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Samira Beringer, Martin Bujard, Sabine Diabaté



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Abstract

This study investigates how the transition to parenthood relates to changes in personal attitudes and perceived public opinion towards external childcare for children under three. We use German panel data which capture cultural perceptions such as individual attitudes and perceived public opinions regarding day care for under threes. We analyze how both variables change during the family formation phase using panel regressions with linear between-within (hybrid) models. The findings suggest that cultural perceptions are strongly influenced by life course events. After their first child is born, parents are less skeptical of day care for under threes; however, we found no systematic changes in perceived public opinion. The results show an increasing gap between personal attitudes of parents and their perception of public opinion regarding childcare acceptance. These diverging views point to a conflict between the wish to use external childcare and societal expectations, which has strong implications for gender equality.

Keywords: Gender attitudes, public opinion, transition to parenthood, childcare, panel analysis, Germany

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Introduction

In recent decades, many industrialized countries have expanded their external childcare for children under three years old (OECD, 2017). This childcare policy followed the political concept of a child-centered social investment strategy (Esping-Andersen, 2002), which is based on early external childhood education and allows parents (especially mothers) to reconcile family and work. However, societies with a conservative welfare state exhibit reservations and skepticism with regard to attitudes and societal norms about formal childcare (Banducci et al., 2016; Chung & Meuleman, 2017). Even with changing policies aimed at increasing maternal employment and gender equality, the use of external childcare represents a challenge to existing norms which held that toddlers suffer when their mothers work (Zhou, 2017; Zoch & Schober, 2018). Such policy changes and the related public discourse could bring about changes in attitudes and norms in the form of policy feedback (Kumlin & Stadelmann-Steffen, 2014). Furthermore, attitudes and societal norms regarding external childcare services are highly relevant for the long-term effects of family policy reforms, since how childcare institutions are viewed may influence the decision as to how one's own child is or should be cared for.

The birth of the first child is one of the most fundamental life-changing events (Kreyenfeld, 2015; Pollmann-Schult, 2016). By becoming a parent, individuals assume a new role (Dahrendorf, 1965) which affects their identity (Deutsch et al., 1988; Gaunt & Scott, 2015; Turner-Zwinkels & Spini, 2020). It may also change their attitudes and beliefs (Elder, 1995; Mayer, 2009) regarding gender roles (Buchler et al., 2017; Katz-Wise et al., 2010; Perales et al., 2018; Zhou, 2017), the division of labor (Baxter et al., 2015), gender equality (Kaufmann et al., 2017), gender ideologies (Zoch & Schober, 2018), and (family) policy issues (Banducci et al., 2016). The results of most of these studies show a shift towards traditional attitudes. One explanation for such a shift in gender norms towards more traditional attitudes may also be adaptation to new circumstances. After starting a family, the mother is often the primary caregiver of the newborn baby and the couple finds itself in a more traditional division of labor (Nitsche & Grunow, 2016; Schober, 2013). There is a mismatch between former egalitarian attitudes and the actual gender division of labor. Hence, many parents try to mitigate this cognitive dissonance by unconsciously adapting their attitude to their action. According to “identity salience theory” (Stryker & Burke, 2000), individuals attribute different priorities to these internalized roles which may result in a change of attitudes. In addition, parents may reflect societal norms as held by mass media and their peers differently after family formation, since questions regarding childcare come to prevail. According to Boudon (2003), by becoming a parent, the phenomenon of childcare becomes a situation “in which they are (...) personally implicated” (Boudon, 2003, p. 9).

However, there are no studies yet on how both variables, perceived public opinion and personal attitudes on external childcare, change after the birth of the first child. Our motivation is threefold: First, only a few studies focus on changes in attitudes toward external childcare during the transition to parenthood. In many surveys, variations on the theme of “A preschool child is likely to suffer if his or her mother works” were asked (Berth, 2019), which can be seen as a proxy for the attitude towards external childcare. Zoch and Schober (2018) found for Germany that expanding public childcare influences the opinion that the children of working mothers suffer. For Norway, attitude changes were found among parents after family policy reforms, showing an increase in a positive view of childcare services (Ellingsæter et al., 2017). However, the Norwegian findings are not based on panel data, so they cannot detect an intrapersonal change in the life course.

Second, there is no knowledge to date concerning changes of perceived public opinion in society. The concept of perceived public opinion can be linked to political science literature with regard to how

public opinion can be changed by media and other actors (Page et al., 1987; Shapiro, 2011). In addition to personal attitudes, the perceived image in society is also important from a sociological viewpoint as it can be seen as an abstraction of the “generalized others” (Mead 1934). Besides peers and the social context of the individual, mass media and the perception of family ideals in TV have an impact on individual opinion. There may be discrepancies between these two perspectives, as the personal opinion may differ from the perception of the prevailing opinion in society (Lück & Ruckdeschel, 2018; Tam, 2015; Wallace et al., 2005), resulting in inconsistent gender beliefs (McDonald, 2000).

