

MPIfG Journal Article

Daria Tisch, Tamara Gutfleisch: Unequal but Just? Experimental Evidence on (Gendered) Distributive Justice Principles in Parental Financial Gifts. In: Socio-Economic Review 21(3), 1369-1390 (2023). Oxford University Press
The original publication is available at the publisher's web site: <https://doi.org/10.1093/ser/mwac041>

The MPIfG Journal Articles series features articles by MPIfG researchers and visiting scholars published in peer-reviewed journals. Max Planck Institute for the Study of Societies (MPIfG) Cologne | www.mpihg.de

Article

Unequal but just? Experimental evidence on (gendered) distributive justice principles in parental financial gifts

Daria Tisch ^{1,2,*} and Tamara Gutfleisch ^{3,4}

¹Max Planck Institute for the Study of Societies, Paulstraße 3, Cologne 50676, Germany;

²Department of Social Sciences, Humboldt-Universität zu Berlin, Unter den Linden 6, Berlin 10099, Germany;

³Mannheim Centre for European Social Research (MZES), University of Mannheim, Mannheim 68131, Germany;

⁴Department of Social Sciences, University of Luxembourg, 2 Avenue de l'université, Esch-sur-Alzette 4365, Luxembourg;

*Correspondence: tisch@mpifg.de

Research has documented gender inequalities in parental financial gifts, but it is unclear under which conditions these inequalities are socially accepted. We combine distributive justice theory with sociological and economic perspectives on intergenerational transfers to examine perceptions of fair allocations of parental gifts. By manipulating children's characteristics in a multifactorial vignette experiment, we conducted in Germany in 2020 ($N=4284$ observations of 714 respondents), we test the prevalence and gendered application of four justice principles (equality, need, entitlement and equity). While the equality principle was widespread, unequal gifts were legitimized both by children's financial needs (unemployment) and exchange services (helping in parents' household). These results indicate that the family is perceived as an agency for economic redistribution, potentially affecting society's socio-economic structure. Moreover, exchange services weighed more for sons while needs weighed more for daughters, suggesting that gendered fairness perceptions are one possible mechanism explaining gender inequalities in financial gifts.

Key words: family economics, gender inequality, social norms, justice theory, wealth, generations

JEL classification: J16 economics of gender, D63 equity, justice, inequality and other normative criteria and measurement, D64 intergenerational transfers

1. Introduction

In families with several children, financial gifts from parents to their children (i.e. wealth transfers during the parents' lifetime) involve a moral decision as to how much each child should receive. Parental gifts can thus be conceptualized as a question of distributive justice. Distributive justice theories state that individuals are morally guided by at least four justice

principles when evaluating the fairness of allocations (Deutsch, 1975; Major, 1993; Liebig and Sauer, 2016). If this theory is applied to parental gifts, the basis for a fair allocation of parental wealth could be children's need (need principle), reciprocity and exchange (equity principle), status characteristics (entitlement principle) or simply equality (equality principle). To the best of our knowledge, it is as yet unclear which of these justice principles individuals believe should be applied to parental gifts and in particular what role the children's gender plays in this context. This study therefore asks two questions: Which justice principles guide individuals' perceptions of a fair allocation of parental gifts? Are these principles applied equally to daughters and sons?

Although gifts and bequests (i.e. wealth transfers after the parents' death) can both affect the economic well-being of children and the socio-economic structure of society (Spilerman, 2000), gifts given earlier in children's lives can enable them to accumulate wealth over their lifetime, with a potentially greater impact on social stratification (Hansen and Wiborg, 2019). Gifts are less restricted by legal regulations, always based on a conscious decision of the parents, can be given in secret (i.e. without the other children knowing) and can be given multiple times (Halvorsen and Thoresen, 2011; Leopold and Schneider, 2011a). Therefore, gifts leave more room for preferential treatment than inheritances, which can have major impacts on intra-familial wealth inequality. Indeed, several studies have documented inequalities in the distribution of parental gifts (Dunn and Phillips, 1997; McGarry, 1999; Light and McGarry, 2004; Albertini *et al.*, 2007; Hochguertel and Ohlsson, 2009). Some of these studies have provided evidence that the children's gender plays a role in their probability of receiving gifts and the total amount received in gifts (Deindl and Isengard, 2011; Leopold and Schneider, 2011b; Wong, 2013; McGarry, 2016; Loxton, 2019).

Gender inequalities in gifts may emerge from systematic differences in the distribution of characteristics between sons and daughters that trigger (certain kinds of) gifts. For example, assuming that the equity principle is widespread, daughters might be advantaged in gifts because they are more likely to provide care to their parents later in life. At the same time, a hitherto neglected explanation for gender inequalities in parental gifts might be that inequalities are regarded as just because of societal beliefs in gender differences in entitlements and social roles (Lerner and Mikula, 1994, p. 6).

The family is an important area of inquiry for questions of justice, not only because the family plays a critical role in the socialization and reproduction of justice principles but also because distribution outcomes within the family may affect the socio-economic structure outside of the family (Major, 1993). Specifically, studying fairness perceptions regarding the allocation of parental gifts is important for two reasons. First, fairness perceptions may affect behavior, with potential consequences for the economic and social structures of society (Liebig and Sauer, 2016). To better understand the causal mechanisms behind (gender) inequalities in parental gifts between siblings, it is therefore important to identify the conditions under which these inequalities are considered fair and are accepted by society. Second, beliefs about fair allocations of parental wealth give us insight into the normative logic of social institutions such as the family (Liebig and Sauer, 2016). Thus, even beyond the potential link to behavior, perceptions of distributive justice in parental gifts are crucial to understanding how individuals perceive the role of the family in economic redistribution in society.

In the majority of prior studies, the justice principles underlying parental wealth transfers were inferred from linking observational data on transfer behavior to children's

characteristics and life events, such as income, marriage or childbirth (e.g. [Leopold and Schneider, 2011a](#); [McGarry, 2016](#); [Loxton, 2019](#)). However, inferring principles from behavior could be misleading due to omitted variable bias or reverse causation, particularly in cross-sectional analyses ([McGarry, 1999](#)). Further, existing evidence is often consistent with multiple principles simultaneously, and it is almost impossible to disentangle different justice principles with observational data ([Hochguertel and Ohlsson, 2009](#); [Nivakoski, 2019](#)). In other studies, respondents were asked directly about their principles regarding intergenerational transfers (e.g. [Light and McGarry, 2004](#); [Künemund et al., 2006](#); [Halvorsen and Thoresen, 2011](#)). Such an approach involves the risk of social desirability bias or measurement error due to ignorance. Individuals may not always be aware of their justice principles and, thus, may be unable to explain their principles when asked directly ([Wallander, 2009](#)).

[Kusa \(2019\)](#) addressed some of these shortcomings by asking respondents to rate vignettes (i.e. descriptions of family situations) rather than single-item questions in order to examine the importance of the equity principle in public opinion on financial compensation for intra-family time transfers [see [Drake and Lawrence \(2000\)](#) for a similar study regarding inheritances]. By taking an observer perspective (i.e. focusing on individuals' fairness perceptions of gifts in fictitious families), Kusa's approach makes it possible to identify shared norms in society. However, Kusa has only considered the equity principle and has focused on families with two daughters, thus neglecting potential gendered mechanisms.

To examine individuals' beliefs about fair allocations of parental gifts between daughters and sons, we conducted a multifactorial vignette survey experiment. Respondents of the German *SoSci Panel* were asked to read three randomly assigned descriptions of a fictitious couple with a son and a daughter. The vignettes systematically differed in the children's characteristics, that is, which child is the firstborn (entitlement principle), who is unemployed (need principle) and who helps in the parents' household (equity principle). After reading each vignette, respondents were asked to indicate a fair allocation of parental money (i.e. financial gift) between the children. We focus on gifts in cash instead of fixed assets, such as housing, because the former can easily be divided between children. Because systematic differences between siblings (e.g. relationship to parents) were held constant in the experiment, justice principles can be identified and their gendered application examined without confounding of other characteristics. Due to the multifactorial experimental design, responses may be less susceptible to social desirability bias compared with direct questions ([Auspurg and Hinz, 2015](#)).

