

**ATTITUDES TOWARD STEPFAMILY RELATIONSHIPS AND BIOLOGICAL RELATEDNESS:
THE ROLE OF FAMILY EXPERIENCES IN YOUTH**

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Objective: This research describes the attitudes that people have toward biological and nonbiological parenting and to examine how living arrangements during youth affect people's attitudes as adults.

Background: It is generally believed that people have negative beliefs about nonbiological (i.e., step) family relationships but there is little systematic research on such attitudes and even less is known about how these attitudes come about. This topic is important given the long-term increase in the number of stepfamilies, a trend which raises concerns as to whether attitudes toward stepfamilies can become more positive over time.

Method: We used Dutch survey data from 5,949 respondents aged 25 to 45 years with an oversample of people who grew up with a stepparent. The respondents' parents also were interviewed. Attitudes were measured in the same way for the two generations and elaborate retrospective questions were asked about respondents' living arrangements in youth.

Results: People who grew up in a stepfamily had more positive attitudes about stepfamily relationships and more negative views on the relevance of biological relatedness. This effect was only present for stepfather and not for stepmother families. Part of this effect was due to parental attitudes but even after these were taken into account, the effect of living arrangements in youth remains.

Conclusion: The general public is divided about the relevance of biology for family relationships. Value socialization and observational learning in youth are both important for understanding people's attitudes toward stepfamily relationships.

Implications: As the number of stepfamilies keeps growing, normative support for stepparents may increase.

Key words: Stepfamilies, divorce, attitudes, values, socialization, intergenerational transmission.

Many studies have examined attitudes and beliefs toward family relationships, including attitudes toward marriage, cohabitation and divorce, beliefs about gender roles in marriage, and ideas about childlessness, single parenting, and same-sex parents (Axinn et al., 1994; Bouchard & Lachance-Grzela, 2016; Cunningham et al., 2005; Halman & van Ingen, 2015; Noordhuizen et al., 2010; Sieben & Verbakel, 2013; Thornton, 2001; van der Valk, Spruijt et al., 2008). Comparatively less research exists about the attitudes and beliefs that people have toward the equivalence of biological and nonbiological family relationships. There are vignette studies on intergenerational support exchange which showed that normative obligations to support stepparents are weaker and more conditional than obligations to support biological parents (Ganong & Coleman, 2006; Rossi & Rossi, 1990; van Houdt et al., 2018). There also are studies about the stereotypes that exist regarding stepfamilies, showing that stepfamilies are often associated with problems, such as instability, bonding problems, jealousy, and insecurity (Claxton-Oldfield, 2008; Claxton-Oldfield & Butler, 1998; Miller et al., 2018; Planitz & Feeney, 2009).

Studying attitudes toward biological and nonbiological family relationships amongst family members is relevant in the context of demographic change. The increase in divorce in the western world from the 1960s to the 1980s has resulted in a rapid change in the nature and number of stepfamilies (Thomson, 2014). In the early part of the 20th century, stepfamilies were often formed out of necessity because one of the parents – often the mother – died young so that the father felt compelled to remarry (van Poppel et al., 2013). Currently, stepfamilies more often are formed after divorce when a mother who gains custody of the children finds a new husband. Stepmothers also have become more important with more parents opting for co-parenting after divorce (Nielsen, 2018). These changes have increased the number of families in which nonbiological parents are raising children. This raises the

question of whether beliefs about stepfamily relationships have the potential to change. Attitudes about biological relatedness also are relevant in light of international adoption (Grotevant & McDermott, 2014), but this is a topic beyond the scope of the present paper.

In the current paper, we present nationally representative data from the Netherlands on the attitudes that people aged 25 to 45 years have about stepfamily relationships. We develop two attitude scales that reflect (a) whether people believe in the assumed importance of biological relationships and (b) how people think about the acceptability of stepparenting. Using the attitude scales as dependent variables, we examine how personal experiences with divorced and repartnered families during youth are associated with the attitudes that people have as adults. This question was examined based on measures about the types of parents that people had when they were growing up and information on the quality of parent-child relationships during youth. Using additional data obtained directly from the parents of the respondents, we further explore underlying mechanisms of *stepfamily effects*, in particular the role of value socialization on the one hand and observational learning on the other.

The Netherlands is representative of the Western European context with a moderate to high level of divorce, relatively mixed views on a range of moral issues, and generally positive intergenerational relationships (Halman & van Ingen, 2015; Hank, 2007). The Netherlands was a strongly religious society in the first half of the 20th century (with a mix of Protestant and Catholic groups), but a rapid secularization process occurred since the 1960s (De Graaf & Te Grotenhuis, 2008). Currently, church membership is low and few nonmembers regard themselves as religious (Halman & Draulans, 2003). The Netherlands is not a forerunner in the trend toward more family complexity (Thomson, 2014), but the people in this study – born in the 1970s and 1980s – belonged to the first cohort in the Netherlands who experienced parental divorce and repartnering on a substantial scale. Of the respondents

in our study, 15.6% of people in this cohort experienced parental divorce before they were age 18 years, and 40% of this 15.6% lived with a stepfather and 19% lived with a stepmother.

BACKGROUND AND HYPOTHESES

The goal of this paper was to study how individual experiences with (and in) stepfamilies affect the attitudes that people have about the importance of biological relationships and the acceptability of stepparents in parenting children. Following learning and socialization theory (Bandura, 1977; Grusec, 2011), our basic argument is that exposure to ‘new’ family forms may change some people’s attitudes toward this family context. Because norms and values are formed most clearly during childhood (Grusec et al., 2000), one could expect the type of family in which a person has grown up will influence values. There is literature that has examined stepfamily experiences in youth (Baxter et al., 1999; Braithwaite et al., 2001; Jensen, 2019). This literature has focused on how and to what extent stepfamilies ‘become families,’ as well as on the development of the relationship between stepchild and stepparent. Little is known, however, about the process of value socialization in stepfamilies. One study has shown that just as do biological parents, stepparents transmit gender ideologies toward stepchildren, especially when the relationship to the stepchild is close (Carlson & Knoester, 2011).