Third, in respect of childcare institutions for under-threes, Germany represents a very interesting case. A paradigm shift in family policy has taken place since the early 2000s in the hitherto conservative welfare state. Childcare institutions for children under three years were expanded, which has led to rising ratios of external childcare usage. German reunification is also an important aspect, as the former German Democratic Republic already had a widespread external childcare infrastructure.

We contribute to the previous literature firstly by showing how *personal attitudes* about formal childcare change during the family formation phase. Secondly, we demonstrate how *perceived public opinion* about formal childcare changes during the family formation phase. We systematically compare both variables and investigate context factors such as education, religiosity, status of relationship, income, gender and the regional historical heritage. We use the two-wave panel study “Concepts of family in Germany” (Diabaté et al., 2019; Schneider et al., 2016) that used a unique approach on a representative sample of young Germans to investigate personal attitudes and perceived public opinions. We conduct hybrid panel regression models to capture intra- and interpersonal differences.

Family policies and cultural context in East and West Germany

Family policies and social norms have a reciprocal relationship (Pfau-Effinger, 2012). The predominant norms and desires in a society are reflected in family policies, while family policies influence norms and provide incentives to act (Zoch & Schober, 2018). For example, the expansion of education resulted in better-educated women entering the labor market. Those social changes create demand for state support, in particular the defamilialization of the welfare state (Esping-Andersen, 2009), to avoid having to choose between career and family.

Germany is an interesting case as it has undergone a paradigm shift in family policy in the last 15 years, which now includes generous parental leave and ambitious efforts to level up childcare subsidies. Starting in 2004, Germany passed several family policy laws which extended childcare services. Since 2013, parents have had a legal entitlement to a subsidized childcare place for all children older than one year. These laws expanded childcare services especially in West Germany where day-care for children under three was less common. As a result, the care rates rose from 9.8% in 2007 to 31% in 2020. In East Germany the figures were 40.7% in 2007 and 52.7% in 2020 (Federal Statistical Office, 2020) – for historical East West differences see below. Although the rate has risen, it is still around 4 percentage points below the European average (Eurostat, 2021). In 2007, income-related parental leave of up to 1,800 euros was introduced, lasting for a maximum of 12 months, plus a 2-month “Partnership Bonus” if both partners take at least 2 months parental leave (Federal Ministry for Family Affairs, Senior Citizens, Women and Youth, 2019). Both new family policies aim to encourage women to reenter the labor-market after one year, while previously a three-year period of parental leave was common.

Until German reunification in 1990, the “Federal Republic of Germany” (FRG) and “German Democratic Republic” (GDR) had two different (family) political systems which led to two standards on gender division of labor that still pertain. The German population has two different cultural contexts: In West Germany the male-breadwinner and female-caregiver-model was dominant, including tax incentives for married women to be homemakers (Bujard, 2011). In East Germany, external childcare institutions made it easier for mothers to participate in the labor market. In reunified Germany, the people of the former GDR were confronted with a more traditional policy which favored a gendered division of labor. Nevertheless, both the norms regarding maternal employment as well as the childcare infrastructure remained intact, enabling East German mothers to work despite the conservative family policy (Rosenfeld et al., 2004).

Theoretical background and previous findings

Personal attitudes, perceived public opinion and the link between them

Personal attitudes provide everyday orientation and function at the micro level. They are relevant for social action and can vary between people. Attitudes are influenced by values and societal contexts (Albarracín & Shavitt, 2018). They are initially cultural phenomena in the sense that they are intersubjectively shared within certain collectives. Norms and attitudes are characteristic of these collectives, which can be social milieus, nationally constituted societies or transnational cultural spaces (Chung & Rimal, 2016). Within these collectives, they are passed on as part of the process of socialization. Here they serve to coordinate social interactions and collective decisions. They reinforce social coherence and are also used for demarcation. If social norms are violated, the individual is threatened with sanctions. The individual’s attitudes may deviate to a certain degree from those of their fellow peers – especially if the person has been socialized in other collectives, e.g. the GDR. In contrast to norms that take longer to change, personal attitudes are subject to a developmental process and are dynamic as a result of constant re-interpretation and re-production in the context of interaction. Their importance can rise or fall, and their content can shift or become differentiated.

