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# Paternal involvement and children's internalization of gender roles in early childhood

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## Abstract

**Objective:** This study investigates the effects of paternal involvement on the frequency of gender-incongruent activities in children's play at age 2.

**Background:** Recent research suggests that paternal involvement is associated with more gender egalitarian attitudes in children and a more egalitarian distribution of housework tasks between sons and daughters. Although previous studies have tested the effects of paternal involvement on teenage children, the process of internalization of gender norms and roles in early childhood has not yet been investigated.

**Method:** Analyses are based on the French Elfe cohort with information at age 2 for 11,564 children born in 2011. Multivariate linear and multinomial logistic regression models were run separately for sons and daughters.

**Results:** Paternal involvement in early childhood was associated with more frequent gender-incongruent activities in boys' but not in girls' play at age 2. The effect of paternal involvement further varied depending on the type of involvement: involvement in housework tasks and childcare was associated with more gender-incongruent activities for sons but paternal participation in children's play increased the frequency of activities gender-typed as masculine, independently of the child's sex.

**Conclusion:** Paternal involvement in housework and childcare in early childhood shapes gender-typed activities in toddlers' play for sons but not for daughters. It contributes to "undoing gender" in play activities for boys and, in doing so, narrows the gender gap in children's play.

## KEYWORDS

early childhood, family roles, fathers, housework/division of labor

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## INTRODUCTION

In recent decades, there have been major changes in gender roles in most post-industrial societies. In many countries, the gender gap in unpaid work has decreased (Geist & Cohen, 2011; Hook, 2006), while women's participation in the labor force has increased and men are more frequently expected to contribute to childcare and housework. The "separate spheres" model, according to which men are associated with the public sphere and women with the private sphere, is waning and new father figures are emerging (Coltrane, 1996). Gender arrangements and relations in the family are changing, which may have crucial implications for children.

One strand of research has investigated the consequences of paternal involvement on the intergenerational transmission of gender roles. The consequences for children are usually assessed by looking at sons' and daughters' housework allocation (Álvarez & Miles-Touya, 2012; Blair, 1992; Cordero-Coma & Esping-Andersen, 2018; Court et al., 2016; Dotti Sani, 2016; Evertsson, 2006) or children's gender attitudes (Cano & Hofmeister, 2023; Cunningham, 2001; Evertsson, 2006; Halpern & Perry-Jenkins, 2016; Kulik, 2002) during the teenage years. Most of these studies have concluded that paternal involvement is associated with more gender-egalitarian attitudes and more equal distribution of housework between sons and daughters. However, little is known about how paternal involvement shapes the transmission and internalization of gender roles during childhood. In particular, the different dimensions of paternal involvement are rarely distinguished, meaning that the precise socialization mechanisms underpinning this "undoing gender" effect are unknown.

Another strand of literature, mainly in psychology, has long underlined the importance of gender stereotyping in children's play. Gender differences in children's play behaviors and choices of toys are large (Davis & Hines, 2020), emerge as early as 12 months (Boe & Woods, 2018; Serbin et al., 2001), occur independently of the context (Todd et al., 2018), and may have consequences for children's physical, social, and cognitive development (Weisgram, 2022). Play is considered an important part of the socialization process in childhood, favoring the internalization of gender roles, norms, and attitudes through engagement in gendered behaviors (Li & Wong, 2016) and shaping interests for future occupations (Coyle & Liben, 2016). Parents play a key role in producing children's gendered play preferences and practices, whether by purchasing or selecting gender-typed toys for their children, by promoting gender-appropriate play activities, or by being more involved in their children's activities when these conform to their gender (Kollmayer et al., 2018; Leaper, 2002; Lytton & Romney, 1991). However, to our knowledge, no studies have investigated the persistence of gender differences in children's play when children are exposed to non-traditional gender roles by their parents.

This study engages both strands of research by analyzing the effects of paternal involvement on the level of gender stereotyping in toddlers' play. We rely on data from a nationally representative French birth cohort, the *Étude Longitudinale Française depuis l'Enfance* (Elfe), to estimate the association between paternal involvement and the frequency of gender-incongruent activities in children's play at age 2. We contribute to the literature in two ways. First, we fill a gap in the existing research by examining how paternal involvement affects children's play in early childhood to gain insights into the mechanisms that contribute to the intergenerational transmission and internalization of gender roles. Second, we follow Cano and Hofmeister (2023) who were the first to distinguish between different types of paternal involvement and found that not all dimensions mattered equally for the transmission of gender attitudes. However, we further investigate the differential effect of paternal involvement depending on both the child's gender and the type of involvement, which has not been explored in previous studies.

## BACKGROUND

Gender roles have long been based on naturalized inegalitarian principles (Okin, 1989). In the family model developed during the Industrial Revolution, which we will refer to as the “traditional” family model for the purposes of concision, fathers are limited to the role of breadwinner, do not contribute to housework tasks, and interact little with their children (Coltrane, 1996). Progressively, new gender-egalitarian norms in the home and the workplace have spread, modifying intrafamilial relationships (Deutsch, 1999; Goldscheider & Waite, 1991). These changes have been interpreted as part of a gender revolution in which women entering the workforce was followed, albeit later and to a lesser degree, by men entering the domestic sphere (Goldscheider et al., 2015). Although equality is far from having been attained, in post-industrial societies there has been a noteworthy rise in men’s involvement in parental and domestic tasks. Between 1965 and 2003, the average proportion of men’s unpaid work in 20 countries rose from 20% to 35% (Hook, 2006).

Moreover, since the 1970s fatherhood has been framed in new ways with new narratives of fatherhood emerging around the figure of the “new father,” incorporating both care and intimacy (Dermott, 2014; Johansson & Klinth, 2008; Miller, 2011). Coltrane (1996), drawing on interviews with dual-earner couples, revealed emergent masculinities that are closer to so-called “maternal” characteristics. The fathers questioned in his study valued reciprocal communication with their children and paid attention to certain emotional cues, contributing to a transformation in the social meaning of gender: “when housework activities are shared equally, ‘maternal thinking’ develops in fathers as well as mothers, and the social meaning of gender begins to change” (Coltrane, 1996, p. 83).

However, the literature stresses that it is important not to overstate progress towards egalitarianism. Many studies have demonstrated that, despite these shifts, the gender revolution has largely stalled (England, 2010) and gender attitudes continue to favor traditional (or neotraditional) arrangements (Dernberger & Pepin, 2020). However, in this context of changing gender roles, new masculinity performances are, at least partially, emerging through fatherhood. This raises the question of how gender, and its codes, norms, and boundaries, are passed down intergenerationally.

### Paternal involvement in France

France is an interesting case study insofar as it has very a particular gender regime, focused on professional equality to the detriment of domestic and parental equality (Delès, 2022). Overall, France’s gender equality is above average among European countries: it has a 75.7 Gender Equality Index score, compared to a European average of 70.2, and it ranks 6th among the 27 countries in the European Union (European Institute for Gender Equality, 2023). French family policy is oriented towards mothers and encourages them to return to work. Maternity allowance is generous but short-lived and quickly replaced by daycare provision (Toulemon et al., 2008). Maternity leave lasts 16 weeks and the daily allowance is equivalent to 100% of the mother’s average daily wage. In the majority of cases, after 3 months, children are looked after in daycare centers (*crèche*) or by individual daycare providers (*assistantes maternelles*). Both options are regulated at the state level, including staffing requirements. These childcare alternatives are partly publicly funded (through direct subsidies or tax credits) and compulsory free schooling starts at age 3. These policies encourage mothers to return to work and gender inequalities in professional time allocation are much lower in France than those observed in Italy or the Netherlands, but relatively close to those observed in the United Kingdom and the United States (Pailhé et al., 2021).