The literature on learning and socialization has noted two ways in which parents can affect the attitudes of their children. The first depends on what parents do, the second depends on parents’ beliefs (Acock & Bengtson, 1980; Moen et al., 1997; Platt & Polavieja, 2016).

The first process, what parents do as an influence denotes, in part, children’s observational learning. Because parents are central role models in the life of a child, their behaviors often are closely observed by a child and can be taken as a signal to the child for

what is appropriate behavior (Morris et al., 2007). For example, by observing the division of paid and unpaid labor that parents display in the family, children may begin to believe that such gender roles are desirable and normatively appropriate (Cunningham, 2001).

Observational learning also can be relevant for the attitudes that children develop about types of families (Axinn & Thornton, 1996; Keijer et al., 2018). Thus, by living in a stepfamily, children may learn that alternative family forms are possible and functional and may develop a more positive view about stepfamilies than do children who do not have this experience. Observational learning by children may occur independently of the attitudes and beliefs that parents themselves have.

The second process can be called value socialization. Parents engage in a range of parenting practices, such as exhortation, persuasion, and explication, that have the intention of ‘teaching’ the child about what is desirable or appropriate. Value socialization is directly related to parents’ attitudes and beliefs and may complement the process of observational learning (Axinn & Thornton, 1996; Keijer et al., 2018). Value socialization is an important alternative explanation for stepfamily effects on children’s view of this family form because there is evidence that parents who divorce, as well as parents in stepfamilies, may have more liberal views on a range of matters, such as unmarried cohabitation, gender roles, and same-sex relationships (Lehrer & Chiswick, 1993; Whitton et al., 2013). As a result, people who were raised in a stepfamily may have different views not because they have been exposed to a stepfamily but because they have been exposed to parents with different ideas who engaged in teaching a child about the moral and functional equivalence of stepfamilies vis-à-vis married biological families.

Few studies have examined how experiences in a stepfamily influence people’s views of this family form, but there is research on a related topic that provides positive evidence. Studies on divorce showed that people were more permissive of divorce if their parents

divorced when they were growing up (Axinn & Thornton, 1996; Cui et al., 2011; Kapinus, 2004; Sieben & Verbakel, 2013). Young adults who grew up in a divorced family also were more tolerant of unmarried parents than children who grew up in married families (van der Valk et al., 2008). In addition, young adults who were raised in a divorced family appeared to have more liberal attitudes toward unmarried cohabitation (Bouchard & Lachance-Grzela, 2016). These findings suggest that the experience of living in a divorced family structure during youth may indeed change people's cultural views on the family.

Studies also have tried to separate the mechanisms of observational learning and value socialization, but again, primarily in the context of parental divorce effects. Some studies used indirect designs by controlling for parental background traits that served as proxies for their attitudes (Sieben & Verbakel, 2013). Other studies used direct designs by controlling for parents' attitudes (Axinn & Thornton, 1996; Kapinus, 2004). Studies using proxy designs suggested that only a small part of the effect of having divorced parents was due to value socialization. Studies using direct designs showed that more than half of the 'exposure' effect was attributable to the attitudes of the parents. Abundant evidence exists, finally, that attitudes toward family issues are transmitted from parents to children (De Vries, Kalmijn, & Liefbroer, 2009; Keijer et al., 2018; Willoughby, Carroll, Vitas, & Hill, 2012).

Our first hypothesis is that people who grew up with a stepparent have less positive attitudes about the importance of biology and more positive attitudes about the acceptability of stepparenting than people who grew up with only biological parents (hypothesis 1).

Based on the principle of value socialization, our second hypothesis is that (a) people have attitudes that are similar to the attitudes of their parents (hypothesis 2a) and (b) part of the effect of growing up with a stepparent on attitudes toward biological relatedness and stepparenting is due to the attitudes of the parents (hypothesis 2b).

Based on observational learning, our third hypothesis is that the effect of growing up with a stepparent on attitudes about the importance of biology and the acceptability of stepparenting remains significant after controlling for the corresponding attitudes of the parents (hypothesis 3).

Exposure to a stepfamily may change a child's views about nonbiological parenting but it is plausible that such effects depend on the nature of these experiences as well (Claxton-Oldfield, 2008). First, it will matter at what age a child became part of a stepfamily. Research related to stepfamilies has shown that the stepfamily goes through a complex set of stages (Braithwaite et al., 2001; Ganong, Coleman, & Jamison, 2011). Although we cannot address these stages here, we do include a central aspect of this transition with the inclusion of the dimension of time. Studies have consistently shown how important the length of shared residence is for the development of close stepparent-stepchild relationships (Kalmijn et al., 2019). Moreover, there is evidence that early socialization by parents is more effective than late socialization (Grusec, 2011).

Combining these notions, we would expect that people who entered a stepfamily relationship earlier or lived longer with a stepparent would have less positive attitudes about the importance of biology and more positive attitudes about the acceptability of stepparenting than people who entered this family context later or lived a shorter time with a stepparent (hypothesis 4).

Past studies suggest that there is considerable heterogeneity in the nature of stepfamilies (Ganong & Coleman, 2017; Jensen, 2019; Jensen & Lippold, 2018). Children can have positive or less positive relationships with their stepparents, the relationship between the parent and his or her new partner can be stable or unstable, and the stepparent can have positive or less positive personal traits. Based on the principle of observational learning, one would expect that when a child has negative experiences with a stepfamily, the

child would be less likely to develop positive attitudes. For example, if the stepparent had problematic traits and there was conflict between the child and the stepparent, a child may not feel that stepfamilies are a good alternative to biological families. Similarly, if a stepparent who entered the life of a child during youth separated from the biological parent later, this may be considered as a ‘bad’ example and result in more skepticism toward stepparenting in general.