The concept of *perceived public opinion* links the micro level with the macro level. It is similar to the image of the “generalized other” (Mead, 1934) or social representations (Höijer, 2011) which form a substrate of the concrete actions, utterances and reactions of many other individuals. People can have the impression that the majority of those around them have a certain idea without this impression necessarily having to correspond to reality. Accordingly, the model gains its own reality “sui generis” (Durkheim, 1984, p. 109), which is more than the sum or statistical average of the ideas of its constituent individuals. Norms, as connected with the concept of social representations, are an important human need because they give orientation and guidance in everyday life (Bonetto & Monaco, 2018; Lück & Ruckdeschel, 2018). In the context of the research question, the general public thus represents the direct and indirect social environment in which individuals find themselves. The “generality” is both undifferentiated and undefined. This means that it cannot be clearly delineated or defined per se as a group. However, each individual has a more or less precise idea of its composition, since the person is in a certain social environment and can be influenced by ideas and actions.

Closely related to the concept of the general public is the concept of public opinion. It is defined as the expression of the views, value judgments or inclinations of the general or specific public (Watts & Dodds, 2007). For the formation of public opinion, norms are transported or reflected by structural

framework conditions (e.g. laws) or the mass media (Gerbner et al., 1980; Watts & Dodds, 2007), and they are important propagators of change, such as of gender stereotypes (Eagly et al., 2020). There are highly influential opinion leaders such as celebrities, politicians or religious leaders who disseminate specific ideologies. In the mass media they are promoted through advertising, TV series, films etc. and reproduced in socio-spatial interactions, for example in partnerships and families, at the workplace, in clubs or in public spaces.

Personal attitudes, norms and perceived behavioral control are linked with each other (Billari et al., 2009; Nowak et al., 1990): personal attitudes are relevant for everyday interaction and behavior which is perceived by actors as desirable (or to be avoided) as the attitudes come from an inner conviction (based on subjective convictions). Moreover, they are connected to the perceived public opinion of society in general or the local environment. There is an expectation that other members of the collective will correspond to these behavioral ideas, i.e. they are also copied because of social desirability (or rejected because of their lack of social acceptance; cf. social control).

The (in)stability of attitudes during the family foundation phase

The life course approach states that individuals go through different stages in their lives which shape behavior and attitudes (Mayer, 2009). Becoming a parent is an important and special life event (Grunow & Evertsson, 2016) which is also connected with changes in self-definition and identity (Deutsch et al., 1988). The change in identity may also induce a change in attitudes. When individuals have a new role, the attitude about that role may change in comparison to the time before they adopted it – i.e. the formerly childless may change their attitudes about parental responsibilities upon becoming a parent. Many researchers have analyzed how attitudes about gender roles change after the birth of the first child (Baxter et al., 2015; Buchler et al., 2017; Deutsch et al., 1988; Katz-Wise et al., 2010). Most of these studies describe how new parents become more traditional compared to the attitudes they had when they were still childless, which is partly due to their current gendered division of labor. When a child is born, the question arises as to who will take care of it. More and more couples want to share their tasks equally; however, many have a more gendered division of work once they become parents (Nitsche & Grunow, 2016; Schober, 2013).

Several theories explain the male-breadwinner-female-homemaker-model: Household economic concepts evaluate this division as more efficient, as specialization allows tasks to be completed faster, and the parent with the lower income should stay home and care for the child in order to maximize the cost-utility ratio (Becker, 1993). Attachment theories underline how, especially in the first years of life, a close mother-child bond is important for the development of the newborn child (Bowlby, 1969). Another reason why women do most family work may also be their preferences (Hakim, 2003), to perform their gender role (West & Zimmerman, 1987) or to strive for the ideal of “intensive mothering” (Hays, 1996). This can also lead to “maternal gatekeeping” in which the mother controls the level of involvement of the father (Allen & Hawkins, 1999). Gender norms and structural circumstances may also encourage couples to adopt the gendered division of labor. If former attitudes regarding sharing work equally do not conform with the couple’s actions, resulting in “cognitive dissonance”, individuals unconsciously adjust their views (Festinger, 1957). Schober and Scott (2012) reinforced this explanation in their study: gender role attitudes remain stable if the parents agree with the actual gendered share of work, but change if they live in a different arrangement. To achieve an equal share of work, reconciliation policies such as Germany’s paradigm shift can create several opportunities for reconciling family and employment.

Hypothesis

When people become parents, they also change their relationship to childcare services, since they are now able to use these institutions: What was formerly a theoretical question – how a hypothetical child should be cared for – is now a real option for their own child. This may trigger an intensive preoccupation with information, arguments and perceived consequences. Furthermore, changing social networks may introduce new views and testimonials about childcare institutions, since congruous social networks stabilize attitudes (Visser & Mirabile, 2004). Changing networks may not only influence the personal attitude but also the perceived public opinion about external day-care. There could also be an effect of habituation, with parents overcoming their reservations (if they had any) by their experience with all-day childcare. Additionally, they could also avoid cognitive dissonance: economic constraints could lead to employment becoming a necessity and therefore make it necessary to use external childcare, even though the parents may not be in favor of these institutions. These aspects lead to our first hypothesis:

Hypothesis 1: The transition to parenthood increases the likelihood of holding a positive personal attitude towards formal childcare for under-threes.