Germany is a relevant case on which to study individuals' perceptions of distributive justice regarding financial gifts from parents to their children. Over the past decades, the German post-war generations have been able to benefit from economic prosperity and peace, thus accumulating large amounts of wealth that can potentially be passed on to the next generation. It has been estimated that about 400 billion Euro can be transferred yearly in Germany ([Baresel et al., 2021](#)). For financial transfers between parents and their children, German tax law grants a tax-free allowance of 400 000 Euro for each child. This allowance applies to the sum of all financial transfers (bequests and gifts) received over a period of 10 years. However, the law limits preferential treatment of one child in the distribution of bequests by entitling children to a statutory share of their parents' estate ('Pflichtanteil'), even if they have been disinherited by will. This statutory share amounts to 50% of what a child would be generally entitled to under the law of intestate succession. Thus, siblings can always claim their statutory share from the child or children named as beneficiary. This is

not the case with financial gifts that children receive before their parents' death. Such gifts are hardly regulated by law. The only exception is that gifts made in the 10 years before the parents' death are credited against the statutory share. Parents are free to decide how often they want to make financial gifts to their children, how high these transfers should be and, most importantly, which child should receive them.

We proceed as follows. In Section 2, we discuss prior literature and our theoretical background. The data and method are introduced in Section 3. We present our results in Section 4. Section 5 discusses our results in relation to prior research. Finally, Section 6 includes our conclusions and potential limitations of our study.

2. Theory and empirical background

2.1 Research on distributive justice

Research on distributive justice dates back many decades (Homans, 1961; Adams, 1965; Deutsch, 1975). Distributive justice theories provide a theoretical framework for how individuals determine the fairness of the allocation of socially valued resources (Cook and Hegrvetd, 1983). These theories have been applied to study justice concerns in a range of social situations, such as the allocation of rewards in work and employment contexts (e.g. Kahn *et al.*, 1980; Sauer and May, 2017), in particular the gender pay gap (Auspurg *et al.*, 2017a), the division of household labor (e.g. Gager and Hohmann-Marriott, 2006; Greenstein, 2009; Davis, 2010) and the intra- or intergenerational distribution of money within families (Drake and Lawrence, 2000; Kusa, 2019; Tisch and Lersch, 2021).

The literature proposes different explanations as to how individuals determine the fairness of allocations of socially valued goods, services or resources. In general, the perceived fairness is considered to depend on individuals' expectations of what they or others deserve (Homans, 1961; Berger *et al.*, 1972a). According to the relative deprivation approach, those expectations might be derived from comparison processes such as comparing one's own rewards with the rewards of others (Crosby, 1982; Major, 1987). They might also be derived from normative beliefs about how resources should be allocated, so-called distributive justice principles (Deutsch, 1975; Gager and Hohmann-Marriott, 2006). Equity theory (Adams, 1965) dictates that the normative rule for allocating socially valued resources should be based on individuals' contributions—the greater the contribution, the higher the reward. However, equity theory has been criticized for relying on a single, parsimonious principle of justice (Kahn *et al.*, 1980). This stream of literature proposes that there are various principles on the basis of which rewards might be distributed (Deutsch, 1975; Major, 1993). Besides the equity principle (rewards should be proportional to individual inputs), established principles are the equality principle (each individual should receive the same rewards), the need principle (rewards should be proportional to individual needs) and the entitlement principle (rewards should be allocated according to status characteristics) (Liebig and Sauer, 2016).

It stands to reason that the preference of certain justice principles over others is closely linked to the type of social relationship, the nature of the situation and the goals of social interactions (Leventhal, 1976; Kahn and Gaeddert, 1985; Liebig and Sauer, 2016). For example, Fiske (1991) considered four types of social relationships and matched these types of relationships with the four main justice principles. Accordingly, the need principle should be most relevant within solidary communities where individuals' well-being is the goal, such as

in the family (see also e.g. [Deutsch, 1975](#); [Schwartz, 1975](#)). The equality principle is suggested to dominate in relationships with an orientation toward a long-term exchange and with the goal of maintaining ‘enjoyable social relations’, such as in non-hierarchical networks (see also e.g. [Deutsch, 1975](#); [Kahn et al., 1980](#)). The equity principle should be dominant in short-term economic exchange relationships such as market relations in which economic productivity is an important goal (see also e.g. [Adams, 1965](#); [Deutsch, 1975](#)). The entitlement principle should be most relevant in hierarchical relationships such as hierarchical feudal societies (see also e.g. [Liebig and Sauer, 2016](#)).

Family relationships can have more than one goal, however, and several justice principles might thus be relevant for individuals’ perceptions of what is a fair allocation of resources within families. Prior research found support for the prevalence of equality, equity and entitlement principles in addition to the need principle in the allocation of resources and burdens within families (e.g. [Burgoyne and Lewis, 1994](#); [Auspurg et al., 2017b](#); [Tisch and Lersch, 2021](#)). Similarly, allocation decisions on parental gifts might be influenced by more than one justice principle and might result from a compromise between opposing demands of different justice principles ([Leventhal, 1976](#)).

In the following, we first elaborate on the prevalence of the four justice principles in the context of parental gifts by relating distributive justice theory to sociological and economic perspectives on parental financial gifts. We then discuss why the children’s gender may play a role in individuals’ perceptions of a fair allocation of gifts.

2.2 Distributive justice and parental gifts

The literature proposes several reasons why the equality principle might be important in parental gifts. Distributing wealth equally among children might prevent psychological burdens arising from jealousy and family conflict ([Wilhelm, 1996](#)). This is in line with the notion that the equality principle is applied to foster harmony and enjoyable social relations ([Deutsch, 1975](#)). The parents’ decision to transfer wealth might be motivated by a ‘warm glow of giving’; that is, parents feel the benefits of maintaining the family peace by dividing gifts equally ([Glazer and Konrad, 1996](#); [Leopold and Schneider, 2011a](#)). Moreover, applying the equality principle might also increase social approval, as parents are adhering to the norm of not favoring one child ([Kohli and Künemund, 2003](#)).

There is some evidence that parents apply the equality principle when allocating intergenerational transfers. Recent findings suggest that parents tend to distribute gifts equally, albeit to a much lesser extent compared with bequests ([Light and McGarry, 2004](#); [Halvorsen and Thoresen, 2011](#)). However, there is little evidence on whether the equality principle is endorsed by society with regard to parental financial gifts—that is, if equal transfer behavior corresponds to general ideas about the family in society. If respondents strictly follow the equality principle, they should consider an allocation fair if the same amounts are gifted to all children. Thus, respondents should allocate gifts equally between the daughter and the son in all the vignettes of our experiment.

H1 [equality hypothesis]: Gifts are allocated equally between daughters and sons irrespective of the children’s characteristics.

It is well-established within the literature on distributive justice that ascribed or achieved status characteristics, such as gender, age or occupational status, determine individuals’

perceptions of deservingness and justice in social interactions (Berger *et al.*, 1972b). Although the entitlement principle has been proposed to dominate in hierarchical relationships such as organizations (Liebig and Sauer, 2016), status characteristics such as age or gender might also play an important role in the context of gifts within the family. In particular, traditional family norms and gender socialization may influence individuals' perceptions of fair allocations of parental gifts, resulting in application of the entitlement principle (Menchik, 1980).

Prior evidence regarding the role of the entitlement principle is mixed. In the USA, daughters seem to receive financial gifts at higher rates than sons, but there seem to be no gender differences in the total amounts gifted (McGarry, 2016; Loxton, 2019). In contrast, some studies showed that sons are advantaged in terms of frequency of financial gifts and total amounts gifted in Germany and Korea (Deindl and Isengard, 2011; Leopold and Schneider, 2011b; Wong, 2013). In line with traditional family norms that value sons more than daughters, we expect that fairness perceptions favor sons' advantage in parental gifts.

H2 [gender entitlement hypothesis]: Sons receive a larger amount of money than daughters.

