Emotion Recognition Accuracy in Hierarchical Relationships

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Abstract

Whether superiors or subordinates are more accurate in assessing the emotions of others (aka emotion recognition accuracy, ERA) is a question that has gained much interest but yielded decidedly mixed empirical results. The present study investigates whether superiors and subordinates who are in an actual hierarchical relationship differ in their ERA. We investigated 142 superiors who each had recruited one of his or her direct subordinates (total N = 284). Superiors and subordinates each took a paper-pencil version of a standardized ERA test. Results showed that superiors were more accurate in assessing the emotions of other persons than subordinates were.

Reference


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What Contributes to the (Im)Balanced Division of Family Work Between the Sexes?

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Abstract
This study examines a comprehensive set of variables that have been proposed as explaining the imbalance of the division of family work between the sexes. The analyses use survey data of 735 dual-earner couples from Austria, the Netherlands, and Portugal. The results support theoretical explanations referring to time availability, gender ideology, relative resources, and the importance of characteristics of the family system. No support was obtained for the doing-gender perspective. Additional findings suggest that increased consideration of psychological concepts adds to the understanding of why women do more family work than men. The analyses revealed similarities, but also differences between the factors that contribute to the division of household labor and childcare.

Keywords
division of family work; household labor; childcare; dual-earner couples

Women in western societies still do the bulk of family-related tasks though their participation in the labor market has increased dramatically during the last decades (e.g., Coltrane, 2000). As a consequence, women typically find themselves in more unfavorable positions than their male counterparts when entering the workforce. This situation exacerbates issues of gender inequality. Increased knowledge about factors that contribute to the division of family work between men and women are thus of general interest. Several theoretical frameworks propose sets of variables that influence the division of family work, and parts of these propositions are supported by empirical evidence. Yet, comprehensive evaluation of the proposed variables and their validity across different kinds of family work and different socio-cultural backgrounds is lacking. The present research is an attempt to overcome some of these limitations. It examines a comprehensive set of variables that have been shown to be relevant to the division of family-related tasks in prior studies. In addition, the present study considers the divisions of household labor and childcare separately. Finally, the present analyses use the data of couples from three European countries that differ with respect to cultural values, family policies, and the typical division of family work between partners.
Family work has been defined as “unpaid work done to maintain family members and/or a home” (Shelton & John, 1996, p. 300). The typical domains of family work include household labor (e.g., cleaning, cooking), childcare (e.g., changing diapers, help with school work), maintenance and repair tasks (e.g., yard work, changing bulbs), caring for the elderly or other people in need of care, emotional work (e.g., emotional support for other family members), and management and financial tasks (cf. Coltrane, 2000). Studies have shown that women do about two-thirds of the family work on average (e.g., Davis & Greenstein, 2004; Evertsson & Nermo, 2004; Lewin-Epstein, Stier, & Braun, 2006; Presser, 1994; for reviews, see Coltrane, 2000; Steil, 1997). This holds true for past decades and the present and for countries all over the world. However, studies have also indicated that there are variations within this general imbalance (for reviews, see Coltrane, 2000; Kroska, 2004; Thompson & Walker, 1989).

Evidence points to the importance of distinguishing between different kinds of family work such as household labor and childcare (cf. Bulanda, 2004; Steil, 1997). For example, the division of household tasks is more imbalanced between men and women than the division of childcare (e.g., Bryson, 1983) and household labor is usually seen more negatively than childcare (e.g., Aldous, Mulligan, & Bjarnason, 1998).

Theoretical Explanations for the Imbalanced Division of Family Work Between the Sexes

Several theoretical frameworks have been advanced to explain the imbalanced division of family work (for a review, see Coltrane, 2000). The most established frameworks and relevant empirical evidence are briefly described in the following.

The relative-resources perspective proposes that the division of family work depends on the resources each partner brings into the relationship (e.g., income, education). The more resources one has, the more one can use them to negotiate out of family work. Accordingly, the larger the gap between the resources brought into the relationship by the man and the woman, the more imbalanced the division of family work. Relevant evidence shows, for instance, that the lower women’s income and education level are, in absolute terms or as compared to their partners, the more family work they generally do (e.g., Davis & Greenstein, 2004; Evertsson & Nermo, 2004; Gupta, 2007; Lewin-Epstein et al. 2006; Presser, 1994).