Few studies have tested these ideas. Some studies have shown that adult children are more liberal about divorce if the marriage of their parents was unhappy or characterized by conflict (Amato & Booth, 1991; Cunningham & Thornton, 2006). This confirmed that the nature of the experience matters, but the evidence was incomplete since these studies did not differentiate among divorces. For example, it would be important to know if a parental divorce has a different effect on children’s attitudes when ex-partners had serious conflicts with each other after the divorce compared to a situation where ex-partners were cooperative in their parenting efforts (Amato, Kane, & James, 2011). As far as we could assess, there are no studies on the effects of stepfamily experiences on attitudes toward stepfamilies.

Our hypothesis is that people who had positive experiences with a stepparent as a child have less positive attitudes about the importance of biology and more positive attitudes about the acceptability of stepparenting than people with negative stepparent experiences (hypothesis 5).

METHODS

This paper used data from the Dutch OKiN survey (Parents and Children in the Netherlands; *Ouders en Kinderen in Nederland*). A team of researchers from the University of Amsterdam and Statistics Netherlands, headed by the author, were responsible for developing the questionnaires, designing the study, and collecting the data. Statistics Netherlands took a

random sample of persons aged 25-45 years from the register in 2017 consisting of three groups: (a) respondents whose biological parents were married/cohabiting at age 14 years, (b) respondents who lived with one biological parent without a partner at that age, and (c) respondents who lived with one biological parent and his/her new partner at that age. The sampling frame was used as an indirect way to obtain an oversample of (now adult) children who grew up in divorced families and stepfamilies. The actual family history of respondents was assessed in the interview itself. Statistics Netherlands identified the biological parents of the respondents, as well as their current partners in case the biological parents were no longer living together.

Ethical clearance was provided by the Ethical Advisory Board of the University of Amsterdam and by the European Research Council who provided the funding for collecting the data. The data can be used for free and without restrictions by any academic researcher and are available in the public domain at the Dutch scientific data archive DANS-EASY (<https://easy.dans.knaw.nl/ui/home>) (Kalmijn et al., 2018).

Adult children and their parents and possible new partners were sent a letter inviting them to participate in a survey via a CAWI interview (Computer Assisted Web Interview). Those who did not respond were then approached for a CAPI interview by trained interviewers from Statistics Netherlands (Computer Assisted Personal Interview). For financial reasons, CAPI was not used in the much larger parent sample. The letter stated that participation was voluntary and that identifying information would be removed before releasing the data to the analysts.

The goal of the survey was described as a survey about parent-child relationships. The letter included a note stating that parents and children could both be part of the study and that answers of parents and children could be linked for statistical purposes. Adult children received a prepaid incentive of €5; parents were included in a lottery when participating

(iPads were given out). Further details of the survey can be found in the online codebook (Kalmijn et al., 2017).

The sample was limited to respondents who were born in the 1970s and 1980s (placing all respondents between the ages of 25-45 years at the time of the survey). The original sample size was 6,485 respondents. Respondents whose parents were widowed when they were growing up ($n = 536$) were excluded, yielding an analytical sample of 5,949 respondents. Due to the oversampling of children who grew up in divorced or stepfamilies, we had a large number of respondents who lived with a stepparent in youth ($n = 2,808$). The response rate was 62%, resulting in a good response rate based on what was common in earlier Dutch and European surveys (De Leeuw & De Heer, 2002). For example, in the well-organized and well-funded European Social Survey, the response rate was 53% in the Netherlands in 2019 (Wuyts & Loosveldt, 2019).

The response of the parents and their possible new partners was 38%. The lower response of the parents was largely due to the lack of a CAPI follow-up and the lack of a prepaid incentive. A relevant question is if and to what extent the response of the parents was selective. Detailed analyses of parental nonresponse, using information from child reports, showed that parents were more likely to respond when the relationship with the child was more positive (according to the child). However, the *degree* of this selectivity appeared to be modest and affected univariate distributions of key relationship variables with a few percentage points at most (Kalmijn, 2020). Moreover, the selectivity in the OKiN survey was smaller than it was in previous multiactor surveys (Kalmijn et al., 2017). The analyses in which we combined information from parents and children (Table 6) were adjusted for parental nonresponse (see below).

Measures

In the CAWI/CAPI interview, respondents were asked to respond to a series of attitude statements. Since there were no existing scales to measure people's attitudes toward stepfamily relationships, five new Likert items were developed and presented to the respondents and their parents. All the items were intentionally biased to elicit the views of the respondent:²

1. "Relations come and go, but biological relationships are forever."
2. "The tie between a biological parent and his/her child cannot be replaced."
3. "It doesn't matter for a child if he/she is raised by a biological parent or a stepparent."
4. "A stepparent deserves the same space in child rearing as a biological parent."
5. "All things considered, a stepfamily is a poor alternative for a normal family."

The first two statements only mentioned biological relationships, the last three statements explicitly asked respondents to compare stepfamily relationships vis-à-vis biological parent-child relationships. Each item was to be answered on a 5-point Likert-scale where 1 = *fully disagree*, 2 = *disagree*, 3 = *neutral*, 4 = *agree*, and 5 = *fully agree*. We analyzed the items using principal component analyses to assess if the items were correlated and to assess if they reflected one or more underlying dimension(s). As is common in research on attitudes, the responses of the respondents to the normative statements are treated as Likert items on an interval scale from 1 to 5 (Pepin & Cotter, 2018).

The central independent variable was the structure of the family in which the respondent grew up (from birth to age 18 or the age at leaving home if that was before age

² In doing so, we follow attitude research on gender roles in which respondents are also presented with traditional statements to which they have to respond (e.g., an attitude statement in the European Values Studies to measure gender roles reads "*A job is alright but what most women really want is a home and children.*"). See <https://europeanvaluesstudy.eu/>.

18). During the interview, we obtained a detailed history of the parents' union transitions and a history of where the respondent lived. The respondents were asked for more details about one of their stepfamily experiences when they were children. If their parents had multiple new partners after divorce or widowhood (which was not uncommon), respondents were asked to focus on the longest relationship (during youth).

