FAMILIES’ CONCEPTUALIZATIONS OF A FAIR DIVISION
Chinese and South Korean Families’ Conceptualizations of a Fair Household Labor Distribution

Allegra J. Midgette

Author Note

Allegra J. Midgette, Frank Porter Graham Child Development Institute, University of North Carolina at Chapel Hill.

The author would like to thank the families that participated in this study, the research assistants who assisted with interviewing and coding, as well as Dr. In Jae Lee, Dr. Di Gao and the Center for Political and Ideological Education at Northeast Normal University who assisted with the recruiting of participants. Thanks go to Dr. Larry Nucci, Dr. Kris Gutiérrez, and Dr. Laura Nelson for their invaluable assistance in preparing earlier versions of this manuscript. Thanks also go to Dr. Jennifer Coffman and Ms. Jalieh Shepard for assistance in revising earlier versions of this manuscript. This work was supported in part by a postdoctoral fellowship provided by the National Institute of Child Health and Human Development (T32-HD007376) through the Frank Porter Graham Child Development Institute, University of North Carolina at Chapel Hill. This study was also funded in part by the Pamela and Kenneth Fong Fellowship as well as by the Center for Korean Studies at the University of California, Berkeley. The writing of this article was supported by the Woodrow Wilson Dissertation Fellowship in Women’s Studies.

Correspondence concerning this article should be addressed to Allegra J Midgette,

This is the author manuscript accepted for publication and has undergone full peer review but has not been through the copyediting, typesetting, pagination and proofreading process, which may lead to differences between this version and the Version of Record. Please cite this article as doi: 10.1111/jomf.12673

This article is protected by copyright. All rights reserved.
Abstract

Objective: The present study set out to investigate how Chinese and South Korean families conceptualize fairness and a fair division of household labor. Background: Previous cross-cultural research has found that a good portion of women and men find the gendered division of household labor fair. In response, scholars have attempted to discover what factors lead to a greater likelihood of reporting a gendered division fair. However, the majority of the scholarship on fairness perceptions has been limited to survey methods, in which fairness is not defined, and the individual’s reasons for their fairness perception is not investigated. Method: This study employed thematic analysis of in-depth interviews with the members of 12 Chinese (N=39) and 12 Korean (N=40) families. Results: No participation in household labor was considered across families to be unfair. On the other hand, the majority of participants justified an unequal division to be fair based on gendered applications of differences in time-availability and levels of tiredness, in which the amount of housework that each member should do was left unspecified. Conclusion: Many adult participants believed that fairness should not apply to the family context. Instead, most participants argued that household labor should be divided based on emotional satisfaction, maintained through mechanisms of understanding and agreement. Implications: Future studies on fairness perceptions should clearly define what they mean by “fairness,” and the gendering of gender-neutral appearing justifications such as time-availability should be further investigated.

Key words: cross-cultural issues; families; gender; housework; inequalities

* note: doesn’t include fairness in the keywords, but ideally it should be added
Chinese and South Korean Families’ Conceptualizations of a Fair Household Labor Distribution

The near universal gendered nature of the uneven distribution of housework has been well established. In most countries around the world, women have been found to be primarily responsible for their families’ household labor (Greenstein, 2009; Jansen, Weber, Kraaykamp & Verbakel, 2016; Öun, 2013). East Asian countries, in particular, have very low rates of men’s participation in housework: Japanese and South Korean men report the two lowest amounts of time spent on housework in all OECD countries (OECD, 2014/2016). Moreover, in the case of China, women’s continued greater time spent in doing domestic labor in addition to being employed in the labor force (Oshio, Nozaki & Kobayashi, 2013l; Qian & Sayer, 2016) has resulted in Chinese women spending more total time laboring overall than all other East Asian men and women (OECD, 2008). Despite the gender unequal nature of the division of household labor, previous research has found that many women and men perceive their family’s division as fair (Greenstein, 2009; Jansen et al., 2016; Öun, 2013; Zuo & Bian, 2001). However, research on fairness perceptions regarding household labor distribution has been mainly focused on Western countries, has been predominantly limited to one family member’s perspective. In addition, prior studies have primarily relied on surveys as a form of data gathering, in which fairness is not defined, and the process by which individuals come to apply fairness to their situation is unexamined. As a result, how families conceptualize a “fair distribution,” and their underlying assumptions and expectations regarding how housework should be divided, have been rarely investigated.
The present study, through thematic analysis of in-depth interviews with each member of 24 Chinese and South Korean families during the year 2017, examined how family members conceptualized a fair distribution and their expectations of how housework should be distributed within the family. All family members living in each household were included in the study because children and grandparents are often both laborers and consumers of their households’ labor, although their perspectives have rarely been investigated (Beagan, Chapman, D’Sylva, & Bassett, 2008). Furthermore, inclusion of all of the members of a family allowed for a more comprehensive understanding of how family members may share certain narratives, while also capturing potential differences based on family roles. In particular, analysis of each family member’s interviews provided the opportunity for insight into why individuals may be accepting of the gendered unequal division of household labor as well as into how individuals conceptualize “fairness” when applied to the case of a household’s labor distribution.

LITERATURE REVIEW

*Fairness Perceptions: Do most individuals find a gendered division fair?*

Despite the near universality of women’s greater overall participation in household labor, cross-cultural research has found that on average almost half of women consider their family’s distribution of household labor fair (Carriero & Todesco, 2016; Greenstein, 2009; Lachance-Grzela & Bouchard, 2010; Öun, 2013; Zuo & Bian, 2001). For example, based on the International Social Survey Program (ISSP) 2002 module on Family and Changing Gender Roles, Braun, Lewin, Epstein, Stier, and Baumgärtner (2008) found that across 25 countries...
(excluding China and South Korea), 44.6% of women described themselves as doing a fair share of
their family’s household labor. Analyzing the same dataset, Greenstein (2009) found that
across 30 countries, 41% of women believed that they did “roughly” their fair share of
housework (p.1042). Tai and Baxter (2018) also analyzed the same data set (ISSP, 2002), but
extended previous findings by also analyzing men’s fairness perceptions. They found that across
29 countries 45% of women perceived the division of housework as fair to them, whereas 56%
of men perceived the housework division as fair to their wives. Overall, then, about half of men
and women consider their family’s division fair, while the other half of men and women consider
it unfair.

Of relevance to the current study, although not often studied (Japan appears to be the East
Asian representative in cross-cultural surveys), a few studies have investigated Chinese and
South Koreans’ fairness perceptions regarding the gendered distribution of housework. Based on
interviews with 39 Beijing couples in 1998, Zuo and Bian (2001) found that although women
were more likely to do most of the housework (30 out of 39 couples), the majority (percentages
not reported) of men and women reported finding their division of housework fair. Jansen,
Weber, Kraaykamp, and Verbakel (2016) analyzed the 2012 wave of the Family and Changing
Gender Roles module of the ISSP cross-cultural survey. Their analysis found that almost a third
(31.1%) of Korean men and 36.7% of Korean women said they did their fair share of housework.
Surprisingly, considering that Korean men have one of the lowest reported daily time spent on
housework in all OECD countries (OECD, 2014), only 36.7% of Korean women reported doing
more than their fair share, whereas 34.3% of Korean men reported doing more than their fair share (Jansen et al., 2016).

Overall, a review of the literature suggests a range of agreement on the perceived fairness of the gendered division of household labor. Part of the variability in fairness perceptions in the literature can be accounted for by country differences (Braun et al., 2008; Jansen et al., 2016; Öun, 2013), gender differences (Hornung, 2018; Nordenmark & Nyman, 2003; Tai & Baxter, 2018), and the actual proportion of inequality in each family’s distribution of housework (Öun, 2013). However, since the majority of these studies relied on surveys where fairness was undefined, I would argue that another cause for variability in fairness perceptions may be as a result of differences in the ways in which individuals are conceptualizing fairness.

Factors Influencing Fairness Perceptions

Fairness perceptions have been found to be important in influencing marital conflict, women’s marital satisfaction, and women’s mental health (Coltrane, 2000). As a result, fairness perceptions regarding the gendered division of housework has been an important matter of study across a variety of disciplines (Coltrane, 2000; Okin, 1989). Although fairness is rarely defined in household labor studies, this manuscript follows Thompson’s (1991) definition of fairness as the judgment that someone is being justly or unjustly treated. In the majority of household labor division research, it is assumed that a fairness judgment follows two possible division outcomes: one based on equity (e.g., a difference in labor in response to differences in other factors such as time-availability), or equality (e.g., a 50-50 division; See Thompson, 1991). However,
individuals have been found to consider their division as fair in situations in which there is neither an equal split, nor an unequal division based on differences in other outcomes (e.g., partner who brings in something else to the relationship can do less). As a result, the scholarship has turned towards investigating what are the factors, both micro and macro, that influence how individuals come to judge the fairness of their household’s labor division (Lachance-Grzela & Bouchard, 2010).