Nevertheless, considerable inequalities persist in the domestic sphere in France. As in other countries, there has been a rise in fathers' involvement in domestic and parental work. Fathers' parental time notably increased by more than 20 min per day between 1985 and 2010, compared to a 13-min increase for women (Champagne et al., 2015). Parental responsibilities are clearly being recalibrated, in line with the decline of the "separate spheres." However, comparative studies have shown that the evolution since the 1960s has been slower than in most other Western countries (Dotti Sani & Treas, 2016; Hook, 2006; Pailhé et al., 2021). National qualitative studies confirm that fathers most often play the role of second parent in France (Cartier et al., 2021; Sponton, 2023).

The French case therefore enables relevant discussion of the consequences of fathers' involvement, both because France presents comparable levels of gender equality to those in other European countries and in the United States, and because there are persistent inequalities in domestic arrangements, meaning that paternal involvement remains an atypical activity in terms of gender. To our knowledge, however, the effects of paternal involvement on children's gender socialization have not yet been assessed in the French context.

## Paternal involvement and undoing gender

Interactionist approaches to gender ("Doing Gender" theories) consider gender not as a fixed given but rather as a social construct: "a person's gender is not simply an aspect of what one is, but, more fundamentally, it is something that one does, and does recurrently, in interaction with others" (West & Zimmerman, 1987, p. 140). When parents display less stereotyped gender behavior, we can hypothesize that this will contribute to "undoing" their children's gender, that is to socializing them to more neutral or more egalitarian gender norms and practices in which the distinction between what is masculine and what is feminine is less of a site for struggle and less of an issue for self-definition (Deutsch, 2007). This hypothesis has been tested by assessing the effect of fathers' involvement (or equal domestic involvement between parents) on children's representations or practices when it comes to gender equality.

With one exception (Evertsson, 2006), the vast majority of these studies have concluded that fathers' involvement fosters more equal division of domestic labor between sons and daughters (Álvarez & Miles-Touya, 2012; Blair, 1992; Cordero-Coma & Esping-Andersen, 2018; Court et al., 2016; Dotti Sani, 2016) as well as more egalitarian gender attitudes among children (Cano & Hofmeister, 2023; Cunningham, 2001; Halpern & Perry-Jenkins, 2016; Kulik, 2002).

Many of these studies have also examined whether children's gender socialization differs according to their sex because research on family dynamics has shown that fathers are more involved with their sons than their daughters (Harris & Morgan, 1991; Raley & Bianchi, 2006) and that their involvement may be an important factor in boys' gender socialization (Lytton & Romney, 1991; McBride et al., 2002). Some studies have concluded that paternal involvement has a stronger effect on boys than on girls (Dotti Sani, 2016), at least in male-earner households (Álvarez & Miles-Touya, 2012). However, other studies have concluded that fathers' egalitarian gender attitudes (Perales et al., 2021) or the equal division of housework tasks (Cunningham, 2001) have similar effects on children regardless of their sex, especially in two-earner households (Álvarez & Miles-Touya, 2012). These mixed findings could be explained by age differences between the children studied. Parents do not play the same role in gender socialization during childhood as they do during adolescence (Bussey & Bandura, 1999). Furthermore, these studies do not always use the same indicators to measure paternal involvement and do not distinguish between its different forms. Yet different forms of paternal involvement can have different effects on children's gender socialization (Cano & Hofmeister, 2023) and these effects may also differ according to the child's sex.

## Channels of gender socialization

The literature points to two main channels of gender socialization. First, the *imitation channel* (role modeling), which functions as a slow, diffuse internalization of gender norms, representations, and behaviors. This conception of socialization is in line with the classic sociological theories of socialization that compare it to “hypnosis” (Durkheim, 1922) or “osmosis” (Bourdieu & Passeron, 1979). Viewed in this way, the reproduction of gender roles and forms of habitus operates through immersion in the family environment. Children reproduce parental behaviors and more specifically the behaviors of the parent of the same sex as them. The imitation mechanism is also often related to the theory of social learning (Bandura, 1977), in which observing and imitating the behavior of other individuals is central. From this perspective, parents’ day-to-day behavior at home shapes the gender roles on which children will base their own gender behaviors and representations. On another register, imitation can also be related to psychoanalytical theories of identification according to which children learn to recognize the typical and appropriate behaviors and attitudes for each sex by seeing which behaviors are more frequent among women and less frequent among men, and vice versa (Maccoby, 1992).

The second channel that is regularly mentioned is the *initiation channel* and parent–child interactions. The initiation mechanism emphasizes parents’ formal, intentional educational actions. It relates to theories of parenting styles (Baumrind, 1971; Leaper, 2002), which draw our attention to forms of communication between parents and children, and the way in which the former nurture and control the latter. In this framework, children’s internalization of gender norms and behaviors takes place through parent–child interactions.

This distinction between different channels of gender socialization remains under-explored in studies of the effects of paternal involvement. The vast majority of the literature examining the question of girls’ and boys’ differential involvement in domestic labor attempts to decide between the hypothesis of “need” or that of “socialization” (Blair, 1992; Cordero-Coma & Esping-Andersen, 2018; Dotti Sani, 2016; Evertsson, 2006). In doing so, these studies homogenize socialization processes and do not allow precise identification of the main mechanism involved in the transmission of gender roles and norms. The only work that has tackled this question directly is the study by Cano and Hofmeister (2023), which distinguished between the effects of different dimensions of paternal involvement. The authors showed in particular that the time fathers spent on housework tasks had a stronger influence on children’s gender attitudes than the time they spent caring for their children or the “warmth” of their relationships with them. This suggests that the imitation channel is a more determining factor than parent–child interactions in the transmission of gender stereotypes or roles. These results are interesting but warrant discussion particularly because they do not differentiate between fathers’ socialization of their sons and their daughters (sex is only used as a control variable). Yet it seems likely that imitating fathers’ practices will not have the same meaning for boys as for girls.

## Gender stereotyping in children’s play

Children’s play tends to be gender differentiated from a very early age as preference for gender-stereotyped toys appears as early as age 1 (Davis & Hines, 2020; Kung, 2022). In their literature review focusing principally on the US, Canadian, and UK contexts, Weisgram and Dinella (2018) stress that the majority of girls are more inclined to play with dolls, tea sets, cooking equipment, make-up, and dress up materials, whereas the majority of boys tend to give preference to cars, trucks, construction toys, and sports equipment (balls, rackets, bicycles, etc.). These gender differences persist when US children begin “pretend play,” between ages 2 and 4. The majority of girls tend to play princess games (Coyne et al., 2016, 2021) and to replicate housework or parental—and more specifically maternal—situations (such as cooking, looking



after babies, telling stories, or singing nursery rhymes) (Kung, 2022; Weisgram, 2022). As for boys, the majority prefer to engage in more “heroic” stories in which weapons and combative dispositions predominate (Lindsey & Colwell, 2013).

