

WHEN WORK COMES HOME: PARENTAL TIME
ALLOCATED TO UNPAID
HOUSEHOLD LABOR

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ABSTRACT

I examined how dual-earner households manage the often-competing demands of work and family life through an in-depth analysis of time allocated to housework and child care while testing the theories of gender display and economic dependency. I developed new measures for occupational nurturance and authority and applied these measures to the housework and child care literature by conducting a series of replication studies. My work supports the relationship between employment characteristics and remaining gender inequalities in unpaid household labor. I was able to shed light on how dual-earner households attempt to manage the complicated work-family time bind, while adding to the field of replication studies in quantitative sociology.

I constructed new measures for occupational nurturance and authority to offer alternative ways to assess occupational traits that were not mutually exclusive or dichotomous. I conducted year fixed effects multilevel models of General Social Survey (GSS) respondents nested within occupations. Using these models, I constructed empirical Bayes (EB) estimates of the occupational effects and aggregated the data set at the occupation-level for easy merging to any data set using Census occupation codes. I showed the utility of my new measures by merging them to the National Survey of Families and Households (NSFH) and American Time Use Survey (ATUS) for further analysis.

I found overwhelming support for gender conventionality for married men and women working in gender atypical occupations who displayed less stereotypical gendered behavior at home. However, separate from occupational sex composition, my

findings also provided support for the influence of gender ideology on married men and women's gendered display of housework at home. For child care, I found consistent and overwhelming support for fathers' and mothers' time spent with children and economic dependency's time availability perspective. These results illuminated the "time crunch" that dual-earners face as they juggle work and family obligations.

Across both studies of unpaid household labor, the overall findings suggest a gendered picture. Married women completed more housework than married men, and mothers completed more child care than fathers. The housework findings were further supported by gender ideology, or that those with more traditional views on housework and family life completed more traditionally gendered housework tasks. Although, my findings also suggested more nuanced housework for those in gender atypical workplaces in support of gender conventionality. Finally, even though I found strong support for economic dependency's time availability perspective for time spent with children in dual-earner households, mothers still completed more child care than fathers regardless of all other factors further highlighting a stalled revolution for working mothers. Women made strides in the workplace, but still faced gendered unpaid household labor at home.

Throughout my studies, I added new measures to the field and I built on the great work of leaders in the field of housework and child care through replication. I conducted robustness and generalizability checks of prior work and made a case for replication studies in quantitative sociology.

To my parents Marjorie Cady Hitchcock and Richard Hitchcock, Jr. Thank you
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CHAPTER 1

INTRODUCTION

In the late-1990s, Arlie Hochschild's *The Time Bind* examined how "home had become work and work had become home" (1997:38). Hochschild believed that the line between work and family life had become blurred, especially in dual-earner families. Hochschild illuminated the challenges that working parents faced when managing the often-competing demands of work and family life, known as the work-family "time bind." Over two decades have passed since Hochschild's *The Time Bind*, but has much changed?

The following excerpt is from a New York Times article describing the modern family (Cain Miller 2015):

Aimee Barnes and [her husband] both work full time at the California Environmental Protection Agency and are the parents of Roman. They said they knew they were lucky to have help, like flexible schedules and extended family nearby. Still, figuring out how to manage work and parenting has been hard. "You basically just always feel like you're doing a horrible job at everything," Ms. Barnes said. "You're not spending as much time with your baby as you want, you're not doing the job you want to be doing at work, you're not seeing your friends hardly ever."

The work-family time bind is an emotional process that involves a balancing act. In her description, Aimee Barnes illustrates that the work-family time bind is something dual-earner families actively manage. Families use work and family resources, such as flexible schedules and extended kin networks, to navigate the work-family time bind.

The work-family time bind is stressful and often leaves parents feeling inadequate in their work and home life.

The stress created by the management of the work-family time bind is not equally shared within families as Dan Clawson and Naomi Gerstel illustrate in *Unequal Time* (2014). In their study, the researchers examined how unplanned child care circumstances impact parental negotiation of the work-family time bind. The stress was not equally shared based on gender, class, and occupational prestige. For example, women in less prestigious medical careers had lower schedule control and flexibility compared to men with similar occupational prestige. Surgeons had the highest level of schedule control and flexibility, but female surgeons were more likely to take time off for unplanned family-related situations compared to male surgeons. Beyond occupational prestige, do occupational characteristics, such as gender composition and job tasks, play a role in parental negotiation of household responsibilities?