The primary factor found to influence fairness perceptions is the actual proportion of inequality in the division of housework (Coltrane, 2000; Lachance-Grzela, McGee & Ross-Plourde, 2019; Mikula, Riederer, & Bodi, 2012; Öun, 2013; Young, Wallace, & Polachek, 2015). In other words, the greater the disparity that is perceived between one’s share of housework compared to one’s partner, the more likely one is to perceive this as unfair, and conversely the greater equality between partner’s division the more likely it is to be perceived as fair. Other factors, such as differences in spouse’s time-availability, relative resources that they bring to the relationship (i.e., income, education, occupational status), an individual’s gender ideology, as well as the larger national context have also been found to play a role in influencing fairness perceptions. For example, women who are more gender egalitarian, earn more income, are more educated, and work full-time, are more sensitive to housework inequality and are more likely to perceive it as unfair (Greenstein, 2009; Jansen et al., 2016; Kawamura & Brown, 2010). In addition, individuals in countries where there is greater overall gender equality (i.e., such as low gender-based income gap) and more women participate in the labor market, are more likely to
consider an unequal division of labor unfair (Braun et al., 2008; Greenstein, 2009; Jansen et al., 2016). However, these factors alone have been found to be insufficient in accounting for differences in fairness perceptions. Other studies have found that women who live in a gender egalitarian society, hold gender egalitarian views, are high income earners, are highly educated, and work full-time, although more likely to find inequality unfair, will not always do so, and can still perceive a gendered unequal division of labor as fair (Nordenmark & Nyman, 2003; Park, 2017; Tai, & Baxter, 2018; Young et al., 2015; Zuo & Bian, 2001).

Another main theoretical perspective that is employed to understand how individuals make sense of the fairness of a gendered unequal division of housework is the distributive justice framework (Thompson, 1991). According to this framework, comparison referents (e.g., do other wives work as hard as I do? Is my husband doing less than other husbands?), outcome values (e.g., do I get what I want out this situation? Does this benefit me?), and justifications (e.g., is there a legitimate reason for why I do more or less?) are all factors that influence how individuals decide whether the division of labor between partners is fair (Major, 1987; Thompson, 1991). In support of this framework, Carriero and Todesco (2016) found that comparison referents did impact fairness perceptions, but unexpectedly only in the case of men’s comparison referents (i.e., comparing the behavior of a man with those of other men), where if the man was seen as doing less than other men, it was more likely to be considered unfair. In another study, Lachance-Grzela, McGee, and Ross-Plourde (2019) argued for the importance of investigating relational and interpersonal outcome values, such as whether women felt like they
mattered. They found that Canadian mothers who thought they mattered less to their family members were more likely to consider doing a greater contribution of housework as unfair.

Furthermore, Braun, Lewin-Epstein, Stier, and Baumgärtner (2008) have suggested that gender ideology, relative resources, and time availability may not only be factors that influence an individual’s fairness perception indirectly, but may also serve as justifications that legitimize a family’s uneven distribution of housework.

As suggested by Braun et al. (2008), studies based primarily on interviews have found that participants legitimized inequality in their fairness perceptions in several ways. Zuo and Bian (2001) argued that a certain gender ideology - women should be more involved in housework and men should be more involved in their paid work - was central to explaining why Chinese individuals found the unequal division of housework fair. These gendered expectations created gendered resources, where men used the status and financial advantages they gained from being more invested in the workplace to buy themselves out of housework responsibilities, whereas women’s greater investment in the domestic space bought them out of the expectation of being equally responsible for breadwinning. This same gender ideology has been found to influence Korean men’s involvement in housework in a study surveying 466 men (Moon & Shin, 2015).

On the other hand, Beagan, Chapman, D’Sylva, and Bassett (2008) found that gender-neutral appearing justifications were often employed to legitimize the gendered practice of foodwork. They studied how Canadian families from three different ethno-cultural backgrounds
rationalized their family’s division of foodwork. Innovatively, their study involved in-depth interviews with several family members in each family, including teens and at times elders. They found that family members gave rationales for the gendered division of foodwork that mainly relied on justifications that held unspoken assumptions about gender. For instance, most family members, including the children, argued that mothers did the majority of the family’s foodwork as a result of differences in time availability. However, although the rationale appeared to be gender neutral, they noted that the time availability argument was employed even when both parents had similar work schedules, which suggested that participants had underlying gendered assumptions regarding work—such as that men’s work may be perceived as more onerous—even if both worked full-time. When not explicit about gender roles, participants’ underlying assumption that women should be responsible for the foodwork became apparent in both descriptions of children and fathers as “helpers,” as well as mothers’ statements that it was “easier” for them to do the work to avoid family conflict and arguments. As Beagan et al. (2008) summarized, “the desire for family harmony seems to outweigh the desire for equal sharing.” (p.665). Overall, Began et al. (2008) suggested that language couched in gender neutral terms such as time, scheduling, and reduction of conflict were operationalized in ways that supported the continued gendered inequity in how foodwork is divided.

In a mixed methods study, Nordenmark and Nyman (2003) interviewed Swedish couples and found that the distributive justice framework was in part supported by their findings. In particular, Swedish couples were found to compare themselves with their spouses, particularly in
terms of leisure time availability. Having enough leisure time, they found, was an important factor in how couples came to evaluate the fairness of their division. In addition, some couples appeared to consider a situation fair if it was perceived to be as a result of joint-decision making (a valued outcome). Gender ideology was also found to be important in influencing fairness perceptions, in that the belief that women are primarily responsible for the housework served as a rationale for the current division of labor and also influenced what outcomes each spouse valued. Furthermore, they found the expectation that a 50-50 split is considered just to be less present than they expected. Nordenmark and Nyman (2003) suggested that how participants defined and understood terms such as housework, fairness, and gender equality, influenced participants’ fairness perceptions. Based on the complexity in how participants approached and defined the issue of fairness in the family, they recommend that qualitative methods should also be included alongside quantitative methods.

In summary, current research suggests the intricate and multifaceted nature of fairness perceptions regarding the gendered division of household labor. The findings have shown that the processes of making sense of what makes a fair distribution is influenced by national context, individual level factors, such as gender ideologies, and justifications that may be influenced by underlying gendered assumptions. However, much of the research has relied on surveys and questionnaires to parse out how different factors may relate to individuals’ fairness perceptions, and how individuals are themselves coming to decide whether their division is fair remains largely unaddressed. Recent qualitative research on this topic is scarce, has mainly been limited
to Western contexts, and has rarely investigated how all of the members of a family experience and make sense of the gendered division of labor (Beagan et al., 2008). Heeding Nordenmark and Nyman’s (2003) call to investigate how individuals conceptualize fairness, housework, and gender equality, this study attempts to contribute to the literature by presenting an in-depth analysis of how South Korean and Chinese families conceptualize and make sense of the issue of fairness in the case of housework distribution.

**The Present Study**

The present study presents data collected from a larger study investigating Chinese and South Korean adults’ and children’s reasoning and experiences of the gendered division of housework. This paper presents findings based on the thematic analysis of in-depth interviews with 39 Chinese and 40 South Korean family members. While both countries have undergone swift economic growth (Ji, Wu, Sun, & He, 2017; Kim, 2017) and have been historically influenced by Confucianism (Park & Cho, 1995; Tu, 1998), they have structural differences in how labor is gendered (OECD, 2008/2014). Although women do the majority of the housework in both countries (Oshio, Nozaki & Kobayashi, 2013), 50% of Korean women participate in the labor force (Qian & Sayer, 2016), while 72% of Chinese mothers with children ages six and under are employed (National Bureau of Statistics in China, 2011). Therefore, while both countries continue to be influenced by the Confucian traditional expectation that women be primarily responsible for the home (Ji et al., 2017; Park & Cho, 1995), Chinese families have been found to be more egalitarian in their division in comparison with their Korean counterparts.
(Oshio et al., 2013). An investigation into both Chinese and Korean families allowed for cross-cultural comparison with non-Western samples that went beyond simplistic “Western” and “Eastern,” dichotomies. Instead, studying families living in these two countries created an opportunity for more in-depth analysis of how families’ cultural logics and meaning-making are created in distinct spaces, with different organizations of gendered labor, but with some shared historical roots.

The current analysis focused on how family members conceptualized a fair division of household labor. This study had the following two main research questions:

1) How are family members conceptualizing fairness and a fair division of labor in the family?

2) What are family members’ expectations for how housework should be divided and how are these expectations gendered?

METHODS

A total of 12 Chinese and 12 South Korean families participated in this study. Although all Korean families were nuclear, two of the participating Chinese families had grandmothers who were part of the household and who participated in this study. (See Table 1 and 2 for participant characteristics). This study followed the standards set by the University of California, Berkeley IRB, where each family member provided informed verbal consent/assent to participate, and parents gave verbal consent for their child (ren) to participate. Participants were recruited during the Spring and Fall of the 2017 year in the urban centers of Seoul, South Korea and Changchun, China. The sample was obtained through convenience sampling, where teachers
from local schools reached out to parents they thought would be interested in participating in the study. All participating families met the following criteria: 1) all family members living in the same household participated; 2) couples were married with at least one child 9-18 years of age; 3) at least one parent had received a college degree.

As can be seen in Tables 1 and 2, participants reported their age, occupation, hours worked weekly, individual yearly income, years of completed education, and the rank order of who did the most housework in the family (Housework). For ease of reference, each family member was assigned an ID, where they were assigned a family number (e.g. Family 5=5), and two letters that specified their country of origin and family role. Participants from Chinese families were assigned a “C” following their family number, while participants from Korean families were assigned a “K.” The letter following the country of origin indicated the participant’s family role, such that “F” stood for father, “M” for mother, “G” for grandmother, “S” for son, and “D” for daughter. In families where there were two daughters or sons, a number was assigned based on their numerical birth order (i.e., the second daughter received a 2).