These findings are not limited to the North-American and British contexts. In a meta-analysis summarizing the last 50 years of research on toy preferences, Todd et al. (2018) emphasize that gender differences are similar in Israel, Asia, and European countries. Similarly, in the French context, many studies (Bourguignon et al., 2023; Rouyer et al., 2018; Zegaï, 2014) have stressed that this same gendered division in toys and games exists from a very young age.

In addition to the identification of differentiated activities according to gender, another strand of research has focused on the consequences of gender stereotyping in children’s play. Kung et al. (2018) and Wong and Yeung (2019) have shown that, in Europe and Asia, “masculine play” not only has an impact on boys’ social behavior by contributing to the development of combative, competitive, or even violent dispositions, but also contributes to the acquisition of cognitive skills, fostering spatial and mathematical abilities. “Feminine play,” on the other hand, tends to contribute to girls’ “nurturing” and verbal skills, as well as, to a lesser degree, their empathy (Li & Wong, 2016; Liben et al., 2018). Coyne et al. (2016) have presented similar findings in North America, but also noted that playing princess or playing with princess dolls was associated with prosocial behaviors among boys and, to a lesser extent than for girls, with care behaviors.

In this article, we take an intermediate position, considering games as indices of the gender socialization in progress. This means that we consider children’s play as both the result of prior gender socialization and as “gender performance” in which children perform how they identify and perceive current norms of masculinity and femininity (Kane, 2012; Skočajić et al., 2020). This intermediate position is heuristic insofar as it allows us to take an original approach to the reciprocal links between toys/games and gender, and more specifically to consider children’s play as both a factor in, and a result of, gender socialization.

## Summary of research questions and hypotheses

In the present study, we build on both the sociological and psychological strands of the literature to examine gender socialization when children are exposed to non-traditional gender roles by their parents. We aim to answer two research questions. First, what is the effect of paternal involvement on the frequency of gender-incongruent activities in toddlers’ play? Based on the mixed results from the literature regarding the effects of paternal involvement depending on the child’s sex (summarized above), we formulate two concurrent hypotheses:

**Hypothesis 1a.** Paternal involvement increases the frequency of gender-incongruent activities in toddlers’ play, independently of the child’s sex.

**Hypothesis 1b.** Paternal involvement increases the frequency of gender-incongruent activities in toddlers’ play but the effect is stronger for boys.

Second, we build on the work by Cano and Hofmeister (2023) to ask: Through which channel(s) of transmission does paternal involvement influence the frequency of gender-incongruent activities in toddlers’ play? We hypothesize that:

**Hypothesis 2.** paternal involvement in housework tasks (channel = role modeling) has more influence than involvement in care tasks and play interactions (channel = parent–child interactions) on the frequency of gender-incongruent activities in toddlers’ play.

## METHODS

### Data

The analyses draw on the Elfe survey, a national longitudinal survey following 18,329 French children born in 2011 and recruited from maternity units randomly selected in metropolitan France (Charles et al., 2020). The survey included telephone interviews with both parents when their children were aged 2 months, 1 year, and 2 years. We draw mainly on the data collected when the child was 2 years old, which included rich information on the division of housework tasks between parents, the frequency of interactions with the child, and the frequency of different play activities and use of toys. We have information for our dependent variable (see below) at age 2 for 13,115 of the children initially selected at birth. Families who dropped out of the survey were more likely to be socially disadvantaged but there was no difference in attrition depending on the child's gender (Charles et al., 2020). We further excluded 807 children not living with both parents and 23 children with same-sex parents. For all analyses, we applied a complete-case approach. Among the children with data for their play activities at age 2 who met our inclusion criteria, 6% had missing data for one of the covariates. Observations with missing information are distributed as follows: paternal involvement ( $n = 373$ ), parental class ( $n = 54$ ), relative occupational position of the father to the mother ( $n = 193$ ), and child is a first-born ( $n = 164$ ). Our analytical sample comprises 11,564 children.

### Dependent variable

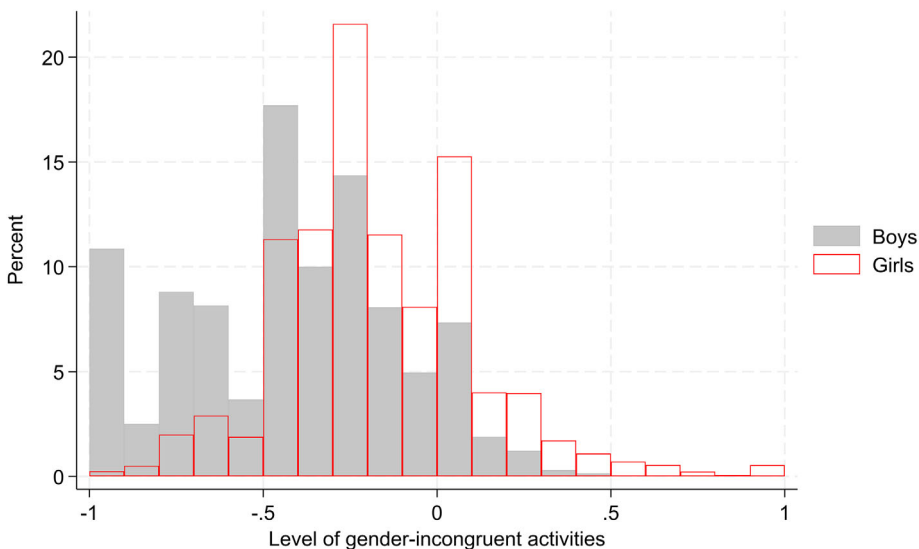
In order to test the “undoing gender” effect of paternal involvement, our dependent variable indicates the relative frequency of activities that are incongruent with gender norms in children's play at age 2, as reported by the mother (or by the father, if the mother's report was missing). We identified the six most gender-typed toys or activities by selecting the items with the strongest associations between frequency of practice and gender, as measured by Cramér's  $V$  ( $>0.20$ ): three activities were more frequent among boys and three among girls. These activities are: “pretending to take care of a baby,” “pretending to cook,” and “playing with a doll” (among girls); “pretending to drive a car,” “playing with toy cars,” and “playing with a ball” (among boys). It should be noted that some of these items refer to specific toys but others are examples of pretend play that do not require access to specific objects. For each item, the parent indicated whether the child played “never,” “sometimes,” “often but not every day,” or “every day.” We built a score summing up the frequencies reported for all these items, considering the (in)congruency of each activity with gender stereotypes. This approach provides a more robust indicator as it is less dependent on access to specific toys. In addition, focusing on one activity would only have allowed us to estimate whether the children engaged in a gender-(in)congruent activity or not. In contrast, we are able to take into account the relative weight of gender-incongruent and -congruent activities in children's play and thus to model the level of gender-incongruency in children's play.