Using this information, we distinguished the following types of households: (a) with a single mother and no stepfather, (b) with a single father and no stepmother, (c) with a mother and stepfather, (d) with a father and stepmother, (e) in other types of households, and (f) in institutional households and not with parents. For each family type, a binary variable was constructed. Respondents living with both biological parents until age 18 were the reference category (this family type is referred to as married biological parents in the text but also includes cohabiting parents). If a respondent lived one period in a single-parent household and another period in a stepfamily, we classified the respondent as having lived in a stepfamily. Respondents could have lived in a stepfather household and in a stepmother household, in this case they were coded 1 for each binary stepfamily variable.

We used four variables to examine effects of the nature of stepfamily experiences: (a) the degree of tension and conflict between the respondent and the stepparent (as reported by the respondent on a scale from 1 to 5 where 1 = *not at all* and 5 = *frequently*), (b) whether the stepparent was ever treated in youth for "an addiction or other mental health problems like a depression" (0 = *no*, 1 = *yes*), (c) how much alcohol the stepparent consumed in the respondent's youth, measured on a 5-point scale and dichotomized (0 = *no, occasionally, modestly*, 1 = *much, excessively*), and (d) if the parent and stepparent separated later. We further included the age at which the child began living with the stepparent. Because we relied on retrospective reports, we kept the measures of stepparent traits relatively simple. For example, we did not ask the respondent to report about the amount of depressive feelings the

stepparent may have had but instead asked whether the parent had, to their knowledge, received treatment for depression (e.g., therapy); this is easier to observe and to remember for a respondent.

The attitudes about stepparenting and biological relatedness mentioned above were also measured in the parent data. All parents, and if divorced, their possible new partners, were asked to fill in a questionnaire. In this questionnaire, the same attitude statements were presented as in the adult child interview except that for practical reasons, the second item was not used (i.e., a shorter questionnaire). All parents were matched to the adult child but for the present paper, we only used data from the biological parents of the respondents. If two biological parents reported, we took the average across parents. We had valid data on parental attitudes for 56% of the respondents, given that at least one parent was still alive.

The following control variables were used in the analyses: (a) the respondent's level of education, (b) whether or not the respondent frequently read books (as a proxy for cultural capital), (c) voting preference for a Christian political party (as a proxy for religion), and (d) sex. These variables were included since they are associated with a range of moral and political attitudes and beliefs (Arts, Hageaars, & Halman, 2003) and may therefore also affect attitudes toward stepfamily relationships. We included variables referring to the respondent's own life history: (a) if the respondent was living with a partner, (b) if the respondent had biological children, (c) if the respondent had stepchildren, and (d) if the respondent experienced a separation or divorce.

Design and Planned Analyses

Descriptive tables were created to examine the attitudes of adult children about biological relatedness and stepparenting. These tables were weighted to adjust for the oversample of respondents who grew up in divorced and repartnered families (Table 2). Next,

we completed a principal component analysis on the five items, using the adult child data (Table 3).

A set of regression models applied to the full sample and is presented in Table 4. Model 1 included the effects of family structure in youth on adult children's attitudes. In Model 2, we added aspects of the adult child's own life course (e.g., marriage, divorce) to examine if these were also associated with the child's attitudes. In Table 5, the reports of adult children who had lived with a stepparent were addressed and the effects of the nature of stepfamily experiences on respondents' attitudes were examined.

To address missing information for some of the stepparent traits (see Table 3), multiple imputation to estimate the models was applied. We first tested whether the missing data were random, conditional on the list of covariates in the model. These tests were not significant, suggesting that imputation was an appropriate solution (White, Royston, & Wood, 2011). Multiple imputation was based on chained regression models. We used 30 imputations and combined the results using Rubin's rules in Stata (Royston, 2005).

In the last part of the analyses, the parents' attitudes were added to the model, using a smaller subsample of respondents whose parent(s) also participated (Table 6). To simplify matters, this model was estimated only for respondents who grew up in a stepfamily or in a married biological family. We examined effects of family structure with and without including parental attitudes and we also examined interaction effects of parental attitudes and family structure. The regression models in Table 6 were weighted to correct for nonresponse in the parent data. The weights are the inverse of the probability of having valid data for at least one parent. To model nonresponse, we used a logistic regression model which included the control variables from the adult child data as well as a series of register-based variables pertaining to the father and the mother (i.e., employment, age, income, urbanization, and neighborhood poverty). Since this information was obtained from the registers, it was also

available for the nonresponding parents.

RESULTS

Descriptive and Factor Analyses of Attitudes

In Table 1, we present the frequency distributions showing how the adult children responded to the attitude statements about biological relatedness and stepparenting. The respondents were somewhat divided about the importance of biological relatedness. For example, 26% fully agreed and 34% agreed with the statement that “nobody can replace the tie between a biological parent with a child,” whereas 17% disagreed and 3% fully disagreed. Also, a portion is neutral on the matter (19%). Beliefs about whether it matters if a child is raised by a biological parent or a stepparent were also diverse: 4% fully agreed and 17% agreed with the statement that “it doesn’t matter for a child if he or she is raised by a biological parent or a stepparent”, whereas 34% disagreed and 8% fully disagreed. The other items also reveal considerable heterogeneity in the attitudes of the adult children.

To what extent can we regard the five items as representing one underlying dimension? After standardizing and combining the five items, the reliability, as measured by Cronbach’s α , was reasonable but not very high (0.66). Table 2 presents the results of a principal component analysis of the five items and indicates that a two-component solution was optimal. Together, two dimensions explained 64% of the variance in the individual items. The rotated factor solution shows that the two items on biological relationships formed one dimension while the items on stepparents formed another dimension.