Table 1. Chinese Families’ Demographic Characteristics

<table>
<thead>
<tr>
<th>Family ID#</th>
<th>Housework</th>
<th>Role</th>
<th>Age</th>
<th>Occupation</th>
<th>Work Hours</th>
<th>Income $</th>
<th>Education (Years)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1CG</td>
<td>Most</td>
<td>Grandma</td>
<td>62.5</td>
<td>Retired</td>
<td>--</td>
<td>5,000</td>
<td>12</td>
</tr>
<tr>
<td>1CF</td>
<td>2nd most</td>
<td>Father</td>
<td>35.8</td>
<td>Sales Rep</td>
<td>48</td>
<td>6,666</td>
<td>15</td>
</tr>
<tr>
<td>1CM</td>
<td>3rd most</td>
<td>Mother</td>
<td>35.4</td>
<td>Nurse</td>
<td>32</td>
<td>11,666</td>
<td>15</td>
</tr>
<tr>
<td>1CD</td>
<td>Least</td>
<td>Daughter</td>
<td>9.3</td>
<td>Student</td>
<td>--</td>
<td>--</td>
<td>3</td>
</tr>
<tr>
<td>2CM</td>
<td>Most</td>
<td>Mother</td>
<td>38.6</td>
<td>Housewife</td>
<td>--</td>
<td>--</td>
<td>15</td>
</tr>
<tr>
<td>2CD</td>
<td>2nd most</td>
<td>Daughter</td>
<td>16.3</td>
<td>Student</td>
<td>--</td>
<td>--</td>
<td>10</td>
</tr>
<tr>
<td>2CD2</td>
<td>2nd most</td>
<td>Daughter</td>
<td>13.3</td>
<td>Student</td>
<td>--</td>
<td>--</td>
<td>8</td>
</tr>
<tr>
<td>2CF</td>
<td>Least</td>
<td>Father</td>
<td>43.5</td>
<td>Office manager</td>
<td>50</td>
<td>83,333</td>
<td>16</td>
</tr>
</tbody>
</table>
### Note
Income in dollars for ease of reference. * Mother was currently on parental leave.