Gender-incongruent activities were given a positive score (from 0 = *never* to 3 = *every day*) and gender-congruent activities were given a negative score (up to  $-3 =$  *every day*). Activities were classified as gender-congruent or incongruent based on the gender that did them most often in our sample. For girls, “pretending to drive a car,” “playing with toy cars,” and “playing with a ball” were classified as incongruent activities and “pretending to take care of a baby,” “pretending to cook,” and “playing with a doll” as congruent activities, and the opposite for boys. However, playing often with a specific toy is not the same for a child who engages in a lot of different activities as for a child who plays almost exclusively with that toy. Our aim was to analyze the importance of gender-incongruent activities in children's play relative to all



gender-typed activities, neutralizing differences in the frequency of play in these activities. We therefore divided the profile score by the sum of the absolute values of all frequencies. The final score ranges from  $-1$  to  $1$  and summarizes the gender profile of the child's activities in relative terms: a negative score indicates a higher frequency of gender-congruent activities, a positive score a higher frequency of gender-incongruent activities, and a score close to  $0$  reflects an equal frequency of gender-congruent and gender-incongruent activities. For example, a girl who pretends to take care of a baby every day ( $-3$ ), pretends to cook every day ( $-3$ ), often plays with a doll ( $-2$ ), often pretends to drive a car ( $+2$ ), sometimes plays with toy cars ( $+1$ ), and often plays with a ball ( $+2$ ) receives a score of  $-3/13 = -0.23$ . In contrast, a girl who often pretends to take care of a baby ( $-2$ ), sometimes pretends to cook ( $-1$ ), often plays with a doll ( $-2$ ), never pretends to drive a car ( $0$ ), sometimes plays with toy cars ( $+1$ ), and sometimes plays with a ball ( $+1$ ) receives a score of  $-3/7 = -0.43$ .

In addition, we tested the effect of paternal involvement on categories of children's play profiles in order to take into account potential threshold effects in the frequency of gender-(in)congruent activities and investigate more precisely the determinants of profiles located at the extremes of the gender-(in)congruent continuum. Deviating from gender norms is not necessarily a linear process and paternal involvement may be more effective in encouraging or deterring children from specific categories. Using our continuous score, we thus distinguished between children with only gender-congruent play activities (score of  $-1$ ), children with mostly congruent play activities (score higher than  $-1$  but lower than  $-0.1$ ), children with as many congruent as incongruent activities (score between  $-0.1$  and  $0.1$ ), and children with more incongruent activities (score higher than  $0.1$ ). In our sample, 27 children (0.23% of the analytical sample) had only incongruent activities, so we did not create a specific category and included them in the "mostly incongruent activities" category. In addition, 576 boys had a score of  $-1$  (i.e., only congruent activities) but this was the case for only 10 girls so we pooled girls with a score of  $-1$  in the "mostly congruent" category. For this outcome, we thus have only three categories for girls compared to four for boys. This difference reflects the differentiated distribution of the score of gender (in)congruency in children's play by gender (see Figure 1 and Table 2).



**FIGURE 1** Score distribution of gender-incongruent activities in children's play at age 2, by gender. *Source:* Elfe survey. Wave at age 2. Weighted proportions.  $N = 5887$  for boys and  $N = 5677$  for girls. [Color figure can be viewed at [wileyonlinelibrary.com](http://wileyonlinelibrary.com)]

## Independent variables

We summarized the level of paternal involvement using nine items referring to routine tasks: preparing meals, doing the dishes, grocery shopping, cleaning, doing laundry, giving food to the child, bathing them, putting them to bed, and playing with them. The respondent indicated whether the task was performed “always” or “in most cases” by themselves, by their partner, “shared between partners,” or “done by someone else.” For the item “playing with the child,” we used information on the frequency of play interactions with each parent (“never,” “sometimes,” “often,” or “everyday”) and compared them to indicate whether the father played with the child as often as, or more often than, the mother did. We summed up the number of tasks for which the father participated equally or more (than the mother) and distinguished between fathers participating in 0–2 tasks; in 3–4 tasks; in 5–6 tasks, and those participating equally (or more) in 7, or more, tasks out of these nine tasks. For all variables on paternal involvement, we relied on answers provided by the mothers (or by the father, if information from the mother was missing) insofar as, while both men and women tend to overestimate their contributions to domestic tasks, women do so much less than men (Kan, 2008). Furthermore, Carrasco and Domínguez (2015) have shown, using similar questions to those we use to measure the division of household tasks within the couple, that women’s answers are closer to the results from time-use diaries than men’s answers.

We then distinguished between three types of paternal involvement. The first is paternal involvement in housework tasks (preparing meals, doing the dishes, grocery shopping, cleaning, and doing laundry). We constructed a binary variable indicating whether the father participated equally, or mainly, in at least three of these five housework tasks. We used this variable to assess the effect of role modeling on the emergence of gender roles. The second dimension of paternal involvement was involvement in routine childcare tasks (giving food, bathing, and putting the child to bed). If a father participated equally, or mainly, in at least two of these three tasks, we classified him as involved in child-care tasks. Paternal involvement in childcare tasks can allow the transmission of incongruent gender roles through direct interactions (Cano & Hofmeister, 2023). Finally, we used the frequency of father-child play interactions (relative to mother-child ones) to further estimate the role of direct parent-child interactions and paternal instructions. Because we are testing the effect of paternal involvement on children’s play, we expect involvement in children’s play to be a stronger vector of paternal instructions than involvement in childcare activities. With the Elfe survey, we can only operationalize our indicators as relative level of paternal involvement compared to maternal involvement, but relative paternal involvement has been shown to be relevant for the transmission of gender norms (Cano & Hofmeister, 2023).

We controlled for social background with three variables: (1) the social class of the family (dominance criteria); (2) whether the father’s occupational class was higher than, equal to, or lower than the mother’s and (3) the highest level of education of both parents (dominance criteria). For these variables, if information was missing at age 2 (around 14% of our analytical sample), we imputed the information from the data collected when the child was 2-months old. Social class and level of education are not likely to vary significantly in 2 years, so we expect the bias introduced to be minimal.

We further controlled for family and, in particular, sibling composition as the literature has highlighted its important effects on children’s play activities (Bourguignon et al., 2023; Colley et al., 1996; Farkas & Leaper, 2014). Binary variables indicate whether the child was a first-born, the presence of at least one brother at home, and the presence of at least one sister.

We only used survey weights for the descriptive statistics because they were not a function of our dependent variables (Winship & Radbill, 1994). Table 1 summarizes the distribution of the independent variables in the analytical sample and shows that there are no statistically significant differences in the distribution of our independent variables between boys and girls, with

**TABLE 1** Descriptive statistics of the independent variables, by gender.

Variables	Boys	Girls	<i>p</i> -values
Paternal involvement: number of tasks shared equally or mainly done by the father			
0–2	26.5%	28.7%	
3–4	31.5%	31.7%	
5–6	26.5%	26.3%	
7–9	15.5%	13.3%	*
Paternal involvement in housework tasks	30.2%	30.0%	
Paternal involvement in childcare	49.7%	44.2%	***
Paternal involvement in play	81.3%	79.7%	
Social class			
Economic upper class	14.8%	14.5%	
Cultural upper class	13.8%	12.4%	
Middle class	36.8%	37.4%	
Skilled working class	24.0%	25.3%	
Unskilled working class	5.5%	5.5%	
Inactive	5.0%	4.9%	
Comparison of the father's and mother's social class			
Father > mother	48.9%	49.9%	
Father = mother	27.9%	27.5%	
Father < mother	23.3%	22.7%	
Parental highest level of education			
Higher education	64.6%	64.6%	
High school degree	18.3%	18.1%	
Below high school degree	17.1%	17.4%	
Child is the first-born	42.5%	44.3%	
At least one brother	39.5%	39.1%	
At least one sister	37.7%	36.9%	
Observations	5887	5677	

Note: Source: Elfe survey. Wave at age 2. Weighted proportions. *p*-values from Pearson's chi-squared tests: \*\*\**p* < .001, \*\**p* < .01, \**p* < 0.5.

the noteworthy exception of paternal involvement as involvement in childcare tasks is significantly higher when the child is a boy ( $p < .001$ ).