Childcare is mostly connoted as female work and therefore external childcare institutions are often the only way that mothers can manage a career and family.

Hypothesis 2: Women profit more than men from such institutions and may have more positive personal attitudes toward them.

Socialization in a (family) political system and a society where a particular care culture is predominant influences individuals' attitudes. The once separate parts of Germany still differ in the infrastructure of childcare institutions and also their usage. Those raised in East Germany will probably have had experience of being cared for in an external childcare institution. Therefore, our next hypothesis:

Hypothesis 3: Those who were socialized in East Germany have more positive attitudes about formal childcare for under-threes than those socialized in West Germany.

Norms change slowly and so first-time parents may still feel that external childcare for under-threes is not fully accepted by the majority. When it comes to deciding who cares for their own child, they may be confronted with this (internalized) distrust in formal childcare. Especially older generations in West Germany may tell them that caring themselves for their young child is the best way, because they have no other experience to draw on and are suspicious about other forms of childcare.

Hypothesis 4: The new parent's experiences may lead to a more strongly negative perception of public opinion. The traditional gender role norm sees caring for one's own child as the responsibility of the mother. Therefore, women may feel pressurized by society to comply with that norm.

Hypothesis 5: Women perceive public opinion towards formal childcare for under-threes to be more negative than men do.

In East Germany, the use of external childcare is and was more common, and people who were raised there may have had their own experience of care in such institutions.

Hypothesis 6: East Germans may perceive attitudes towards external childcare as less negative than those who were socialized in West Germany.

Method

Data and sample

For this study we use the two waves from the “Concepts of Family in Germany” Panel (Schneider et al., 2016). A unique approach is taken to surveying concepts of family in the FLB data. Firstly, respondents were asked to give their personal responses to several statements about partnership, family, gender roles and childcare. Secondly, they were also asked to assess the opinion of the general public in Germany on these same statements.

In 2012, a representative sample of 5,000 German residents between the ages of 20 and 39 years (born between 1973 and 1992) was interviewed, based on a standardized questionnaire, using CATI. In the first panel maintenance wave 2013 3,076 (61.5 %) of those interviewed the previous year participated. Then, in the second panel maintenance wave 2014, 2,148 interviews were completed. As is common, the panel attrition was higher at the beginning and declined over the course of the panel. In 2016, 1,858 persons gave complete, evaluable interviews in the second wave with the full questionnaire (Diabaté et al., 2019). In respect of the Germany family policy reforms, the timing of these interviews is fortuitous for our research questions, as one year after the first interview, children older than one year gained the legal right to a place in a childcare institution.

Our analytical sample is restricted to all respondents who participated in both survey waves. As the focus of our study is changes in the family foundation phase, we excluded people who were already parents, were pregnant or whose partner was pregnant in the first wave (N= 951). Excluded are all those with any missing values in the model variables (N=53). Finally, the analytical sample consists of 848 persons, with 714 individuals who were childless in both waves (“childless”) and who had an average age of 32.7 years, and 134 persons who were childless in the first wave and became parents or pregnant since then (“family founders”) and who had an average age of 34.1 years.

Dependent variables

For the analysis in this study, the following statement is used in two ways: “Children between 1 and 3 years suffer when they are cared for mostly in a childcare facility or day-care center for children under the age of three.” First, respondents should state if they personally agree with this statement, and second, they should state their perception of what the general public thinks about this statement. Both are our dependent variables. The response scale ranged from 0 (*strongly disagree*) to 3 (*strongly agree*). To clarify what is meant by the perceived public opinion in Germany the interviewer read the following introductory text: “[...] I’d like to know what you think the opinion of the general public in Germany is. What you think is the prevailing opinion in Germany; what you might hear about most often in everyday life from the media or contact with other people.” (Diabaté et al., 2019, p. 100). The statement that is used in this paper measures the overall level of skepticism towards external childcare institutions – as general distrust or as a criticism of the present quality of those institutions.

Independent variables

The main explanatory variable in this study is parenthood (including pregnancy) as a dummy variable. We include three time-constant independent variables in the model because we expect them to show

important effects between person groups. “Woman” is a dummy variable for gender, with male respondents as a reference category. To analyze the different socialization in the two former parts of Germany “East Germany (including West Berlin)” is also incorporated as a dummy variable. It is operationalized from the survey question “In which state (Bundesland) did you spend most of your childhood and youth?” Spending most of one’s childhood in West Germany is the reference category. Respondents who stated that they spent most of their childhood and youth in another country were excluded. The third time-constant variable is the respondent's year of birth minus 1973 (the oldest year of birth in this survey) to control for differences in birth cohorts. The survey year is included in all models to control for the period effect in the panel analyses.