According to the time-availability or demand-response model, the division of family work depends on the time each partner has available and the need for each partner’s participation in family work. Studies have shown that the less time one spends on professional work and the more one’s partner spends on professional work, the more time one spends on family work oneself because the more time one’s partner spends on professional work, the greater the demands placed on oneself (e.g., Evertsson & Nermo, 2004; Gaszo-Windle & McMullin, 2003; Lewin-Epstein et al., 2006). In addition, a higher number of children living at home also results in greater demands on both partners and more time spent on family work (e.g., Davis & Greenstein, 2004; Evertsson & Nermo, 2004; Lewin-Epstein et al., 2006; Presser, 1994).

The gender-ideology model predicts that the division of family work depends on the traditionalism of the partners’ gender attitudes. The available evidence confirms that men with less traditional gender attitudes do more family work and women with less traditional gender attitudes do less family work as compared to those with more traditional attitudes. Consequently, those with less traditional attitudes usually have less imbalanced divisions of
family work (e.g., Bulanda, 2004; Greenstein, 1996; Kroska, 2004; Lewin-Epstein et al. 2006; Presser, 1994).

According to the doing-gender or social-construction-of-gender perspective, the division of family work depends in part on people's desire to live in line with their gender roles and to display their gender. The motivation to display one's gender is particularly strong when people deviate from their gender roles in certain respects. As doing family work has a symbolic meaning closely associated with the traditional female gender role, women who deviate from their traditional gender role in other areas (e.g., spending a lot of time on professional work, earning a lot of money, or being the family breadwinner) can compensate for this and display their gender by doing family work. Correspondingly, men who deviate from their traditional gender role (e.g., spending little time on professional work, earning little money) can display their gender by not doing family work (cf. Shelton & John, 1996). Thus, the more the female partner earns as compared to her partner, if her income exceeds his, the more imbalanced the division of family work will become. Similarly, women spending a great deal of time on professional work will tend to do more family work and men spending very little time on professional work will tend to do less family work to compensate for their deviation from the typical gender role and to display their gender.

Taken together, the doing-gender perspective contradicts some of the predictions derived from the time-availability model and the relative-resources perspective. The latter two models predict linear negative associations between the size of the women's share of family work and either time spent by women on professional work or women's income relative to their partner's, respectively. In contrast, the doing-gender perspective predicts curvilinear, U-shaped associations between income or time spent on professional work, respectively, and women's share in family work. If time spent by women on professional work or women's income relative to their partner's income exceeds a certain critical value, the time spent by women on family work should increase. Correspondingly, time spent by men on family work should decrease if their time spent on professional work or their income relative to their partner's income is very low and falls below a critical value. Supportive evidence for the doing-gender perspective has been reported, among others, by Bittman, England, Folbre, Sayer, and Matheson (2003), Brines (1993, 1994), Evertsson and Nermo (2004), Gaszo-Windle and McMullin (2003), Greenstein (2000), and Hochschild and Machung (1989).

Apart from the four theoretical frameworks and the variables discussed thus far, various other characteristics and dynamics of the situation of families have been used to explain the imbalanced division of family work between partners. Consistent findings highlight the relevance of age (e.g., Davis & Greenstein, 2004; Evertsson & Nermo, 2004; Lewin-Epstein et al., 2006), marital status (e.g., Blair & Lichter, 1991; Shelton & John, 1996), race (e.g., Shelton & John, 1996), and special phases of relationships as, for instance, the transition to parenthood (cf. Thompson & Walker, 1989).

The above review of relevant theorizing and research reveals that the majority of variables used to explain the imbalanced division of family work between the sexes reflect socio-demographic and structural characteristics of couples. Aside from gender attitudes, psychological variables have rarely been considered thus far.

**The Present Research**

The primary goal of the present study was the simultaneous examination of a broader set of variables that have been proposed as explaining the imbalanced nature of the division of family work between men and women. As the above review has shown, there is supportive evidence for each of the four explanatory frameworks and various family-system characteristics. However, the majority of empirical studies only considered variables
representing a single or, at best, a few of the theoretical perspectives. Comprehensive analyses that simultaneously consider variables representing several different perspectives and that, thus, provide evidence about the relative relevance of different variables are rare (cf. Coltrane, 2000; Gaszo-Windle & McMullin, 2003; Kroska, 2004). The present study aimed to rectify this.

A further goal of the present study was to examine the degree to which the variables contributing to the division of family work generalize across different kinds of family work. The majority of prior studies focused on the division of household labor and did not consider other family tasks such as childcare. As household labor and childcare differ with respect to how they are evaluated and divided between partners (e.g., Aldous et al., 1998; Bryson, 1983), the two kinds of family tasks may also differ with regard to the variables contributing to their division between partners.

