US and Chinese preschoolers normalize household labor inequality

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Across many cultural contexts, the majority of women conduct the majority of their household labor. This gendered distribution of labor is often unequal, and thus represents one of the most frequently experienced forms of daily inequality because it occurs within one's own home. Young children are often passive observers of their family's distribution of labor, and yet little is known about the developmental onset of their perceptions of it. By the preschool age, children also show strong normative feelings about both equal resource distribution and gender stereotypes. To investigate the developmental onset of children's recognition of the (in)equality of household labor, we interviewed 3 to 10-y-old children in two distinct cultural contexts (US and China) and surveyed their caregivers about who does more household labor across a variety of tasks. Even at the youngest ages and in both cultural contexts, children's reports largely matched their parents', with both populations reporting that mothers do the majority of household labor. Both children and parents judged this to be generally fair, suggesting that children are observant of the gendered distribution of labor within their households, and show normalization of inequality from a young age. Our results point to preschool age as a critical developmental time period during which it is important to have parent–child discussions about structural constraints surrounding gender norms and household labor.

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One of the most universally experienced forms of inequality occurs within one's own home environment. In most countries around the world, women in opposite-gendered relationships do the majority of their household's labor (1, 2). This unequal and gendered nature of taking on one's family labor negatively influences marital relations (3), contributes to poorer representation of women in STEM careers (4), promotes lower labor force participation and opportunities (5, 6), and negatively influences women's mental health (7). This inequality persists even among families in which women work full-time, have a higher paying job, and report having a gender egalitarian ideology (8). As a result, when time spent on paid and unpaid labor (work and home) is combined, US women spend an additional two 40-h wk laboring more than men per year (1, 9).

Children are active observers and experiencers of their family's labor distribution, and it is notable that children grow up observing these gendered divisions during the same developmental time period that they develop ideas about fairness, inequality, and norms (10, 11). Despite the fact that the unequal gendered distribution of labor is well documented across multiple family and cultural contexts, very little is known about when children recognize and accept as normative their own family's labor distribution. This gap is striking given that experience with home inequality may be one of the first encounters that children have with witnessing the occurrence and subsequent perpetuation of social inequality. As such, children's experience of inequality in the home presents an important opportunity to study its consequences on children's understanding of social inequality more generally. This research thus investigates the developmental onset of children's understanding of their family's gendered distribution of labor through asking children directly (and comparing their answers to the parent report).

We sought to distinguish among three primary hypotheses: First, given young children's general sensitivity to equality norms surrounding how to share valuable and limited resources with others (12), preschool-aged children might notice violations of equality norms when they occur within their own family and thus report (accurately) when labor is unequally divided (we refer to this as the *sensitivity to inequality hypothesis*). Based on this hypothesis, children would both notice violations of uneven distribution and also judge them to be unfair. On the other hand, chronic experience with inequality may also help children to normalize it and thus judge the labor distribution to be fair (*normalization of inequality* hypothesis). This hypothesis is in line with findings suggesting that people show strong "is equals ought" tendencies and thus conflate descriptive norms and regularities (what happens) with descriptive norms (what ought to happen) (13), and by middle childhood, children do so specifically

in the context of family social roles (14). On this account, in order for children to normalize what occurs in their families, they must both notice the gendered distribution of labor and also judge it to be fair. Yet one last alternative possibility is that children may judge their family's labor as fair specifically because they do not notice it (*unobservant* hypothesis). Young children's positivity biases in predicting human behavior as well as their own lack of involvement in household chores (in many cultural contexts) may obscure their ability to observe inequality within their family context.

We surveyed two distinct cultural contexts: the United States and China, both of which represent a large portion of the world's population; in both, women perform the majority of their household's labor, despite the fact that women in both cultures have relatively high involvement in the labor market. Yet, the inequality occurs in distinct contexts: Chinese grandparents are more likely to be involved in household labor (US households are more likely to be limited to two parents), and the two cultures also have distinct socio-political structures, economic structures, and overall ranking in gender equality. Thus, the two cultures may ascribe different subjective meanings to the household inequality (HI), despite showing similar levels of objective inequality (time spent on housework). A cross-cultural developmental comparison is key to understanding whether objective features of inequality (amount of time spent on housework) or the cultural meaning that may be given to that inequality shape young children's recognition of it.