We also included three time-varying socio-structural control variables that may change during the transition to parenthood or may also influence personal attitudes or perceived norms: “High education” as a dummy variable for a school-leaving qualification including those with a tertiary education (ISCED-level 5 or higher). A positive subjective “assessment of income” describes the economic situation of the respondent’s household as a dummy variable. Also, being married and living with your spouse or being in a long-term-relationship is included as the dummy variable “has a partner”.

Table 1: Descriptive Statistics of Dependent and Independent Variables

	Time	Childless N=714		Family founders N=134	
		Mean	SD	Mean	SD
Personal attitude towards external childcare	Wave 1	1.33	0.87	1.19	0.84
	Wave 2	1.17	0.87	0.86	0.89
Perceived public opinion towards external childcare	Wave 1	1.54	0.71	1.42	0.63
	Wave 2	1.65	0.70	1.49	0.71
Women	Constant	0.43		0.51	
Childhood in East Germany	Constant	0.23		0.35	
Year of birth	Constant	1984		1983	
High education	Wave 1	0.35		0.49	
	Wave 2	0.54		0.64	
Assessment of income	Wave 1	0.65		0.76	
	Wave 2	0.76		0.82	
Has a partner	Wave 1	0.46		0.84	
	Wave 2	0.56		0.96	

Source: Concepts of Family in Germany Survey (FLB 2012 and 2016), own calculations.

Analytical Models Method

The main research question of this paper is how attitudes change when an individual becomes a parent for the first time. Another interest is the time-constant variables of gender and socialization in a certain part of Germany which do not vary within individuals, but may cause differences when evaluating the views of external childcare between different people. This paper analyzes both the intra-individual as well as the inter-individual effects; accordingly between-within (BW) linear models are used. Like a fixed-effect model, the BW estimates changes within an individual which are not biased by time-constant unobserved heterogeneity, but has the feature that time-constant variables that only vary between persons can be included.

$$y_{it} = \beta_0 + \beta_w(x_{it} - \bar{x}_i) + \beta_b\bar{x}_i + \beta_t c_i + \alpha_i + \varepsilon_{it}$$

The between-within (hybrid) models are random-effect models in which time-varying variables are broken down into two parts: a within-component ($x_{it} - \bar{x}_i$) that is the demeaned variable with its coefficient β_w , and a between-component (\bar{x}_i) which is the person-specific mean of variables over the waves with its coefficient β_b . As already mentioned, the BW model also has the capacity to estimate time-constant predictors (β_t). β_b is an individual constant, α_i is the time-constant individual error and ε_{it} is the time-variant individual error (Allison, 2009; Firebaugh et al., 2013).

To test our Hypotheses 1 and 4, we analyze within-changes of personal attitudes and perceived public opinions towards external childcare when a person becomes a parent. For Hypotheses 2 and 5 we analyze the differences between men and women in their personal and perceived public opinion towards external childcare. For Hypotheses 3 and 6 we analyze the differences between persons who spent their childhood in West or East Germany. All analyses were conducted using the Stata SE 16 statistics program (Schunck, 2013).

Results

Changes in personal attitudes

The bivariate description of the personal attitude towards external childcare (Table 2) shows differences between two groups: Persons who were childless in both survey waves (“childless”) and persons who were childless in the first survey wave and became parents or pregnant since then (“family founders”). In the first wave in 2012, more “childless” individuals agreed with this statement on average than “family founders” did when they were still childless. Especially in the middle categories (“disagree”/ “agree”), the two groups differ by more than ten percentage points, with more childless people agreeing that a child suffers in external childcare. This would suggest a self-selection or anticipation effect: Persons who have fewer reservations towards external childcare are more likely to become parents, or individuals with a concrete plan to have their first child (in the near future) have greater trust in external childcare. The differences in the highest agreement or disagreement are marginal between these groups in 2012.

In 2016, “family founders” and “childless” people showed less agreement with the statement that toddlers suffer in external childcare institutions. This indicates a greater acceptance of this form of childcare, which may be caused by the changing family policy and the higher usage of childcare institutions in Germany. But even if both groups showed greater disagreement in the second wave, the new parents certainly exhibit a greater shift after the birth of their first child. We have to note that respondents who answered “strongly disagree” could not change to stronger disagreement. As the second half of Table 2 shows, this is a sign of intra-personal changes in the personal attitude score between the two waves. There are significant differences in the drift of the answers: Almost half of the “family founders” (48.5%) changed their answers to less strong agreement after they became parents. In contrast, almost one third of the “childless” people (31.9%) stated a lower reservation towards external childcare in the second wave. These descriptive results suggest that founding a family may influence the personal evaluation of external childcare institutions.