Theory

The literature on time allocated to unpaid household labor primarily focuses on two main theoretical perspectives—economic dependency and gender display. Both theories attempt to conceptualize how working parents manage the work-family time bind.

Economic Dependency

In 1965, Gary Becker developed the theory of new home economics to apply economic principles to family processes, such as in the bargaining, division, and production of household labor in dual-earner couples. Economic dependency, an

extension of Becker's new home economics, theorizes housework as the exchange of unpaid labor from one partner for the monetary resources gained through the paid labor of the other partner (Walby 1986). The partner with less income is viewed as dependent on the partner with main breadwinner status illustrating the "logic of the pocketbook" (Hochschild and Machung 1989). Unpaid household labor, such as housework, operates as a brokered exchange between the economically dependent partner and the economic support of the breadwinning partner.

The rational exchange of dependency and support is further solidified by marital commitment. Married women dedicate more time to unpaid household labor compared to their cohabiting peers, and married men complete less unpaid household labor compared to their cohabiting peers (Bianchi, Sayer, Milkie, and Robinson 2012). The marriage contract is viewed as a way of solidifying partner commitment to the exchange of unpaid household labor and financial support (Walby 1986). However, exchanges between married partners do not purely reflect the exchange of goods and services within the free market (Curtis 1986). There is a social and relational code between married partners that softens the purely economic transactions in the marketplace. However, exploitation through unequal brokered exchanges of unpaid household labor and financial resources may occur (Curtis; Brines 1994). This is seen with the "stalled revolution," during which women entered the labor market, but their unpaid household labor responsibilities remained the same (Hochschild 1989; Gerson 2010).

Persistent inequalities in unpaid household labor are still gendered as research continues to support that wives complete more unpaid household labor than husbands despite labor market gains (Bianchi et al. 2012).

Gender Display

Candace West and Don Zimmerman's (1987) gender display theory focuses on the social construction of gender identity operating as a performed behavior. In Western culture, gender takes on a socially constructed performance seen in our everyday interactions. Displays of gender performance, or simply referred to as "doing gender," can therefore be viewed as either gender normative or atypical. Social norms that surround gender performance situate masculine performances for men and feminine performances for women as agreed upon normative behavior. Housework is the primary setting for men and women, or husbands and wives, "doing gender." Housework is viewed as, "...the material embodiment of wifely and husbandly roles, and derivatively, of womanly and manly conduct" (1987:30). Women, culturally characterized as caregivers, produce femininity through the completion of housework and child care, whereas men, culturally characterized as providers, produce masculinity by financially providing for the family and by avoiding housework and child care (Schneider 2012; West and Zimmerman 1987).

"Doing gender" may also operate through the types of housework tasks men and women choose to complete (McClintock 2017; Schneider 2012). A perspective on gendered housework tasks suggests that men are more likely to complete masculine tasks, such as household maintenance and repair, and women are more likely to complete

feminine tasks, such as cooking and cleaning. However, more progressive gender ideologies also suggest that housework tasks may not be as clear cut. Men and women with more progressive gender ideologies or who work in gender atypical occupations complete more gender atypical housework at home (Okamoto & England 1999; Dodson and Borders 2006; McClintock 2017). Further, fathers also show greater involvement and responsibility over children suggesting a more progressive gender and family ideology for the modern involved father (Milkie, Mattingly, Nomaguchi, Bianchi, and Robinson 2004; Raley, Bianchi, and Wang 2012).

The Present Studies

The present set of studies examine how working parents manage housework and child care responsibilities in order to add to the current literature on the relationship between employment characteristics and unpaid household labor. I test the theoretical perspectives that attempt to make sense of inequalities in time dedicated to housework and child care. I develop new measures for occupational nurturance and authority and then apply these measures to a housework study, and separately, to a child care study. I use three different data sets throughout my analyses to show the utility of the newly constructed measures and to test the housework and child care perspectives. I also replicate and build on the great work of leaders in the field of housework and child care through robustness and generalizability checks.

Jeremy Freese and David Peterson (2017) provided a detailed overview of replication in the social sciences in order to increase awareness of and promote this work in the field of quantitative sociology. Importantly, Freese and Peterson differentiated

between the different forms of replication applicable to the field. These forms include verifiability, robustness, repeatability, and generalizability (Table 1-1). For the present studies, I conduct robustness and generalizability tests as I compare my work to prior research. Robustness tests replicate the analysis of prior research but also incorporate new or alternative specifications of measures to see if and how results differ.

