo and Hauser, 1995; Sieben and De Graaf, 2004). However, sibling models have not yet been applied to assess the influence of the family of origin on children's kinship norms. A recent paper by Gans and Silverstein (2006) has made progress in this respect by applying multilevel models to data on parents' and multiple children's filial obligations. They show that part of the variance in people's filial obligations is due to a common family effect, but the family effect is modest. Since the family effect in their model includes parents and children, as well as spouses (i.e., the two parents), this approach is not strictly comparable to our approach in which the association between siblings in a family is the central focus.

Sibling models yield estimates of the total influence of the family of origin but they do not tell us where that influence comes from. Our second research question therefore is: *How can we explain the influence of the family of origin on the kinship norms that people have?* Based on well-known theories on intergenerational transmission processes and social influence (Cialdini and Trost, 1998; Cunningham, 2001; Moen et al., 1997), we formulate and test several hypotheses. One notion is that the influence of the family is the result of socialization processes. Two hypotheses are derived from the socialization perspective. The first is a hypothesis about direct norm transmission to children, the second is a hypothesis about socialization of obedience. An alternative notion is that the influence of the family is the indirect result of the fact that siblings share the same family background characteristics when growing up. This leads to a third hypothesis about the influence of family background factors. We test these hypotheses by developing a multivariate model in which characteristics of the siblings' parents are included and we examine to what extent these measured characteristics of parents can explain the total family influence.

The data we use come from a recently collected large multi-actor survey among respondents in the Netherlands. A unique feature of this survey is that family members—whom we call 'alters'—were also part of the study. More specifically, two (adult) children, one parent, and one sibling of the 'anchor' respondent were asked to fill out a written questionnaire. This 'alter' questionnaire contained a large number of attitude questions which were also included in the anchor interview. The data offer information on 2120 sibling pairs which allows us to estimate the total family influence (our first question). Moreover, the data offer direct information on parents' attitudes and other family background characteristics, which allows us to assess to what extent the total family influence can be explained (our second question).

2. Hypotheses

Our starting hypothesis is that the family of origin has an influence on the kinship norms of children. We examine this by looking at the similarities in the norms that siblings have. Hence, our first hypothesis is: *There is similarity between siblings in the kinship norms they have (H1a).*

In examining this hypothesis, it is useful to make a distinction between different types of kinship norms. We expect that the family effect may be particularly strong for filial norms and weaker for parental norms and general kinship norms. If parents fail in transmitting their kinship norms to their children, it becomes less likely that their children will behave towards them in ways that they expect and hope for. Parents, therefore, have a stake in successfully transmitting their norms about family obligations to their children. We note that in most states with a modern welfare system, this interest in transmitting kinship norms probably applies more to the social and emotional aspects of support than to the financial and instrumental aspects of support. Our hypothesis about these differences is as follows: *The similarity between siblings is stronger for filial norms than for general kinship norms and parental norms (H1b).*

Given that there is an influence of the family of origin, we set out to explain this influence. There are several ways in which the family of origin may influence the kinship norms of children. An important explanation comes from the value socialization theory. One line of thought in socialization theory emphasizes the *direct* transmission of parents' norms and values to their children (Amato, 1996; Glass et al., 1986; Grusec et al., 2000). The value transmission perspective suggests that parents try to transmit their norms and values to their children by telling children that they have these norms and by informing them about the functions of these norms. To the extent that parents are successful in doing so, this will result in shared kinship norms among siblings. Our second hypothesis consists of two subhypotheses: *Kinship norms of parents have a direct and significant influence on the kinship norms of children (H2a).* By implication: *The sibling similarity in kinship norms can partly be explained by the influence of the kinship norms of parents on the kinship norms of children (H2b).*

A second hypothesis also focuses on socialization, but in a somewhat different fashion. Parents vary in the extent to which they demand obedience from their children. Obedience is not only relevant for how children behave when they are young, it is also important for the development of norms. There is a considerable literature on the concept of obedience in parent–child relationships and its consequences for adult development and functioning (Amato and Fowler, 2002; Kasser et al., 2002; Kohn et al., 1997). In this literature, little attention has been paid to the link between obedience and family support. It is well-known that when parents emphasize obedience in their children, the children will develop a greater level of conformism when they are adults (Kohn, 1977). This may make it more likely that they will adhere to social norms, including norms about how to behave toward parents. In addition, it has been argued that in more traditional, familialistic societies, obedience is an important way in which parents secure the continuing support from their children (Lee et al., 1994b). We can translate this to the present context by arguing that when parents think that obedience is an important trait in children, the children will develop stronger kinship norms. This applies perhaps more to norms regarding support for parents than to norms about support to children and other family members. Our hypothesis again consists of a pair of subhypotheses: *When parents emphasize obedience in children, children's kinship norms will be stronger (H3a).* By implication: *The sibling similarity in kinship norms can partly be explained by the influence of the degree to which parents find obedience from children important on the kinship norms of children (H3b).*

An alternative explanation of the similarity between siblings lies in the characteristics that parents have when the siblings grow up. During childhood, siblings not only share a set of parents who socialize them, they also share the social and cultural characteristics of their parents. Examples of such characteristics are parental religiosity, education, urbanization, and family size. From the literature, it is known that these factors affect the kinship norms of children. For example, religious persons are found to hold stronger feelings of family obligation than non-religious people (Daatland and Herlofson, 2003; Killian and Ganong, 2002). Similarly, most recent studies find that kinship norms are more weakly developed among the higher educated (Burr and Mutchler, 1999; Gans and Silverstein, 2006, Lee et al., 1994a). Studies have also shown that siblings raised in urban environments show higher rates of individualistic behavior and thus will be less likely to endorse kinship norms than siblings raised in rural areas (Fischer, 1995). Finally, there is also a positive correlation between kinship norms and family size (Burr and Mutchler, 1999). Not only the size of the family but also the sex composition may matter. Numerous studies have shown that daughters support older parents more often than sons (Hagestad, 1986). As a result, parents will have less need to emphasize the importance of filial norms in their children when they have relatively more daughters. Our hypotheses are formulated as follows: *The social and cultural characteristics of the parents when the children were growing up have an effect on the kinship norms of children (H4a).* By implication: *The sibling similarity in kinship norms can partly be explained by the influence of shared social and cultural characteristics of the parents when the children were growing up (H4b).*