In addition, the present study aims to make up for the relative neglect of psychological variables in explaining the division of family work. Thompson (1991) argued that doing family work should not only be viewed as a burden as it can also provide valued outcomes to men and women. Based on this argument, the present study examined the fulfillment people feel they get from doing family work as a psychological variable that may affect the size of their share of family work. We expected that the more fulfillment men and women get from doing family work, the more family work they will do. Accordingly, the more fulfillment the woman and the less fulfillment the man get from doing family work, the more imbalanced – to women's disadvantage – the division of work between the sexes should be.

A final goal of the present study was to examine the degree to which the findings concerning variables that contribute to the imbalance of the division of family work are consistent across different national samples. We thus considered three different national samples.

**Method**

**Sample and procedure**

The study used data from a convenience sample of 735 couples from three European countries: Austria (n = 213 couples), the Netherlands (n = 276 couples), and Portugal (n = 246 couples). The data were collected as part of a European project dealing with the reconciliation of professional and family work on the part of dual-earner couples with young children (cf. [www.eu-project-famwork.org](http://www.eu-project-famwork.org)). To increase the power of the statistical analyses, they were based on a combined data set of the three national samples. In addition, comparisons between the samples were also conducted to examine the stability of the findings across different national samples. The three countries were chosen from the seven countries that participated in the project because they best represent the variety of these countries. The three countries differ in various economic and societal aspects. For instance, in Austria and the Netherlands, the gross domestic product per capita is about twice as high as and the income gap between the sexes wider than that in Portugal (Eurostat, 2008a; International Monetary Fund, 2007). The fertility rate is lower in Austria and Portugal than in the Netherlands (Eurostat, 2008b). The three countries also differ with regard to parental-leave rules, availability of financial support for families, and coverage of childcare services, with a somewhat more difficult situation for families in Portugal (Berner & Mikula, 2003). There are also significant differences between the three national samples with respect to each variable considered in the following regression analyses, apart from men's fulfillment from doing childcare.¹
Couples were recruited via public kindergartens and other family institutions, via announcements in pediatricians' offices and at various workplaces, via online and e-mail announcements, and via word of mouth. Researchers visited each couple (both partners together) to give them the questionnaires, some information, and the instructions.

The couples who participated in the study fulfilled the following criteria. Both were employed at least 15 hours per week. They had at least one preschool-aged child and no child older than 12 years living in their home. In addition, both were willing to participate in the survey. Due to these participation criteria, the national samples were not representative samples. For example, the average education level was higher than that in the respective national populations. The proportion of participants with a university degree or higher vocational education varied from 45% (Portuguese men) to 79% (Dutch women). The proportion of married couples was 72% in the Dutch sample, 84% in the Austrian sample, and 98% in the Portuguese sample. Fifty percent of all couples had two children living at home (varying from 42% in Portugal to 55% in Austria).

Measures

The variables considered in the present analyses were assessed as part of an extensive questionnaire addressing various aspects of the work/life balance of dual-earner couples with young children. The two partners filled in the questionnaire independently of each other.

**Dependent variable**—The division of family work between the partners was assessed separately for household labor and childcare. Household labor was defined for the participants as comprising tasks like cleaning, cooking, doing the dishes, and laundering. Childcare was defined as comprising tasks like bathing, changing diapers, feeding the baby, playing, and helping with homework. Participants indicated the hours they themselves and their partner spent on household labor and childcare during an average 7-day week. Based on these data, we calculated the percentage of the total time spent by the woman on household labor and childcare, respectively. A value of 50% indicated an equal division of the respective tasks between the partners and a value above 50% indicated that the woman was spending more time on family work than her partner was. We used the scores derived from both partners' assessments as indicators for one latent outcome variable for each kind of family work in order to minimize bias due to systematic measurement error. The partners' assessments were correlated at a medium level (rs between 0.4 and 0.5; ps< .001). Analyses of differences between the partners' assessments revealed a significant egocentric bias: Men's and women's estimates of their own time spent on family work were significantly larger than the respective estimates of the partner.

**Independent variables**—The choice of variables was primarily guided by their relevance to the theoretical models discussed above. However, it was also influenced by the availability of suitable measures in the pool of variables assessed in the project that provided the data base for the present study.

The time-availability or demand-response perspective was represented by the number of children and the time spent on professional work by the man and the woman. The time spent was indexed by the participants' estimates of the time they typically spend on professional work (hours per week including contracted time, overtime, time for commuting, etc.). The relative-resources perspective was represented by the monthly incomes of both partners as

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1Details of the analyses comparing the means of the samples are not presented due to limited space, but can be received from the authors on request.
well as the woman's relative monthly income (as compared to her partner's). Monthly income was measured using an 11-step scale ranging from less than 500 euros to more than 4,000 euros in all countries. The present analyses considered the absolute incomes of each partner and a relative income value comparing the two respective partners. The latter variable was computed as the woman's income relative to the man's income (i.e., income\(_{\text{woman}} \div \text{income}_{\text{man}}\)). Consequently, the higher the relative income value, the higher the woman's income as compared to her partner's income.\(^2\) In addition, the squared relative income value was considered in the analyses to test for the U-shaped associations predicted by the doing-gender perspective.