Regarding the birth order as another potentially relevant status characteristic within the family, Mechoulan and Wolff (2015) found that French parents are more likely to make financial gifts to their firstborn child. In a multi-country analysis, Emery (2013) similarly found evidence for the role of birth order in children receiving financial gifts from their parents. Regarding the role of the children's birth order, the historical primacy of primogeniture might lead to justifications of an advantage for firstborns in parental gifts. Against this background, we expect:

H3a [firstborn entitlement hypothesis]: The firstborn child receives a larger amount of money.

The equity principle might also be relevant in the context of the family (Gager, 2008). For example, financial gifts might be given to children in exchange for affection, care, time spent together and household help (e.g. Light and McGarry, 2004; Kusa, 2019). Such behavior is in line with what has been termed strategic exchange in economics (e.g. Bernheim *et al.*, 1985) and with norms of reciprocity in sociology (e.g. Kohli and Künemund, 2003). A study with US data found that providing informal care to parents is positively linked to children's likelihood of receiving gifts (Norton *et al.*, 2013). Nivakoski (2019) showed for Ireland that informal care provided by children is statistically related to receiving small transfers (between 250 and 5000 Euro), but not to transfers above 5000 Euro (i.e. gifts). Regarding attitudes toward the equity principle, a vignette study with representative data for Germany showed that 79% of the respondents allocated more parental money to the hypothetical child who helps the parents with the long-term care of the child's grandmother than to the non-helping child (Kusa, 2019). We expect that the child who helps in the parent's household receives a higher share of financial gifts.

H4a [equity hypothesis]: The child who helps in the parent's household receives a larger amount of money.

It has been proposed that the need principle is dominant within the family (Deutsch, 1975; Liebig and Sauer, 2016). In the context of the family, the need principle corresponds to economic and sociological theories suggesting that parental giving is motivated by altruism and norms of parental responsibility (Barro, 1974; Leopold and Schneider, 2011a). Accordingly, parents gift money to increase their children's well-being without expecting anything in return (Light and McGarry, 2004).

Supporting the relevance of the need principle, some studies found a negative association between children's income and parental gifts (e.g. Dunn and Phillips, 1997; McGarry, 2016). Furthermore, studies have shown that parents are more likely to give a financial gift to unemployed children (Deindl and Isengard, 2011; Albertini and Kohli, 2013; McGarry, 2016). For Germany, it has been argued that unemployment might signal need particularly if the child is young, because receiving public unemployment benefits depends on having participated in the labor market (Künemund *et al.*, 2005). We expect the child that is in greater need, here operationalized as being unemployed, to receive more money.

H5a [need hypothesis]: The unemployed child receives a larger amount of money.

Based on the existing evidence, making clear predictions about the relative importance of the four justice principles in parental gifts is difficult. We therefore did not formulate explicit expectations but instead test the relative importance of justice principles exploratively.

2.3 Gendered justice principles

In the research tradition of expectation states theory and the status value theory of distributive justice (Berger *et al.*, 1972b; Correll and Ridgeway, 2003), gender is considered a primary category that shapes social relations and individual expectations of just rewards (Ridgeway, 2009). The theory assumes a cognitive gender bias that is engrained in cultural beliefs about typical 'male' and 'female' personality traits, competences and behavior (Ridgeway and Correll, 2006). As we discussed above, gender may also be an important status characteristic regarding individuals' fairness perceptions of allocations of parental gifts. Choosing between justice principles might depend on the nature of the situation, including the gender of the individuals between whom rewards are allocated (Kahn and Gaeddert, 1985). Theories of double standards further assume that the cultural beliefs associated with gender may lead to different evaluations of others, such that the same characteristics or behaviors have different consequences for men and women (e.g. Foschi, 2000). This notion has been applied, for example, to study double standards in individuals' perceptions of just earnings for men and women (Jasso and Webster, 1997; Auspurg *et al.*, 2017a). Grounded in traditional gender-specific roles, our argument similarly suggests that the gender entitlement principle might interact with other justice principles.

First, there might be an interaction between the gender entitlement principle and the firstborn entitlement principle. Due to traditional beliefs in a male-preference primogeniture and archaic patrilineality, the firstborn entitlement principle might be stronger for firstborn sons than for firstborn daughters (Menchik, 1980; Wong, 2013).

H3b [gendered firstborn entitlement hypothesis]: The effect of being firstborn is stronger for sons than for daughters.

Second, we expect a gendered application of the equity principle. According to traditional gender ideology, women are responsible for the ‘domestic sphere’; that is, it is the traditional role of women to care for the household, children and parents (Davis and Greenstein, 2009). Individuals might therefore assume that the opportunity costs of helping in the parents’ household are lower for daughters than for sons and believe that household help from daughters does not necessarily need to be compensated financially (see Lennartsson *et al.*, 2010). In contrast, individuals might believe that sons should be rewarded for putting in the ‘extra’ work of helping in the parents’ household in addition to tasks that are culturally expected from men. This notion is in line with empirical research showing a significant association between child-provided elderly care and parental financial transfers for sons but not for daughters (Mazzotta and Parisi, 2020).

H4b [gendered equity hypothesis]: The effect of providing help is stronger for sons than for daughters.

Finally, we expect the application of the need principle to be gendered. In traditional gender beliefs, daughters are expected to be cared for by their family or husband, whereas men are assigned the more active role of provider. For example, individuals may expect greater financial competence and autonomy of men than of women (Tisch and Lersch, 2021). As a corollary, individuals may think that parents should be more altruistic toward their daughters with regard to financial gifts. As far as we can judge, the gendered effect of unemployment as an indicator for children’s need on receiving gifts or on individuals’ perceptions of fair allocations of parental wealth has not yet been examined. Nevertheless, in line with the theoretical argument discussed above, we expect that respondents perceive unemployment as a stronger indicator for a daughter’s need than for a son’s.

H5b [gendered need hypothesis]: The effect of unemployment is stronger for daughters than for sons.

3. Method

To test our hypotheses, we conducted a multifactorial vignette experiment, which was integrated into an online survey. Respondents were asked to imagine a married couple who want to transfer 10 000 Euro to a daughter and a son. Three vignettes, which differed in the combination of the children’s characteristics, were presented to each respondent. After reading each vignette, the respondents were asked to decide how much money they would give to each child to reach a fair allocation of the 10 000 Euro. By experimentally manipulating the children’s characteristics, we are able to identify and compare the individual effects of those characteristics on a fair allocation of gifts.

3.1 Multifactorial experimental design

In the vignettes, we fixed some of the children’s characteristics and manipulated others. The experimental conditions are listed in Table 1 and highlighted in bold in the vignette text below. To tie in with existing research, we focus on common operationalizations of need,

equity and entitlement in the sociological and economic literature on intergenerational financial transfers within the family. We chose unemployment to operationalize need, help in parents' household to operationalize equity and being firstborn to operationalize entitlement. We hold constant the children's health status, relationship with their parents, approximate age, education and living situation. All these characteristics have been found to be related to receiving gifts and might therefore lead to bias if respondents systematically think that sons or daughters differ in these characteristics. One example vignette reads as follows (translated into English from the German original):

Imagine a couple who have a daughter and a son. Both children are healthy and have a great relationship with their parents. Both children are in their late twenties, have a university degree and live in their own households.

The couple have just received the pay-out of a life insurance and want to allocate 10,000 Euro between their children.

The son and the daughter are twins. The daughter has a monthly income of 2,000 Euro and the son has been unemployed for two months. The daughter helps in the parents' household a few times a week (e.g. cleaning, shopping, small repairs).

In your opinion, what would be a fair allocation of the 10,000 Euro between the daughter and the son?