Table 2: Descriptive Statistics of personal attitude towards external childcare and Within-Person Changes across Waves (in percent)

	Childless		Family founders	
	2012	2016	2012	2016
Attitude score				
Strongly disagree	16.95	23.11	17.91	41.04
Disagree	43.14	43.98	54.48	38.81
Agree	30.11	25.65	17.91	13.43
Strongly agree	9.80	7.28	9.70	6.72
Within-Person changes across Waves				
Decrease	31.93		48.51	
No change	50.00		34.33	
Increase	18.07		17.16	
N	714		134	

Source: Concepts of Family in Germany Survey (FLB 2012 and 2016), own calculations.

Note: Agreement to the statement: "Do you personally agree that children between 1 and 3 years suffer when they are cared for mostly in a childcare facility or day-care center for children under the age of three."
Group differences. 2012: $\chi^2=21.82$ $p\leq 0.001$; 2016: $\chi^2=14.85$ $p\leq 0.001$

For deeper analysis, multivariate linear hybrid panel regression models have been calculated in Table 3, which combined interpersonal (between) and intrapersonal (within) components. As Model 1 shows, the transition to parenthood involves an interpersonal difference as well as an intrapersonal change. The between component shows that people who become parents agreed in wave average less than the childless to the statement: "children between 1 and 3 years suffer when they are cared for mostly in a childcare facility or day-care center for children under the age of three." The within component shows an intrapersonal effect: former childless persons change their personal attitudes about formal childcare to a less critical opinion when they become parents.

Model 2 included the time-constant variables of gender and spending the childhood in a part of the former separated Germany. The time-constant variables only have between-components, as within-components exhibit changes within a person, whereas the independent variable change and time-constant do not change within a person. Those variables have a highly significant difference between those person groups, but reduce the power and significance of the between-component of parenthood.

The time-varying control variables education, assessment of income and living with the partner in the same household are part of Model 3. This addition reduced the size of the effect of the transition to parenthood and its level of significance only in the between component, while the within-effect stays significant. Those results support Hypothesis 1: persons adopt a less skeptical personal attitude towards external childcare after they become parents.

There is a negative effect in the time-constant variable gender (Hypothesis 2): Compared to men, women had less negative attitudes towards external childcare. Those who spent their childhood and youth in East Germany are more accepting of childcare institutions on average than West Germans (Hypothesis 3). In East Germany, the ratios of childcare usage for under-threes is much higher than in West Germany, and therefore a common option for childcare. This suggests a historically developed trust in external childcare. The significant positive effect of the birth cohort disappears in Model 3.

The time-varying control variables display a significant effect in the between-component of education. Therefore, the average value that toddlers suffer in external childcare in both waves are lower for people with high-level education than those who have low or middle-level education. Controlling by the survey year shows that there is a general change among the young Germans to fewer reservations towards external childcare institutions. This may be a result of a cultural shift and the rising acceptance of external childcare among young adults.

Table 3: Linear hybrid panel regressions models for the personal attitudes towards external childcare

		Model 1	Model 2	Model 3
		b	b	b
		(RSE)	(RSE)	(RSE)
Parenthood (ref. no children)	Between	-0.45*** (0.14)	-0.25 (0.13)	-0.11 (0.14)
	Within	-0.18* (0.09)	-0.18* (0.09)	-0.18* (0.09)
Women (ref. men)	Between		-0.15** (0.05)	-0.14** (0.05)
Childhood in East Germany (ref. West Germany)	Between		-0.55*** (0.05)	-0.58*** (0.05)
Year of birth (- 1973)	Between		0.01* (0.005)	0.01 (0.005)
High education (ref. low/middle education)	Between			-0.27*** (0.06)
	Within			-0.06 (0.07)
Assessment of income (ref. we manage/not well)	Between			-0.06 (0.07)
	Within			-0.04 (0.06)
Has a partner (ref. has no partner)	Between			-0.09 (0.06)
	Within			0.03 (0.07)
Survey year 2016 (ref. 2012)	Within	-0.16*** (0.03)	-0.16*** (0.03)	-0.14*** (0.03)
Constant		1.33*** (0.03)	1.40*** (0.07)	1.64*** (0.09)
N (Persons years)		1696	1696	1696
R ² (overall)		0.02	0.11	0.13
R ² (within)		0.05	0.05	0.05
R ² (between)		0.01	0.13	0.16

Source: Concepts of Family in Germany Survey (FLB 2012 and 2016), own calculations.

Note: Higher attitude scores indicate greater distrust towards external childcare. Agreement to the statement: "Do you personally agree that children between 1 and 3 years suffer when they are cared for mostly in a childcare facility or day-care center for children under the age of three".