The gender-ideology model was represented by the gender attitudes of the man and the woman. Gender attitudes were measured with eight items from Athenstaedt's (2000) Normative Gender-Role Orientation Questionnaire and a 6-point rating scale. Sample items are “Preschool children suffer if their mother is employed” and “Boys and girls should take over the same duties in the household.” High scores indicated less traditional gender attitudes. The reliability was low but acceptable for men and women (Cronbach's \(\alpha = .73\) and .67, respectively). The doing-gender perspective was represented by the squared measure of the woman's relative income and the squared measures of time spent on professional work by the man and the woman to test for the predicted U-shaped associations of these variables with women's relative share in family work.

The personal fulfillment one feels one gets from doing household labor and childcare, respectively, was measured with one item each on a 6-point rating scale (e.g., “How much does childcare contribute to your personal gratification?”). High scores indicated a high degree of fulfillment. Fulfillment from doing household labor was used in analyses concerning the division of household labor, and the fulfillment from doing childcare was used in analyses concerning the division of childcare. Further independent variables referred to the man's and the woman's age and the couple's marital status (effect-coded with −0.16 indicating married and 0.84 indicating non-married cohabitating).

Results

What variables contribute to the division of family work?

The main goal of the present study was to examine what variables contribute to the explanation of the division of family work between partners. For this purpose, we set up a hierarchical multiple regression model regressing the division of household labor and the division of childcare on a set of theoretically relevant predictor variables, including squared values of selected variables. Following the recommendations of Aiken and West (1991) for testing interaction effects in regression analyses, all variables except the effect-coded marital status were centered by their means separately for each country. We simultaneously estimated models predicting the division of household labor and the division of childcare. In addition, we made allowances for the mutual dependence of each partner's assessments of the division of household labor and childcare with correlated residuals between the outcome variables of the men and the women. We tested the models in a multiple-group analysis to account for possible differences between estimates for the national samples.

The analyses were performed in several steps. In the first step (Model 1), all theoretically relevant predictors were included for which main effects were estimated. In the second step (Model 2), we extended Model 1 by adding both partners' squared time spent on

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\(^2\)This kind of ratio score results in a non-linear scaling across the entire distribution because scores for women earning less or equal incomes as compared their partners are skewed within a range between a positive value close to zero and 1. Therefore, we performed a natural-log transformation on the original ratio scores.
professional work to examine curvilinear effects, and the relative income of the woman as compared to the man. In the third step (Model 3), we added the squared measure of relative income to examine the curvilinear effect of that variable.

**Division of household labor**—The results for the prediction of the division of household labor are summarized in Table 1. The upper section of Table 1 shows the results for Model 1. Significant effects resulted for the time men and women spent on professional work. Increased professional workload of women was associated with a less imbalanced division of household labor to women’s disadvantage ($\beta = -0.19; p< .001$) and increased professional workload of men was associated with a more imbalanced division ($\beta = 0.36; p< .001$). The effects of the partners’ incomes mirrored the effects of time spent on professional work. The higher the woman’s income, the lower her share of household labor ($\beta = -0.14; p< .001$); the higher the man’s income, the higher the woman’s share of household labor ($\beta = 0.16; p< .001$). Furthermore, we found small but significant effects for both partners’ age: Higher age of women was associated with larger shares of household labor performed by women ($\beta = 0.10; p< .05$) and higher age of men was associated with smaller shares of household labor performed by women ($\beta = -0.11; p< .01$).³

Marital status and the number of children did not predict the division of household labor. Both partners’ gender attitudes significantly predicted the division of household labor. The more traditional men’s ($\beta = -0.17; p< .001$) or women’s ($\beta = -0.17; p< .001$) attitudes, the more imbalanced the division of household labor between the partners to the women’s disadvantage. Again, these estimates reflect associations found while the partner’s gender attitudes were held constant. Finally, increasing fulfillment felt by women was associated with larger shares of household labor performed by women ($\beta = 0.07; p< .05$), while increasing fulfillment felt by men was associated with lower shares of household labor performed by women (and, thus, higher shares of household labor performed by men; $\beta = -0.08; p< .05$).