**Table 2. Korean Families’ Demographic Characteristics**

<table>
<thead>
<tr>
<th>Family ID#</th>
<th>Role</th>
<th>Housework Division</th>
<th>Age</th>
<th>Occupation</th>
<th>Work Hours</th>
<th>Income $</th>
<th>Education (Years)</th>
</tr>
</thead>
<tbody>
<tr>
<td>3CM</td>
<td>Most</td>
<td>Mother</td>
<td>42.1</td>
<td>Bank clerk</td>
<td>40</td>
<td>10,000</td>
<td>16</td>
</tr>
<tr>
<td>3CF</td>
<td>2\textsuperscript{nd} most</td>
<td>Father</td>
<td>44.5</td>
<td>Administrator</td>
<td>45</td>
<td>100,000</td>
<td>19</td>
</tr>
<tr>
<td>3CD</td>
<td>Least</td>
<td>Daughter</td>
<td>16.7</td>
<td>Student</td>
<td>--</td>
<td>--</td>
<td>10</td>
</tr>
<tr>
<td>4CM</td>
<td>Most</td>
<td>Mother</td>
<td>43.8</td>
<td>Businesswoman</td>
<td>30</td>
<td>100,000</td>
<td>14</td>
</tr>
<tr>
<td>4CB</td>
<td>2\textsuperscript{nd} most</td>
<td>Father</td>
<td>46</td>
<td>Office manager</td>
<td>40</td>
<td>16,666</td>
<td>16</td>
</tr>
<tr>
<td>4CD</td>
<td>Least</td>
<td>Daughter</td>
<td>16.3</td>
<td>Student</td>
<td>--</td>
<td>--</td>
<td>10</td>
</tr>
<tr>
<td>5CF</td>
<td>Most</td>
<td>Father</td>
<td>46.1</td>
<td>Administrator</td>
<td>40</td>
<td>13,333</td>
<td>16</td>
</tr>
<tr>
<td>5CM</td>
<td>2\textsuperscript{nd} most</td>
<td>Mother</td>
<td>42.2</td>
<td>School teacher</td>
<td>40</td>
<td>30,000</td>
<td>19</td>
</tr>
<tr>
<td>5CS</td>
<td>Least</td>
<td>Son</td>
<td>14.1</td>
<td>Student</td>
<td>--</td>
<td>--</td>
<td>8</td>
</tr>
<tr>
<td>6CG</td>
<td>Most</td>
<td>Grandma</td>
<td>65.3</td>
<td>Cleaner</td>
<td>10-15</td>
<td>3,333</td>
<td>9</td>
</tr>
<tr>
<td>6CM</td>
<td>2\textsuperscript{nd} most</td>
<td>Mother</td>
<td>39.3</td>
<td>College teacher</td>
<td>0*</td>
<td>10,000</td>
<td>19</td>
</tr>
<tr>
<td>6CS</td>
<td>3\textsuperscript{rd} most</td>
<td>Son</td>
<td>10.2</td>
<td>Student</td>
<td>--</td>
<td>--</td>
<td>4</td>
</tr>
<tr>
<td>6CF</td>
<td>Least</td>
<td>Father</td>
<td>42.7</td>
<td>Office worker</td>
<td>40</td>
<td>10,000</td>
<td>16</td>
</tr>
<tr>
<td>7CF</td>
<td>Most</td>
<td>Father</td>
<td>47</td>
<td>Office manager</td>
<td>40</td>
<td>30,000</td>
<td>16</td>
</tr>
<tr>
<td>7CM</td>
<td>2\textsuperscript{nd} Most</td>
<td>Mother</td>
<td>44.7</td>
<td>Office manager</td>
<td>40</td>
<td>20,000</td>
<td>16</td>
</tr>
<tr>
<td>7CD</td>
<td>Least</td>
<td>Daughter</td>
<td>13.9</td>
<td>Student</td>
<td>--</td>
<td>--</td>
<td>8</td>
</tr>
<tr>
<td>8CM</td>
<td>Equal</td>
<td>Mother</td>
<td>40.4</td>
<td>Office manager</td>
<td>40</td>
<td>16,666</td>
<td>16</td>
</tr>
<tr>
<td>8CF</td>
<td>Equal</td>
<td>Father</td>
<td>41.6</td>
<td>Office worker</td>
<td>40</td>
<td>16,666</td>
<td>16</td>
</tr>
<tr>
<td>8D</td>
<td>Least</td>
<td>Daughter</td>
<td>9.1</td>
<td>Student</td>
<td>--</td>
<td>--</td>
<td>3</td>
</tr>
<tr>
<td>9CM</td>
<td>Most</td>
<td>Mother</td>
<td>47.7</td>
<td>College teacher</td>
<td>20</td>
<td>16,666</td>
<td>19</td>
</tr>
<tr>
<td>9CF</td>
<td>2\textsuperscript{nd} most</td>
<td>Father</td>
<td>47.1</td>
<td>Bank manager</td>
<td>40</td>
<td>66,666</td>
<td>21</td>
</tr>
<tr>
<td>9CS</td>
<td>Least</td>
<td>Son</td>
<td>13.3</td>
<td>Student</td>
<td>--</td>
<td>--</td>
<td>8</td>
</tr>
<tr>
<td>10CM</td>
<td>Most</td>
<td>Mother</td>
<td>48.9</td>
<td>Accountant</td>
<td>40</td>
<td>10,000</td>
<td>15</td>
</tr>
<tr>
<td>10CF</td>
<td>2\textsuperscript{nd} most</td>
<td>Father</td>
<td>49</td>
<td>Office worker</td>
<td>40</td>
<td>25,000</td>
<td>15</td>
</tr>
<tr>
<td>10CD</td>
<td>Least</td>
<td>Daughter</td>
<td>12.7</td>
<td>Student</td>
<td>--</td>
<td>--</td>
<td>6</td>
</tr>
<tr>
<td>11CM</td>
<td>Most</td>
<td>Mother</td>
<td>42.1</td>
<td>College teacher</td>
<td>30</td>
<td>16,666</td>
<td>19</td>
</tr>
<tr>
<td>11CF</td>
<td>2\textsuperscript{nd} Most</td>
<td>Father</td>
<td>43.3</td>
<td>Engineer</td>
<td>37.5</td>
<td>26,666</td>
<td>16</td>
</tr>
<tr>
<td>11CS</td>
<td>Least</td>
<td>Son</td>
<td>16.4</td>
<td>Student</td>
<td>--</td>
<td>--</td>
<td>10</td>
</tr>
<tr>
<td>12CM</td>
<td>Most</td>
<td>Mother</td>
<td>36.4</td>
<td>School teacher</td>
<td>40</td>
<td>10,000</td>
<td>15</td>
</tr>
<tr>
<td>12CF</td>
<td>2\textsuperscript{nd} most</td>
<td>Father</td>
<td>39.9</td>
<td>Office worker</td>
<td>40</td>
<td>16,666</td>
<td>14</td>
</tr>
<tr>
<td>12CS</td>
<td>Least</td>
<td>Son</td>
<td>9.6</td>
<td>Student</td>
<td>--</td>
<td>--</td>
<td>3</td>
</tr>
<tr>
<td>Code</td>
<td>Gender</td>
<td>Relation</td>
<td>Social Status</td>
<td>Occupation</td>
<td>Age</td>
<td>Income</td>
<td>Year</td>
</tr>
<tr>
<td>------</td>
<td>--------</td>
<td>----------</td>
<td>---------------</td>
<td>------------</td>
<td>-----</td>
<td>--------</td>
<td>------</td>
</tr>
<tr>
<td>1KM</td>
<td>Mother</td>
<td>Most</td>
<td>43.3</td>
<td>School teacher</td>
<td>40</td>
<td>41,373</td>
<td>16</td>
</tr>
<tr>
<td>1KF</td>
<td>Father</td>
<td>Least</td>
<td>45.9</td>
<td>Office worker</td>
<td>40</td>
<td>82,747</td>
<td>16</td>
</tr>
<tr>
<td>1KS2</td>
<td>Son</td>
<td>Least</td>
<td>9.1</td>
<td>Student</td>
<td>--</td>
<td>--</td>
<td>4</td>
</tr>
<tr>
<td>1KS</td>
<td>Son</td>
<td>Least</td>
<td>13.1</td>
<td>Student</td>
<td>--</td>
<td>--</td>
<td>7</td>
</tr>
<tr>
<td>2KF</td>
<td>Father</td>
<td>Most</td>
<td>45.1</td>
<td>Legal consultant</td>
<td>70-80</td>
<td>82,747</td>
<td>16</td>
</tr>
<tr>
<td>2KM</td>
<td>Mother</td>
<td>2nd Most</td>
<td>45.4</td>
<td>Professor</td>
<td>56</td>
<td>49,648</td>
<td>22</td>
</tr>
<tr>
<td>2KD</td>
<td>Daughter</td>
<td>Least</td>
<td>13.5</td>
<td>Student</td>
<td>--</td>
<td>--</td>
<td>8</td>
</tr>
<tr>
<td>3KM</td>
<td>Mother</td>
<td>Most</td>
<td>37.1</td>
<td>School teacher</td>
<td>40</td>
<td>37,236</td>
<td>18</td>
</tr>
<tr>
<td>3KF</td>
<td>Father</td>
<td>2nd Most</td>
<td>43</td>
<td>Office worker</td>
<td>40</td>
<td>62,888</td>
<td>18</td>
</tr>
<tr>
<td>3KD</td>
<td>Daughter</td>
<td>Least</td>
<td>10.11</td>
<td>Student</td>
<td>--</td>
<td>--</td>
<td>5</td>
</tr>
<tr>
<td>4KM</td>
<td>Mother</td>
<td>Most</td>
<td>40.6</td>
<td>School teacher</td>
<td>40</td>
<td>41,373</td>
<td>17</td>
</tr>
<tr>
<td>4KF</td>
<td>Father</td>
<td>2nd most</td>
<td>43.7</td>
<td>Office worker</td>
<td>44</td>
<td>49,648</td>
<td>16</td>
</tr>
<tr>
<td>4KD</td>
<td>Daughter</td>
<td>Least</td>
<td>12.5</td>
<td>Student</td>
<td>--</td>
<td>--</td>
<td>8</td>
</tr>
<tr>
<td>5KM</td>
<td>Mother</td>
<td>Most</td>
<td>48.6</td>
<td>Housewife</td>
<td>--</td>
<td>--</td>
<td>14</td>
</tr>
<tr>
<td>5KD</td>
<td>Daughter</td>
<td>2nd Most</td>
<td>17.1</td>
<td>Student</td>
<td>--</td>
<td>--</td>
<td>12</td>
</tr>
<tr>
<td>5F</td>
<td>Father</td>
<td>Least</td>
<td>47.3</td>
<td>Office Worker</td>
<td>40-45</td>
<td>39,718</td>
<td>12</td>
</tr>
<tr>
<td>6KM</td>
<td>Mother</td>
<td>Most</td>
<td>49.1</td>
<td>School teacher</td>
<td>40</td>
<td>49,648</td>
<td>16</td>
</tr>
<tr>
<td>6KF</td>
<td>Father</td>
<td>2nd most</td>
<td>49.2</td>
<td>School teacher</td>
<td>40</td>
<td>49,648</td>
<td>18</td>
</tr>
<tr>
<td>6KS</td>
<td>Son</td>
<td>Least</td>
<td>17</td>
<td>Student</td>
<td>--</td>
<td>--</td>
<td>11</td>
</tr>
<tr>
<td>7KM</td>
<td>Mother</td>
<td>Most</td>
<td>40</td>
<td>Housewife</td>
<td>--</td>
<td>--</td>
<td>16</td>
</tr>
<tr>
<td>7KF</td>
<td>Father</td>
<td>2nd Most</td>
<td>43.1</td>
<td>Dentist</td>
<td>50</td>
<td>157,220</td>
<td>22</td>
</tr>
<tr>
<td>7KS</td>
<td>Son</td>
<td>Least</td>
<td>10.7</td>
<td>Student</td>
<td>--</td>
<td>--</td>
<td>4</td>
</tr>
<tr>
<td>8KM</td>
<td>Mother</td>
<td>Most</td>
<td>48.8</td>
<td>Housewife</td>
<td>49**</td>
<td>1,000</td>
<td>16</td>
</tr>
<tr>
<td>8KF</td>
<td>Father</td>
<td>2nd most</td>
<td>50.1</td>
<td>Minister</td>
<td>98</td>
<td>(undisclosed)</td>
<td>16</td>
</tr>
<tr>
<td>8KS</td>
<td>Son</td>
<td>Least</td>
<td>12.9</td>
<td>Student</td>
<td>--</td>
<td>--</td>
<td>7</td>
</tr>
<tr>
<td>8KS2</td>
<td>Son</td>
<td>Least</td>
<td>10.10</td>
<td>Student</td>
<td>--</td>
<td>--</td>
<td>5</td>
</tr>
<tr>
<td>9KM</td>
<td>Mother</td>
<td>Most</td>
<td>44.6</td>
<td>School teacher</td>
<td>35</td>
<td>16,384</td>
<td>16</td>
</tr>
<tr>
<td>9KF</td>
<td>Father</td>
<td>2nd most</td>
<td>47.1</td>
<td>Office worker</td>
<td>40</td>
<td>57,923</td>
<td>16</td>
</tr>
<tr>
<td>9KD</td>
<td>Daughter</td>
<td>Least</td>
<td>10.6</td>
<td>Student</td>
<td>--</td>
<td>--</td>
<td>4</td>
</tr>
<tr>
<td>10KM</td>
<td>Mother</td>
<td>Most</td>
<td>50.6</td>
<td>Housewife</td>
<td>--</td>
<td>--</td>
<td>16</td>
</tr>
<tr>
<td>10KF</td>
<td>Father</td>
<td>Least</td>
<td>54.9</td>
<td>Civil servant</td>
<td>40</td>
<td>82,747</td>
<td>24</td>
</tr>
<tr>
<td>10KS</td>
<td>Son</td>
<td>Least</td>
<td>10.6</td>
<td>Student</td>
<td>--</td>
<td>--</td>
<td>4</td>
</tr>
<tr>
<td>10KS2</td>
<td>Son</td>
<td>Least</td>
<td>10.6</td>
<td>Student</td>
<td>--</td>
<td>--</td>
<td>4</td>
</tr>
<tr>
<td>11KM</td>
<td>Mother</td>
<td>Most</td>
<td>44.7</td>
<td>Librarian</td>
<td>40</td>
<td>16,549</td>
<td>16</td>
</tr>
<tr>
<td>11KF</td>
<td>Father</td>
<td>2nd most</td>
<td>47.1</td>
<td>Civil Servant</td>
<td>40</td>
<td>49,648</td>
<td>16</td>
</tr>
<tr>
<td>11KS</td>
<td>Son</td>
<td>Least</td>
<td>17.6</td>
<td>Student</td>
<td>--</td>
<td>--</td>
<td>11</td>
</tr>
<tr>
<td>11KS2</td>
<td>Son</td>
<td>Least</td>
<td>13.11</td>
<td>Student</td>
<td>--</td>
<td>--</td>
<td>8</td>
</tr>
<tr>
<td>12KM</td>
<td>Mother</td>
<td>Most</td>
<td>53.11</td>
<td>Housewife</td>
<td>--</td>
<td>--</td>
<td>14</td>
</tr>
</tbody>
</table>
FAMILIES’ CONCEPTUALIZATIONS OF A FAIR DIVISION

<table>
<thead>
<tr>
<th></th>
<th>Father</th>
<th>2nd most</th>
<th>Office worker</th>
<th>40</th>
<th>66,198</th>
<th>16</th>
</tr>
</thead>
<tbody>
<tr>
<td>12KF</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12KD</td>
<td>Daughter</td>
<td>Least</td>
<td>Student</td>
<td>--</td>
<td>--</td>
<td>11</td>
</tr>
</tbody>
</table>

Note. Income is in dollars for ease of reference. ** Korean mother reported helping her minister husband with his work and also having a part-time job when needed selling clothes.

As part of the larger study, each family member filled out a demographic questionnaire and a daily routine survey checklist, in addition to completing a 45 minute to one hour interview. Each interview was conducted individually, in a separate room, in the participant’s native tongue and audio recorded. The author, who is professionally fluent in Mandarin completed the interviews with Chinese families, whereas a trained Korean research assistant, assisted by the author, completed the interviews with Korean families. Families were compensated for their participation. Chinese families were offered 325RMB (~$50), and Korean families were offered 100,000 KWON (~$93.94) for their participation.

Interviews involved questions regarding the gendered nature of the division of housework and the reasoning employed for making sense of whether the division was fair. The interview consisted of three parts: 1) hypothetical scenarios in which various division of housework were presented and participants evaluated whether the division was fair and shared their justifications; 2) open-ended questions regarding the family’s own current division of housework, the reason for such a division, whether it was fair and why, and their definition of fairness. In addition, all adults were asked to share the history of how the family divided the housework from the beginning of their marriage until the present. Grandparents shared the history of their own marriage’s division, as well as the history of their household labor division since they joined
their children’s household; 3) general open ended questions regarding gender and gender differences in ability to do housework, as well as their beliefs about gender equality and whether their current society was gender equal.