Level of significance: * $p \leq 0.05$; ** $p \leq 0.01$; *** $p \leq 0.001$

Changes of perceived public opinion

Table 4 displays a lower variance in the attitude scores of the perceived public opinion. The ratio of the outer answer category changes marginally for childless persons between the two waves, but for the middle categories there is a shift to a perception of stronger agreement that children suffer in an external childcare. Family founders exhibit a different trend: they mentioned both external response categories more often. So, apparently there are different experiences for new parents who perceive greater reservations about external childcare, yet sense that this form of childcare is becoming more accepted.

Table 4: Descriptive Statistics of perceived public opinion towards external childcare and Within-Person Changes across Waves (in percent)

	Childless		Family founders	
	2012	2016	2012	2016
Attitude score				
Strongly disagree	4.34	4.20	5.97	8.21
Disagree	46.36	35.29	47.01	39.55
Agree	40.62	51.54	45.52	47.76
Strongly agree	8.68	8.96	1.49	4.48
Within-Person changes across Waves				
Decrease	20.03		26.12	
No change	49.30		44.78	
Increase	30.67		29.10	
N	714		134	

Source: Concepts of Family in Germany Survey (FLB 2012 and 2016), own calculations.

Note: Agreement to the statement: "The general public thinks that children between 1 and 3 years suffer when they are cared for mostly in a childcare facility or day-care center for children under the age of three."

Group differences. 2012: $\chi^2=9.05$ $p \leq 0.05$; 2016: $\chi^2=7.38$ $p \leq 0.1$

The within-person change across the waves shows that the perceived levels of agreement do not differ that much between family founders and the childless compared to the results in Table 2. Almost half of both groups did not change their perceived attitudes. Family founders perceived rather more change towards assent than towards reservation, but at 3 percentage points, the difference is small.

With regard to the perceived public opinion, the hybrid models in Table 5 show that the transition to parenthood has no significant results in the within components. The new parents do not change their perception after their child is born, so there is no intrapersonal effect after the life-changing event of becoming parents. The perceived opinion may not change in a certain direction because the new parents are confronted with different opinions and expectations and thus the change is likely to be heterogeneous. Thus, there are differences between the groups: Family founders report on average less societal reservation towards external childcare than the childless. It should be noted that the between-component could be biased. Hypothesis 4 can be rejected. For the time-constant variables, only gender has a significant effect. Hypothesis 5 can be supported, as women have a positive perceived public opinion that children suffer in an external childcare institution. Women seem to feel greater social skepticism towards external childcare and thus pressure that mothers should look after their children. Being raised in East or West Germany has no significant effects and therefore Hypothesis 6 regarding regional differences can be rejected. Age is shown to be negatively significant, meaning

the younger respondents perceive less distrust in society. In contrast, the control of the survey year shows a shift to a more critical perceived public opinion. There are no significant effects for the time-varying control variables.

Table 5: Linear hybrid panel regressions models for the perceived public opinion towards external childcare

		Model 1	Model 2	Model 3
		b	b	b
		(RSE)	(RSE)	(RSE)
Parenthood (ref. no children)	Between	-0.28** (0.10)	-0.32** (0,10)	-0.34** (0.10)
	Within	-0.06 (0.08)	-0.06 (0.08)	-0.05 (0.08)
Women (ref. men)	Between		0.15*** (0.04)	0.15*** (0.04)
Childhood in East Germany (ref. West Germany)	Between		-0.06 (0.04)	-0.06 (0.04)
Year of birth (- 1973)	Between		-0.01** (0.004)	-0.01** (0.004)
High education (ref. low/middle education)	Between			0.03 (0.04)
	Within			0.12 (0.08)
Assessment of income (ref. we manage/not well)	Between			-0.02 (0.05)
	Within			0.01 (0.06)
Has a partner (ref. has no partner)	Between			0.02 (0.05)
	Within			-0.01 (0.07)
Survey year 2016 (ref. 2012)	Within	0.12*** (0.03)	0.12*** (0.03)	0.09** (0.04)
Constant		1.54*** (0.03)	1.59*** (0.05)	1.59*** (0.07)
N (Persons years)		1696	1696	1696
R ² (overall)		0.01	0.03	0.03
R ² (within)		0.02	0.02	0.02
R ² (between)		0.01	0.03	0.04

Source: Concepts of Family in Germany Survey (FLB 2012 and 2016), own calculations.

Note: Higher attitude scores indicate greater distrust towards external childcare. Agreement to the statement: "The general public thinks that children between 1 and 3 years suffer when they are cared for mostly in a childcare facility or day-care center for children under the age of three."