Model 2 in the second section of Table 1 shows the results for curvilinear associations between the proportion of household labor performed by women and both partners’ time spent on professional work, and the (linear) effect of women’s income relative to their partner’s income. A significant effect resulted for squared time spent by men on professional work ($\beta = -0.18; p< .001$). As can be seen in Figure 1, women’s share of household labor increases with increasing time spent by men on professional work. This increase in the share diminishes with higher amounts of time spent by men on professional work. A similar, albeit only marginally significant, effect resulted for time spent by women on professional work ($\beta = 0.09; p< .10$). The decrease in women’s share of household labor with increasing time spent by women on professional work diminishes with greater amounts of time spent by women on professional work (Fig. 1).

Women’s relative income (as compared to their partner’s) did not explain additional variance (Model 2). Testing for a curvilinear effect of women’s relative income on their share of household labor (Model 3) yielded no significant effect, as shown in the third section of Table 1.

**Division of childcare**—Table 2 summarizes the results for the prediction of the division of childcare. The upper section of Table 2 shows the results for Model 1. The results highly correspond to the results concerning the division of household labor. This holds true with

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³It is important to note, however, that the age of woman and man were significant predictors only when the age of both partners was simultaneously considered in the analysis. This indicates that these age effects are due to the residualized age differences controlling for the absolute age of the partners.
respect to both partners’ time spent on professional work, both partners’ income, marital status, women’s gender attitudes, and both partners’ felt fulfillment from doing childcare.

Contrary to the results concerning the division of household labor, number of children was negatively associated with women’s share of childcare, suggesting that women’s relative share of childcare slightly decreases with an increasing number of children ($\beta = -0.08; p < 0.05$). No significant effect was obtained for both partners’ age or for men’s gender attitudes, at least when women’s attitudes were held constant.

Model 2 in the second section of Table 2 shows the results for curvilinear associations between the proportion of childcare performed by women and the time spent by both partners on professional work as well as the (linear) effect of women’s income relative to their partner’s income. Curvilinear effects of time spent by men and women on professional work (men: $\beta = -0.25; p < 0.001$; women: $\beta = 0.19; p < 0.001$) indicate attenuation toward the higher end of the distribution. This shows that the effect of time spent on professional work on the division of childcare diminished for people who reported high amounts of professional work. The shapes of these curvilinear effects correspond to those found for the division of household labor (cf. Fig. 1). No significant effect was found for women’s income relative to their partner’s income.

Testing for a curvilinear effect of women’s relative income (Model 3) yielded a significant negative curvilinear effect ($\beta = -0.11; p < 0.05$) as shown in the third section of Table 2, while the linear effect was significantly positive ($\beta = 0.28; p < 0.05$; not shown in Table 2). In combination, these results indicate a positive association between women’s relative income and their share of childcare within the lower range of women’s relative income that diminishes toward the higher range of women’s relative income. In other words, increasing relative women’s income was associated with an increasing share of childcare performed by women, particularly within the lower range of relative income.

Remarkably, these effects of women’s relative income counteract the main effects of partners’ absolute incomes. If the effects of partners’ absolute and relative incomes are considered in combination, it follows that a higher absolute income of women (or a lower absolute income of men) was associated with smaller proportions of childcare performed by women particularly if the woman’s income was substantially lower than the man’s. Women with an income similar to their partner’s performed equal amounts of or more childcare than women who earned less than their partner even if their absolute income was higher. Again, it is important to note that the counteractive effects of women’s relative income weakened significantly if women clearly earned more than their partner. That is, the incremental effects for women who earned more than their partners were weak, and they were non-significant if women earned at least 1.37 times more than their partner did.

Differences between national samples

The present study used data from three different European countries to increase the power of the statistical analyses and to examine the degree to which the findings concerning variables that contribute to the imbalance of the division of family work generalize across different national samples. We conducted multiple-group analyses to account for possible differences between estimates for the national samples. By constraining the parameter estimates to be equal across the three national samples, this procedure allows to straightforwardly test for significant differences in these estimates. For this purpose, we computed modification indices. These indices indicate possible improvements in the model by relaxing the equality constraint for a specific predictor and a specific sample. The modification indices show only few significant differences concerning the contribution, and non-contribution, of variables to the division of family work. Most of these differences were differences in the strength of
associations, but not differences in the direction or significance. Only five results indicated country-specific differences in the significance and/or the direction of associations. But the respective zero-order correlations do not significantly differ between the national samples, even in these cases. For this reason, we will not present details concerning the modification indices (although they can be provided by the authors on request).