## Empirical strategy

In order to identify the effect of paternal involvement in the domestic sphere, we first ran linear models using the continuous score of gender incongruity in children's play, separately for boys and girls. In these linear regression models, the score is standardized among all children, independently of their gender, so regression coefficients are comparable for both genders. In order to explore the differentiated effect of paternal involvement on the different gender-typed play profiles, we ran multinomial logistic regressions and reported average marginal effects for the sake of interpretability and comparability between boys and girls (Mood, 2010). For both outcomes, we first ran a model estimating the effect of the total level of paternal involvement.

In a second model, we distinguished between paternal involvement in housework tasks, in childcare tasks, and in play interactions to disentangle the effect of different channels of transmission.

## FINDINGS

### Frequency of gender-incongruent activities in children's play

At age 2, on average, children engaged in gender-congruent activities more often than incongruent ones, as the average score is  $-0.30$ . However, the frequency of gender-incongruent activities in children's play differed by gender, as shown in Figure 1. In our analytical sample, boys had an average score of  $-0.42$  but it reached  $-0.17$  for girls. Thus, at age 2, girls had, on average, more gender-incongruent activities in their play than boys.

The distribution of the categorical variable of the profile of children's play activities by gender (Table 2) confirmed that boys were, in the vast majority, conforming to gender norms contrary to girls who integrated gender-incongruent activities in their play more often. 84% of boys had only (11%) or mainly (73%) gender-congruent activities in their play, compared to less than two-thirds of girls and the proportion of girls who had only gender-congruent activities in their play was marginal (0.25%). Conversely, 36% of girls had either a balanced profile (23%) or a mainly incongruent one (13%) compared to only 16% of boys (12% and 4% respectively).

### The influence of paternal involvement on the level of gender-incongruency in children's play

The effect of paternal involvement on the level of gender-incongruency in play activities at age 2 was strongly differentiated by the child's gender (Table 3, Model 1). Given the construction of our dependent variable, a positive coefficient means that children engage more often, in relative terms, in play activities that are incongruent with gender norms. For boys, we found a linear and positive effect: higher level of paternal involvement was associated with higher relative frequency of gender-incongruent activities. Compared to sons of fathers involved in no more than two tasks, the effect reached  $+18\%$  of a standard deviation (SD) when fathers were involved as much as, or more than, the mother in seven to nine routine tasks ( $p < .001$ ). Conversely, we found a close to zero (and not statistically significant) association between the level of paternal involvement and the level of gender-incongruency in play activities for girls. These results confirmed our Hypothesis 1b regarding a stronger effect of paternal involvement for boys than girls and further showed that paternal involvement actually had no effect for girls. In order to better understand the mechanisms at work, we also modeled separately the influence of paternal involvement on the frequency of activities gender-typed as masculine and feminine. Results are

**TABLE 2** Profile of play activities, by gender (in %).

	Boys	Girls
Only gender-congruent	10.86	0.25
Mainly gender-congruent	73.27	63.50
As many gender-congruent as incongruent	12.30	23.37
Mainly gender-incongruent	3.56	12.88
Observations	5887	5677

Note: Source: Elfe survey. Wave at age 2. Weighted proportions.

**TABLE 3** Regression models for the level of gender-incongruent activities in play at age 2, standardized score.

Variables	Model 1				Model 2			
	Boys		Girls		Boys		Girls	
	<i>B</i>	SE	<i>B</i>	SE	<i>B</i>	SE	<i>B</i>	SE
Paternal involvement: number of tasks shared equally or mainly done by the father (reference 0–2)								
3–4	0.07	0.03	–0.04	0.03				
5–6	0.13***	0.04	–0.04	0.03				
7–9	0.18***	0.04	–0.02	0.04				
Paternal involvement in housework tasks					0.10***	0.03	–0.02	0.02
Paternal involvement in childcare					0.07**	0.03	–0.04	0.02
Paternal involvement in play					–0.06	0.03	0.06*	0.03
Social class (ref. economic upper class)								
Cultural upper class	0.03	0.04	–0.04	0.04	0.04	0.04	–0.04	0.04
Middle class	0.02	0.04	–0.01	0.03	0.02	0.04	–0.01	0.03
Skilled working class	–0.13**	0.05	0.04	0.04	–0.13**	0.05	0.04	0.04
Unskilled working class	–0.13	0.08	0.03	0.07	–0.13	0.07	0.04	0.07
Inactive	–0.09	0.08	0.13	0.07	–0.09	0.08	0.13	0.07
Comparison of the father's and mother's social class (ref. father > mother)								
Father = mother	0.13***	0.03	–0.07*	0.03	0.13***	0.03	–0.07**	0.03
Father < mother	0.05	0.03	–0.04	0.03	0.05	0.03	–0.04	0.03
Parental highest level of education (ref. higher education)								
High school degree	–0.12**	0.04	–0.01	0.03	–0.12**	0.04	–0.01	0.03
Below high school	–0.29***	0.05	0.06	0.04	–0.29***	0.05	0.06	0.04
Child is the first-born	–0.15***	0.04	–0.01	0.04	–0.15***	0.04	–0.00	0.04
At least one brother	–0.06	0.03	0.16***	0.03	–0.06	0.03	0.16***	0.03
At least one sister	0.42***	0.03	–0.17***	0.03	0.42***	0.03	–0.17***	0.03
Constant	–0.48***	0.05	0.42***	0.05	–0.41***	0.06	0.36***	0.05
<i>R</i> -squared	0.078		0.024		0.078		0.025	
Observations	5887		5677		5887		5677	

Note: Source: Elfe survey. Wave at age 2. \*\*\* $p < .001$ , \*\* $p < .01$ , \* $p < .5$ .

shown in Tables S1 and S2. The effect of paternal involvement on the level of gender-incongruency in play activities for boys was actually driven by an increase in the frequency of activities gender-typed as feminine rather than a decrease in the frequency of activities gender-typed as masculine (Model 1).

Table 3 also shows results for control variables. The strongest associations with the level of gender-incongruent activities in play activities were found for family composition variables. Boys with at least one sister were much more likely to have gender-incongruent activities ( $B = 0.42$ ,  $p < .001$ ) and girls with a brother were more likely to do so, although the effect was smaller than for boys ( $B = 0.16$ ,  $p < .001$ ). Being the first-born child decreased the level of gender-incongruent activities in play activities but only for boys ( $B = -0.15$ ,  $p < .001$ ). Social background was mainly relevant for boys: compared to boys from the economic upper class, boys from the skilled working class were somewhat less likely ( $B = -0.13$ ,  $p < .01$ ) to have gender-incongruent activities. Parental highest level of education had an even larger effect on boys' level of gender-incongruent activities. Boys whose parents had below a high school degree

were significantly less likely ( $B = -0.29, p < .001$ ) to engage in gender-incongruent activities than boys with at least one tertiary-educated parent. Finally, boys whose mother was in an occupational class of the same level as their father were more likely to engage in gender-incongruent activities ( $B = 0.13, p < .001$ ).

In contrast, social background variable coefficients for girls were substantially and significantly insignificant, with one exception. Girls whose mother was in an occupational class of the same level as their father were less likely to engage in gender-incongruent activities ( $B = -0.07, p < .05$ ).