The effects of shared family background characteristics can be direct and indirect. For example, part of the effect of parental church membership on children's kinship norms can in principle be explained by the fact that more religious parents have stronger kinship norms themselves and stronger attitudes on obedience. If this is true, the effect of parental church membership on children's norms should disappear or be reduced when controlling for socialization variables. There is also a possibility, however, that the effect of church membership is direct, for example, because the children of religious parents are involved in settings in which other people also endorse kinship norms. In this case, the effect of church membership should remain after controlling for the parents' norms and attitudes. If the effect is indeed direct, the role of parental social and cultural characteristics can be interpreted in part as a contextual effect on children's norms. Similar arguments can be applied to the role of parental education and urbanization. Higher educated parents will have higher educated friends and other family members who may emphasize more individualistic values and autonomy. Parents living in more rural areas will probably share strong kinship norms and an emphasis on obedience with their neighbors. For that reason, we will estimate effects of family background characteristics in two models, a

model with and a model without including socialization variables (parental kinship norms and parental attitudes on obedience).

3. Data and method

We use data from the first wave of the Netherlands Kinship Panel Study (Dykstra et al., 2004), which was conducted in 2003. The NKPS is based on a random sample of addresses in the Netherlands. CAPI interviews were held with 8161 'anchor' respondents aged 18–79. At the end of the interview respondents received a self-completion questionnaire. During the interview, respondents were asked to give permission to send a written questionnaire to several 'alters': the (married or unmarried) partner, one of their parents, a sibling, and two children who were at least 15 years old (if available). All alters were chosen at random if there were more living alters of a certain type than we needed. The parent was also chosen randomly.

In this analysis, we use information on two subsets of the data. The first set consists of an anchor, a sibling, and a parent ($n = 1186$). The second set consists of an anchor and two of her or his children ($n = 934$). In both subsets we thus have a sibling pair connected to a (living) parent (a triad). The subsets fully employ the multi-actor structure of the survey. Hence, in both subsets, the kinship norms are measured directly from three actors. Note also that all the independent variables are the same in the two subsets, except for a small definitional difference in one variable to be discussed later. Finally, we note that we have information on the spouse of the anchor in the second subset. This allows for the additional possibility to compare effects of fathers and mothers within one model. We find very little evidence that effects of fathers and mothers differ (results available upon request). For that reason, we focus on both subsets and do not use the spouse questionnaires. This also implies that we use information on the norms and attitudes of one parent (either the father or the mother).

Although the multi-actor nature is an important asset of our data, there are limitations as well. The most important problem of multi-actor data is that not all alters will respond. Overall response rates for (alter) children were 50 percent and for (alter) parents 41 percent. Overall response rates are a product of the willingness of the anchor to give the address of the alter and the willingness of the alter to return the questionnaire. Previous research on the NKPS has shown that the response of alters is selective with respect to the quality of the relationship with the anchor (as reported by the anchor). In this paper, Kalmijn and Liefbroer (2008) have corrected for selective alter response using Heckman models for sample selection bias. They show that estimates of parental influences on children's filial obligations are not biased by selective alter response (Kalmijn and Liefbroer, 2008). For our paper, this implies that there is little need to correct for sample selection bias.

In the remainder of the paper, we use the terms 'siblings' and 'parents' for both subsets. Hence, these terms are no longer used in reference to the anchor respondent.

3.1 Kinship norms

Kinship norms have been measured by 11 items (see Table 1 for their wording), each having five answering categories ranging from fully agree to fully disagree. Items have been recoded so that higher scores imply stronger norms. The first four items refer to general kinship norms, the second four refer to filial norms and the last three refer to parental norms. An

Table 1
Factor analysis of 11 items on kinship norms: Siblings' responses

	Percentages			Factor (standardized)		
	Disagree	Neutral	Agree	General	Filial	Parental
General kinship norms						
One should always be able to count on one's family	5	15	80	0.826	0.082	0.135
Family members should be ready to support one another, even if they don't like each other	32	31	38	0.650	0.222	0.155
If one is troubled, family should be there to provide support	8	20	72	0.847	0.156	0.215
Family members must help each other, in good and bad	6	14	81	0.858	0.134	0.180
Filial norms						
Children should look after their sick parents	17	39	44	0.294	0.670	0.195
In old age, parents must be able to live in with their children	60	30	10	0.057	0.790	0.090
Children who live close to their parents should visit them at least once a week	36	25	39	0.260	0.611	0.165
Children should take unpaid leave to take look after their sick parents	44	33	23	0.030	0.754	0.125
Parental norms						
Parents should support their adult children if they need it	12	24	64	0.398	0.169	0.669
Parents should help their adult children financially if they need it	38	39	23	0.129	0.165	0.845
Parents should provide lodging to their adult children if they need it	27	33	40	0.165	0.187	0.832

Note: Varimax rotation. $n = 4240$ (siblings).

explanatory factor analysis was performed to test whether these three dimensions can be distinguished empirically. The factor analysis with varimax rotation shows that the three dimensions are indeed present (Table 1). The total variance explained by the three factors is 65 percent. Cronbach's alpha values for the separate subscales are 0.84 for general kinship norms, 0.72 for filial norms, and 0.78 for parental norms (using siblings as units).

3.2 Measures of independent variables

To test the hypotheses about direct norm transmission, we include the kinship norms of the parent, which were measured in exactly the same way as they were measured for the two siblings. To test the hypotheses about obedience, we use a brief version of the well-known parental socialization scale of Kohn (1977). Parents were asked to rank the importance of three qualities in children: "that they obey their parents," "that they are considerate of others," and "that they act and think independently." We construct a variable which indicates how the parent ranked the first option (coded 1 for the third place, 2 for the second place, and 3 for the first place). Hence, the higher the score, the more importance the parent attached to obedience.