Discussion

The goal of this study was to identify variables that contribute to the division of family work between sexes and to test whether the findings generalize across different kinds of family work and across different countries. The selection of variables was guided by different theoretical frameworks explaining the imbalanced nature of the division of work to women’s disadvantage.

Which theoretical perspectives are supported by the present results?

The findings support the given theoretical explanations to different extents. In accordance with the time-availability or demand-response model and related evidence (e.g., Davis & Greenstein, 2004; Evertsson & Nermo, 2004; Gaszo-Windle & McMullin, 2003; Lewin-Epstein et al. 2006), the division of family work is more imbalanced to women’s disadvantage, the more time men and the less time women spend on professional work. The finding that the division of childcare becomes less imbalanced with an increasing number of children provides support for the demand-response facet of this theoretical perspective. Increasing demands in the family domain may motivate men to take over larger shares of work and thus contribute to a less imbalanced division of childcare.

In line with the gender-ideology model, the more traditional gender attitudes the partners held, the more imbalanced the division of family work. This is in agreement with the evidence obtained in other studies (e.g., Bulanda, 2004; Greenstein, 1996; Kroska, 2004; Lewin-Epstein et al., 2006).

The present analyses partly supported the relative-resources perspective. The absolute size of men’s and women’s incomes significantly contributed to the division of family work. The woman’s relative income (as compared her partner’s) was not relevant to the division of family work. The present pattern of results is consistent with Gupta’s (2007) results: It is the absolute rather than the relative amount of income that matters. According to Gupta (2007), this corresponds with the relative-resources perspective, as people with higher absolute incomes are likely less dependent and more powerful in negotiation processes within the relationship, regardless of their relative income.

No support was obtained for the doing-gender perspective. The U-shaped associations between the division of family work and time spent by men and women on professional work and women’s relative income, respectively, either were not significant or did not correspond to the prediction.

Additional findings point to the relevance of certain characteristics of the situation of the family. The findings concerning the number of children were already mentioned above. They are largely in line with previous studies. Contrary to the evidence obtained in other studies (cf. Coltrane, 2000; Shelton & John, 1996), married couples do not have a more imbalanced division of family work than cohabitating couples. This may be due to the high proportion of married couples in our samples. In addition, and also in contrast to other studies (e.g., Davis & Greenstein, 2004; Evertsson & Nermo, 2004; Lewin-Epstein et al., 2006), no age effects were obtained when the correlation between the partners’ ages was
controlled for. Presumably this is due to the restricted range of age and/or the special phase of life of couples with young children in the present samples.

For exploratory purposes, the present study examined the fulfillment people feel they get from doing family work as an additional psychological variable that might affect the share of family work done by each partner. Felt fulfillment does indeed contribute significantly to the explanation of the division of family work between men and women. The results are in accordance with Thompson’s (1991) proposal that doing family work can also provide valued outcomes to men and women and should not only be viewed as a burden.

The amount of variance explained in the regression analyses, varying from 31% to 54%, is remarkable if compared to other studies (e.g., Evertsson & Nermo, 2004; Greenstein, 2000; Lewin-Epstein et al., 2006; Presser, 1994). Notably, however, a considerable amount of variance is left unexplained. The present results, that psychological variables (i.e., gender attitudes and fulfillment felt from doing family work) explained considerable amounts of variance, encourage the further consideration of psychological concepts in future theorizing and empirical studies. For instance, variables such as the partners' individual standards of tidiness, the liking of certain tasks, and the competency for doing household labor and childcare that men and women ascribe to themselves and to their partner might also affect the share of family work done by each partner. Unfortunately, no data for these variables were available for the present sample.

**To what extent do the findings for the division of household labor and that of childcare converge?**

The division of both kinds of family work were found to be imbalanced to women’s disadvantage. However, the division of childcare was less imbalanced than that of household labor. In addition, both sexes reported feeling more fulfillment from doing childcare tasks than from doing household labor. Both of these findings are in line with others studies (e.g., Aldous et al., 1998; Bryson, 1983).

The regression analyses yielded rather similar results for the division of household labor and that of childcare. Differences between the two kinds of family work were found mainly with respect to men’s gender attitudes, the number of children, and the quadratic trend of women's relative income. Due to the lack of relevant theory, we can only speculate about possible explanations for these differences. *Men’s gender attitudes* affected the division of household labor, but not the division of childcare. Household labor is generally regarded as more unpleasant than childcare, and its division is more gendered. It seems possible that men's gender attitudes are more influential when it comes to unpleasant and out-of-role tasks as compared to more intrinsically rewarding tasks. *Number of children* contributed to the division of childcare, but not to the division of household labor. It is plausible that the number of children is more closely linked with increasing demands for childcare than household labor. In addition, the increasing pressure on men to contribute more to the family work when demands increase may be stronger concerning childcare than household labor.