Daughter: _____ Euro

Son: _____ Euro

We employed a $3 \times 3 \times 3$ design (see Table 1), resulting in 27 different vignettes. These 27 vignettes were blocked to 9 decks, each containing three vignettes. To reach a highly efficient design, we used the %MktEx Macro in SAS 9.4 for blocking the vignettes to decks, which is a d-efficient blocking algorithm. This algorithm maximizes orthogonality (minimizes correlation between dimensions) and level balance (equal frequency of each level) (Auspurg and Hinz, 2015). Each respondent was randomly assigned one of the nine decks. Online Appendix 1 shows that there are no significant correlations between the vignette dimensions and the respondent characteristics, indicating that the randomization worked. It further indicates that the vignette dimensions correlate only marginally ($r < 0.05$), which

Table 1 Dimensions and levels

Dimension	Levels
Firstborn	(1) Son is firstborn (2) Twins (3) Daughter is firstborn
Help	(1) Son helps in parents' household (2) Both help in parents' household (3) Daughter helps in parents' household
Need	(1) Son is unemployed (2) Both are employed (equal earnings) (3) Daughter is unemployed

ensures an efficient estimation. By randomizing the order of vignettes per respondent, allowing respondents to re-evaluate prior vignettes and presenting only three vignettes to each respondent, we reduce order, learning, ceiling and fatigue effects (Auspurg and Hinz, 2015).

3.2 Data

Participants for our online survey experiment were recruited through *SoSci Panel*, a non-commercial online access panel in Germany (Leiner, 2016). Individuals register voluntarily with *SoSci Panel* and are regularly invited by email to participate in scientific surveys (opt-in panel). Researchers can apply for data collection but must pass a peer-review process. The convenience sample of *SoSci Panel* is not representative for the German population. Because our design eliminates confounding of unobserved heterogeneity through randomization, respondents do not have to be sampled randomly to identify justice principles within our experimental setting (Auspurg and Hinz, 2015). Although one should be cautious in generalizing our results to the German population, our experimental data make it possible to achieve high internal validity. For another recent experimental study using samples from *SoSci Panel* see, for example, Czymara and Schmidt-Catran (2017). Moreover, other studies comparing results of survey experiments with (student and non-student) convenience samples and population-based samples show that both samples provide comparable estimates of the causal effects (Mullinix *et al.*, 2015).

Our online survey experiment was fielded between May 19 and May 29, 2020. We restricted our sample to individuals residing in Germany. The email inviting panelists to participate informed them about the topic of our study and the approximate length of the questionnaire, as well as about data protection according to the General Data Protection Regulation (GDPR) in Germany. Participants were not monetarily incentivized but they were informed about the main findings on *SoSci Panel* website (<https://www.soscipanel.de/>). A qualitative pilot study ($N=5$) was conducted in March 2020 using the thinking aloud method (Collins, 2003), in which participants expressed their thoughts aloud while completing the survey.

In total, 748 individuals started the online survey. Of those, 27 respondents did not rate any vignette (unit non-response), 4 respondents rated only one vignette and 3 respondents rated only two vignettes (item non-response). We excluded those observations. The exclusion is not significantly related to the decks of the experiment as can be seen in [Online Appendices 2 and 3](#). Our analytic sample included 714 respondents, who completed the experiment and rated all three vignettes. [Table 2](#) depicts descriptive statistics of the respondent sample. About 62% of the sample is female, respondents are on average 45 years old, 50% of the respondents have children, 13% have a migration background and about 86% are educated to high-school level (have the German *Abitur*). Because the vignettes were randomly assigned to respondents, respondent characteristics should not influence our main results and we did not adjust for respondent characteristics in the models (see [Online Appendix 1](#)).

3.3 Measurements

For each respondent, we have two observations per vignette, one for the amount of money allocated to the hypothetical daughter and one for the amount allocated to the son. Thus, the dataset comprises six observations for each respondent (three vignettes with two

numerical inputs each). Importantly, for each vignette, the amount of money allocated to the daughter and the amount allocated to the son always add up to 10 000 Euro. Because the dataset includes 714 respondents, we have a total of 4284 vignette observations (714 respondents * 3 vignettes * 2 numerical inputs). Our dependent variable represents the amount of parental money received by the focal child. This variable takes the value of the son’s amount of money in half of the sample and the value of the daughter’s amount in the other half. **Figure 1** depicts the histogram of the children’s amount received in financial gifts. As explanatory variables we use our experimental conditions, namely, children’s unemployment, firstborn and children helping in their parents’ household, each with three levels (see **Table 1**).

Table 2 Descriptive statistics of respondent characteristics

	Mean	SD	Min	Max	N
Female	0.62		0	1	702
Age	44.93	15.29	19	82	705
Having children	0.50		0	1	707
Migration background	0.13		0	1	704
Gifts (donor) [†]	0.66		0	1	353
Gifts (donee)	0.87		0	1	711
Upper secondary education (‘Abitur’)	0.86		0	1	690

[†]Only respondents with children are asked.

Notes: Only standard deviations for continuous variables are shown. All other variables are dummy variables.

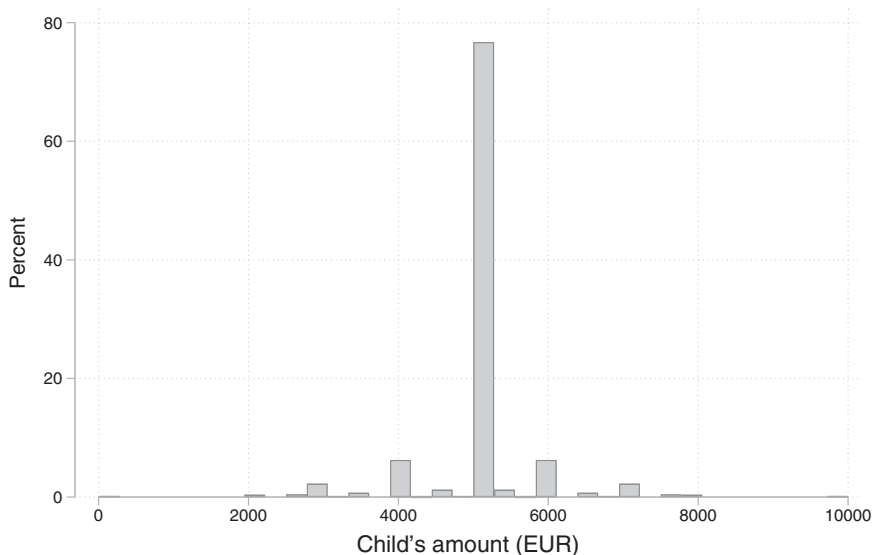


Figure 1 Histogram of child’s amount of money received. N = 4284 observations (714 respondents).

3.4 Analytical approach

Our hypotheses have been preregistered at OSF (<https://osf.io/uqtng/>). To test these hypotheses, we conducted our analyses in two steps. We first examined how many respondents strictly follow the equality principle and allocated the money independent of the son's and the daughter's characteristics. In a second step, we examined if respondents follow the equity, need and entitlement principles by estimating the following model:

$$\begin{aligned} \text{Child's Gifts}_{iv} = & \beta_0 + \beta_1 \text{Daughter}_{iv} + \beta_2 \text{Unemployed}_{iv} + \beta_3 \text{Unemployed}_{iv} * \text{Daughter}_{iv} \\ & + \beta_4 \text{Help}_{iv} + \beta_5 \text{Help}_{iv} * \text{Daughter}_{iv} + \beta_6 \text{Firstborn}_{iv} \\ & + \beta_7 \text{Firstborn}_{iv} * \text{Daughter}_{iv} + \varepsilon_{iv}, \end{aligned} \quad (1)$$

where Gifts_{iv} represents the amount of money (i.e. financial gifts) allocated to the focal child in vignette observation v of respondent i . Daughter_{iv} denotes a dummy for the focal child being a daughter or a son. Unemployed_{iv} , Help_{iv} and Firstborn_{iv} indicate our three experimental variables (see Table 1). Unemployed_{iv} comprises three levels [focal child unemployed, both employed (reference category) and sibling unemployed]. Help_{iv} comprises three levels [focal child helps, both help (ref.), sibling helps]. Finally, Firstborn_{iv} comprises three levels [focal child firstborn, twins (ref.) and sibling firstborn]. The β s represent the vectors of regression coefficients and ε_{iv} represents the idiosyncratic error.