**Coding & Reliability**

All interviews were transcribed in their original language. Two Chinese and two South Korean trained research assistants coded the interviews in their respective languages. Each research assistant first met with the author and then independently read all of the interviews from the country that they were assigned. After several readings, each assistant developed their own codebook delineating the codes they developed based on the ideas or concepts that they found present in participants’ interviews. For example, all four coders, in addition to the author, independently found the concept of “having time” and differences in time to be mentioned as an important factor in how housework should be distributed in both Chinese and Korean interviews. In their own codebooks (Boyatzis, 1998), each assistant created the code name “time availability,” defined the term based on how it was being employed in the data, and provided an example taken from the transcripts (Contact author for codebook). After having completed their codebook, each pair of assistants met with the author and developed a unified codebook for each country. During the meetings each team shared their individual codebooks, discussed their definitions and examples and agreed on a final code, definition, and example.

Following the creation of a tentative codebook for each data set, each pair of assistants tested the codebook on 10% of the transcripts and made modifications if they did not agree on
the code’s definition or application. The resulting finalized codebook was employed by the
research assistants to code 20% of the transcripts of the data set on Dedoose (Qualitative
Software). Following their initial coding, coder reliability was calculated and established based
on the 20% of excerpts already coded in Dedoose. The Chinese team established a coder
reliability with a Cohen’s $\kappa = .81-.90$ (R1, R2), whereas for the Korean team, the coders had an
agreement of Cohen’s $\kappa = .85-.86$ (R1, R2). After establishing reliability, each team coded the
remaining interviews.

All transcriptions were coded in Dedoose. The analysis was focused on the codes that
addressed the following questions: 1) how are families conceptualizing what is considered fair
when it comes to housework? (e.g., “can’t do nothing!”,” “it should be reasonable”), and 2) how
do families think housework should be divided? (e.g., if they differ on time; if they share equally,
etc). Themes were created based on the co-occurrence and relationship between codes, their
usage in the transcripts, as well as how the codes addressed the study’s research questions. For
example, the theme of “participation” was developed through analyzing a series of indicators
describing expectations as to what individuals should be doing in terms of housework (e.g., help,
“do something,” “be active,” “collaborate” or “share”). Following the development of themes,
Dedoose allowed for investigating whether the types of participation (e.g., equality), for
example, were more or less present in the interviews of those of a particular family role (e.g., did
children say this more?), within particular families (e.g., did family members agree?), and in
families from China or South Korea (e.g. did Korean families expect equality more?).
RESULTS

Overall Within-Family Agreement on Housework Division and Fairness Perceptions

In the majority of participating families, women were reported as doing the bulk of the family’s housework. In eleven out of the twelve Korean families and in nine out of twelve Chinese families, the mother or grandmother was reported as primarily responsible for the housework. On the other hand, in one of the Korean and two of the Chinese families, fathers were reported as doing the majority of the housework. Although interviewed individually, in 20 of the 24 families, all family members agreed in their reports of which family member did most of the housework. Of the four families in which disagreement was present, the source of the disagreement was between children and their parents; in all four families, children reported their father as more involved than both parents reported him as being.

In terms of fairness perceptions, overall, almost half (38) of the participants perceived their division fair, about forty percent (33) perceived the division as unfair, and the remaining ten percent (8) stated that they perceived the division as neither unfair or fair, but rather reasonable. However, within-family agreement among all family members regarding the fairness of their family’s division was very low. Only two Chinese families and three Korean families had within-family agreement in their fairness perceptions regarding their family’s division.

Although members of a family agreed that there was inequality, they disagreed on whether this unequal division was fair. In order to better account for the variance in how members within these families make sense of the issue of the fairness of an unequal division of
household labor, the remainder of this article presents some of the most salient themes present in family members’ expectations and assumptions regarding a fair housework division.

*Thematic Findings*

*Expectations for Housework Participation: Do Something*

A major theme present in participants’ interviews was the expectation that all family members should do some housework. In other words, all participants across family roles in both China and Korea believed that one person doing nothing was considered unfair. This theme emerged in response to prompts regarding how housework should be divided in both hypothetical and actual situations. For instance, when prompted to give an example of an unfair division, a Chinese father (ID#3CF) stated: “One party does nothing, and the other does everything, that is definitely not fair” (一方什么都不干，另一方全干，那肯定是不公平的).

The expectation that a family member should do (some) housework held even in cases in which a family member was described as busier or more burdened. Elucidating her position that each spouse has the responsibility to do housework independent of other factors, a Chinese mother (ID#4CM) stated:

> It doesn’t matter if I am busy at work, or not busy, the family is communal. Actually, if he is tired from work and does housework, that is a way of participating in the family. It should be this way. (translation by author)

那不管我的工作忙也好，不忙也好，家庭是，共同的，其实他工作很累做家务，是对家庭的参与，应该是这样的.
Although explicit in their expectation that doing none of the housework was unacceptable, the majority of participants were consistently ambiguous about the amount of housework that each member should do. Explicit statements regarding amount of involvement, although rare, tended to be used in situations in which strict equality was expected. Children, in particular, were more likely to expect a strictly equal division than their parents, and to believe that a fair division be an equal one. For example, when asked how a family should divide the housework, a Korean son (ID#1KS) stated, “Neither of them should be doing more work than the other, but rather be fair and do the same amount” (둘다 많이하면 안되고 공평하게 똑같이 하면 될것같아요. … 하는 양이 똑같다는거요). However, adult participants, particularly Korean adults, rarely expected a strictly equal division. Instead, it was only in situations in which both spouses were seen as experiencing the same conditions - either being equally tired and equally involved in the labor market - was an expectation of equality in sharing the housework mentioned.

Rather than expecting an equal (50-50) division, or detailing “how much” housework should be done, participants were more likely to suggest types of household labor participation in which the amount of labor remained unspecified. Both Korean and Chinese participants were more likely to expect another family member to “help,” and to “collaborate” than they were to “share equally.” To “help” was the most frequent descriptor employed in both countries to qualify a family member’s participation in household labor.
As an unspecified type of participation to “help” signaled a minimal and limited form of involvement in household labor. Helping was often described as involving less responsibility:

Housework should be something you sometimes help to do, or help do a little, even if it is not your main responsibility, but you should help together, together do housework. I think it should be done this way. (Father, ID#2CF)

I obviously think we’re supposed to do it together, but the other person thinks of it as helping me out. (Mother, ID#4KM)

As implied by the above excerpts, fathers were often described as those who should help or saw themselves as “helpers.” Chinese women, in particular, were more likely than their husbands, to say that the husband should help. Reflected in the aforementioned excerpts, there existed a tension between fathers’ expectations that they should help, as an acceptable form of limited involvement, and some mothers’ expectations that housework should be more equally shared. However, in the majority of the cases, the expected limited forms of participation were vague in their specifications regarding amount of involvement. For instance, when asked how to make a division fair, a Korean father (ID#11KF) stated, “That’s why they need to help out with the housework. That’s why the men – is the expression “helping” the right one? – should do it together… together. Even if they’re exhausted” (그니까 집안일을 도와줘야죠. 그러니까 남자가 도와준다는 표현이 좀 그런가? 같이 해야죠 같이. 힘들더래도). The father’s statement helps illustrate how words such as “help,” “some,” “a little,” “sometimes” and
“together” served to create both a narrative of familial housework engagement, while also masking the still present inequality in the burden placed on a family member’s shoulders.

In the case of Chinese families, Chinese fathers in particular tended to explicitly state that the amount of housework that a family member engaged in was irrelevant. For instance, when prompted to explain why he thought one person doing nothing was an example of an unfair division, a Chinese father (ID#3CF) stated: “That is a family right? It is formed by both parties. It doesn’t matter how much, you still have to do it (housework). Rather it shouldn’t be not doing even a little bit, that is not very reasonable” (那家庭吗，是双方共同组建的家庭，无论做的多少，还是要做的。而不是应该一点都不做，这个是不合适的). Therefore, while emphasizing the importance of doing something participants concurrently de-emphasized the value of considering “how much” housework a family member should do:

I think when it comes to a family, it should be both people together put in effort, although I don’t care – don’t fuss over how little or much effort one of the people put in. But, you can’t say you won’t do anything at all. (Mother, ID#10CM)

我觉得对于一个家庭来说应该是两个人共同付出，虽然不在乎不计较就是其中一个

人付出的多与少，但是不能说一点你都不干.

Every person should take on some of the burden, I can’t really say specifically how much. (Child, ID#11CS)

每个人都是要承担一点的，承担多少真的是说不准.

Rather than relying on principles of equality in their fairness perceptions, participants held the belief that belonging to a family required each member to be responsible for doing some of the household labor. This expectation of minimum participation meant that individuals were
more likely to perceive non-participation unfair, than to consider a fair division as one that must be equal.

**Gendering Equity: Expecting Gendered Differences**

In concert with the expectation of minimum participation was the assumption by the majority of participants that there would be an uneven housework distribution. Participants across families believed that family members’ differences in time availability, as well as other factors such as energy levels and gendered responsibilities, were legitimate justifications for an uneven distribution:

At home it’s just who has time, does a little more, who is busy does a little less.(Father, ID#10CF)
在家里就是谁有时间，多做一些，谁忙就少做一些

She is an elementary school teacher so she finishes work earlier. She is responsible for picking up our child, when she comes back(home) she still has to make dinner, because I get off of work at five pm.( Father, ID#12CF)
她是小学老师下班比较早，由她来完成接孩子，回来呢她还得做饭，因为我单位到家我要五点下班.