Taken together, the present study revealed only a few differences between the division of household labor and that of childcare. Most of them seem to be related to differences in the evaluation of the two kinds of family tasks and the normative expectations regarding men's participation in childcare and household labor. Thus, future theorizing and research should shift attention from the division of household labor to a more comprehensive set of different kinds of family work.
Differences between national samples

The examination of differences between the three national samples concerning variables that contribute to the imbalance of the division of family work revealed only few and rather negligible differences. The consistency of the results is remarkable because the three countries from which the samples were drawn differ in various economic and societal characteristics, and significant differences between sample means occurred with nearly all variables considered in the study.

Limitations

Several limitations of our study warrant caution in the interpretation and generalization of the present results. First, due to the recruitment criteria and the requirement that both partners of a couple had to participate in the study, it is based on convenience samples that are not representative of the general population in the respective countries. Second, the cultural diversity of the countries considered is limited and strong conclusions about cross-cultural similarities or differences require replication with more diverse samples. Third, the choice of variables representing the different theoretical perspectives was limited because the data were taken from a survey that had not been designed specifically for the purposes of the present study. This may have impaired testing the different theoretical perspectives with equal rigor. Finally, the relatively small number of couples for which the woman’s income exceeded the man’s in the present sample, and also in European countries in general (cf. Eurostat, 2008a), may have worked against finding support for the doing-gender perspective.

Conclusions

The present study tested a diverse collection of variables for their relevance to the division of family work between men and women. The results largely support the assumptions of the time-availability model and the gender-ideology model and point to the importance of certain characteristics of the family system. Partial support was obtained for the relative-resources perspective. The weak support for the relative-resources perspective and the lack of support for the doing-gender perspective may be partly due to the specific samples and the methodology of the present study.

The present analyses used data about the division of household labor and childcare from three different countries, which allowed us to assess the degree to which the findings generalize across different familial tasks and countries. The results revealed many similarities between household labor and childcare, but also differences. The differences admonish against careless generalization of theorizing and empirical evidence across different kinds of family work. The remarkable consistency of findings across different national samples should be interpreted with caution: It must not be mistaken as evidence that no cultural differences exist in the variables that contribute to the division of family work between the sexes. Though differences exist (see above), the three countries are rather similar in other respects as all three are member states of the European Union. Thus, the consistencies should be taken only as evidence of the stability of findings across different samples from a rather homogeneous cultural region.

To conclude, the limitations mentioned above call for additional studies that validate and complement the present findings. Nevertheless, the present study adds to the literature on the division of family work in multiple ways, such as with the simultaneous examination of a comprehensive set of variables representing different theoretical perspectives within one study, the consideration of different kinds of family work, and the comparative analyses of data from three different national samples.
Acknowledgments

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Berner M, Mikula G. Reconciliation of work and family life: External resources for families in Austria, Belgium, Germany, Italy, the Netherlands, Portugal and Switzerland (Research Report FamWork-A-03/02). 2003 Retrieved February 1, 2006, from http://www.eu-project-famwork.org


Figure 1.
Associations between time spent by men and women on professional work and division of family work
### Table 1

Summary of Regression Analysis for Variables Predicting the Division of Household Labor