To test the hypotheses about shared family background characteristics, we use the following variables: *Parental church membership* is coded 1 if both parents were church members (0 otherwise). Since the data on the family of origin were retrospective, no additional information on parents' religiosity was collected. *Parental education* is the average education in years of the father and the mother of the sibling. Education was an ordinal variable which has been recoded to the number of years necessary to complete the level of education, as is often done in Dutch research (De Graaf and Ganzeboom, 1993). *Number of children* was measured as the number of children of the parent. *Proportion daughters* refer to the proportion of daughters among all children, including the two siblings. *Urbanization* is the population density of the municipality during siblings' youth (the higher the score, the more urbanized). For the child–child subsets, we only have information on the current municipality of the parent. Since there is little urban-rural migration of parents after the children have reached adulthood (Mulder and Hooimeijer, 1999), we think this measure may be fairly close to a measure based on the parents' municipality when the siblings were growing up.

We control for a number of variables which may lead to a spurious association between siblings: *Current parental marital status* is measured with two dummy-variables, whether or not the parents are divorced and whether or not one parent had deceased. Note that all dyads had at least one living parent. *Siblings' age* is the average age of the two siblings. Since age differences in kinship norms can be nonlinear, we include age and age squared (Gans and Silverstein, 2006). To make the interpretation of the age effects easier, we divided age by 10. We include the *sex composition* of the two siblings in the analysis as a control because the effect of the proportion of daughters in the family of origin can be biased by the sex composition of the two siblings. Table 2 gives descriptive information for all independent variables in the analysis.

3.3 Statistical model

We estimate the family influence on kinship norms with sibling similarity models (Hauser and Mossel, 1985), using the LISREL (version 8.8) software (Jöreskog and Sörbom, 1996). In these models the variance of a dependent variable (in our models the variance of kinship norms) is decomposed in a family factor and an individual factor. The relative size of each factor is estimated on the basis of the correlation between the kinship norms of two siblings. Our model is presented in Fig. 1 for one of the three norms (i.e. general family norms). The actual model is estimated for all three norms simultaneously; the three norms are allowed to correlate with each other via the ψ.

The siblings' norms are latent variables which are indicated by the four measured items for the particular dimension of kinship norms. The relation between the latent variables of the kinship norms of the two siblings is completely caused by a latent family factor. As a result, the family factor represents what siblings share in terms of their norms. Note that the family

Table 2
Descriptive information about the variables in the analysis

	n	*m*	s.d.
Parents church member (0/1)	2116	0.72	
Educational attainment father and mother averaged (5–18)	2114	10.70	2.73
Urbanization (1 = not urbanized, 5 = very strongly urbanized)	2112	2.89	1.23
# Siblings (family size) (1–10)	2120	2.58	1.51
Parent's stress on obedience (1–3)	2037	1.89	0.89
Proportion of daughters (0–1)	2120	0.56	0.30
Daughter–daughter pair (0/1)	2114	0.34	
Son–son pair (0/1)	2114	0.18	
Parents divorced (0/1)	2080	0.08	
One parent died (0/1)	2080	0.24	
Age in years divided by 10 (1.5–6.6)	2120	3.34	1.00

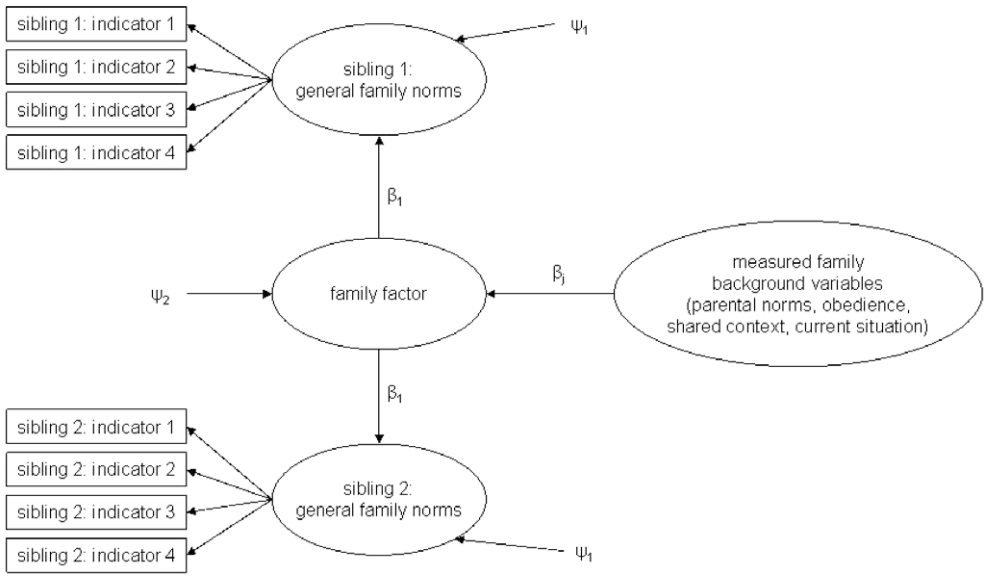

Fig. 1. A sibling model for general family norms.

influence on the sibling's norms (β_1) is the same for siblings 1 and 2, which is theoretically justified since the siblings were randomly selected. The variance in the siblings' norms which is not caused by the family is individual variance (ψ_1). By assumption, $\beta_1^2 + \psi_1 = 1$. The proportion of variance explained by the family is $1 - \psi_1$. This is the statistic needed for answering our first research question.

Part of the family factor can be explained by shared family background variables and by parents' norms and attitudes. These effects are represented by the β_j coefficients. ψ_2 is the variance in the family factor which is not explained by the measured family variables in the model, i.e. variance due to unobserved family characteristics. The proportion of the family factor which can be explained by the measured family variables is $1 - \psi_2$. This is the statistic needed for answering our second question.

Four models are estimated. Model I is an empty model and serves to assess the total family influence (i.e. $1 - \psi_1$). Model II includes only the control variables and serves to calculate the total family influence after potential spurious elements (e.g., age) are taken into account. Model III adds shared family background characteristics. Model IV adds socialization variables (parental kinship norms and attitudes on obedience). The last model can be used to assess how well we can explain the total family influence (i.e. $1 - \psi_2$). By comparing the third and the fourth models, we can assess to what extent effects of family background characteristics are explained by the norms and attitudes of the parents.