Differences in time availability was the most frequent rationale given for the fairness of an uneven division of household labor. In Chinese interviews, time availability was the most frequent rationale given for how housework should be divided. In Korean interviews, time availability was the second most frequent rationale. Although time availability was at times referred to as a gender-neutral principle, it was frequently gendered in its application. Korean participants in particular, often referred to women’s greater time availability as a rationale for them to do more:
Naturally, the wife would do more housework because she spends more time at home. (Mother, ID#1KM)
아무래도 부인이 집안에 집에 있는 시간이 많으니까 가사일도 당연히 좀 더 많이 하겠죠.

Since the mother has more time, she is bound to do more work. Even if the father wants to help, he can’t because of work. (Child, ID#1KS)
엄마가 좀더 시간이 많으니까 좀더 많이 할수밖에 없을것같고, 아빠는 도와주고 싶어도 일때문에 못도와주기때문에,

The time availability justification, however, was employed in ways that supported a greater imbalance in household labor than it would appear to at face value. Akin to the language use in terms of the expectation of minimum participation, as illustrated above, individuals did not specify how much “more” the wife should be expected to do with her greater availability. As a result, differences in time spent on paid labor served as a rationale for expecting women’s greater involvement in household labor, without specific expectations of how much “less” housework men should be doing.

Guarding tiredness: home as a place of rest (for men). In addition to differences in time availability, feeling tired and differences in energy levels were employed as justifications for how the housework should be divided. Although parents of both genders were often described as tired, the reason for their tiredness was distinctly gendered. Men were often described as tired from working. For example, when asked why he thought a family’s division should change if the husband worked longer hours, a Korean father (ID#12KF) noted, “If the husband has a lot of work outside the house, wouldn’t he be tired when he comes home?” (그 남편도 밖에서 하는...
On the other hand, women were primarily described as tired as a result of doing domestic labor, or from their double burden of both paid work and household labor. As a Chinese son (ID#7CS) pointed out when asked why he considered a gendered division unfair, “Because they have the mother do all the housework, this way the mother is very tired, more and more tired” (因为他们全都由母亲做家务，这样母亲就很累，越来越累). Furthermore, gender differences were found in whose tiredness was being highlighted. In Korean families, mothers were more likely to point out that the wife is tired, whereas fathers were more likely to point out that the husband was tired. In Chinese families, mothers were more likely to note that both husband and wife were tired.

Although both genders were described as tired, their tiredness justified different types of behavior. Men’s tiredness was often given as a rationale for their lower participation in household labor:

Well, for example, I am very busy, I am actually very busy, I am also tired, so maybe when I come back home I just don’t have any energy to do it (housework). Maybe coming back home I need to “have a rest,” then my wife can do a little more, take care of me. (Father, ID#6CF)

That比如说我很忙，我确实很忙，我也很累，可能我回到家我就可能没有力气去做事了。可能我回家可能需要have a rest,我的妻子就多做一些，照顾一下我。

My wife is a little tired, but I often arrive home more tired, and have the habit of just, no, I am too tired, I am going to lie down, maybe just sleep. When they come over they will just say wake up, come eat. (Father, ID#10CF)
As illustrated by the above excerpts, men’s tiredness justified their right to rest at home, whereas women were expected to provide them with the space to do so. A woman’s right to rest at home was not given the same consideration. Instead, women also saw themselves as responsible for protecting men’s time and well-being:

She has to think about how very tired her husband is, in order to reduce her husband’s burden she can do a little more housework. (Grandmother, ID#6CG)

因为她考虑丈夫太累呗，为丈夫减轻一些负担，多做一些家务

Forcing them to do the same amount of housework as me during weekdays is like telling them to go die. (Mother, ID#3KM)

그런 사람한테 집안일을 평일에도 나랑 똑같이 하라고 강요하는 건 그 사람한테 죽으라고 말하는 것 같아요.

Women’s protection of men’s energy and time through lowering their expectation of men’s participation in domestic labor, results from a process that I term a “time drag.” A “time drag” occurs when men’s greater time spent in the labor market, not only justifies their lower involvement in housework because they are not home, but also justifies protection of their time once they are home. In other words, the fact that the father comes home at 7pm, serves to not only justify why he could not prepare dinner at 6pm for the children, but to also justify why he is too tired to do the dishes once the meal is over. Therefore, men’s greater time spent in paid labor seems to drag on to their “availability” in the home space.
In contrast, a woman’s tiredness served as justification for why men should do (some) housework. When asked how to make a gendered division fair, a Chinese mother (ID#6CM) explained, “The husband can also participate in doing some housework. From Monday through Friday the mother is doing all the housework, so maybe this wife is also very tired” (丈夫也能参与家务活。周一到周五之间都是妻子来完成，也许这个妻子也是挺累的). Similarly, a Korean father (ID#5KF) suggested, “If the wife is having a hard time and is asking for help, then of course you would help her” (아내가 힘들다고 그러면 좀 도와달라고 할 때는 도와줘야죠). However, a woman’s tiredness, in part because of the unspecified amount of assistance men were expected to provide, did not receive the same level of protection. Referring to his parent’s division of labor, a Korean father (ID#3KF) reflected:

I guess my father could have done more. My father used to run his own business and I think he was stressed a lot while running it. He was stressed, but in retrospect, he could have done more. Because, when I was in college my mother had been hospitalized and I sometimes think that maybe if my father had supported her more back then she would have been healthier than she is now.

In summary, differences in energy levels served to justify women’s greater involvement in housework. Men’s tiredness served to legitimize their lower involvement, whereas women’s...
tiredness resulted in the expectation that men do (some) housework. Although both genders were described as tired, the continued expectation that women should do more, ultimately prioritized men’s tiredness and well-being, which resulted in the home serving as a place for (only) men to rest.

There is No Such Thing as Absolute Fairness in the Family Context

When asked to assess the fairness of their family’s division, the majority of adult participants in both countries did not believe that a strict notion of fairness should serve as a criterion for evaluating a family’s household labor. Instead, participants argued that a strictly fair division was neither the end goal nor particularly desirable. Rather than fairness, participants tended to argue that how the housework is divided should be flexible and based on whether all family members found it acceptable, reasonable, or emotionally satisfactory.

Participants were often unwilling to apply the notion of fairness to the family context. When directly asked to judge whether their family’s division was fair or not, a Chinese father (ID#7CF) stated, “Fairness? When it comes to the home there is no such thing as thinking fair or not fair” (公平呢，就是在家庭里没有什么公平不公平的说法). Fairness was deemed incompatible with expectations of family life. Mirroring the Chinese father’s sentiment, a Korean mother (ID#7KM) stated, “I don’t think household chores need to be divided up equitably/fairly—at least in our family’s house, in our environment” (저는 집안일 분담을 공평하게 해야 한다고 생각하지는 않아요. 저희 집 가정에서는, 환경 속에서는). Rather, the relational and
intimate nature of the context of the family was seen as requiring relational considerations rather than fairness considerations. For example, when asked to define fairness, a Chinese father said (ID#10CF):

In the family there is no saying fair or not fair. Fairness should be, in a family’s environment (context), reaching a relational/emotional balance, at work it is win-win (collaborate and collectively win).

在家里里面没有公平可言,公平应该是,在家庭的环境里,达到一个感情的平衡,在工作上就是合作共赢.

Specifically, participants seemed to reject the notion of an “absolute” fairness ideal being applied to evaluate a family’s household labor division. Illustrating her rejection of an “absolute” fairness, when asked whether fairness was an important factor in deciding how housework should be divided, a Chinese mother (ID#5CM) stated, “There is no absolute fairness. So I am saying that there is only tacit understanding, only balance. There is only a kind of balance, and there is no absolute fairness” (对没有绝对的公平。所以说就是只有默契只有平衡,只有一种平衡,而没有绝对的公平)。“Absolute fairness” was often described as a form of evaluation that was restrictive, rigid, and incompatible with how decisions were made in the life of a couple. When to asked to evaluate the fairness of a housework division, for instance, a Chinese father (ID#1CF) stated, “This, I think this is still rather something between two people, because this thing (housework), has no absolute fair or not fair” (这个我想就是还是两个人的事吧，因为在这种东西下，没有绝对的公平不公平). Demonstrating her skepticism that fairness was a
realistic expectation in married life, a Korean mother (ID#9KM) reflected, “Is equity always fair/equitable? Is it like that in life? It's not like that when couples live together” (공평하는 게 꼭 공평해야 돼? 삶에 있어서? 부부 생활이라는 게 꼭 그렇게 되지 않아요.) Fairness, then was often describe as unsuited for the expectations of family life. For example, following her statement that a family can’t be absolutely fair, a Chinese mother explained (ID#8CM):

In China there is an old saying “the home isn’t the place where you talk about reason.” In other words, everyone can find a balance, so you can accept, I can also accept, he can also accept. And then harmoniously get along, you don’t have any disputes, just have a point of balance, finding a balance point is enough. There is no absolute fairness.