We ran ordinary least squares (OLS) regressions with cluster-robust standard errors because each respondent evaluated three vignettes; thus, our data are clustered at the level of respondents. OLS regression with cluster-robust standard errors is an appropriate estimation strategy, since we are only interested in estimating the effects of vignette variables and not respondent characteristics (Auspurg and Hinz, 2015). To test the main justice principles, we derive the marginal effects of being unemployed, helping in the parents' household and being firstborn. The coefficients related to the interaction terms with the dummy variable indicating if the focal child is a daughter or a son allow us to test whether these justice principles are gendered. Because the son's amount and the daughter's amount add up to 10 000 Euro in each vignette rating, models using either the daughter's or the son's amount of money received as dependent variable would produce identical coefficients and very similar standard errors to those derived from our model.

4. Results

4.1 Hypotheses

Most respondents in the sample ($N = 465$, 65.13%) allocated the 10 000 Euro equally between the fictitious son and daughter in each of the three vignettes that were evaluated. Hence, for these respondents, the children's attributes did not affect their fair allocation of parental gifts. To statistically test the equality hypothesis, we assess the overall fit of our regression model. The F -test of overall significance is statistically significant [$F(6, 2135) = 68.80$, $P < 0.001$], suggesting that the fit of the model including the experimental conditions is better than the fit of the intercept-only model; that is, we find support for respondents not applying the strict equality principle at the mean. The experimental conditions explain 16.2% (R^2) of the variance in child's amount of money received.

In the following, we examine under which conditions an unequal allocation is perceived as fair and whether justice principles are gendered. Table 3 shows the regression table of the full model. If firstborns were advantaged, we would expect positive coefficients of being firstborn for both the son (main effect of the child being firstborn) and the daughter (main effect of the child being firstborn plus interaction term with being the daughter) on the child's amount of money because the reference category is the children being twins. Analogously, we would expect positive coefficients of being unemployed and helping in parents' household for both siblings if these variables had an effect on child's amount of money received. To ease interpretation of the interaction terms, Figure 2 depicts in a graph the marginal effects of our three experimental conditions for children as well as for sons and daughters separately.

We found no evidence for the entitlement principle, either for gender entitlement (H2) or for firstborn entitlement (H3). Table 3 shows that the difference in gifts between sons and daughters is 66 Euro but not statistically significant if the children are similar in all other characteristics (both employed, twins and both helping). We also found no support for belief that firstborns are entitled to a larger amount of money. The average marginal effect of a child being firstborn is 15 Euro but not statistically significant ($P = 0.449$). Figure 2 shows that a son received 37 Euro more if he is firstborn than if he is a twin (not statistically significant). The marginal effect of being firstborn for daughters is negative (against our expectations) but also not statistically significant. Hence, our results do not support the hypothesis

Table 3 Results of OLS regressions on child's fair amount of gifts

	<i>b</i>	se
Gender entitlement		
Daughter	65.853	(74.79)
Firstborn entitlement		
Focal child firstborn	37.237	(43.21)
Sibling firstborn	6.346	(43.49)
Focal child firstborn × daughter	-43.583	(76.50)
Sibling firstborn × daughter	-43.583	(76.50)
Equity		
Only focal child helps	320.686***	(38.96)
Only sibling helps	-207.280***	(37.93)
Only focal child helps × daughter	-113.406*	(58.64)
Only sibling helps × daughter	-113.406*	(58.64)
Need		
Only focal child unemployed	205.191***	(38.61)
Only sibling unemployed	-313.954***	(39.68)
Only focal child unemployed × daughter	108.763*	(61.24)
Only sibling unemployed × daughter	108.763*	(61.24)
Constant	4967.074***	(37.40)
<i>N</i> observations	4284	
<i>N</i> individuals	714	

Notes: The interaction terms per experimental condition are identical because respondents had to allocate 10 000 Euro between the son and the daughter; that is, the dependent variable is symmetrical around 5000 Euro. Reference categories: son, twins, both children help and both children employed.

* $P < 0.05$, ** $P < 0.01$, *** $P < 0.001$ (one-sided tests).

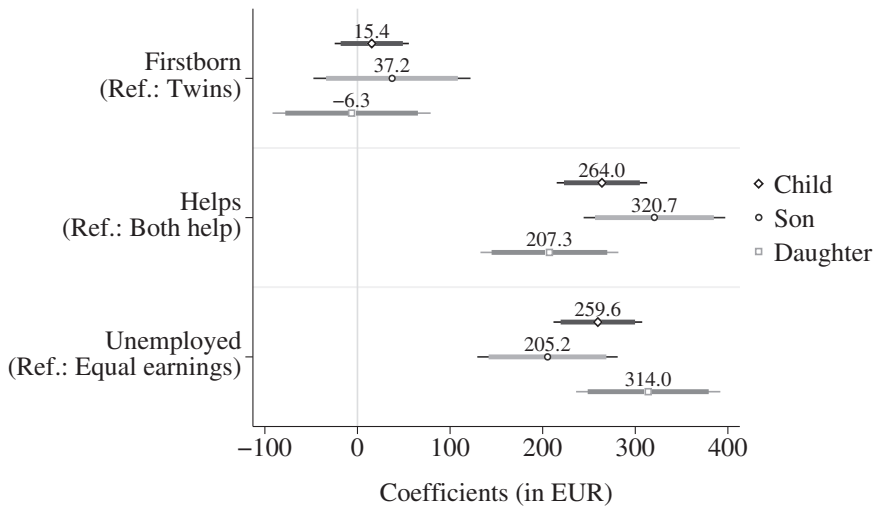


Figure 2 Marginal effects of experimental conditions on fair amount received in gifts. Marginal effects plot of OLS regression based on the model shown in Table 3. $N = 4284$ observations (714 respondents), 90% and 95% confidence intervals.

that the amount of money allocated to a child is larger if the child is firstborn compared with the child being a twin (H3a). In addition, the difference in the effect of being firstborn between sons and daughters was not statistically significant on conventional levels (H3b) (as indicated by the insignificant interaction term shown in Table 3).

In contrast, we found evidence for the equity principle (H4a). The average marginal effect of a child helping in the parents' household was 264 Euro. Where children are similar in all characteristics, the amount of money they receive is predicted to be 5000 Euro (see Figure 3). Thus, helping in parents' household results in an increase in parental gifts by 5.3% ($5264/5000$) on average.

This effect varied by gender (as shown in the graph in Figure 2). *Ceteris paribus*, respondents allocated on average 207 Euro more to the daughter if only she helped in her parents' household and 321 Euro more to the son if only he helped compared with both helping [joint F -test: $F(2, 713) = 57.67, P < 0.001$]. This results in an increase in gifts for daughters who help by 4.1% ($5240.2/5032.9$) and for sons who help by 6.5% ($5287.8/4967.1$) compared with the amount of money daughters and sons received where daughters and sons are equal in all characteristics (see Table 3; see Figure 3 for the corresponding predictions of gifts). The difference in the effect size of helping between daughters and sons was 113 Euro and statistically significant (see Table 3). In other words, helping was of greater advantage to sons than to daughters. Thus, the results support a gendered application of the equity principle (H4b), in that the son's help weighed more than the daughter's help in the fair allocation of rewards.