The covariance matrix for all variables is presented in the Appendix A.

4. Results

We start by describing the degree to which siblings endorse kinship norms. Earlier descriptive analyses of these items can be found in Liefbroer and Knijn (2006). The first impression we get from the percentages presented in Table 1 is that the endorsement of general kinship norms depends on the condition given in the statement. A large majority of people believe that family members should help each other in general, but agreement is much lower under the condition that family members do not like each other. In this case, the respondents are divided almost equally between agree, disagree and neutral. Hence, affection is an important extra motivation for support and in that sense, the general kinship norms are clearly not unconditional.

There is also a substantial degree of endorsement of filial norms. Agreement seems weaker for general norms, but the formulation of the items is more specific for parents than for family members in general, which makes the percentages difficult to compare. We see that almost half of the respondents believe that children should look after sick parents whereas 39 percent is neutral on this and another 17 percent disagrees. We also see that the level of agreement depends on the type of support: 39 percent agrees with 'weekly visiting', 23 percent agrees with 'taking unpaid leave to care for ill parents' and only 10 percent agrees with 'coresidence of elderly parents with children.' Hence, it seems that the more 'costly' the support—in terms of how much impact it will have on children's day-to-day lives—the lower the level of agreement.

Table 3
Effects of family background characteristics on siblings' kinship norms: Unstandardized regression coefficients from two sibling models

	General kinship norms				Filial norms				Parental norms			
	Model III		Model IV		Model III		Model IV		Model III		Model IV	
	B	*p*	*B*	*p*	*B*	*p*	*B*	*p*	*B*	*p*	*B*	*p*
Shared family background characteristics												
# Children (family size)	0.016	0.02	0.014	0.03	0.022	0.01	0.012	0.16	0.007	0.33	0.006	0.38
Parents church member	0.003	.89	−0.008	.73	0.020	0.48	0.000	.99	0.026	0.30	0.022	0.39
Education parents	−0.016	0.00	−0.007	0.07	−0.020	0.00	−0.008	0.10	−0.008	0.07	−0.003	0.46
Urbanization at age 15	−0.007	0.39	−0.007	0.42	0.017	0.11	0.020	0.05	0.014	0.13	0.012	0.19
Proportion of daughters in family	−0.060	0.34	−0.057	0.36	−0.032	.69	−0.026	.74	−0.195	0.01	−0.198	0.00
Socialization												
Parental stress on obedience			0.040	0.00			0.046	0.00			0.033	0.02
Parallel measure of parents' norms			0.107	0.00			0.153	0.00			0.073	0.00
Control variables												
Parents divorced (versus intact)	−0.049	0.20	−0.046	0.23	−0.067	0.17	−0.077	0.10	0.055	0.20	0.063	0.14
Parent widowed (versus intact)	−0.003	.93	−0.007	.79	−0.040	0.24	−0.039	0.25	−0.032	0.28	−0.021	0.47
Age (divided by 10)	−0.290	0.00	−0.305	0.00	−0.188	0.00	−0.153	0.00	−.627	0.00	−.657	0.00
Age (divided by 10) squared	0.036	0.00	0.037	0.00	0.016	0.16	0.009	0.42	0.113	0.00	0.117	0.00
Daughter-daughter pair (versus mixed)	−0.041	0.20	−0.048	0.14	−0.109	0.01	−0.110	0.01	−0.053	0.14	−0.054	0.13
Son-son pair (versus mixed)	−0.024	0.50	−0.038	0.28	0.063	0.16	0.061	0.16	−0.034	0.39	−0.039	0.32
Variance composition												
Proportion of variance due to family ($1-\psi_1$, Model I)			0.179				0.293				0.320	
Proportion family variance explained ($1-\psi_2$) by:												
Control variables (Model II)			0.318				0.141				0.453	
Control + family background (Model III)			0.359				0.175				0.468	
Control + family background + norms (Model IV)			0.445				0.278				0.495	

Note: Fit statistics for Model III: $\chi^2 = 3372$, d.f. = 832, and RMSEA = 0.040 and for Model IV: $\chi^2 = 3260$, d.f. = 826, and RMSEA = 0.039.

The items on parental norms also yield interesting results. Respondents are clearly divided on the issue of whether parents should help their children financially. A similar division exists for having children live in the parents' home. We note also that there is more support for the notion that children in need should live with parents than for the notion that elderly parents should live with children. The norms therefore seem asymmetric.

The results in Table 1 illustrate that for filial and parental norms, there is a clear variation among respondents. For general kinship norms, the variance is lower, possibly due to the general nature of the questions. We now turn to the explanation of the differences in kinship norms.

The results of the structural equation models are presented in Table 3. We start by discussing the empty model. This model only includes the norms of both siblings. Note that the size of the family effect is estimated on the basis of the correlation between the norms of the siblings, so even though the model contains no explanatory variables, we can estimate the family effect. The total effect of the family, which includes measured and unmeasured aspects of the family of origin, explains 18 percent of the variance in general kinship norms (obligations toward family in general), 29 percent of the variance in filial norms (obligations toward parents), and 32 percent of the variance in parental norms (obligations toward children). Hence, the family of origin initially seems to explain a substantial part of individual differences in the normative obligations that people feel toward family members.

The influence of the family of origin can also be measured after including the control variables. After all, part of the similarity between siblings may be due to age similarities of siblings and to the role of the parents' current marital status. Table 3 shows that the control variables already explain part of the family effect: 32 percent of the effect on general norms, 14 percent of the effect on filial norms, and 45 percent of the effect on parental norms (Model II). Hence, for general kinship norms and for parental norms, a considerable part of the family effect is spurious. If we subtract this part from the family effect, the family effect is modest for general norms and for parental norms (respectively 12 and 18 percent of the total variance is due to the family). For filial norms, the remaining family effects are stronger. More precisely, 25 percent of the variance in filial kinship norms can be attributed to the family.