The results of the factor analyses can be interpreted as follows. The first two questions (i.e., the first factor) indicate(s) agreement with the importance of biological relationships and the latter three items (i.e., the second factor) indicate(s) acceptability of stepparents in parenting children. Following this, two variables were constructed that were

the average score across the unstandardized items. The correlation between the scales was -.27. Hence, people who endorsed the importance of biological relatedness were more negative about stepparenting, but the magnitude of this association was modest.

Effects of Family Structure

The first set of regression models is presented in Table 4. The dependent variables were standardized so that the coefficients pertaining to dichotomous independent variables can be interpreted as effect sizes (Cohen's *d*). We observed partial evidence for hypothesis 1. People raised with a stepfather less often endorsed the importance of biological relationships and were more likely to believe that stepparents are acceptable. The effects were moderate to strong in magnitude. The effects of having lived with a stepmother, however, were not in line with our hypothesis. There was no effect of having lived with a stepmother on attitudes toward biology and even a negative effect on attitudes toward stepparenting. People who lived with a stepmother were less likely to believe that stepparenting is acceptable. This gender difference is addressed below.

Because of the oversample of respondents who grew up in divorced families, we were able to look at several other family types as well. People who were born to unmarried single mothers (without a father) less often believed in the importance of biological relationships but they were not more supportive of stepfamily relationships. The absence of a biological father apparently did affect people's views on the importance of biological relationships, in line with what one would expect.

In Model 2, we added control variables for the respondent's own life course experiences. Although we had no explicit hypotheses about these variables, the effects were consistent with what one could expect. People who had children of their own were more likely to believe in the importance of biological relationships and less likely to believe in the

equivalence of stepparenting. In contrast, people who had stepchildren believed more strongly in the equivalence of stepparenting.

Several control variables had significant effects. More highly educated respondents and respondents who frequently read books had more positive views on stepfamilies and were more skeptical about the relevance of biological relatedness. Respondents who voted for Christian political parties had more negative attitudes about stepfamilies and more positive views on the importance of biological relationships. There was a significant but small effect of gender: women were less likely to believe in the relevance of biology than men.

Effects of Stepfamily Experiences

In Table 5, we limited the sample to respondents who grew up with stepparents and examined differences *within* this subset. Models were estimated separately for respondents with children from stepfather families and children from stepmother families. In the previous models, it was not necessary to split these since no characteristics of stepfathers and stepmothers were included there. We first focused on stepfather families, which was the largest group in our data. In line with hypothesis 4, we found significant effects of the age at which the child began to live with a stepfather. The earlier people began living with a stepfather, the less positive the attitudes about biological relatedness and the more positive the attitudes toward stepfamilies.

Several findings were supportive of hypothesis 5. People were less positive toward stepparenting when they had conflicts with their stepfather and when the stepfather had issues with alcohol. When the stepfather later separated from the mother, the respondent was more likely to endorse the importance of biological relationships and less positive toward stepparenting. One unexpected effect was that of psychological problems. When stepfathers

had psychological problems, people were less rather than more likely to support the importance of biological relationships.

The results for stepmother families were less consistent with our hypotheses. We did find an effect of the age at which the child began to live with the stepmother, but when looking at the other stepfamily experiences, the only significant effect we found was that of conflict. People who had conflicts with their stepmother had more negative views about stepparenting, in line with hypothesis 5. There were no effects, however, of alcohol consumption and separation and there was a contrary effect of psychological problems. One could note that the sample was smaller which may in part have led to less convincing evidence in stepmother families. However, the effect of psychological problems was not insignificant but significant and counter to the hypothesis.

The measures we used for the experiences with stepparents allowed us to explore gender differences in more detail. Earlier, in Table 4, we found opposing effects of stepfather and stepmother families. People who lived with a stepfather had more positive attitudes toward stepfamily relationships, but people who lived with a stepmother had more negative attitudes, in contrast to hypothesis 1. It is possible for such differences to arise if experiences with stepmothers were more negative overall. To test this, we pooled respondents from stepfather and stepmother families and examined the effects of stepparent gender. To make this possible, we need to take into account that some children lived in a stepfather family as well as in a stepmother family. The dependencies this creates between the observations were corrected by adjusting the standard errors for the clustering of stepparents in children.

The effect of stepparent gender (1 was stepmother and 0 was stepfather) on attitudes toward stepparenting was $-.31$ ($t = -8.8$, $p < .01$) showing that respondents with a stepmother had more negative views on stepparenting than respondents with a stepfather. After we controlled for the age at which a stepparent entered the household, the effect was reduced to -

.23 ($t = -6.3$, $p < .01$). According to a *khb* test in Stata, this reduction was significant, showing that the gender effect was significantly mediated by the age at which a stepparent entered the household ($t = 6.3$). After we subsequently controlled for the effects of stepparent conflict, stepparent separation, and stepparent traits, the stepparent gender effect did not decline further ($b = -.23$, $t = 0.03$).

The Role of Parents' Attitudes

To what extent were the differences in attitudes we found between respondents with and without stepparents due to value socialization and to what extent were they due to observational learning? To address this question, we added the measures of parental attitudes in Table 6. The sample was limited to respondents for whom parents responded. Respondents who grew up in a single parent family and respondents from other household types were also omitted. For this reason, we first estimated a model again without parental attitudes. These models replicated the results of Table 4 although the stepfamily effects were somewhat weaker. In line with value socialization, the effect of parental attitudes toward the importance of biological relationships on children's attitudes was positive and significant. The effect of parental attitudes toward stepparenting on children's attitudes was also significant and somewhat stronger.

Differences between people raised in stepfamilies and people raised in married families remained significant when parental attitudes were added to the model (compare Model 1 and 2). In the case of attitudes toward the importance of biological relationships, there was no reduction in the stepfamily effect between Model 1 and 2. However, in the case of attitudes toward stepparenting, about half of the effect was mediated by parental attitudes. The mediated effect was statistically significant ($b = .068$; $z = 4.58$), but the net effects remained significant.