Generalizability tests are informed by prior research, although they deviate in methods in order to determine if findings will be similar under different circumstances. Replication studies are common in medical research and other social science fields, but not as common in sociology. I add to the field by conducting replication studies in the forms of robustness and generalizability in order to advance these studies in quantitative sociology.

Table 1-1. Replication in the Social Sciences by Type (Freese and Peterson 2017:152)

| | Similar | Different |
|----------|---------------|----------------|
| Old Data | Verifiability | Robustness |
| New Data | Repeatability | Generalization |

Note: Table from Freese and Peterson (2017:152).

In Chapter 2, I develop alternative measures for occupational nurturance and authority using the General Social Survey (GSS). I use a multilevel model that nests GSS respondents in occupations. I then use empirical Bayes predictions to construct new measures for occupational nurturance and authority based on workers' responses to GSS survey questions. I show the utility of these newly constructed measures by merging them

to two different data sets via Census occupation codes. I apply these newly constructed measures to the housework literature in Chapter 3 and the child care literature in Chapter 4.

In Chapter 3, I examine workers in gender atypical occupations and their time spent on housework tasks using the second wave of the National Survey of Families and Households (NSFH2) and the American Time Use Survey (ATUS). I focus on workers in dual-earner households in order to better assess the work-family time bind. I test the housework theories of gender display and economic dependency by focusing on perspectives on gender deviance neutralization, gender conventionality, bargaining power, and time availability. I conduct a robustness check of prior work by Schneider (2012) and McClintock (2017) by examining if my findings substantially differ when using the alternative measures of occupational nurturance and authority constructed in Chapter 2. I also assess more recent data from the ATUS.

In Chapter 4, I examine how parents in dual-earner households spend their time with children by focusing on economic characteristics and also the type of child care activity. This chapter serves as a generalizability test of prior work by Raley, Bianchi, and Wang (2012). Although similar to their work, I limit my sample to dual-earner households in order to assess the work-family time bind. I also incorporate the newly constructed measures for occupational nurturance and authority developed in Chapter 2 to see if these measures, which are common to the housework literature, translate to a different form of unpaid household labor—child care. Similar to Raley and colleagues' (2012) work, I use the ATUS, but I incorporate more recent waves. I also conduct parallel

analyses using the NSFH2 to examine the influence of gender ideology on child care. I wrap up these studies in Chapter 5 by discussing overall findings and implications for the field.

CHAPTER 2

THE DEVELOPMENT OF ALTERNATIVE MEASURES FOR OCCUPATIONAL NURTURANCE AND AUTHORITY

Holding all else equal, occupations predominantly filled by women, measured as occupational sex composition, are valued less for both women and men in these occupations. Paula England and her colleagues have studied the gendered valuation of occupations for decades (England and McLaughlin 1979; England, Chassie, and Linda McCormick 1982; England, Farkas, Kilbourne, and Dou 1988; England 1992; England, Reid, and Kilbourne 1996; Budig and England 2001; England, Budig, and Folbre 2002; Bittman, England, Folbre, Sayer, and Matheson 2003; England 2005). Their work continues to shed light on the existence of gender inequality in the labor market, and more specifically, the continuing gender pay gap in the United States. Beyond occupational sex composition, occupations deemed as nurturing, or involving traits seen as feminine, are also devalued in terms of compensation. Occupations involving authority, a masculine trait, receive higher pay.

England and Colleagues' (1994) Measures for Occupational Nurture and Authority

England, Herbert, Kilbourne, Reid, and Megdal (1994) developed dichotomous measures for occupational nurturance and occupational authority in order to capture the gendered valuation of skills in the workplace. For occupational nurturance, occupations requiring employees to spend a substantial amount of face-to-face time with clients or customers were coded as exhibiting nurturance (Appendix A Table A-1). Occupations

with manager, supervisor, or administration in the title were coded as exhibiting authority (Appendix A Table A-2). Although widely used in the literature, researchers highlight potential flaws for these measures:

I find this schema problematic. Many workers without manager, supervisor, or administration in their title exercise substantial authority, and workers providing direct services do not always nurture. For example, England et al. (1994) classify “physicians” as performing nurturing and not authority. Yet many physicians supervise a large staff (nurses, medical assistants and technicians, receptionists) and not all physicians interact with patients (radiologists, anesthesiologists) or act nurturing (surgeons). I include these measures so that my results can be compared with Schneider (2012), but I consider them a “noisy” measure of gender performance (McClintock 2017:6).