The main reason why the control variables explain a substantial part of the family effect lies in the age of the sibling pair. Siblings are much alike in age and age is strongly associated with kinship norms. For general norms and for parental norms, the quadratic coefficient is significant. A graphic inspection is presented in Fig. 2. The graph shows that for obligations to parents and family in general, there is a clear negative tendency, although the rate of decline declines with age. That kinship obligations are generally weaker for older persons has been observed before and has been interpreted in terms of the desire for independence from family members when one is old (Logan and Spitze, 1995). For obligations toward children, we again see a negative tendency but there is also a turning point within the observable age range. At about age 45, normative

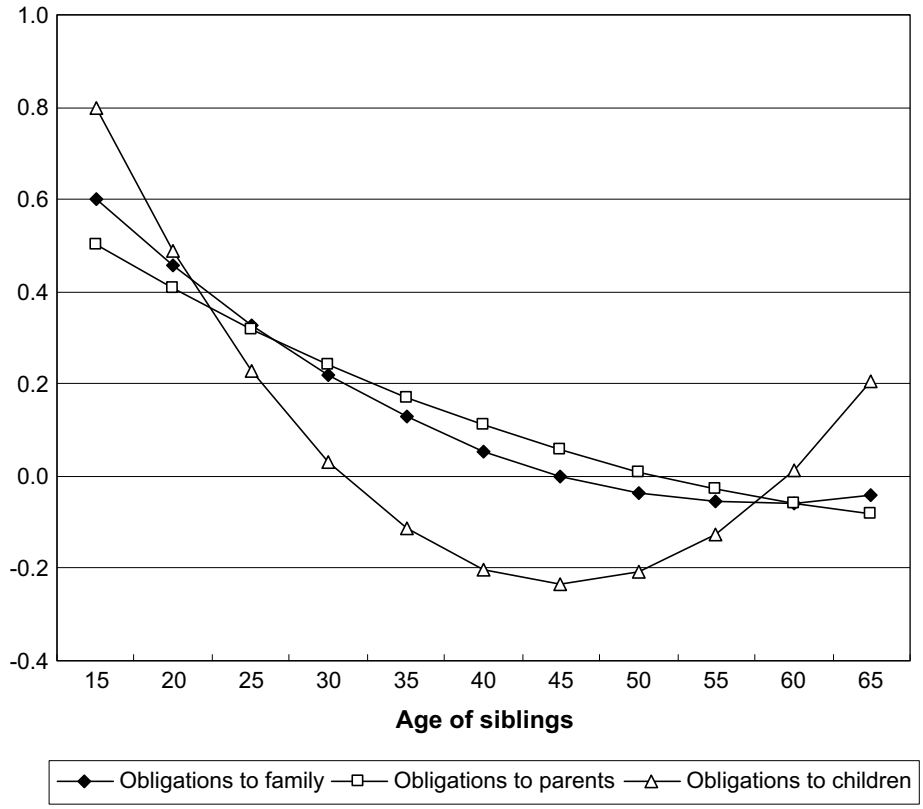

Fig. 2. The relation between age and kinship norms.

obligations to children increase again with increasing age. Perhaps at this age, financial support to children is more relevant as children are involved in setting up their own households. Note that age differences can in principle also reflect cohort differences, although it is difficult to see why younger cohorts would be *more* familialistic than older cohorts. Finally we see that parental divorce and widowhood have no significant effects. In line with earlier research, it appears that sister pairs have weaker filial norms than brother pairs.

We now focus on the effects of (measured aspects of) the family of origin (see Model III). Model III fits the data well. The RMSEA (Root Mean Squared Error of Approximation) is 0.040, which is below the threshold of 0.05, implying a good fit (Browne and Cudeck, 1993). We find several significant effects in Model III. Children of larger families have stronger filial norms and stronger general kinship norms. In line with expectations, we also find that the proportion of daughters has a significant negative effect on parental norms. The more daughters in a family, the less emphasis there is on norms about caring for adult children. This effect is controlled for the effects of the sex composition of the sibling pair itself. Parental church membership has no significant effects, in contrast to our hypothesis. Parental education has the expected negative effect. Children of highly educated parents have weaker general kinship norms and weaker parental norms than children of lower educated parents. There is also a negative effect of education on parental norms, but this is only marginally significant. Urbanization has no effects, in contrast to what we expected.

How much of the family effect can be explained by shared family background characteristics? Table 3 shows that the role of shared family background characteristics is limited. For the total family effect on general kinship norms, family background characteristics explain an additional 4 percent, for filial norms it is 3 percent, and for parental norms it is 2 percent. Hence, even though some family background effects operate in the expected direction, their combined influence for explaining the similarity between siblings is small. An important reason, we believe, lies in the lack of an effect of parental church membership. We expected that religion would play an important role in the development of kinship norms in families, but our evidence does not support this. We come back to this in the conclusion.

We now turn to Model IV, which includes the socialization variables. Again, the model fit is good according to the RMSEA. We first see a strong and significant effect of the parents' norms. The stronger the kinship norms of the parents, the stronger the kinship norms of the children. This applies to all three types of norms but the effect for filial norms is stronger ($b = 0.15$) than the effect for general kinship norms ($b = 0.11$) and for parental norms ($b = 0.07$). The variables have the same metric so that their magnitudes can be compared. We compared a model in which the three coefficients are constrained to be equal

with a model in which the effect of filial norms is allowed to differ from the other two. The difference in fit between these models is significant ($\chi^2 = 7.3$, d.f. = 1, $p < .05$), showing that the effect for filial norms is significantly stronger.

We further see significant positive effects of obedience. The more emphasis parents put on obedience, the stronger the kinship norms of the children. This effect is found for all three types of norms. We compared a model that constrains the effects to be equal on the three types of norms with a model that allows the effect of obedience on filial norms to differ from the effect of obedience on the other two norms. These models fit equally well ($\chi^2 = 0.4$, d.f. = 1, $p > .05$), suggesting that the effects of obedience do not differ significantly across types of norms.

Table 3 further shows that the parents' norms and their attitudes about obedience explain an additional portion of the family effect. The inclusion of these variables explains an additional 9 percent of the family effect on general kinship norms and an additional 10 percent of the family effect on filial norms. For the family effect on parental norms, only an additional 3 percent can be explained.