Overall, it is worth noting that boys in socially advantaged families tended to have more gender-incongruent activities, although social background had little or no effect for girls. When it did have an effect, it went in the opposite direction for girls than for boys, suggesting that socially advantaged parents may devalue activities labeled as traditionally masculine rather than promoting gender-incongruent activities for their children.

Turning to the effect of paternal involvement on the profile of boys' activities in their play (Panel a of Table 4), we see that the highest level of paternal involvement was associated with a decrease of 4 percentage points (p.p.) in the probability of engaging in "only gender-congruent" activities ( $p < .001$ ) and with an increase of 6 p.p. in the probability of having "as many gender-congruent as incongruent" activities ( $p < .001$ ). In contrast, the association between paternal involvement and the category "mainly gender-incongruent activities" was smaller (no more than

**TABLE 4** Average marginal effects from multinomial models of the profile of children's activities in their play, Model 1.

<b>a. Boys (N = 5887)</b>								
	<b>Only gender-congruent (N = 576)</b>		<b>Mainly gender-congruent (N = 4339)</b>		<b>As many gender-congruent as incongruent (N = 758)</b>		<b>Mainly gender-incongruent (N = 214)</b>	
	<i>B</i>	SE	<i>B</i>	SE	<i>B</i>	SE	<i>B</i>	SE
Paternal involvement: number of tasks shared equally or mainly done by the father (reference 0–2)								
3–4	−0.02*	0.01	−0.00	0.02	0.01	0.01	0.01*	0.01
5–6	−0.04**	0.01	0.00	0.02	0.02	0.01	0.02**	0.01
7–9	−0.04***	0.01	−0.02	0.02	0.06***	0.01	0.01	0.01
Log likelihood	−4743							
Pseudo $R^2$	0.0372							
<b>b. Girls (N = 5677)</b>								
	<b>Mainly gender-congruent (N = 3783)</b>		<b>As many gender-congruent as incongruent (N = 1254)</b>		<b>Mainly gender-incongruent (N = 640)</b>			
	<i>B</i>	SE	<i>B</i>	SE	<i>B</i>	SE	<i>B</i>	SE
Paternal involvement: number of tasks shared equally or mainly done by the father (reference 0–2)								
3–4			0.04*	0.02	−0.03	0.01	−0.01	0.01
5–6			0.03	0.02	−0.00	0.02	−0.03*	0.01
7–9			0.02	0.02	0.01	0.02	−0.02	0.01
Log likelihood	−4761							
Pseudo $R^2$	0.0135							

Note: Source: Elfe survey. Wave at age 2. Models controlled for social class, relative occupational class of the father, parental highest level of education, child being a first-born, having at least one brother, and having at least one sister. \*\*\* $p < .001$ , \*\* $p < .01$ , \* $p < .5$ .



+2 p.p.,  $p < .01$ ) and we found a null effect on the probability of engaging in “mainly gender-congruent” activities for boys.

Contrary to what was seen with the linear outcome, the level of paternal involvement had a small effect on some profiles of girls’ activities (Panel b of Table 4). However, this effect was the opposite to the effect for boys’ play profiles as it tended to reinforce gender congruency in girls’ play. Girls with a father involved in 3–4 tasks were more likely to engage “mainly in gender-congruent” activities (+4 p.p.,  $p < .05$ ) and those with a father involved in 5–6 tasks were less likely to engage in “mainly gender-incongruent” activities (–3 p.p.,  $p < .05$ ).

## The channels of transmission of the influence of paternal involvement on the level of gender-incongruency in children’s play activities

Based on the results of the linear models for different types of paternal involvement (Model 2, Table 3), we reject Hypothesis 2. Paternal involvement in housework tasks did not have a larger effect on the frequency of gender-incongruent activities in children’s play at age 2 as all channels of transmission appeared to be relevant. Nevertheless, different types of involvement resulted in opposite effects and differed by gender. Paternal involvement in housework tasks and in childcare increased gender-incongruency but only for boys ( $B = 0.10$ ,  $p < .001$  and  $B = 0.07$ ,  $p < .01$  respectively). The effects were different when fathers played with, rather than just cared for, their children: it increased the frequency of gender-incongruent activities for girls ( $B = 0.06$ ,  $p < .05$ ) but decreased it for boys ( $B = -0.06$ ,  $p < .10$ ) so when fathers played with the child (as often as or more than the mother), they tended to promote activities gender-typed as masculine, independently of the child’s gender. The differentiated effects of paternal involvement on the frequency of activities gender-typed as masculine and feminine also differed depending on the dimension of paternal involvement (Tables S1 and S2, Model 2). Paternal involvement in housework tasks both decreased the frequency of activities gender-typed as masculine and increased the frequency of activities gender-typed as feminine, for boys. In contrast, paternal involvement in childcare increased the frequency of activities gender-typed as feminine for boys and girls but had no effect on the frequency of activities gender-typed as masculine.

We replicated the analyses to estimate the effect of the (absolute) frequency of father-child play interactions, controlling for the frequency of mother-child play interactions. The results confirmed the results of the relative measure, further suggesting that paternal involvement in play made a difference when fathers played every day with their child: this increased the frequency of gender-incongruent activities for girls ( $B = 0.13$ ,  $p < .01$ ) but decreased it for boys ( $B = -0.10$ ) although this coefficient was not statistically significant ( $p < .10$ ). Interestingly, fathers and mothers did not differ on this aspect as mothers who played every day with their child increased the frequency of activities gender-typed as feminine, independently of the child’s sex (analyses available upon request).

Table 5 displays the effect of different types of paternal involvement on the gendered profile of children’s activities at age 2 and shows small effects of each type of involvement for boys (Panel a) compared to null effects for girls (Panel b), further confirming our Hypothesis 1b. For boys, paternal involvement in housework tasks was associated with a decrease of 3 p.p. in the probability of engaging in “mainly congruent” activities and an increase of 2 p.p. in the probability of engaging in “as many congruent as incongruent” and “mainly incongruent” activities. Involvement in childcare tasks had a similar effect and was associated with a decrease of 2 p.p. in the probability of engaging in “only gender-congruent” activities and an increase of the same size in the probability of engaging in “as many congruent as incongruent” activities. Conversely, paternal involvement in play decreased by 2 p.p. the probability of engaging in “mainly gender-incongruent” activities. The effects estimated for girls (Panel b) were not statistically significant despite the large size of our sample, confirming that paternal involvement had little effect on the gender-typed profile of their activities (Hypothesis 1b).

**TABLE 5** Average marginal effects from multinomial models of the profile of children's activities in their play, Model 2.

<b>a. Boys (N = 5887)</b>								
	<b>Only gender-congruent (N = 576)</b>		<b>Mainly gender-congruent (N = 4339)</b>		<b>As many gender-congruent as incongruent (N = 758)</b>		<b>Mainly gender-incongruent (N = 214)</b>	
	<i>B</i>	SE	<i>B</i>	SE	<i>B</i>	SE	<i>B</i>	SE
Paternal involvement in housework tasks	-0.01	0.01	-0.03*	0.01	0.02*	0.01	0.02***	0.01
Paternal involvement in childcare	-0.02*	0.01	-0.00	0.01	0.02*	0.01	0.00	0.01
Paternal involvement in play	0.01	0.01	0.01	0.02	-0.00	0.01	-0.02*	0.01
Log likelihood	-4741							
Pseudo R <sup>2</sup>	0.0375							
<b>b. Girls (N = 5677)</b>								
	<b>Mainly gender-congruent (N = 3783)</b>		<b>As many gender-congruent as incongruent (N = 1254)</b>		<b>Mainly gender-incongruent (N = 640)</b>			
	<i>B</i>	SE	<i>B</i>	SE	<i>B</i>	SE	<i>B</i>	SE
Paternal involvement in housework tasks		0.00	0.01	0.01	0.01	0.01	-0.01	0.01
Paternal involvement in childcare		0.02	0.01	0.00	0.01	0.01	-0.02	0.01
Paternal involvement in play		-0.00	0.02	0.01	0.01	0.01	-0.00	0.01
Log likelihood		-4764						
Pseudo R <sup>2</sup>		0.0129						

Note: Source: Elfe survey. Wave at age 2. Models controlled for social class, relative occupational class of the father, parental highest level of education, child being a first-born, having at least one brother, and having at least one sister. \*\*\**p* < .001, \*\**p* < .01, \**p* < .5.