In Model 3, we added an interaction between the stepfamily variables and the attitudes of parents. For both types of attitudes, we found significant and positive interaction effects with the stepfather variable. Hence, the effect of parental attitudes on adult children's attitudes was stronger when children lived with a stepfather. For example, the effect of parental attitudes was 0.273 for people who did not live with a stepfather and $0.273 + 0.133 = 0.406$ for people raised in a stepfather family.

To better understand the interaction effects, we present predictive margins and their confidence intervals in Figure 1. Figure 1 first shows the slope differences. The slope for the association between attitudes of parents and children was steeper in stepfamilies than in married families. The figure also illustrates an alternative interpretation of the interaction effect. People who were raised in a stepfather family were more positive about stepfamily relationships, but *only* when their parents were also positive in this respect.

DISCUSSION AND CONCLUSION

Motivated by the question of potential change in people's attitudes toward the importance of biological relatedness in parent-child relationships, we studied the effects of personal family experiences during youth on attitudes in adulthood. We developed a series of attitude items which, according to a factor analysis, could be summarized in two dimensions: the degree to which people find biological relatedness important for family ties, and the degree to which people find stepparenting a functional and valuable alternative form of parenting. The two dimensions were negatively correlated, but the correlation was weak. In our interpretation, this meant that strong beliefs in the importance of biology do not always translate into negative views on stepparenting.

We found considerable evidence that people who were raised in a stepfather family were less likely to endorse the importance of biological relationships and more likely to

believe that stepparenting is an acceptable form of parenting compared to people who lived only with their biological parents (hypothesis 1). These effects were not found for children who grew up with a single parent after divorce, lending additional support to the idea that experiences with stepfamilies matter and not experiences with family dissolution more generally.

We subsequently studied the processes that may be behind this effect. We estimated models including the attitudes that parents had and found that part of the effect of family structure was due to value socialization. Parents in stepfamilies had more positive attitudes toward stepfamily relationships and their attitudes were correlated with the attitudes of their children. These two effects combined mediated a substantial part of the effect of family structure on adult children's attitudes (in line with hypothesis 2a and 2b). At the same time, we also found effects of family structure on children's attitudes, independently of the attitudes of parents. This suggests that observational learning also played an important role in the process (hypothesis 3).

Value transmission has often been observed in studies of family issues (Axinn & Thornton, 1996; Keijer et al., 2018). We generalized this evidence to attitudes toward the importance of biological relatedness and attitudes toward stepfamilies. For attitudes toward biological relationships, the degree of transmission was somewhat weaker than for attitudes toward stepparenting but the measure was more elaborate for the latter, which may partly explain the difference. We also observed, however, that the transmission of attitudes was stronger in stepfamilies. In our view, this can be interpreted by using ideas about attitude salience. Social psychologists who study personal relationships have argued that when an attitude domain is more salient, social influence in the relationship is stronger (Davis & Rusbult, 2001). When applied to our topic, it can be argued that when parents and children are not living in a stepfamily, biological relatedness is probably taken for granted

(nonsalient). As a result, there is less reason to think and communicate about these issues and the chance that parents will transmit their views to children will be smaller.

We also hypothesized that ‘exposure’ to stepfamilies in youth would primarily affect a person’s attitudes if these experiences were early and positive. We found strong and consistent evidence for the timing of the experiences. The earlier children were exposed to a stepfamily, the more positive their attitudes were (hypothesis 4). We found partial evidence for the hypothesis that the quality of the stepfamily experiences matters (hypothesis 5). People who had experienced conflicts with their stepfather or stepmother had more negative views on stepparenting. Moreover, when there was a divorce or separation from the stepfather, people were also more conservative. In fact, when we compare the effects of having lived with a stepfather per se and the effect of separation from a stepfather, the initial effect was annulled. In other words, only stable stepfather families have the expected effect on people’s attitudes toward the equivalence of stepparenting.

Although there was considerable support for our hypotheses, there were important refutations as well. Most importantly, we found that people who lived in a stepmother family did not have different views on the importance of biological relationships and even *more negative* attitudes toward stepparenting in general. How might this exception be explained? First, the experiences may be more negative in stepmother families than in stepfather families. We tested this interpretation but found no support. A second possibility is that the length of shared residence was often shorter with stepmothers than with stepfathers. We found partial support for this explanation. A third interpretation lies in the strong emphasis in our culture on biological motherhood, something which especially ‘hurts’ stepmothers (Claxton-Oldfield, 2008). As a result of this, it may be more difficult for stepmothers to ‘replace’ mothers than it is for stepfathers to ‘replace’ fathers, a problem which is further

aggravated by the negative impact that a divorce has on biological father-child relationships (Juby, Billette, Laplante, & Le Bourdais, 2007; Kalmijn et al., 2019).

Another unexpected result was found for the effects of the *traits* of the stepparents. We expected that when stepparents had more problematic characteristics, people would have less favorable views on stepparenting and more positive views on the importance of biological relationships. In contrast to this expectation, we found that when stepfathers or stepmothers had psychological problems, people were less convinced of the importance of biological relationships. We believe that this result is due to the behaviors of stepparents in their – actual or potential – role as biological parents. If stepparents with psychological problems have children from a previous union, they may be less able to be a ‘good parent’ for these biological children, especially in the aftermath of divorce. The stepchildren may be a witness of these child-rearing problems and this may make them more skeptical about the strength of biological parent-child relationships.

Limitations and Future Directions

We end with discussing limitations and prospects for further analysis. First, we welcome more elaborate measures of the attitudes toward biological parenting. In the absence of existing scales, we developed new items and these worked reasonably well. However, we also found two dimensions rather than one and this resulted in a smaller number of items for each subscale than envisioned. We also welcome items that specifically gauge opinions about stepfamilies only, without the comparison to biological families.

Second, we emphasized the contrast between stepparents and biological parents but we also have data on children who were raised by adoptive parents and the attitudes they have about the nature of adoptive parenting. This is an important and related topic but it would require a separate treatment (Grotevant & McDermott, 2014).