It is also interesting to compare effects between Model III and Model IV. We observe that the effects of parents' education disappear after including socialization variables. That the effect of parents' education is not significant once the parents' norms and attitudes are included shows that the effect of education is due to the fact that higher educated parents have weaker kinship norms and put more emphasis on autonomy in children. Similar results are found for the effect of family size on filial norms. This effect disappears once socialization variables are included. Hence, we conclude that some of the influence of measured family background characteristics can be attributed to the fact that these characteristics are correlated with the norms and attitudes of the parents.

How much can shared family background variables and socialization variables together explain of the total family effect? Of the total family effect on general norms, 13 percent can be explained. For filial norms, 14 percent can be explained. For the total family effect on parental norms, only 4 percent can be explained.

5. Conclusion and discussion

The question of where kinship norms come from is an important yet underanalyzed issue in the growing research on family solidarity. Many studies emphasize the importance of norms for understanding why people help their family members, but such explanations remain somewhat uninformative without having explanations of where these norms come from. We have examined the role of the family of origin in generating such norms. The socializing role of the family of origin is well-known and may even have a more important role in this application since parents have much at stake in securing support from children during old age. We use sibling designs to estimate the impact of the family of origin since this allows us to assess the total impact of the family.

Our findings show that after the siblings' ages and other control variables are taken into account, about a quarter of the variance in obligations toward parents can be attributed to the family of origin. For two other types of kinship norms—obligations toward family in general and toward children—the family of origin is of more modest importance. Our results for filial obligations provide stronger evidence for the influence of the family of origin than previous studies (Mangen and Westbrook, 1988; Sabatier and Lannegrand-Willems, 2005). Previous studies relied primarily on associations between children's attitudes and parents' attitudes and we argued that such studies may have underestimated the total family influence since there are several unmeasured ways in which the family of origin may influence the attitudes of children. Our sibling models are able to also capture these unmeasured components of family influence. The results we find also provide stronger evidence for a family effect than the multilevel results of Gans and Silverstein (2006). The main reason for this difference is that the focus of the latter analysis was somewhat different. The study of Gans and Silverstein measures the homogeneity of families with respect to filial norms, and this includes correlations among husbands and wives, among siblings, and among parents and children. Our study measures how strong the parental influence is and focuses only on the correlations among siblings.

The next question was how we can explain the family influence. We suggested two mechanisms, socialization on the one hand, and shared circumstances when growing up on the other hand. Our survey had a unique possibility of assessing the former explanation since the norms and attitudes of the siblings' parents were assessed directly from the parents, which is quite rare in the context of large-scale survey research. The results show that together, these mechanisms explain a modest part of the family effect, about 13–14 percent of the family effect on general and filial norms.

Of the two mechanisms, socialization is more important than shared background. We find that when parents have stronger kinship norms, their children also have stronger kinship norms, suggesting that there is direct transmission of norms across generations. Moreover, we had measures of the degree to which parents value obedience in children. We find positive evidence for the role of obedience. The more importance parents attach to obedience in children, the more strongly the children endorse kinship norms. Apparently, there are two complementary ways in which parents socialize their children: They can communicate about the kinship norms they themselves have but they can also teach their children to be obedient.

The role of family background characteristics is more limited. We find that children from lower educated families and from larger families have stronger kinship norms, but these effects are to a large extent indirect, via the norms and attitudes of the parents. There is little evidence that the shared contexts of the children when growing up have a direct influence on the children's norms once the parents' norms and attitudes are taken into account. A somewhat surprising finding is the lack of influence of church membership. We expected that there would be more emphasis on the obligation to give family

support in more religious families but we find no effect of parental church membership. Perhaps there is considerable heterogeneity within the group of church members with respect to religious beliefs and religious behaviors (i.e., church attendance, bible reading). It is possible that more elaborate measures of religious socialization would have produced stronger results for the influence of religion on kinship norms.

Our paper has also established that there are three dimensions in kinship norms, depending on the type of kin. Our factor analysis shows three dimensions: obligations toward children, toward parents, and toward family in general. Our regression models further show that the determinants are also different across types of norms. Most importantly, we find that the total family influence is strongest for filial norms and we also find significantly stronger direct norm transmission for filial norms than for general and parental norms. These differences can be interpreted in terms of the greater interests that parents have to teach their children norms about caring for parents than to teach them norms about caring for other family members.

How large is the total family effect that we find? The size of the family effect on filial norms is in line with family effects on other values. A recent study of values which also uses sibling data shows that the family explains 14–36 percent of the variance in values, depending on the type of value (Sieben and De Graaf, 2004). The family effect for filial obligations is in the same range. That the family effect is *not stronger* for filial obligations is unexpected—after all, kinship norms have direct consequences for the parents' relationships with children, and hence, parents have more incentives to socialize their children in this respect than to socialize them in, for example, political or cultural values.

Our attempt to explain the family influence with measured characteristics was only partial successful. This raises the question of how to explain the remaining family effect. One possible mechanism is observational learning. Authors from child development studies have argued that observational learning constitutes a powerful way in which behavior and attitudes are transmitted from parents to children (Amato, 1996; Bandura, 1982). It results from the often unconscious imitation of behaviors and roles during the early phases of childhood (Tillmann, 2004). Although learning based on verbal interactions between family members will become more important during adolescence and young adulthood, it can be expected that siblings even in this life phase will learn a lot about kinship norms from the implicit messages that are emitted by acts of solidarity between family members. Future research can address the role of observational learning by including measures of how parents interacted with other family members when the children were growing up.

We end with some caveats about our methods. While our study has a number of strengths—the large-scale of the data, data from multiple sets of siblings, direct information about the norms of alters, and more-dimensional multiple-item measures of norms—there are also weaker points. One problem is that the data about the norms of the parents are based on the current situation rather than on the situation in the parental home. The effect of parental norms may be underestimated to the extent that parents have systematically different norms now than they had when the children were growing up. Second, our analyses focus on the full sample of respondents. New analyses could include a life course perspective by looking at sibling resemblances across the different age groups. After all, it seems plausible that the influence of the parental home declines as children grow older, although the norms that children learn may also be activated again when the parents experience health and other problems of old age. Finally, we were unable to examine the influences that siblings have on each other and the influences that children have on parents. To unravel such influences, the multi-actor approach we used needs to be combined with a prospective panel design. Data collected in the second wave of the NKPS will make this possible.