### Robustness checks

We carried out additional analyses to check the sensitivity of the results. We first tested a different operationalization of the continuous dependent variable. Instead of dividing the score obtained by the total frequency of the six selected gender-typed activities, we divided it by the total frequency of all play activities for which information was collected in the Elfe survey at age 2. These added six activities for which the gender gap in frequency was small or null such as “drawing or painting,” “playing with stacking toys,” “playing with nesting toys,” “pretending to make oneself beautiful,” “doing jigsaw puzzles,” and “playing with cuddly toys.” We did not use information on the frequency of play activities that require the presence and/or the participation of the parent (such as bath games, going for a walk, and physical activities with the parent). The new score can be interpreted as the frequency of gender-(in)congruent activities relative to the frequency of all gender-typed and gender-neutral activities done by the child at age 2. Results of the regression analysis of the standardized score are available in Table S3. The conclusions were similar, and the estimated effect of parental involvement was even slightly larger than the estimated effects of our main analyses. We then replicated the analyses on single children only because we expect parental influences on children's play to be more central in the absence of siblings. This led to a decrease of 60% of the analytical sample and fewer coefficients reached statistical significance at the 5% threshold. However, the conclusions remained largely unchanged as the signs and sizes of the coefficients were very similar to our main analysis

(Table S4). We further compared the results for the categorical outcomes using different thresholds to define our categories. We first distinguished between children with mostly gender-congruent activities (with a score between  $-1$  and  $-0.5$ ) and those with mainly gender-congruent activities (with a score between  $-0.5$  and  $-0.1$ ). Our results were robust to this change and the conclusions remained largely unchanged: a high level of paternal involvement mainly reduced the probability of being in the “mostly gender-congruent activities” category for boys and we found no effect for girls (Tables S5 and S6). Finally, we considered that children had as many congruent as incongruent activities if their continuous score was between  $-0.15$  and  $0.15$  (instead of between  $-0.1$  and  $0.1$ ), which changed the classification for 865 children. Results from the multinomial models are insensitive to this change (Tables S7 and S8).

## DISCUSSION

This article has built on the literature on the division of domestic and parental work and on the literature on gender socialization to estimate the effects of paternal involvement on the level of gender stereotyping in toddlers' play. It contributes to the literature by examining for the first time the consequences of paternal involvement on the intergenerational transmission and internalization of gender roles and representations in early childhood rather than the outputs of this process among teenagers or young adults. Our results provide an opportunity to discuss whether and how paternal involvement shapes gender socialization in the early years.

First, our work concludes that paternal involvement, particularly in domestic work and childcare, influences the probability of engaging in gender-incongruent activities in boys, whereas this effect is not observed in girls. This result contradicts the findings of the seminal article by Cunningham (2001) on this issue but confirms other results for children's housework activities or gender attitudes (Blair, 1992; Cordero-Coma & Esping-Andersen, 2018; Dotti Sani, 2016). In the case of play in early childhood in France, paternal involvement does not contribute to “undoing gender” in general but rather, more specifically, to “undoing” traditional masculinity. It is important to relate this result to gender-egalitarian norms in a given context, insofar as the “undoing” effect may appear more clearly in inequalitarian settings. Álvarez and Miles-Touya (2012) showed, for example, that the effect of paternal involvement in boys was greater in couples with a traditional division of paid labor (male-earner households). Contradictory results in Italy (where an undoing gender effect has been observed on boys [Dotti Sani, 2016]) and in Scandinavian countries (where paternal involvement does not have any effect on sons' household participation [Evertsson, 2006; Kotsadam & Finseraas, 2013]) suggest that men's gender-incongruent activities have a stronger effect on deconstructing traditional masculinity in contexts with less egalitarian gender norms, practices, and representations. National and cultural contexts thus seem to influence the strength of this effect. Our work, based on the French context where the gendered division of domestic labor remains broadly unequal despite women participating in the workforce at high rates (Champagne et al., 2015; Pailhé et al., 2021), contributes to this discussion and underscores the need to differentiate the effects of paternal involvement by children's sex, which is not systematically the case in the existing literature.

The lack of effect of paternal involvement on girls' play at age 2 raises the question of the differential gender constraints affecting boys and girls. Although our results confirm that children's play is gendered from the earliest age (Kung, 2022; Weisgram & Dinella, 2018), they also show that girls engage in more diversified and less gender-congruent activities than boys: 23% of girls engaged in as many gender-congruent activities as gender-incongruent ones (against 12% of boys), and 13% engaged mainly in gender-incongruent activities as opposed to only 4% of boys (Table 2). This result indicates that adopting behaviors traditionally associated with the other gender does not have the same meaning for girls and boys or for their parents. Girls'

greater propensity to cross gender boundaries could be explained by the fact that boys face stronger pressure and admonitions to conform to gender norms than girls (Kane, 2012; Martin, 1990; Skočajić et al., 2020). These studies have underlined that children's parents, educators, and peers react more negatively towards, and are more disparaging of, boys who engage in gender-incongruent activities than girls. They ascribe this stronger reaction (particularly from men and fathers) to the fear of homosexuality, which applies more, if not exclusively, to boys. Our results suggest that this greater pressure on boys to conform to gender norms makes parental roles more salient in the gender socialization of sons than of daughters, especially when fathers and mothers adopt atypical behavior in the domestic sphere. The results for our control variables for social background support this hypothesis: whereas the literature shows that highly-qualified and upper-class parents are more likely to follow egalitarian gender norms (Davis & Greenstein, 2009), to "gender-type" toys less, and to be less critical of children's gender incongruity (Freeman, 2007; Kulik, 2002), we identify a greater probability that children will engage in gender-incongruent play in these advantaged backgrounds only for boys (Table 2). Once again, the effect of more egalitarian gender norms in the family appears to be more of a determining factor for boys than for girls. In general, our results suggest that paternal involvement contributes to reducing differences in boys' and girls' behaviors in early childhood by encouraging boys to engage in feminine-typed play a bit more often, whereas girls already engage in more diversified play whatever the level of paternal involvement.