Results

All data are available at (15). We asked 215 Chinese (n = 106) and US (n = 109) 3 to 10-y-olds and one of their caregivers (187 mothers; 27 fathers; 1 gender not reported) to (separately) report to us who does more work across several categories of commonly-studied household tasks that were drawn from prior work on household labor distribution and included a comprehensive list independently validated as representing the majority of labor types within the home (16). For each task, both children and adults could indicate that their dads do more (scored as –1), their moms do more (+1), or they do about the same (0).

Adults reported gendered HI, with mothers in the family as doing the majority of the family labor, one-sampled test compared to egalitarian distribution of 0, $t(211)$ = 13.674, P < 0.001 (Fig. 1). This was true in both cultures (both one-sampled t's > 9, both P's < 0.001). Adults also normalized the inequality—caregivers found

this inequality to be fair [one sampled t-test compared to 0 ("neither fair nor unfair), $t(210)$ = 5.964, P < 0.001], though US adults were more likely to rate it as fair, $t(208.92)$ = –3.779, P < 0.001. Qualitative responses suggested that this may reflect a cultural difference in applying fairness norms to family considerations (with Chinese parents being more hesitant to do so).

We then turned to child report: Our analyses aimed to distinguish among three mutually exclusive hypotheses (unobservant hypothesis, sensitivity to inequality hypothesis, and normalization of inequality hypothesis). Children's reports looked strikingly similar to their parents in both cultures: Child HI Scores indicated mothers in the family as doing the majority of the family labor, one-sampled $t(212)$ = 4.911, P < 0.001 compared to the score of 0 (perfect equality), and this was true in both cultures (both t's > 2, both P's < 0.01).

Children's reports of parental involvement in chores resembled parental reports by the preschool age: A model predicting Child HI Scores from age, country, and the interaction and found a significant effect of age, B = 0.044, $SE(B)$ = 0.021, P = 0.040, and no other effects (all P's > 0.50). We conducted follow up t-tests for each age group (3, 4, 5, 6, 7, 8, and 9+) comparing Child HI Scores to 0. While 3-y-olds largely reported egalitarianism (one-sample t-test comparing to the egalitarian score of 0, P > 0.25), the other age groups did not (t's > 2.2, P's < 0.03). One exception was 6-y-olds, who also reported egalitarianism, though 4- and 5-y-olds, and all other age groups did not). In general, however, preschool-aged children's reports (3 to 5-y-olds) were significantly above 0, $t(90)$ = 2.783, P = 0.007. We thus rule out the unobservant hypothesis.

Despite observing their family's inequality, nearly all children normalized it: Children in both cultures judged their family's housework and childcare chore distribution as fair (94.6% and 95.0%, respectively). Average Fairness Scores were above chance levels, one-sample $t(205)$ = 35.61, P < 0.001.

Discussion

By the preschool age, across two distinct cultural contexts, children recognized the distribution of labor in their household labor and also judged it to be fair. We note that normalizing inequality in many resource distribution contexts is not typical of this age group (11), suggesting that early prescriptive-to-descriptive norm tendencies dictate that they believe what happens in the family context is also what is most appropriate.
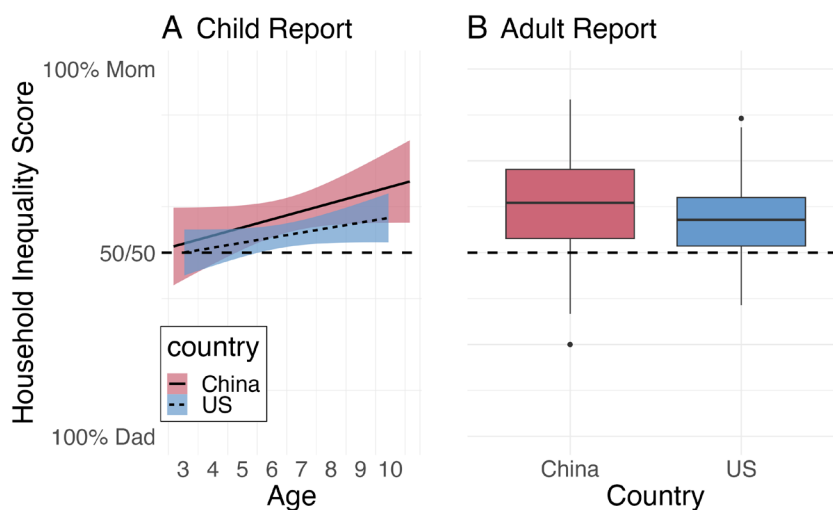

Fig. 1. Child (*A*) and Adult (*B*) Household Inequality Scores.