Appendix A. Covariance matrix

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45
1	0.657																																												
2	0.389	1.052																																											
3	0.428	0.450	0.668																																										
4	0.414	0.393	0.484	0.612																																										
5	0.229	0.278	0.272	0.252	0.838																																								
6	0.115	0.212	0.145	0.131	0.379	0.782																																							
7	0.234	0.317	0.281	0.258	0.376	0.329	1.230																																						
8	0.111	0.190	0.151	0.135	0.384	0.383	0.412	1.012																																					
9	0.295	0.288	0.352	0.328	0.266	0.143	0.316	0.223	0.816																																				
10	0.203	0.301	0.260	0.232	0.248	0.190	0.259	0.230	0.444	0.880																																			
11	0.234	0.320	0.284	0.261	0.280	0.218	0.304	0.233	0.471	0.592	0.987																																		
12	0.090	0.061	0.078	0.063	0.053	0.021	0.041	−0.002	0.071	0.085	0.085	0.617																																	
13	0.079	0.180	0.087	0.082	0.110	0.100	0.089	0.074	0.114	0.124	0.133	0.358	1.034																																
14	0.091	0.091	0.087	0.085	0.057	0.033	0.069	0.024	0.089	0.100	0.110	0.406	0.434	0.652																															
15	0.083	0.074	0.074	0.069	0.058	0.029	0.049	0.013	0.065	0.091	0.100	0.412	0.382	0.477	0.596																														
16	0.072	0.127	0.093	0.069	0.123	0.081	0.082	0.080	0.092	0.125	0.116	0.218	0.311	0.293	0.261	0.825																													
17	0.045	0.078	0.053	0.024	0.111	0.143	0.073	0.109	0.052	0.071	0.087	0.096	0.204	0.155	0.122	0.369	0.766																												
18	0.095	0.159	0.124	0.123	0.108	0.113	0.248	0.093	0.113	0.117	0.130	0.226	0.343	0.289	0.270	0.399	0.355	1.160																											
19	0.051	0.103	0.079	0.064	0.132	0.083	0.095	0.114	0.084	0.077	0.099	0.119	0.188	0.154	0.149	0.335	0.360	0.381	0.979																										
20	0.092	0.072	0.090	0.077	0.081	0.056	0.095	0.028	0.128	0.109	0.144	0.275	0.282	0.340	0.320	0.296	0.165	0.307	0.230	0.732																									
21	0.072	0.082	0.093	0.059	0.111	0.074	0.088	0.042	0.129	0.183	0.196	0.166	0.274	0.232	0.194	0.266	0.188	0.285	0.203	0.387	0.873																							
22	0.109	0.102	0.102	0.095	0.116	0.083	0.094	0.033	0.143	0.158	0.190	0.221	0.263	0.271	0.224	0.318	0.229	0.297	0.209	0.438	0.529	0.934																						
23	0.044	0.057	0.043	0.035	0.035	0.009	0.104	0.026	0.001	−0.001	−0.004	0.031	0.024	0.033	0.033	0.028	0.025	0.124	0.032	0.001	−0.007	−0.003	0.621																					
24	0.034	0.096	0.035	0.019	0.023	0.005	0.098	0.019	−0.020	−0.031	−0.034	0.003	0.044	0.003	−0.001	0.008	0.038	0.087	0.036	−0.024	−0.025	0.009	0.451	0.935																				

25	0.047	0.077	0.046	0.042	0.030	0.011	0.097	0.010	0.014	−0.016	−0.019	0.026	0.047	0.030	0.034	0.024	0.006	0.091	0.000	0.001	−0.003	0.003
26	0.046	0.070	0.045	0.045	0.041	0.010	0.077	0.019	0.010	−0.012	−0.011	0.022	0.039	0.032	0.040	0.032	0.023	0.090	0.013	0.012	−0.011	0.012
27	0.049	0.120	0.073	0.053	0.116	0.087	0.135	0.066	0.021	0.030	0.043	0.042	0.083	0.051	0.058	0.098	0.051	0.146	0.072	0.064	0.071	0.084
28	0.033	0.084	0.039	0.026	0.053	0.100	0.072	0.019	0.036	0.058	0.066	0.030	0.074	0.043	0.050	0.050	0.086	0.089	0.062	0.049	0.063	0.084
29	0.068	0.107	0.091	0.091	0.041	0.066	0.239	0.051	0.044	0.033	0.043	0.039	0.059	0.039	0.035	0.012	0.004	0.238	0.024	0.040	0.029	0.041
30	0.030	0.096	0.053	0.042	0.063	0.100	0.103	0.061	0.056	0.054	0.099	0.017	0.063	0.045	0.052	0.056	0.035	0.097	0.073	0.059	0.077	0.071
31	0.035	0.030	0.036	0.043	0.028	0.021	0.050	0.012	0.022	−0.003	0.004	0.001	0.012	0.011	0.011	0.007	0.008	0.062	0.038	0.003	−0.001	0.025
32	0.039	0.027	0.036	0.046	0.012	0.026	0.043	0.021	−0.005	0.033	0.014	−0.024	−0.023	−0.008	−0.024	0.009	0.013	0.059	0.042	−0.027	0.016	0.012
33	0.015	0.035	0.028	0.026	0.017	0.041	0.059	0.030	0.003	−0.005	0.012	0.011	0.016	0.011	0.019	0.038	0.037	0.061	0.041	−0.004	−0.022	0.053
34	−0.011	0.031	0.012	0.014	0.011	0.012	0.016	0.004	0.008	−0.012	−0.007	−0.017	−0.002	−0.021	−0.008	−0.011	−0.006	0.016	−0.011	−0.007	−0.008	−0.004
35	0.065	−0.078	−0.004	−0.055	0.054	0.022	−0.436	−0.025	−0.004	0.232	0.180	0.043	−0.048	0.007	−0.033	0.064	0.090	−0.503	0.110	0.045	0.213	0.080
36	−0.005	−0.014	−0.003	−0.010	−0.008	0.004	−0.018	0.006	0.005	0.017	0.012	0.006	0.000	0.006	0.006	0.007	0.001	−0.010	−0.005	0.013	0.007	0.007
37	−0.020	−0.008	−0.027	−0.014	−0.023	−0.030	0.002	−0.020	−0.040	−0.031	−0.042	−0.025	−0.016	−0.029	−0.020	−0.033	−0.024	0.012	−0.019	−0.035	−0.018	−0.035
38	−0.024	−0.059	−0.032	−0.049	0.000	−0.019	−0.103	0.007	−0.032	0.036	−0.023	−0.036	−0.024	−0.030	−0.027	0.043	0.012	−0.018	0.048	−0.021	0.054	0.051
39	−0.011	0.109	0.016	0.019	0.042	0.060	0.053	0.031	−0.001	0.021	−0.032	−0.035	0.088	−0.010	0.015	0.018	0.034	0.003	−0.053	−0.005	−0.002	−0.027
40	−0.145	−0.089	−0.132	−0.094	−0.139	−0.098	−0.048	−0.035	−0.181	−0.178	−0.240	−0.185	−0.151	−0.187	−0.162	−0.173	−0.093	−0.045	−0.068	−0.216	−0.192	−0.218
41	−0.517	−0.181	−0.456	−0.314	−0.484	−0.400	−0.014	−0.157	−0.583	−0.474	−0.719	−0.674	−0.416	−0.655	−0.580	−0.620	−0.394	−0.078	−0.312	−0.742	−0.519	−0.673
42	0.014	0.055	0.027	0.040	0.016	0.025	0.133	0.029	−0.009	−0.013	−0.006	−0.008	0.049	0.023	0.010	0.011	0.009	0.124	0.010	−0.008	−0.029	−0.004
43	0.000	−0.025	−0.006	−0.011	−0.031	−0.018	−0.015	−0.013	−0.016	−0.033	−0.030	−0.006	−0.037	−0.007	−0.008	−0.023	−0.015	−0.016	0.003	−0.009	−0.026	−0.032
44	−0.010	0.017	−0.003	0.004	0.033	0.020	0.011	0.008	0.004	0.025	0.019	0.008	0.037	0.007	0.005	0.023	0.021	0.014	−0.011	−0.003	0.022	0.028
45	−0.004	−0.049	−0.011	−0.021	−0.047	−0.032	−0.021	−0.018	−0.025	−0.048	−0.049	−0.008	−0.060	−0.015	−0.014	−0.038	−0.027	−0.023	−0.003	−0.017	−0.037	−0.046