Our work also makes a contribution to the emerging literature on the effects of different channels of paternal involvement. In line with Cano and Hofmeister (2023), we find that the father effect varies according to type of involvement, but our results do not entirely confirm these authors' conclusions about the greater influence of involvement in housework activities. Unlike Cano and Hofmeister (2023), we observe that fathers' involvement in childcare has an "undoing gender" effect on boys that is almost as large as for father's involvement in housework tasks. Moreover, paternal involvement in play has the reverse influence, reinforcing the probability of masculine-typed play for both boys and girls. Running counter to the findings of Cano and Hofmeister (2023), we therefore show that some paternal activities can reinforce gender-congruent socialization for boys. We identify two reasons underpinning these differences in our results. First, our study focuses on behavioral outcomes among 2-year-old children unlike Cano and Hofmeister's work, which focuses on attitudinal outcomes among teenagers. The childcare dimension may be much more relevant for very young children, making the effect of paternal involvement in this dimension only visible at a young age. Second, again unlike Cano and Hofmeister's study, ours distinguishes between two dimensions of childcare, namely physical care and interactive care. Our findings confirm that fathers are significantly more involved in interactive care activities, including playing with children, than in physical care activities (Craig, 2006) and they suggest that interactive care may have different effects on gender socialization than other forms of paternal involvement. More fundamentally, this invites us to rethink our conceptualization of channels of socialization. Notably, our "involvement in childcare" and "involvement in play" variables were initially conceived as relating to the initiation channel, because, unlike involvement in housework tasks, they both presuppose interaction with the child. However, our results show that the effects of involvement in childcare and play are contradictory, which leads us to question what type of father/child interaction occurs in these forms of involvement. Involvement in childcare is, in fact, ambiguous because although it does imply interaction with the child, it is also an activity in which the father adopts feminine-typed behavior. In this respect, it seems to produce a similar effect to involvement in housework, which relates unambiguously to the mechanism of "role modeling." This interpretation allows us to explain the discrepancy between our findings and those of Cano and Hofmeister (2023). Conversely, playing with children, which relates more clearly to the initiation channel, is associated with a slight effect reinforcing gender assignments for boys and undoing gender for girls. These

results suggest that, through this channel, fathers tend to encourage masculine-typed games whatever the sex of their child.

Given that the effect of paternal involvement on undoing traditional masculinity varies depending on the types of involvement, it is crucial to consider detailed forms of paternal involvement when studying fatherhood. Men's involvement in the household and with their children is often analyzed as engagement in a traditionally feminine activity. However, this can be debated in two ways. First, as domestic roles become more equal, and despite a persisting gap, it seems likely that the gendered coding of housework and childcare practices is losing relevance, depending on the context (Deutsch, 2007). In some cases, it may be inaccurate to presume that housework and childcare tasks are essentially feminine activities and that men are enacting atypical gender roles when they are involved in them. In our sample, where 80% of fathers played with their children at least as often as the mothers, whereas only 30% participated equally in housework tasks (Table 1), it is noteworthy that these practices were associated with contradictory effects on the children's gendered play. More gender-neutral activities seem to have less of an undoing gender effect. When examining the effect of fathers' involvement on children's gender socialization, it is therefore essential to differentiate the tasks fathers do by how atypical these are in a given context. Second, even when housework and childcare tasks remain gendered, there is nothing to suggest that men engage in so-called feminine activities *in a feminine way*. This point is congruent with our findings about fathers' involvement in play. When fathers play with their children, they seem to convey and promote ways of being that are traditionally associated with masculinity. This ties in with questions about the specificity of fathers' parental engagement: "Do men mother?" (Doucet, 2006). Our findings therefore have implications for the theoretical construction of fatherhood and contribute to asking to what degree it is autonomous from motherhood as a point of reference.

This article has limitations that are important to consider in interpreting the results. First, paternal involvement is only measured in terms of relative levels of engagement with children. We only know whether mothers consider fathers' involvement in different forms of housework and childcare tasks to be more than, less than, or the same as their own. We do not have any more objective information, such as data from time-use diaries about how long fathers spend doing housework tasks, on childcare, or playing with their children. Such information could be useful because absolute levels of paternal involvement appear to influence children's and teenagers' gender norms in addition to the impact of relative levels of involvement (Cano & Hofmeister, 2023). In our case, it is possible that one father who is less involved than the mother spends more time looking after his children than another father who is more involved than the mother who is often absent. Our data do not allow us to distinguish between these situations and studies with other data sources would be welcome to compare the effects of paternal involvement in absolute and relative terms. Second, our variable on children's play may be affected by bias relating to social desirability or memory insofar as it is the parents who estimate the frequency of their children's activities. It is possible that some stated practices relate more to those expected from children than to those in which they actually engage. This could introduce bias into our results if the social desirability bias were stronger in families where the father is involved at home than in those where he is not. This limitation is not, however, the most problematic because the parents' responses indicate the expected results of their children's gender socialization and therefore reflect parental expectations likely to influence that socialization. Finally, the analyses rely on data on paternal involvement and children's play reported at age 2 and are thus cross-sectional, despite the longitudinal nature of the Elfe survey. Further analyses would thus be necessary to identify the dynamic process of intergenerational transmission of gender norms and draw causal conclusions on the effects of paternal involvement.



## CONCLUSION

This article aimed to study the impact of fathers' domestic involvement on 2-year-old children's gendered play practices and thus on their internalization of gender roles, in the French context of persisting gender inequalities in the domestic sphere. Our results show that paternal involvement in housework tasks and physical care contributes to "undoing gender" in play activities for boys and, in doing so, narrows the gender gap in children's play. We also conclude that this "undoing gender" effect for boys is linked to a role modeling mechanism, that is to say a diffuse form of socialization because fathers' involvement in interactive care (play interactions) tends to reinforce activities gender-typed as masculine for both boys and girls. The contribution of this article lies in the fact it distinguishes between the different channels of paternal involvement and shows that they have different socializing effects: some contribute to "undoing masculinity" while others tend to reinforce it, at least in early childhood.

However, our research does not allow us to retrace with precision the chain of mechanisms linking fathers' domestic involvement to children's gendered play. Future research could therefore open up this black box, particularly by drawing on data providing access to children's point of view. It would be especially interesting to see how children perceive and take up paternal involvement. Seemingly insignificant paternal gender performances may have powerful effects on children's gender socialization just as, conversely, more formal, controlled actions may have no impact. It would also be interesting to have more detailed information regarding how children use toys and play games as it is possible that boys and girls do not play the same games or play with the same toys in the same way and that gender differences also emerge within the same activity. Quantitative or qualitative analyses on this topic would be useful in order to extend and enrich our findings, as well as to better grasp the mechanisms of formal and informal gender socialization.

A second important extension of this study would consist in adopting an intersectional approach analyzing the contrasting effects of class or race in terms of gender socialization. This would afford insight into the extent to which gender boundaries vary from one part of the social space to another, or according to families' geographical and cultural backgrounds. It would also allow an understanding of whether, and in what circumstances, assigning a given behavior to a given gender, or challenging such associations, serves social, cultural, or racial distinction strategies, which, in turn, would provide a more fine-grained understanding of how gender is done and undone according to social class and race.

The stalling gender revolution can be attributed to the neglect of men's participation in the domestic sphere (England, 2010; Goldscheider et al., 2015). Our findings expand upon this idea, showing that men's lack of involvement in the domestic sphere not only perpetuates women's disproportionate burden and hinders their professional integration but also jeopardizes the development of gender egalitarian practices in children. Consequently, our findings are in line with the policy implications of the "stalling gender revolution," emphasizing the need to adopt a more holistic approach to advancing gender equality. Measures encouraging men's domestic involvement, first and foremost paternity leave, have had well-documented transformative effects (Bünning, 2015; Hook, 2010). It seems that they help foster equality not only between partners, but also among children by transforming the internalization of gender roles.

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