Finally, we found evidence for the need principle (H5a). The average marginal effect of a child being unemployed is 260 Euro. *Ceteris paribus*, where only one child was unemployed, the amount of money allocated to this unemployed child increased by 5.2% ($5260/5000$) on

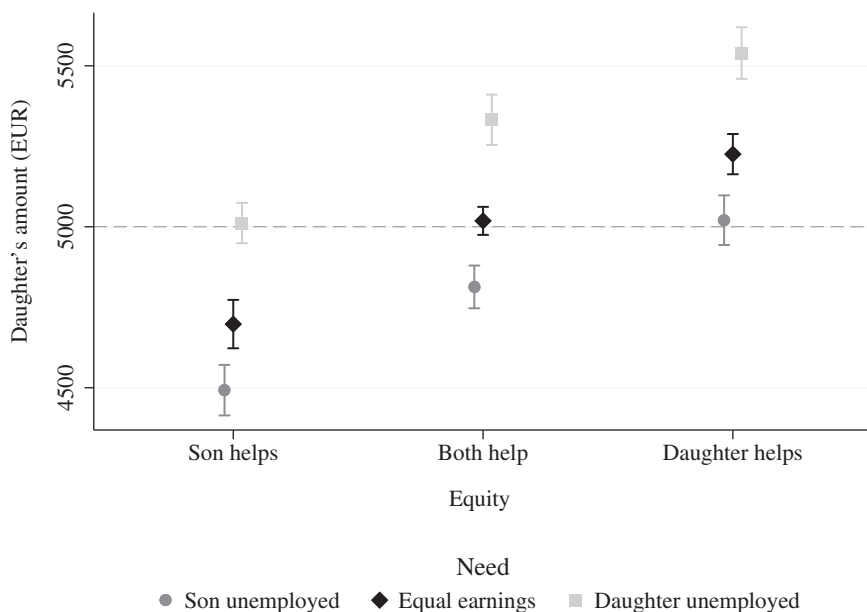


Figure 3 Predicted values for daughter's amount of money received. 95% confidence intervals, $N = 4284$ observations (714 respondents), adjusted for being firstborn.

average, compared with situations in which both children were employed. Again, this effect is gendered. As shown in Figure 2, respondents allocated on average 314 Euro more to the daughter if only she was unemployed and 205 Euro more to the son if only he was unemployed compared with both being employed [joint F -test: $F(2, 713) = 57.68, P < 0.001$]. Thus, if the son and the daughter are twins and both help their parents but only the daughter is unemployed, she received 5347 Euro on average compared with 5033 Euro if the daughter and the son were equal in all characteristics; that is, the daughter's gifts increased by 6.2% (see Figure 3). If only the son was unemployed, he received 5172 Euro on average compared with 4967 Euro if the daughter and the son were equal in all characteristics (i.e. the son's gifts increased by 4.1%). The gender difference in the effect of being unemployed was 109 Euro and statistically significant (see Table 3), indicating that the daughter's unemployment weighed more than the son's unemployment in the fair allocation of rewards. Therefore, we found support for a gendered application of the need principle (H5b).

4.2 Relative importance of justice principles

To assess the relative importance of justice principles in individuals' fairness perceptions, the graph in Figure 3 shows the main results from the perspective of the hypothetical daughter (y -axis). It depicts the predicted values for the daughter's amount of money by the two experimental conditions 'unemployment' and 'help.' The highest amount is allocated to the daughter when only she is unemployed and helps and the lowest amount if only her brother is unemployed and helps. Both children were predicted to receive roughly the same amount of money if they both help and have equal earnings, but also if one child helps and the other

child is unemployed. Thus, the daughter's unemployment weighed as much as the son's help and vice versa for a fair allocation of parental gifts. The differences between the effects of the daughter's unemployment and the son's help, as well as between the effects of the daughter's help and the son's unemployment, were not statistically significant [joint F -test: $F(2, 2135) = 0.02, P = 0.984$]. Hence, based on our operationalization of need and equity, our results indicate equal relevance of the need and equity principle in individuals' fairness perceptions of parental gifts, but also that the gender of the child plays a role.

5. Discussion

In the following, we discuss our findings in relation to previous research. Relating to the broader literature on the homology between the type of social relationship and justice principles (for a review, see [Liebig and Sauer, 2016](#)), our study highlights that the family cannot be clearly matched to only one justice principle. Whereas some earlier works (e.g. [Fiske, 1991](#)) have argued that the need principle should be dominant in family relationships, we found that equality was the dominant principle for parental gifts in our sample. We did not find evidence for the entitlement principle based on gender and primogeniture in our regression models. Nevertheless, our results showed that a considerable share of respondents applied the equity principle and the need principle. Helping in the parent's household and being unemployed both had a positive effect on the amount of parental money allocated to the respective child. Our findings regarding the need principle indicate that the family is perceived as an agency of economic redistribution in the sense that the economically weaker child should receive parental support. In line with [Kusa's \(2019\)](#) findings, the present study's evidence for the equity principle further highlights that individuals support the norm of reciprocity and exchange within the family.

Our findings further add to the long-standing debate (e.g. [Cox, 1987](#)) in the sociological and economic literature about the relative importance of the altruistic model (need principle) and the exchange model (equity principle) for gifts by explicitly examining the role of the children's gender in fairness perceptions of parental gifts. We found evidence that, overall, children's financial needs (operationalized by unemployment) and exchange services (operationalized by helping in parents' household) are similarly important for a fair allocation of gifts, but the relative importance might depend on the children's gender. While gender had no main effect on the amount of money received, helping in the household weighed more for sons and being unemployed weighed more for daughters. Thus, deviations from equality based on need and equity had an additional gender-specific dimension in our sample.

These results are in line with evidence from observational studies on the relationship between informal care and financial transfers from parents to sons in several European countries ([Mazzotta and Parisi, 2020](#)). Regarding the gendered need principle, our results are in line with some studies showing a positive association only for daughters between divorce and receiving gifts ([McGarry, 2016](#); [Loxton, 2019](#)). While our results suggest that individuals regard equality as the normative basis of parental gifts, gender inequalities in financial gifts from parents to their children are not necessarily perceived as unjust. However, in consideration of relatively small effect sizes of gender difference, our findings should be interpreted cautiously.

6. Conclusion

To better understand how (gender) inequalities in the distribution of parental wealth emerge and to contextualize these inequalities in terms of social norms, it is important to understand under which conditions inequalities in financial gifts are perceived as fair. We examined the prevalence of four justice principles (equality, equity, entitlement and need) in individuals' perceptions of a fair allocation of parental gifts and tested if these principles are applied equally to daughters and sons. We conducted a multifactorial vignette experiment using a convenience sample of respondents listed in the German *SoSci Panel*. Respondents were asked to fairly allocate 10 000 Euro of parental gifts between a fictitious daughter and son. The vignettes were experimentally manipulated in three children's characteristics: firstborn (entitlement principle), unemployed (need) and helping in the parents' household (equity).

By studying the allocation of parental gifts from the perspective of distributive justice, this study uniquely contributes to the literature on intergenerational transfers. We were able to examine individuals' beliefs about the normative logic of the family in the context of parental gifts by taking an observer perspective in our empirical design. This approach helped us to understand how inequalities among siblings in receiving gifts, as found in prior observational studies, can be reconciled with perceptions of justice. Our results offer new insights into the mechanisms underlying unequal intergenerational transfers and thus into the potential consequences of intergenerational transfers for the socio-economic structure of society. We showed that unequal gifts are legitimized both by children's needs and exchange services. However, our results suggest that the dominance of the equality principle in the allocation of parental gifts among children limits the extent to which the need or equity principles are applied. For example, if the children's need alone mattered, we would have expected the daughter or son in need to receive all 10 000 Euro. Thus, our results rather suggest that respondents seemed to reconcile equality with other justice principles (Leventhal, 1976; Drake and Lawrence, 2000).

Most importantly, by suggesting gendered applications of justice principles (i.e. helping in the household weighed more for sons and being unemployed weighed more for daughters), our results illustrate that important mechanisms explaining (gender) inequalities in intergenerational transfers might be masked when the children's gender is not considered in these principles. As discussed in prior research (Major, 1993), perceptions of distributive justice principles regarding family issues may contribute to the acceptance of socio-economic inequalities in the wider society and thereby to their reproduction. Thus, gendered justice principles in parental financial transfers have the potential to contribute to existing structural inequalities between men and women outside of the family. More research is needed on the heterogeneity of gendered justice principles across different social groups. Because prior research found that daughters and sons seem to differ in the kinds of wealth transfers (such as cash, property ownership and company ownerships) and timing of transfers, leading to unequal wealth accumulation (Bessière, 2022), future research could also examine how these gender differences are reflected in fairness perceptions in society. We recommend that future research studying intergenerational financial transfers differentiates between the gender of receivers, and possibly that of donors, in order to elucidate the role of gender in definitions of justice in this context.