25	0.390	0.496	0.657																				
26	0.380	0.415	0.464	0.558																			
27	0.181	0.282	0.230	0.194	0.877																		
28	0.054	0.106	0.063	0.041	0.308	0.654																	
29	0.248	0.328	0.274	0.221	0.447	0.250	1.262																
30	0.042	0.090	0.085	0.063	0.352	0.377	0.352	0.906															
31	0.197	0.238	0.251	0.225	0.179	0.033	0.219	0.078	0.653														
32	0.171	0.278	0.215	0.181	0.199	0.077	0.212	0.075	0.430	0.900													
33	0.206	0.256	0.218	0.202	0.155	0.081	0.220	0.067	0.357	0.434	0.798												
34	0.020	0.042	0.020	0.025	0.034	0.017	0.046	0.006	0.009	0.013	0.000	0.202											
35	−0.386	−0.552	−0.411	−0.429	−0.319	−0.157	−0.784	−0.144	−0.255	−0.084	−0.257	−0.131	7.469										
36	−0.004	−0.017	−0.006	−0.008	0.001	0.006	−0.012	0.010	−0.005	−0.010	−0.006	−0.017	0.080	0.071									
37	0.037	0.044	0.035	0.034	−0.001	0.003	0.031	−0.012	−0.006	0.008	0.002	0.012	−0.219	−0.018	0.177								
38	0.011	0.014	−0.001	−0.024	−0.036	−0.067	−0.069	−0.052	0.030	0.093	0.023	−0.064	0.286	0.031	0.023	1.514							
39	0.056	0.126	0.074	0.085	0.162	0.170	0.116	0.098	−0.010	0.025	0.030	0.134	−0.440	−0.026	0.106	−0.156	2.469						
40	0.126	0.228	0.117	0.095	−0.003	−0.059	0.108	−0.124	0.086	0.183	0.101	0.056	−0.748	−0.035	0.185	0.097	0.353	0.993					
41	0.499	0.854	0.467	0.379	0.054	−0.154	0.470	−0.375	0.254	0.640	0.290	0.213	−2.839	−0.141	0.789	0.477	1.673	3.848	16.259				
42	0.139	0.209	0.143	0.133	0.132	0.064	0.248	0.089	0.103	0.095	0.096	0.051	−0.826	−0.021	0.040	−0.060	0.162	0.191	0.701	0.754			
43	−0.003	−0.002	−0.004	−0.007	−0.007	−0.001	−0.008	0.003	0.003	0.002	0.003	−0.006	−0.053	0.000	0.000	−0.006	−0.035	0.000	−0.019	0.003	0.089		
44	0.016	0.014	0.019	0.017	0.017	−0.003	0.009	−0.010	0.002	0.005	0.004	0.004	0.042	0.002	0.001	0.011	0.041	0.000	0.014	−0.001	−0.074	0.147	
45	0.008	0.011	0.007	0.007	0.000	0.001	−0.011	0.000	0.009	0.005	0.013	−0.006	−0.095	0.004	−0.002	0.007	−0.040	−0.001	−0.044	0.006	0.104	−0.061	0.223

1–11 = norms sibling 1 (see Table 1), 12–22 = norms sibling 2 (see Table 1), 23–33 = norms parent (see Table 1), 34 = parental church membership, 35 = educational attainment parents, 36 = parents divorced, 37 = one parent deceased, 38 = urbanisation at age 15, 39 = family size (family of origin), 40 = age in years minus 15, 41 = age in years minus 15 squared, 42 = parent's stress on obedience, 43 = proportion of daughters (in family of origin), 44 = brother–brother dyad, and 45 = sister–sister dyad.

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