<table>
<thead>
<tr>
<th>Variable</th>
<th>$B$</th>
<th>$SE$</th>
<th>$t$</th>
<th>$\beta$</th>
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</thead>
<tbody>
<tr>
<td><strong>Model 1</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Time spent on professional work – W</td>
<td>−.17</td>
<td>.04</td>
<td>−3.97***</td>
<td>−.19</td>
</tr>
<tr>
<td>Time spent on professional work – M</td>
<td>.35</td>
<td>.04</td>
<td>8.06***</td>
<td>.36</td>
</tr>
<tr>
<td>Income – W</td>
<td>−1.17</td>
<td>.30</td>
<td>−3.96***</td>
<td>−.14</td>
</tr>
<tr>
<td>Income – M</td>
<td>1.02</td>
<td>.25</td>
<td>4.09***</td>
<td>.16</td>
</tr>
<tr>
<td>Age – W</td>
<td>.33</td>
<td>.14</td>
<td>2.37*</td>
<td>.10</td>
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<tr>
<td>Age – M</td>
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<td>.11</td>
<td>−2.61**</td>
<td>−.11</td>
</tr>
<tr>
<td>Marital status</td>
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<td>1.19</td>
<td>.61</td>
<td>.02</td>
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<tr>
<td>Number of children</td>
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<td>.65</td>
<td>−1.33</td>
<td>−.05</td>
</tr>
<tr>
<td>Gender attitudes – W</td>
<td>−3.47</td>
<td>.77</td>
<td>−4.50***</td>
<td>−.17</td>
</tr>
<tr>
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<td>.67</td>
<td>−4.13***</td>
<td>−.17</td>
</tr>
<tr>
<td>Fulfillment – W</td>
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<td>2.13*</td>
<td>.07</td>
</tr>
<tr>
<td>Fulfillment – M</td>
<td>−.74</td>
<td>.31</td>
<td>−2.40*</td>
<td>−.08</td>
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<td><strong>Model 2</strong></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Squared time spent on professional work – W</td>
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<td>.00</td>
<td>1.62†</td>
<td>.09</td>
</tr>
<tr>
<td>Squared time spent on professional work – M</td>
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<td>.00</td>
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<td>−.18</td>
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<tr>
<td>Relative income (W/M)</td>
<td>3.74</td>
<td>2.42</td>
<td>1.55</td>
<td>.17</td>
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<tr>
<td><strong>Model 3</strong></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Relative income (W/M)$^2$</td>
<td>−.32</td>
<td>.57</td>
<td>.55</td>
<td>−.02</td>
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<table>
<thead>
<tr>
<th></th>
<th>Model 1</th>
<th>Model 2</th>
<th>Model 3</th>
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<tbody>
<tr>
<td>$R^2$ Austria Model 1 vs 2: $F(3, 178) = 4.48^{**}$</td>
<td>.43</td>
<td>.47</td>
<td>.47</td>
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<tr>
<td>$R^2$ Netherlands Model 1 vs 2: $F(3, 243) = 7.36^{***}$</td>
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<td>$R^2$ Portugal Model 2 vs 1: $F(3, 177) = 5.56^{**}$</td>
<td>.47</td>
<td>.42</td>
<td>.42</td>
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</table>

*Note*: Austria: $n = 194$; Netherlands: $n = 259$; Portugal: $n = 193$.

† $p < .10$.
* $p < .05$.
** $p < .01$.
*** $p < .001$.
### Table 2

Summary of Regression Analysis for Variables Predicting the Division of Childcare

<table>
<thead>
<tr>
<th>Variable</th>
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<th>t</th>
<th>β</th>
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<tr>
<td><strong>Model 1</strong></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Time spent on professional work – W</td>
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<td>.04</td>
<td>−5.71***</td>
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<tr>
<td>Time spent on professional work – M</td>
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<td>.04</td>
<td>7.88***</td>
<td>.38</td>
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<tr>
<td>Income – W</td>
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<td>.24</td>
<td>−4.11***</td>
<td>−.15</td>
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<tr>
<td>Income – M</td>
<td>.91</td>
<td>.20</td>
<td>4.51***</td>
<td>.19</td>
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<td>Age – W</td>
<td>.13</td>
<td>.11</td>
<td>1.26</td>
<td>.05</td>
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<tr>
<td>Age – M</td>
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<td>.00</td>
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<tr>
<td>Marital status</td>
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<td>.03</td>
<td>.00</td>
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<tr>
<td>Number of children</td>
<td>−1.16</td>
<td>.50</td>
<td>−2.34*</td>
<td>−.08</td>
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<tr>
<td>Gender attitudes – W</td>
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<td>.60</td>
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<td>−.11</td>
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<td>−.06</td>
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<td>Fulfillment – W</td>
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<td>.07</td>
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<tr>
<td>Fulfillment – M</td>
<td>−1.59</td>
<td>.31</td>
<td>−5.18***</td>
<td>−.16</td>
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<td><strong>Model 2</strong></td>
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<tr>
<td>Squared time spent on professional work – W</td>
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<td>.00</td>
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<td>.19</td>
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<tr>
<td>Squared time spent on professional work – M</td>
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<td>.00</td>
<td>−4.49***</td>
<td>−.25</td>
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<tr>
<td>Relative income (W/M)</td>
<td>2.65</td>
<td>2.01</td>
<td>1.32</td>
<td>.15</td>
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<td><strong>Model 3</strong></td>
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<tr>
<td>Relative income (W/M)$^2$</td>
<td>−1.05</td>
<td>.50</td>
<td>−2.11*</td>
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<td>.54</td>
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<td>.31</td>
<td>.31</td>
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</table>

Note: Austria: $n = 194$; Netherlands: $n = 259$; Portugal: $n = 193$.

† $p < .10$.

* $p < .05$.

** $p < .01$.

*** $p < .00$.

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