We acknowledge some limitations of our study. First, our results cannot be generalized to the German population because our analyses are based on a non-representative

convenience sample. We cannot rule out that the effect sizes of our experimental conditions may vary across different social groups that were not represented in our sample. For example, the entitlement principle may be widespread among lower educated or older cohorts. However, we would not expect substantial differences in our finding that the equality, equity and need principles matter for individuals' fairness perceptions of parental gifts. Because our sample consists of well-educated individuals, who tend to have more gender egalitarian views (Davis and Greenstein, 2009), we would expect even stronger effects regarding the gendered application of the need and equity principles in the overall population of Germany. As is common in these types of experiments, the generalization of our findings is further limited to the children's characteristics considered in our experimental design. However, these aspects do not affect the internal validity of our results for the effects of the vignette variables on individual fairness perceptions in our context.

Second, the finding that 65% of respondents followed the equality principle might at least partially be driven by social desirability or satisficing behavior by respondents. For example, respondents might have allocated gifts equally in an attempt to minimize cognitive effort (Oppenheimer *et al.*, 2009), or because the experimental stimuli were too weak, that is, the differences between the children too small to justify unequal allocations. This limits our ability to make statements about the extent to which the equality principle guides individuals' fairness perceptions in parental gifts. However, as discussed above, our results suggest that equality matters even in the sample that did not strictly follow the equality principle.

Finally, we have used only one operationalization each for equity and need. The role of these principles and their relative importance in individuals' fairness perceptions of parental gifts may to some extent depend on how these principles are operationalized. Nevertheless, our study showed that not only equality but also equity and need are justice principles which individuals consider when evaluating the fairness of parental gifts.

Acknowledgements

We thank Philipp Lersch, Thomas Leopold, Nicole Kapelle, Theresa Nutz and Manuel Schechtl for helpful comments on earlier versions of this article and Anika Nelles for excellent research assistance. Special thanks to Hakan Yüçetas for his insightful comments on the conceptualization of this study and his support in conducting the qualitative pilot study. For helpful suggestions regarding the design and implementation of the factorial survey experiment within the SoSci Panel, we thank the anonymous reviewers and the SoSci Panel Team. All errors remain those of the authors.

Funding

This research is supported by the German Research Foundation (DFG), grant number LE 3612/2-1.

Supplementary material

[Supplementary material](#) is available at *SOCECO Journal* online.

References

- Adams, J. S. (1965) 'Inequity in Social Exchange', *Advances in Experimental Social Psychology*, 2, 267–299.
- Albertini, M. and Kohli, M. (2013) 'The Generational Contract in the Family: An Analysis of Transfer Regimes in Europe', *European Sociological Review*, 29, 828–840.
- Albertini, M., Kohli, M. and Vogel, C. (2007) 'Intergenerational Transfers of Time and Money in European Families: Common Patterns–Different Regimes?', *Journal of European Social Policy*, 17, 319–334.
- Auspurg, K. and Hinz, T. (2015) *Factorial Survey Experiments*, Los Angeles, SAGE.
- Auspurg, K., Hinz, T. and Sauer, C. (2017a) 'Why Should Women Get Less? Evidence on the Gender Pay Gap from Multifactorial Survey Experiments', *American Sociological Review*, 82, 179–210.
- Auspurg, K., Iacovou, M. and Nicoletti, C. (2017b) 'Housework Share between Partners: Experimental Evidence on Gender-Specific Preferences', *Social Science Research*, 66, 118–139.
- Baresel, K., Eulitz, H., Fachinger, U., Grabka, M. M., Halbmeier, C., Künemund, H., Alcántara, A. L. and Vogel, C. (2021) 'Hälfte Aller Erbschaften Und Schenkungen Geht an Die Reichsten Zehn Prozent Aller Begünstigten', *DIW Wochenbericht*, 5, 64–71.
- Barro, R. J. (1974) 'Are Government Bonds Net Wealth?', *Journal of Political Economy*, 82, 1095–1117.
- Berger, J., Cohen, B. P. and Zelditch, M. (1972a) 'Status Characteristics and Social Interaction', *American Sociological Review*, 37, 241–255.
- Berger J., Zelditch M., Anderson B. and Cohen B. (1972). 'Structural aspects of distributive justice: a status value formulation', In Berger J. and Zelditch M. and Anderson B. and Cohen B. (eds.) *Sociological Theories in Progress*, Vol. 2, Boston, MA: Houghton Mifflin Company, pp. 119–146.
- Bernheim, B. D., Shleifer, A. and Summers, L. H. (1985) 'The Strategic Bequest Motive', *Journal of Political Economy*, 93, 1045–1076.
- Bessi re, C. (2022) 'Reversed Accounting: Legal Professionals, Families and the Gender Wealth Gap in France', *Socio-Economic Review*, 20, 233–256.
- Burgoyne, C. B. and Lewis, A. (1994) 'Distributive Justice in Marriage: Equality or Equity?', *Journal of Community & Applied Social Psychology*, 4, 101–114.
- Collins, D. (2003) 'Pretesting Survey Instruments: An Overview of Cognitive Methods', *Quality of Life Research*, 12, 229–238.
- Cook, K. S. and Hegtvedt, K. A. (1983) 'Distributive Justice, Equity, and Equality', *Annual Review of Sociology*, 9, 217–241.
- Correll, S. J. and Ridgeway, C. L. (2003) 'Expectation States Theory', In Delamater, J. (ed.) *Handbook of Social Psychology*, New York, Dordrecht, Springer, pp. 29–51.
- Cox, D. (1987) 'Motives for Private Income Transfers', *Journal of Political Economy*, 95, 508–546.
- Crosby, F. J. (1982) *Relative Deprivation and Working Women*, New York, Oxford University Press.
- Czymara, C. S. and Schmidt-Catran, A. W. (2017) 'Refugees Unwelcome? Changes in the Public Acceptance of Immigrants and Refugees in Germany in the Course of Europe's "Immigration Crisis"', *European Sociological Review*, 33, 735–751.
- Davis, S. N. (2010) 'Is Justice Contextual? Married Women's Perceptions of Fairness of the Division of Household Labor in 12 Nations', *Journal of Comparative Family Studies*, 41, 19–41.
- Davis, S. N. and Greenstein, T. N. (2009) 'Gender Ideology: Components, Predictors, and Consequences', *Annual Review of Sociology*, 35, 87–105.