Third, we note the limitation of a retrospective design. It would obviously be ideal to measure attitude *change* but attitudes toward stepfamily relationships have not been included in national panel studies. Moreover, this methodological criticism applies most directly to studies of the effects of people's own life course experiences on their own attitudes. For such effects, prospective panel data are more or less a necessity (Thornton, Axinn, & Hill, 1992). When studying the impact of life course experiences of parents on attitudes of children, retrospective data are a good alternative.

Fourth, the response rate of the parents to the survey was on the low side. While survey nonresponse is often considered problematic, the level of nonresponse is less relevant than the selectivity of the nonresponse (Groves, 2006). There is evidence that the level of response is not strongly associated with the selectivity of the nonresponse (Groves & Peytcheva, 2009), which suggests that the higher level of nonresponse in the parent survey was not associated with a more selective type of response. Moreover, in our analyses, we were able to control for the selectivity of parental nonresponse because we had information on nonresponding parents from the children's data and from the population registers.

Implications

If our interpretations are correct, there is room for attitude change at the macro level. With an increasing number of children being raised in stepfamilies, coupled with an increasing amount of exposure to stepfamilies in the peer networks of these children, attitudes toward stepfamilies may well become more positive. Such a scenario may apply less to stepmothers, however. At the individual level, experiences in stepmother families were not associated with more positive views on stepparents. Stepmothers were less common in the cohorts that we studied than stepfathers – children born in the 1970s and 1980s – but as a result of the rise of co-parenting after divorce, more and more children will live with a

stepmother, at least part of the time. We speculate that it will be harder for these families to increase acceptance of non-biological parenting and that this may slow down a more general acceptance of stepfamilies.

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Table 1. *Weighted Frequency Distributions of Attitudes of Adult Children 25-45*

“Relations can come and go, but biological relationships are forever.”	N	%
Fully agree	1439	24.19
Agree	2408	40.48
Neutral	1069	17.97
Disagree	838	14.08
Fully disagree	195	3.28
“Nobody can replace the tie between a biological parent with child.”	N	%
Fully agree	1540	25.89
Agree	2032	34.16
Neutral	1155	19.42
Disagree	1018	17.12
Fully disagree	203	3.41
“For a child it doesn’t matter if raised by bio or stepparent.”	N	%
Fully agree	215	3.62
Agree	1034	17.38
Neutral	2223	37.36
Disagree	2016	33.89
Fully disagree	461	7.75
“Stepparents need same opportunity in raising children as bioparents.”	N	%
Fully agree	409	6.87
Agree	1947	32.73
Neutral	2307	38.79
Disagree	1096	18.42
Fully disagree	190	3.19
“A stepfamily is bad alternative for a normal family.”	N	%
Fully agree	124	2.08
Agree	444	7.47
Neutral	1882	31.64
Disagree	2740	46.06
Fully disagree	758	12.75

Note. OKiN data on respondents 25-45 in the Netherlands in 2018.

Table 2. *Principal Component Analysis of Attitudes of Adult Children 25-45 (N = 5,949)*

Unrotated	Factor1	Factor2	Uniqueness
Biological relationships are forever	-0.574	0.656	0.240
Biological relationships irreplaceable	-0.695	0.497	0.271
Stepparent versus biological parent doesn't matter	0.708	0.279	0.420
Stepparents deserves equal role	0.574	0.544	0.375
Stepfamily bad alternative	-0.593	-0.358	0.520
Rotated	Factor1	Factor2	
Biological relationships are forever	0.105	0.892	
Biological relationships irreplaceable	-0.101	0.823	
Stepparent versus biological parent doesn't matter	0.705	-0.161	
Stepparents deserves equal role	0.815	0.144	
Stepfamily bad alternative	-0.685	0.027	

Note. OKiN data on respondents 25-45 in the Netherlands in 2018. Variables coded as 1 (disagree) ... 5 (agree). Factor 1 explains 40% of the variance, factor 2 explains 24% of the variance.

Table 3. Means and Standard Deviations of Variables

Variable	Mean	s.d.	Minimum	Maximum	N
Child's attitude (step)	3.23	.77	1	5	5,949
Child's attitude (bio)	3.45	1.07	1	5	5,949
Parents' attitude (bio)	4.08	.83	1	5	3,335
Parents' attitude (step)	3.23	.63	1	5	3,322
Age respondent	33.4	5.61	25	46	5,949
Woman	.53	.5	0	1	5,949
Single mother family	.14	.34	0	1	5,949
Single father family	.02	.13	0	1	5,949
Stepfather family	.41	.49	0	1	5,949
Stepmother family	.14	.35	0	1	5,949
Other postdivorce family	.01	.11	0	1	5,949
Never-married parent	.02	.14	0	1	5,949
In institution	.01	.11	0	1	5,949
With partner	.7	.46	0	1	5,949
Experienced separation	.31	.46	0	1	5,949
Has own children	.54	.5	0	1	5,949
Has stepchildren	.03	.17	0	1	5,949
Education (isled)	66.3	17	22.98	87.13	5,949
Christian party vote	.09	.29	0	1	5,949
Frequent book reading	.26	.44	0	1	5,949
Age entry stepfather	9.22	4.24	0	18	2,438
Stepfather alcohol use	.17	.38	0	1	2,412
Stepfather psychological issues	.12	.33	0	1	2,156
Stepfather conflict	2.23	.93	1	4	2,454
Stepfather separated	.31	.46	0	1	2,454
Age entry stepmother	11.52	4.12	0	18	852
Stepmother alcohol use	.09	.29	0	1	813
Stepmother psychological issues	.15	.36	0	1	667
Stepmother conflict	2.26	1.02	1	4	862
Stepmother separated	.28	.45	0	1	862

Note. OKiN data on respondents 25-45 in the Netherlands in 2017.