Building off of McClintock’s assessment, I also find potential problems with the current measures:

- 1) The measures are mutually exclusive. Occupations cannot be both nurturing and exert external authority using the current classifications. This prevents physicians and teachers from being classified as nurturing and exerting external authority.

McClintock’s excerpt¹ illustrates this downfall for physicians, and I extend this argument to teachers who are nurturing and also exert authority over a classroom of students.

¹ McClintock’s excerpt also highlights a separate problem with the current definition for occupational nurturance. The broad classification of physicians into one single occupation category, which is subsequently coded as nurturing, does not address variation of nurturance within the occupation itself (e.g., pediatricians versus surgeons). I acknowledge this limitation. The occupation codes unfortunately do not drill down to the level of detail needed to address this issue. Although, the methods I use to develop the alternative measures could address this limitation if more granular occupation codes were used. However, this remains a limitation for the measures developed by England and colleagues,’ as well as my own.

- 2) The measures are dichotomous. Occupations are either coded as displaying occupational nurturance (i.e., equal to 1) or not (i.e., equal to 0). The same logic is used for the measure of external authority. The current dichotomous coding scheme does not consider the degree or range of either measure. Using the current coding scheme, taxicab drivers and shoe salesmen are coded as being as nurturing as teachers and nurses.
- 3) The measures may suffer from issues with construct validity. The operationalized definitions used by England and colleagues may not necessarily capture the concepts of occupational nurturance or authority. I struggle to connect the concept of occupational nurturance to an operationalized definition of spending substantial face-to-face time with clients or customers. Again, using the prior example, the definition classifies both shoe salesmen and nurses as nurturing, which I argue is a noisy way to capture nurturance. The operationalized definition appears to be too broad—casting the net too wide, and resulting with not so nurturing occupations classified as so. The same construct validity issue may be seen with the definition for occupational authority (i.e., occupations with manager, supervisor, or administration in the title). However, I see this definition as too narrow—potentially missing occupations that exert external authority but lack the specified terminology within their title.

Dictionary of Occupational Titles in the General Social Survey

Before England and colleagues' (1994) measures, the United States Department of Labor produced the *Dictionary of Occupational Titles* (DOT) to classify over 13,000

occupations (U.S. Department of Labor 1991). The Department of Labor conducted observational field research to assess workplace characteristics and the skills required for various occupations. The field research led to the DOT classification system for the skills necessary for workers to be successful in their occupations.

Lloyd Temme (1975) used the DOT classification system to construct average DOT scores for each Census occupation using the Current Population Survey (CPS). Temme's work resulted in five interval measures for workplace trait components: (1) relationship to data, (2) relationship with people, (3) relationship with things, (4) general education requirements, and (5) job training. These measures were incorporated into the General Social Survey using the Census occupation codes for analysis (Smith, Davern, Freese, and Morgan 2019).

The relationship with people DOT measure is closely related to the operational definition used by England and colleagues' (1994) measure of occupational nurturance and addresses two of the three limitations I previously listed. The measure is not mutually exclusive or dichotomous, which are both improvements. Although, the measure has similar limitations to England and colleagues' measure in terms of construct validity. A high score in the relationship to people measure may not necessarily capture occupations exhibiting nurturing traits. The operational definition solely focuses on whether or not an occupation requires frequent interaction with other people. It does not get at the substance of the interaction and whether or not the interactions exhibit nurturance. The measure remains too broad and would again similarly score shoe salesmen and nurses, which I argue is still a noisy way to capture nurturance.

Present Study

In the present study, I develop an alternative way for measuring occupational nurturance and authority using survey questions from the General Social Survey (GSS). I base these measures on how workers respond to attitudes, beliefs, and behaviors exhibiting nurturance and authority and how these attitudinal measures vary across occupations. I use a year fixed effects multilevel model nesting GSS respondents within occupations to assess survey items pooled across all available GSS survey years. I then use the model to predict empirical Bayes (EB) estimates for occupational nurturance and occupational authority. I aggregate the EB estimates by occupation in order to construct an occupation-level data set using the Census occupation codes, which may then be merged to any dataset using these common occupation codes.