- Deindl, C. and Isengard, B. (2011) 'Familiale Unterstützung Und Soziale Ungleichheit in Europa'. In Berger, P. A., Hank, K. and Tölke, A. (eds) *Reproduktion Von Ungleichheit Durch Arbeit Und Familie*, Wiesbaden, VS Verlag für Sozialwissenschaften, pp. 23–47.
- Deutsch, M. (1975) 'Equity, Equality, and Need: What Determines Which Value Will Be Used as the Basis of Distributive Justice?', *Journal of Social Issues*, 31, 137–149.
- Drake, D. G. and Lawrence, J. A. (2000) 'Equality and Distributions of Inheritance in Families', *Social Justice Research*, 13, 271–290.
- Dunn, T. A. and Phillips, J. W. (1997) 'The Timing and Division of Parental Transfers to Children', *Economics Letters*, 54, 135–137.
- Emery, T. (2013) 'Intergenerational Transfers and European Families: Does the Number of Siblings Matter?', *Demographic Research*, 29, 247–274.
- Fiske, A. P. (1991) *Structures of Social Life: The Four Elementary Forms of Human Relations*, New York, NY, Free Press.
- Foschi, M. (2000) 'Double Standards for Competence', *Annual Review of Sociology*, 26, 21–42.
- Gager, C. T. (2008) 'What's Fair Is Fair? Role of Justice in Family Labor Allocation Decisions', *Marriage & Family Review*, 44, 511–545.
- Gager, C. T. and Hohmann-Marriott, B. (2006) 'Distributive Justice in the Household: A Comparison of Alternative Theoretical Models', *Marriage and Family Review*, 40, 5–42.
- Glazer, A. and Konrad, K. (1996) 'A Signaling Explanation for Charity', *The American Economic Review*, 86, 1019–1028.
- Greenstein, T. N. (2009) 'National Context, Family Satisfaction, and Fairness in the Division of Household Labor', *Journal of Marriage and Family*, 71, 1039–1051.
- Halvorsen, E. and Thoresen, T. O. (2011) 'Parents' Desire to Make Equal Inter Vivos Transfers', *CESifo Economic Studies*, 57, 121–155.
- Hansen, M. N. and Wiborg, Ø. N. (2019) 'The Accumulation and Transfers of Wealth: Variations by Social Class', *European Sociological Review*, 35, 874–893.
- Hochguertel, S. and Ohlsson, H. (2009) 'Compensatory Inter Vivos Gifts', *Journal of Applied Econometrics*, 24, 993–1023.
- Homans, G. C. (1961) *Social Behavior: Its Elementary Forms*, New York, Harcourt, Brace & World.
- Jasso, G. and Webster, M. J. (1997) 'Double Standards in Just Earnings for Male and Female Workers', *Social Psychology Quarterly*, 60, 66–78.
- Kahn, A., Krulowitz, J.E., O'Leary, V.E., Lamm, H. (1980) 'Equity and Equality: Male and Female Means to a Just End', *Basic and Applied Social Psychology*, 1, 173–197.
- Kahn, A. S. and Gaeddert, W. P. (1985) 'From Theories of Equity to Theories of Justice: The Liberating Consequences of Studying Women'. In O'Leary, V. E., Unger, R. K. and Wallston, B. S. (eds) *Women, Gender, and Social Psychology*, Hillside, NJ, Lawrence Erl, pp. 129–148.
- Kohli, M. and Künemund, H. (2003) 'Intergenerational Transfers in the Family: What Motivates Giving?'. In Bengtson, V. L. and Lowenstein, A. (eds) *Global Aging and Challenges to Families*, New York, Aldine de Gruyter, pp. 123–142.
- Künemund, H., Lüdicke, J. and Vogel, C. (2006) 'Gießkanne Oder Matthäus? Muster Des Erbens Und Ihre Konsequenzen Für Die Soziale Ungleichheit', In Rehberg, K.-S. (ed.) *Soziale Ungleichheit, Kulturelle Unterschiede*, Frankfurt am Main, Campus Verl, pp. 3819–3830.
- Künemund, H., Motel-Klingebiel, A. and Kohli, M. (2005) 'Do Intergenerational Transfers from Elderly Parents Increase Social Inequality among Their Middle-Aged Children? Evidence from the German Aging Survey', *The Journals of Gerontology: Series B*, 60, 30–36.
- Kusa, N. (2019) 'Financial Compensation for Intra-Familial Long-Term Care and Childcare in Germany', *Journal of Family and Economic Issues*, 40, 352–366.

- Leiner, D. J. (2016) 'Our Research's Breadth Lives on Convenience Samples. A Case Study of the Online Respondent Pool "SoSci Panel"', *SCM Studies in Communication and Media*, 5, 367–396.
- Lennartsson, C., Silverstein, M. and Fritzell, J. (2010) 'Time-for-Money Exchanges between Older and Younger Generations in Swedish Families', *Journal of Family Issues*, 31, 189–210.
- Leopold, T. and Schneider, T. (2011a) 'Family Events and the Timing of Intergenerational Transfers', *Social Forces*, 90, 595–616.
- Leopold, T. and Schneider, T. (2011b) 'Intergenerationale Vermögenstransfers Und Soziale Ungleichheit'. In Berger, P. A., Hank, K. and Tölke, A. (eds) *Reproduktion Von Ungleichheit Durch Arbeit Und Familie*, Wiesbaden, VS Verlag für Sozialwissenschaften, pp. 49–72.
- Lerner, M. J. and Mikula, G. (1994) 'Justice in Close Relationships: An Introduction'. In Lerner, M. J. and Mikula, G. (eds) *Entitlement and the Affectional Bond. Justice in Close Relationships*, New York, Springer, pp. 1–10.
- Leventhal, G. S. (1976) 'The Distribution of Rewards and Resources in Groups and Organizations', *Advances in Experimental Social Psychology*, 9, 91–131.
- Liebig, S. and Sauer, C. (2016) 'Sociology of Justice'. In Sabbagh, C. and Schmitt, M. (eds) *Handbook of Social Justice Theory and Research*, New York, NY, Springer, pp. 37–59.
- Light, B. A. and McGarry, K. (2004) 'Why Parents Play Favorites: Explanations for Unequal Bequests', *American Economic Review*, 94, 1669–1681.
- Loxton, A. (2019) 'Gender Differences in Inter Vivos Transfers', *CAEPR Working Paper*, 2, 1–24.
- Major, B. (1987) 'Gender, Justice, and the Psychology of Entitlement', *Review of Personality and Social Psychology*, 7, 124–148.
- Major, B. (1993) 'Gender, Entitlement, and the Distribution of Family Labor', *Journal of Social Issues*, 49, 141–150.
- Mazzotta, F. and Parisi, L. (2020) 'Money and Time: What Would You Give Back to Me? Reciprocity between Children and Their Elderly Parents in Europe', *Economia Politica*, 37, 941–969.
- McGarry, K. (1999) 'Inter Vivos Transfers and Intended Bequests', *Journal of Public Economics*, 73, 321–351.
- McGarry, K. (2016) 'Dynamic Aspects of Family Transfers', *Journal of Public Economics*, 137, 1–13.
- Mechoulan, S. and Wolff, F.-C. C. (2015) 'Intra-Household Allocation of Family Resources and Birth Order', *Journal of Population Economics*, 28, 937–964.
- Menchik, P. L. (1980) 'Primogeniture, Equal Sharing, and the U.S. Distribution of Wealth', *The Quarterly Journal of Economics*, 94, 299–316.
- Mullinix, K. J., Leeper, T., Druckman, J. & Freese, J. (2015) 'The Generalizability of Survey Experiments', *Journal of Experimental Political Science*, 2, 109–138.
- Nivakoski, S. (2019) 'Does the Exchange Motive Influence Intergenerational Transfers? Evidence from Ireland', *Review of Economics of the Household*, 17, 1049–1079.
- Norton, E. C., Nicholas, L. H. and Huang, S. S. H. (2013) 'Informal Care and Inter-Vivos Transfers: Results from the National Longitudinal Survey of Mature Women', *NBER Working Papers*, 18948, 1–34.
- Oppenheimer, D. M., Meyvis, T. and Davidenko, N. (2009) 'Instructional Manipulation Checks: Detecting Satisficing to Increase Statistical Power', *Journal of Experimental Social Psychology*, 45, 867–872.
- Ridgeway, C. L. (2009) 'Framed before We Know It: How Gender Shapes Social Relations', *Gender & Society*, 23, 145–160.
- Ridgeway, C. L. and Correll, S. J. (2006) 'Consensus and the Creation of Status Beliefs', *Social Forces*, 85, 431–453.

- Sauer, C. and May, M. J. (2017) 'Determinants of Just Earnings: The Importance of Comparisons with Similar Others and Social Relations with Supervisors and Coworkers in Organizations', *Research in Social Stratification and Mobility*, **47**, 45–54.
- Schwartz, S. (1975) 'The Justice of Need and the Activation of Humanitarian Norms', *Journal of Social Issues*, **31**, 111–136.
- Spilerman, S. (2000) 'Wealth and Stratification Processes', *Annual Review of Sociology*, **26**, 497–524.
- Tisch, D. and Lersch, P. M. (2021) 'Distributive Justice in Marriage: Experimental Evidence on Beliefs about Fair Savings Arrangements', *Journal of Marriage and Family*, **83**, 516–533.
- Wallander, L. (2009) '25 Years of Factorial Surveys in Sociology: A Review', *Social Science Research*, **38**, 505–520.
- Wilhelm, M. O. (1996) 'Bequest Behavior and the Effect of Heirs' Earnings: Testing the Altruistic Model of Bequests', *American Economic Review*, **86**, 874–892.
- Wong, E. S. (2013) 'Gender Preference and Transfers from Parents to Children: An Inter-Regional Comparison', *International Review of Applied Economics*, **27**, 61–80.