Table 4. *Regression of Attitudes on Family Structure in Youth*

	Attitudes about the importance of biological relationships		Attitudes about the acceptability of stepparenting	
	(1)	(2)	(3)	(4)
Age respondent	0.006** (0.002)	-0.000 (0.003)	0.008*** (0.002)	0.013*** (0.003)
Woman	-0.117*** (0.026)	-0.140*** (0.026)	0.003 (0.026)	0.029 (0.027)
Educational attainment	-0.079*** (0.013)	-0.066*** (0.013)	0.017 (0.013)	0.005 (0.013)
Christian party vote	0.140*** (0.044)	0.133*** (0.044)	-0.286*** (0.044)	-0.262*** (0.044)
Frequent book reading	-0.152*** (0.030)	-0.147*** (0.030)	0.143*** (0.031)	0.137*** (0.030)
Single-mother family ^a	-0.120*** (0.040)	-0.123*** (0.040)	-0.075* (0.041)	-0.080** (0.040)
Single-father family ^a	-0.132 (0.101)	-0.138 (0.101)	-0.030 (0.102)	-0.035 (0.102)
Stepfather family ^a	-0.385*** (0.029)	-0.390*** (0.029)	0.216*** (0.029)	0.211*** (0.029)
Stepmother family ^a	-0.010 (0.037)	-0.011 (0.037)	-0.282*** (0.037)	-0.283*** (0.037)
Other postdivorce family ^a	-0.039 (0.118)	-0.047 (0.118)	-0.103 (0.120)	-0.096 (0.119)
Never-married parent ^a	-0.390*** (0.093)	-0.393*** (0.092)	0.133 (0.094)	0.124 (0.093)
In institution	-0.078 (0.116)	-0.081 (0.116)	-0.161 (0.118)	-0.169 (0.117)
With partner		-0.093*** (0.031)		0.091*** (0.031)
Experienced separation		-0.004 (0.029)		0.055* (0.029)
Has own children		0.198*** (0.030)		-0.222*** (0.031)
Has stepchildren		0.053 (0.075)		0.247*** (0.076)
Constant	0.090 (0.084)	0.259*** (0.088)	-0.300*** (0.085)	-0.460*** (0.089)
N	5949	5949	5949	5949
R-squared	0.055	0.062	0.034	0.045

Note. OKiN data on respondents 25-45 in the Netherlands in 2017. Dependent variable standardized. Standard errors are in parenthesis

^a Reference is two-parent biological family.

*** p<0.01, ** p<0.05, * p<0.1

Table 5. *Regression of Attitudes on Stepfamily Experiences Among Children Who Grew Up in a Stepfamily*

	Children who lived in a stepfather family		Children who lived in a stepmother family	
	Attitudes about the importance of biological relationships (1)	Attitudes about the acceptability of stepparenting (2)	Attitudes about the importance of biological relationships (3)	Attitudes about the acceptability of stepparenting (4)
Age respondent	0.006 (0.004)	0.010** (0.004)	0.002 (0.007)	0.006 (0.007)
Woman	-0.112** (0.044)	0.053 (0.043)	-0.053 (0.072)	0.091 (0.073)
Educational attainment	-0.074*** (0.022)	-0.013 (0.021)	-0.011 (0.036)	-0.022 (0.036)
Christian party vote	0.100 (0.097)	0.097 (0.094)	0.115 (0.145)	0.146 (0.145)
Frequent book reading	-0.134*** (0.051)	0.124** (0.050)	-0.312*** (0.085)	0.218** (0.086)
Age entry stepfather	0.025*** (0.005)	-0.040*** (0.005)		
Stepfather alcohol use	-0.064 (0.060)	-0.137** (0.058)		
Stepfather psychological issues	-0.162** (0.074)	0.057 (0.070)		
Stepfather conflict	0.020 (0.024)	-0.294*** (0.023)		
Stepfather separated	0.179*** (0.047)	-0.203*** (0.045)		
Age entry stepmother			0.021** (0.009)	-0.034*** (0.009)
Stepmother alcohol use			-0.088 (0.128)	0.016 (0.129)
Stepmother psychological issues			-0.327*** (0.116)	-0.114 (0.112)
Stepmother conflict			-0.036 (0.036)	-0.220*** (0.036)
Stepmother separated			-0.078 (0.079)	-0.094 (0.079)
Constant	-0.620*** (0.159)	0.842*** (0.154)	-0.103 (0.269)	0.426 (0.270)
N	2454	2454	862	862

Note. OKiN data on respondents 25-45 in the Netherlands in 2017. Dependent variable standardized. Missing values imputed via mi estimate in Stata (no fit statistics available). Standard errors are in parenthesis.

*** p<0.01, ** p<0.05, * p<0.1

Table 6. *Regression of Attitudes on Stepfamily Experiences and Parental Attitudes*

	Attitudes about the importance of biological relationships			Attitudes about the acceptability of stepparenting		
	(1)	(2)	(3)	(4)	(5)	(6)
Stepfather family ^a	-0.336*** (0.039)	-0.334*** (0.038)	-0.872*** (0.188)	0.152*** (0.040)	0.077** (0.039)	-0.354* (0.201)
Stepmother family ^a	0.009 (0.048)	0.000 (0.047)	0.078 (0.232)	-0.252*** (0.049)	-0.275*** (0.048)	-0.367 (0.246)
Parents' attitude ^b		0.129*** (0.022)	0.054 (0.036)			
x stepfather			0.132*** (0.045)			
x stepmother			-0.019 (0.056)			
Parents' attitude ^b					0.355*** (0.030)	0.273*** (0.048)
x stepfather						0.133** (0.061)
x stepmother						0.029 (0.073)
N	2713	2713	2713	2704	2704	2704
R-squared	0.055	0.066	0.069	0.024	0.071	0.073

Note. OKiN data on respondents 25-45 in the Netherlands in 2018. Dependent variable standardized. Results weighted for parent nonresponse.

^a Reference is two-parent biological family. Other nonmarried families omitted.

^b Parents' attitudes refer to the same attitude that was measured for the adult child.

*** p<0.01, ** p<0.05, * p<0.1

Figure 1. Predicted scores of adult children's attitudes