Notably, noticing HI is not without consequence and leads to an array of negative behavioral outcomes, including girls' expectations of future inequality and lower involvement in STEM careers (16). Nonetheless, to be clear, our work cannot—and does not—make normative claims about what *ought* to happen within the family, nor about whether the inequality reported is, in fact, unfair. Instead, we believe our work points to the critical value of discussing with young children about the structural, family, and personal causes of gendering of labor and provides evidence of preschool age as an appropriate developmental time window during which to do so. Without such discussion, young children may be left to infer their own pernicious biases and conclusions and may ultimately perpetuate these inequalities in their own and others' futures.

Materials and Methods

Participants were 215 children between 3 and 10 y of age (United States: N = 109; mean age = 6.34, range = 3.04 to 9.94, 57 girls, 50 boys, 2 other/not disclosed; China; China: N = 106, mean age = 6.47 y, range 2.67 to 10.66 y, 57 girls, 49 boys) recruited through local children's museums (US only), local schools (Chinese only), and online. The US population was drawn nationally but predominantly from urban and suburban centers in the greater Southern California area. Chinese children and their parents were recruited from the cities of Zhengzhou, Beijing, Shanghai, Changchun, and Xian (*SI Appendix*). Participation was limited to children from opposite-sex two-parent families. The majority of the sample was collected online via a scheduled Zoom interview, with the exception of 41 US children who participated in-person. Four additional children were tested but excluded due to experimenter error (n = 3) or prior participation in a pilot version of this task (n = 1). The parent available at the time of testing filled out the questionnaire. Parental consent was obtained for all participants, and all procedures were approved by the University of California–Irvine IRB. Participants received an e-gift card for $3/20 RMB or a small toy of equivalent value for participation. Families that had a second caregiver fill out a follow-up questionnaire for further analysis were offered an additional $3/20 RMB via an e-gift card.

Child Questionnaire. Children were interviewed by an experimenter fluent in the local language. All children initially completed a familiarization task in which they were shown black and white silhouettes depicting a female, male, and both that were used to represent mom, dad, or both parents. They were prompted to point to one of those silhouettes for each answer choice. They then completed three practice questions where they were asked who wore more dresses (priming them to choose mom), who wore more ties (priming them to choose dad), and who wore more socks (priming them to choose both). After training, children completed an eight-item questionnaire in which they were asked about a series of household and childcare tasks and asked which parent performed more of the task (mom, dad, or both). For each task, children were asked to choose between whether their mother performs more of the task (+1), father performs more of the task (−1), or both people perform the task equally (0). Item scores were averaged into a Child HI Score.

Children were also asked who does the most overall housework and childcare (separate questions) and whether they believed this was "OK" (scored +1) or "not OK" (scored −1). Scores across the two fairness questions were averaged to form a Fairness Score for child participants. All child data were audio- or video-taped, with the exception of 17 children whose parents did not provide video/audio consent or due to equipment failure (n = 2), and whose answers were transcribed by a research assistant present at the interview. Video/audio tapes were coded by two independent coders fluent in the language the child was tested in. Inter-rater reliability was 99.96% and 99.8% for US and Chinese data, respectively, and disagreements were resolved with a third coder (US data) or discussion (Chinese data).

Adult Questionnaire. Adults were surveyed using a longer 14-item questionnaire, but, for each item, could respond via a five-point Likert scale ranging from "Completely Mom" (+1), "Mostly Mom" (+0.5), "Both equally" (0), "Mostly Dad" (−0.5), "Completely Dad" (−1). Item scores were averaged to create an Adult HI Score. Eighty-seven percent of questionnaires were filled out by the child's mother, 13% father, and one parent did not disclose their gender. After completing the chore questionnaire, parents were asked two follow-up questions about their beliefs about overall housework and overall childcare (coded on the same Likert scale as above) and how fair they felt the overall labor division was ranging from Completely Fair (+1), Mostly Fair (+0.5), Neither Fair nor Unfair (0), Mostly Unfair (−0.5), to Completely Unfair (−1).

Data, Materials, and Software Availability. Anonymized .csv files data have been deposited in open science framework (https://osf.io/9u2kj/) (15).

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