Level of significance: * $p \leq 0.05$; ** $p \leq 0.01$; *** $p \leq 0.001$

Conclusion and discussion

This study provides evidence that personal attitudes and perceived public opinion about formal childcare move in different directions during the family formation phase. Based on German panel data for 2012-2016 and hybrid panel regression models, we show that there are significant differences in the change of attitudes between childless people and new parents. Individuals who recently became parents have significantly fewer reservations about formal childcare than those who remained childless. The addition of the socioeconomic control variables reduced the influence of the between component, but the event of becoming a parent still has an impact on changing an individual's personal attitude. By contrast, there are no significant differences in the change in perceived public opinion. In a decade of pronounced family policy changes, as has been the case in Germany, the event of having a first child resulted in changed personal attitudes towards greater acceptance of external day-care and unchanging perceived public opinion. Taken together, there are evidently diverging views between the personal and perceived societal level for persons after starting a family.

The positive change in the attitudes regarding external childcare for persons after family formation may be explained by the use of such childcare institutions and the changing networks that have become more and more child-centered. The event of becoming a parent and the concomitant new experiences contributed to changing attitudes, as the life course approach suggests (Elder, 1995; Mayer, 2009). The results stand in contrast to previous studies that showed rather more traditional attitudes when an individual becomes a parent (Katz-Wise et al., 2010). That may be an effect of the changing family policy: The parental leave introduced for 2007 as well as the expansion of external childcare offer mothers an incentive to share their primary care responsibility after the child's first year of life. Mothers have to decide between a return to the labor market and family work under new circumstances as their right, and the availability of a place in an external childcare institution. The birth of the first child also changes individuals' relationship to childcare institutions, as the formerly theoretical option for a hypothetical child becomes a real decision and therefore the new parents may decide to inform themselves more concretely about these institutions and so reduce their reservations towards them. Consequently, the attitude change is in line with arguments of the policy feedback (Kumlin & Stadelmann-Steffen, 2014), focusing it on the persons (new parents) who are most affected by the policy change.

Increasing ratios of external childcare usage are another indication that external childcare for under-threes is becoming more common. This may influence the trust in those institutions and reflect a long-term change between and within cohorts since the 1980s in West Germany (Berth, 2019). Our findings, however, contribute to the literature by showing that a short-term change of attitudes is predominantly due to persons having their first child. This suggests that parents who have new (and mainly positive) experience with external childcare or with the necessity of it in order to maintain their career, could be responsible for distributing positive attitudes regarding external childcare of toddlers within their environment and therefore be driving forces behind societal attitude change. Our results show that perceived public opinion could be another driving force for rollback-behavior, as it would appear to be a hidden but meaningful force in determining traditional concepts of family life. We see that the subjective perception of public opinion remains stable, while the personal attitudes change with the transition to parenthood and that new parents are more positive about external childcare for under-threes. Cultural contradictions and (latent) conflicts may become more noticeable when parents hand their child over for care. We still observe different attitudes between East and West Germany, thereby highlighting the long-term character of cultural representations.

The non-significant effect of the birth event on the perceived public opinion stands in contrast to the effect on the personal attitudes. Both results show an increasing cultural gap (Smith, 2005) between young parents and other parts of society regarding childcare acceptance: There is a perception of diverging views in society regarding external childcare. This may contribute to conflicts arising from incongruence of gender equity beliefs (McDonald, 2000). These conflicts could be barriers for some parents to make use of childcare facilities, which could have negative effects on maternal employment and gender equity in society.

The study has some limitations. The data only covers a short period of four years and a panel with two waves. Therefore, we could only analyze a short period within the family policy change in Germany which has occurred since 2004. Accordingly, any interpretation regarding the policy context has to be tentative. However, there is no panel data on personal attitudes and perceived public opinion for a longer period. Second, we could not control for the real societal norms of younger and older age groups. This perception could also be a mistaken perception that societal norms would also change. At least the attitudes of the childless people of the panel, whereby younger cohorts show slightly increasing acceptance but still differences to new parents, suggest that the perception of diverging views is at least partly correct. However, the cultural gap may concern two groups: (1) between childless young people and young parents and (2) between young parents and the older generation. Here our findings need to be tested in further research. A panel survey with more waves that ask for personal attitudes, as well as perceived public opinion about external childcare, would be desirable.

Finally, this paper makes relevant contributions to the literature. It is the first, to our knowledge, which shows the attitude change towards an acceptance of external childcare for parents after the first birth, and which proves the contrast between personal attitudes and perceived societal norms after a central life course event. Therefore, it is relevant for research on attitudes and norms, especially on how gender norms are changed by life course events. The increasing discrepancy between both measures may result in a conflict and shows the pressure new parents feel to comply with certain norms. This may influence their choice of childcare and the success of childcare policies.

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