Chinese fathers in particular were resistant to applying the notion of fairness to the family context. For example, when asked whether their family’s division was fair, seven out of the 12 Chinese fathers rejected the term “fair” altogether (only one mother, ID#9CM, did so), and instead stated that their family’s division was “reasonable.” Rather than “fairness,” fathers argued that a reasonable (合理) division was one in which the amount did not matter, and the couple agreed on the division. For example a Chinese father (ID#8CF) explained his reasoning, “Reasonableness, I have always thought, is not about how much, it is about the two people’s
acceptance of this distribution” (合理性我一直觉得不是说该干多少，是两个人对这种事物分配的认可).

Overall, participants who rejected applying fairness as an ideal to the issue of housework distribution seemed to juxtapose fairness with affect and relational intimacy. Fairness was perceived as based on “reason,” as possibly causing disputes, as strict, and as interfering with, or falling outside of the scope of decision making between the couple. Instead, in order to maintain family harmony and balance, a couple was expected to make decisions that were “reasonable” and flexible, rather than nitpicking on the issue of amount. For instance, when describing his rationale for his fairness evaluation, a Chinese father (ID#4CF) stated, “I think between a wife and husband it doesn’t matter, who does more, who does a little less, I don’t think it matters. Between a husband and a wife you shouldn’t be counting (measuring) these things” (我认为在夫妻之间是无所谓的，谁多做一点，少一点，我觉得都没什么的。夫妻之间不应该计较这些). Therefore, implicitly, and at times explicitly, participants considered a reason-based, measured, and “absolutely fair” division of labor as incompatible with a balanced and harmonious marriage.

Within-family agreement in conceptualizing fairness. Reflecting the diversity of within-family judgments regarding the fairness of the gendered division of housework, most Korean families (9 out of 12) and Chinese families (7 out of 12) did not have within-family agreement
among all family members in how fairness was conceptualized. This was primarily as a result of the generational gap that was alluded to previously. Although most couples (and grandmothers) were generally in agreement in their definition of fairness as being about reasonable and flexible, children were more likely to conceptualize fairness as absolute, measurable and applicable to the family context. For instance, in ten out of the 24 families, children did not agree with their parents’ conceptualization of fairness as an issue of reasonableness requiring flexibility, acceptance, and established through agreement (Korean ID # 3K, 7K, 9K, 10K, 12K; Chinese ID#2C, 5C, 6C, 9C, 12C). In addition, in another six families, various family members disagreed with each other regarding how to conceptualize fairness (Korean ID# 2K, 5K,8K, 11K; Chinese ID# 4C, 10C). For example, in one Korean family (ID#11K), the sons agreed with their father that there is no absolute fairness, however their mother, who did the majority of the housework, disagreed with this notion. On the other hand, in eight families, there was high within-family agreement in their conceptualization of fairness as not being absolute but rather flexible and reasonable (Korean ID#1K, 4K 6K; Chinese ID# 11C,8C, 7C, 3C, 1C). Families with high within-family agreement all had at least one parent who frequently (10+) stated that the family’s division should be considered an issue of reasonableness rather than fairness.

Understanding rather than fairness as maintaining a balanced division. Instead of relying on principles of fairness (i.e., where amount of labor is considered and measured), adult participants in both countries believed that understanding, consideration, and consultation would serve as mechanisms that would create a “balanced” division of labor. Understanding one’s
spouse’s need, however, was often gendered in its application. Women in both countries were often the ones doing and describing the expectation of being understanding. For example, after being presented with a gendered division of labor, a Chinese mother (ID#2CM) reflected:

I think a family should understand each other. When the father is busier at work, maybe he will do less housework, only on the weekends he can help a little. Then the wife may assume the role of mother. She will take care of the whole family and let her husband work with peace of mind.

Overall, participants described the gendered division of housework labor to be as a result of being considerate of one’s spouse’s needs. Any changes that should occur were described as resolved by a family coming together and discussing it. However, the onus to change was often expected to come from the dissatisfied family member, often the mother, who would then ask for a change. For instance, a Korean father (ID#4KF) explained, “When my wife complains about certain issues, she addresses them because she has problems with it” (와이프가 좀 불만이나 이런 부분들이 바뀌었으면 좋겠다 하는 그 부분들이 있다고 하면 아무래도 불만이 이제 있는 거니까 뭐 그거까지 생각하는 거잖아.). As a result, women were both expected to be understanding and to complain if they had a problem with the division of labor. Therefore, through relying on women to perform the emotional labor of both understanding and complaining, most households maintained a gendered division of labor.
The present study investigated how Chinese and Korean families made sense of a fair division of household labor. The results revealed how family members conceptualized a fair distribution, as well as their assumptions and expectations regarding how housework should be divided in the family. As was previously found (Oshio et al., 2013), in the majority of participating families, women were reported as doing the bulk of the family’s housework. The examination of within-family agreement regarding the gendered division of housework demonstrated the complicated relationship between perceiving inequality and finding such inequality unfair. Although members of a family agreed that there is inequality, they disagreed on whether their family’s inequality is fair. This finding indicates that, in line with prior research, recognizing inequality is not sufficient in itself for perceiving the division as unfair (Braun et al., 2008; Lachance-Grzela et al., 2019; Öun, 2013). While children, in keeping with recent findings (Midgette, 2020), considered fairness to mean either absolute equality or a measured form of equity, many adult participants redefined fairness in relational and relative terms. The majority of adult participants preferred to conceptualize fairness to mean a “reasonable” division, in which agreement and balance between family members was reached.

One main expectation that individuals held across families and family roles was that each family member should participate in housework. However, adult participants often did not quantify the amount that each family member should do. In addition, the majority of participants assumed that a gendered division of labor was fair based primarily on gendered applications of
time-availability and differences in energy levels. Moreover, adult participants believed that the family context was incompatible with expectations of “absolute fairness,” and instead relied on principles of understanding and agreement to maintain a balance in the family’s division. The results of this study provide further insight into the investigation of fairness perceptions of the gendered division of housework in several important ways.

Conceptualizing Fairness

First, this study found that individuals were more sensitive to no housework involvement, than to the actual amount of participation in household labor. Whereas across family roles and cultures, individuals were in almost universal agreement that doing nothing was unfair, some participants were much more flexible in their expectations regarding what types of divisions could be considered fair. In particular, the majority of adult participants were leery of measuring or quantifying the amount of housework that each family member should do. Through the practice of either dismissing or obscuring the expectation of the amount of participation and rarely expecting equality, participants created a very minimum expectation for household labor participation and a very high threshold for perceiving a gendered division of labor unfair. This expectation of minimum participation meant that individuals were more likely to perceive non-participation unfair, than to consider a fair division as one that must be equal. The practice of holding unclear standards for how much housework each member should contribute, may help explain in part why both men and women may find the gendered division of housework fair, or be hard pressed to say it is unfair. Furthermore, adults’ flexibility in their expectations regarding
the amount of housework that each member should do may also account for the variability that researchers find in fairness perceptions that are unexplained by proportion of inequality, country, and gender differences (Braun et al., 2008; Jansen et al., 2016; Öun, 2013; Tai & Baxter, 2018). Future research should investigate whether an individual’s unwillingness to quantify their family’s involvement may help mediate their fairness perceptions regarding different proportions of inequality in household labor. In other words, it is possible that the proportion of inequality may be less predictive of fairness perceptions for individuals who are less willing to quantify the amount of each family member’s involvement in housework.

In addition, adult participants in particular, rejected the notion that a standard of “absolute” fairness should be applied to the family context. Participants seemed to assume that when asked whether a division was fair, “fairness” meant absolute equality or a measured and calculated form of equity. As a result, participants either rejected the term as unsuitable to the family context completely, and argued that the family’s division was “reasonable” (i.e., a division that is acceptable to both parties), or explained that a fair division was one in which all family members were satisfied and a relational balance was reached, rather than one in which the division was based solely on principles of equity or equality. Therefore, as previously argued (Glenn, 2010; Okin, 1989), adults saw the family as a distinct social context in which fairness does not apply. Rather than a measured fairness (e.g., one in which inputs and outputs were being calculated and judged as unjust or not), adults appeared to prioritize relational elements, such as agreement and understanding. This suggests the importance of affect and relational
factors as central interpersonal outcomes that both men and women value and which therefore inform their perceptions regarding the fairness of the gendered division of labor (Lachance-Grzela et al., 2019; Thompson, 1991). It may be the case that relationship satisfaction may be prioritized over concerns for fairness, and that concerns for fairness can be seen to jeopardize the relationship. As a result, for those who reject principles of fairness in the home, other aspects of the distributive justice framework (i.e., comparison referent), may remain unconsidered, since the situation is not being read as one that requires a certain type of distribution or justice. The acceptance or rejection of principles of fairness to the home context may explain variation in prior findings regarding the presence or absence of particular dimensions of the distributive justice framework (e.g., Carriero & Todesco, 2016; Nordenmark & Nyman, 2003).

The fact that some participants rejected the idea that fairness can be applied to the family context has important methodological implications. The findings suggest that when presented with a survey question, participants may not employ the same definition of fairness as the researcher may have intended. Therefore, it is possible that previous findings may be misleading in their assertion regarding the proportion of individuals that find their family’s division “fair.” Instead, scholars may consider including other terms, such as “reasonable,” “balanced,” “acceptable” or “agreeable” to identify participants’ judgments of whether they consider their division of labor satisfactory. On the other hand, depending on the construct scholars are hoping to measure, future research should consider presenting a clear definition of fairness in the survey.
Families’ Conceptualizations of a Fair Division

Accepting Gender Inequality

Family members considered a gendered division of household labor as fair as a result of several gendered assumptions. As found by Beagan et al. (2008), across family roles and families most participants relied on seemingly gender-neutral differences in time-availability to justify their perception that the gendered division was fair. This study extends previous findings by revealing how time-availability was gendered in its application through creating an expectation for women to take up the household labor of their busier husbands without quantifying or qualifying the amount of how much more labor they should take up. In other words, family members were not as concerned with calculating exact differences in working hours as economic approaches would suggest (Becker, 1974). This more flexible approach to considering time-availability obfuscated the fact that in most cases, when time working in the workplace and in the household are combined, both Chinese and Korean women spend on average more total hours laboring overall than men (OECD, 2008/2014). Therefore by employing the time availability justification in a way in which the actual differences in time use was neither measured nor considered, women often ended up taking on more hours of domestic labor than would be expected based on principles of equity alone.

Furthermore, extending previous theorizing about time-availability, this study found that through the phenomenon of the “time drag,” men’s tiredness from working longer hours
protected them from doing housework once they were home, and technically “available.” In other words, the need to conserve men’s energy results in calculating men’s time in a unique way. In particular, once a father is home, his past work (e.g., he is tired from working) and his future work (e.g. he will have to do another 12 hour shift tomorrow) are combined, so that his presence in the home is not considered to truly be an “available” presence to engage in labor. Therefore, through reading men as having been busy laboring before coming home, and expected to be busy after leaving the house, men’s time at home was protected, his leisure time guaranteed, and his availability for household labor discursively erased. Through the rationale of unavailability, family members maintain the home as a place of rest for men (Kim, 1998). Therefore, men’s involvement in labor was not only a gendered resource (Zuo & Bian, 2001), but a protected one. The protecting of men’s time lends further credence to scholars’ arguments that time and time-availability is a gendered practice (Beagan et al., 2008). The safeguarding of men’s time rather than women’s is also in line with research that has found women to be more “time poor” than men, meaning they do not have enough time for rest and leisure (Qi & Dong, 2018; 2016). As Hochschild and Machung (2012) note, men’s time is seen as more valuable than women’s, which leads to the notion that his leisure time is also more valuable, since it “enables him to refuel his energy, strengthen his ambition, and move ahead at work” (p.247). The logic of the “time drag,” through the reading of men as unavailable while present at home, helps explain in part how Chinese and Korean men’s leisure time is created and their energy levels protected, while continuing to promote women’s greater involvement in household labor.
Furthermore, this finding also adds to prior theorizing that suggests that women value their husband’s work and wages over their own (Thompson, 1991). In the case of this study’s participants, women appeared to not only be considering the value of their husbands’ work and the wages they bring, but the impact of their husbands’ work to their well-being from the resulting stress and fatigue associated with working long hours. The process of protecting their time was more than just valuing men’s earnings or work, but also a form of women valuing their husbands’ well-being (at times over their own). Future research should investigate the relationship between women and their spouses’ working hours, and their perception of each other’s sense of well-being. It may be the case that in families where there is a high level of perceived stress, family members may be more likely to employ the time-availability argument in gendered ways in order to protect their family member’s well-being.

Ultimately, this study suggests that the continued gender unequal division of labor and its acceptance stem from participants’ reliance on gender-neutral appearing, but gendered applications of narratives of time-availability and tiredness, as well as avoiding quantifying “how much” less or more each spouse should do rather than as a result of traditional gender ideologies. That is to say, most participants appeared to rely on the gendering of structural inequalities (e.g. gendering of occupational opportunities), rather than on individually held traditional gender ideologies, to organize their family’s division of labor.

*Studying Across Cultures, Family Roles, and Within Families*
One of the main contributions of this study was the extension of the study of fairness perceptions of household labor beyond the couple within a particular country. Through an investigation into the experiences of all the members of a household, this study was able to provide several novel contributions. One, this study found that within-family agreement as to who does the majority of the housework is relatively high. Children, elders, and parents are all able to perceive who does the majority of the housework. Two, children were found to be more likely to expect equality in the division of household labor, and to consider fairness to involve equality. On the other hand, adults were more likely to reject fairness as requiring an equal division, and to redefine it to involve relational elements such as agreement and acceptance. In other words, within-family analysis revealed a generational tension between adults (including grandparents) and children’s conceptualizations of fairness in the case of household labor. This generational difference may be as a result of developmental differences, since recent scholarship has shown that Chinese and Korean children and adolescents reason about a fair division of household labor primarily based on equality and equity concerns (Midgette, 2020), rather than relational. This finding suggests that couples and grandparents may be more focused on the implications of their fairness judgments to their relationship, while children may not have the same considerations. It may also be the case that being in a cohabiting romantic relationship (present or past), may modify how individuals come to conceptualize fairness in intimate relationships. Three, across family roles time-availability and tiredness were employed as legitimizing factors for differences in the division of labor. The near ubiquity of these rationales
may suggest the power of gender-neutral appearing rationales in maintaining gender inequality. Therefore, this study suggests the importance of further exploring children’s and elders’ experiences and reasoning regarding the gendered division of household labor, for they are able to highlight the biases present within couples based on their roles, and are themselves active participants in household labor, who at times, do more housework than fathers (Hu, 2018). Future research should consider investigating whether grandmothers, children, and other members of the family differ in terms of their comparison referents, their valued outcomes, and justifications. Future studies should also further investigate within-family agreements and disagreements as to how family members conceptualize fairness and a fair division, and the possible explanatory factors for why some families agree while others disagree.

Moreover, this study was able to investigate both Chinese and South Korean families’ expectations of how housework should be divided. Interestingly, across countries family members were expected to help do some housework. However, inequality in household labor was maintained in different ways. In Korean families, participants were more likely to refer to women’s overall greater time availability as a rationale for them to do more, and were less likely to expect equality within the family. On the other hand, in Chinese families, participants were more likely to consider the amount of housework that each family member did as irrelevant. These differences may be as a result of differences in women’s involvement in the labor force, where Chinese women are more likely than Korean women to be working full-time, and therefore gender differences in time availability are less extreme. In addition, rather than relying
on the cultural ideology that men should focus on work outside and women should work inside (Zuo & Bian, 2001), Chinese participants relied on the notion that the family is a place free from reason, and therefore the division should be reasonable rather than fair. This cultural ideology supported the rejection of both measuring who does how much, as well as the concept of applying fairness to the family context. Future research should further investigate how structural, economic, and ideological differences interact in informing how Chinese and Korean families approach and make sense of the gendered division of household labor. For example, future research should investigate what factors can account for an individual's greater likelihood to consider their family's division “reasonable” rather than fair or unfair.

Limitations

Although this study contributed to our understanding regarding family members’ conceptualizations of a fair household labor division, it had several limitations. First, this study was limited to 24 highly educated middle-class families residing in urban centers in China and South Korea. Future research should investigate the role that class, education, and living arrangement (urban or rural), as well as other cultural and country factors, play in how family members conceptualize a fair division of labor. Moreover, this study was limited to mainly heterosexual, married, and nuclear families, where only one of the immediate family members did most of the housework, and only two families were included that were multi-generational. Future research should investigate how families conceptualize a fair division across a diversity of family formations (e.g. multi-generational,
skip-generation, homosexual, single-parent), including those in which non-family members (e.g. such as a maid) may also be engaging in doing the majority of the housework. This study was also limited as a result of the gender of the author and research assistants, all whom were women. Therefore it is possible that the participants may present different answers and conceptualizations of what is fair depending on the gender of the researcher. In addition, this study was limited in that it only studied family members’ experiences separately through individual one-on-one interviews. To better analyze within-family dynamics and interactions, including family narratives, future studies should investigate how family members agree or disagree in their conceptualizations of a fair division through family focus groups and long-term observation.

Conclusion

In line with previous findings (Nordenmark & Nyman, 2003), the majority of couples did not expect equality. Rather than striving for an absolutely fair division, the majority of adults relied on subjective, emotional factors such as being understanding and agreement to maintain a “reasonable” balance within the family. Therefore, by expecting flexibility, not quantifying how much housework each family member should do, and relying on understanding and agreement rather than fairness, the majority of participants were accepting of a gender unequal division of labor.

This study’s findings have several implications for future research. First, this study suggests the value in analyzing not only individuals’ justifications regarding time availability,
but also how they come to measure and quantify how much housework is too little or too much.

Although we know that a greater proportion of inequality is more likely to be perceived as unfair (Coltrane, 2000; Öun, 2013), this study found that not participating in doing any housework is considered universally unfair. Future research should investigate what markers and measures family members are using to decide how much is too much inequality. Second, this study highlighted the gender unequal emotional labor expected between spouses in regards to their experiences of differences in terms of time availability and energy levels. Future research should investigate how gendered expectations regarding emotional labor, such as being required to be understanding and maintain harmony, influence fairness perceptions of the gendered division of labor. Finally, what is absent in the findings also has important implications. References to the Confucian ideology of “men outside, women inside” appeared very rarely (code application of 1% in Korean and 2% in Chinese data). This marks a transition away from relying on gendered resources (Zuo & Bian, 2001), to more seemingly gender-neutral rationales such as time-availability (Beagan et al., 2008). Future research should investigate whether interventions that educate participants regarding the gendering of time and the gendered structure of the organization of labor, would result in a move towards more equitable divisions of labor as well as the lessening of the use of time availability as a rationale for a gendered division of labor.
REFERENCES


This article is protected by copyright. All rights reserved.


This article is protected by copyright. All rights reserved.


doi: 10.1007/s11211-013-0195-x


doi: 10.1111/jomf.12274