These new measures offer refinements to England and colleagues' (1994) prior work and add precision to measurement within the work-family literature. I test the alternative measures for occupational nurturance and authority in the housework literature in Chapter 3, and in the child care literature in Chapter 4. My analysis in Chapter 3 serves as a robustness test for prior work conducted by McClintock (2017) as I swap out England and colleagues' measures of occupational nurturance and authority for my newly constructed measures (Freese and Peterson 2017). My analysis in Chapter 4 offers a generalizability test to prior work by Raley, Bianchi, and Wang (2012). I incorporate the new measures for occupational nurturance and authority in the child care literature. I also use more recent data and an additional data source.

Methodology

I used the General Social Survey (GSS) to develop new measures for occupational nurturance and authority. I illustrate the utility of the newly developed measures by merging them onto the second wave of the National Survey of Families and Households (NSFH2) and separately, the American Time Use Survey (ATUS). I describe the data sources, methods for measure development, and analytic strategy below.

Data Sources

General Social Survey

The General Social Survey (GSS) began in 1972 with the purpose of examining the complexities of American life and social phenomena. Data collection for the GSS occurred annually from 1972 to 1994 except for three years, and every other year from 1994 to today (Smith, Marsden, Hout, and Kim 2015). In the early years of the GSS, researchers implemented quota sampling on respondent gender, age, and employment. With additional funding, the GSS transitioned to full probability sampling in 1977 to better reach a nationally representative sample. The GSS has oversampled certain underrepresented groups, such as African Americans in the 1980 survey. The GSS only surveyed English-speaking respondents up until 2006 when they implemented surveys for non-English speakers. The GSS surveys adults who are at least eighteen years old living in the United States. The GSS is administered in-person and takes an average of ninety minutes to complete. Since 1972, the GSS has collected data on close to 60,000 respondents. Beyond demographic data, the GSS measures social indicators, such as attitudes, beliefs, and behaviors (Smith, Marsden, Hout, and Kim 2015).

I accessed the GSS using NORC at the University of Chicago's website. I used the GSS Data Explorer to search for survey items related to occupational nurturance an authority. I downloaded the GSS 1972 to 2018 cross-sectional cumulative data released on May 27, 2020. This dataset pools data from all GSS years.

National Survey of Families and Households

Data collection for the National Survey of Families and Households (NSFH) began in 1987 and consisted of three waves. The first wave (1987 to 1988) targeted a nationally representative sample of 13,017 households in the United States. Researchers oversampled underrepresented racial and ethnic groups, as well as diverse family forms (single-parent, step-parent, and cohabiting households) (Sweet and Bumpass 2002). One randomly selected adult was chosen as the primary respondent in each household. The primary respondent took part in a series of self-administered questionnaires and interviews. Additionally, a shorter self-administered questionnaire was given to the married spouse or cohabiting partners. The NSFH collected rich data on life history, such as living arrangements throughout childhood, education, marriage, childbearing, labor force participation, and well-being.

A five-year follow-up study, known as the NSFH2, was conducted from 1992 to 1994. The NSFH2 includes personal interviews with 10,007 original primary respondents, 5,624 current partners of primary respondents, and 789 former partners of primary respondents (Sweet and Bumpass 2002). The NSFH2 also includes 2,505 telephone interviews with children. A third follow-up study was conducted from 2001 to 2002 using a similar format as NSFH2, although includes a much smaller sample size. I

used the NSFH2 in order to show the utility of the newly constructed measures for occupational nurturance and authority. I extracted the data from the University of Wisconsin Madison's Better Access to Data for Global Interdisciplinary Research (BADGIR) online tool (Sweet and Bumpass 2008). I limited my sample to workers aged 18 to 65 who reported occupations (N=5,917).

American Time Use Survey

The American Time Use Survey (ATUS) is a time-use diary study (Horrigan and Herz 2004). The ATUS, funded by the United States Bureau of Labor Statistics (BLS), began in 2003 and data collection continues annually through today. The ATUS is a repeated cross-sections study. ATUS participants are meant to represent the larger national population, with some oversampled groups. ATUS participants are selected using stratified random sampling from households completing the Current Population Survey (CPS). Participants are chosen from families based on stratified groupings of race/ethnicity, presence of children, age of children, and number of adults present in the household.

The ATUS oversamples families with Hispanic or non-Hispanic black parents, as well as families with children (Horrigan and Herz 2004). One household member, 15 years or older, is randomly selected and asked to self-report time-use within a designated 24-hour period (4am to 3:59am). Participants are then interviewed over the phone to report their time-use for the 24-hour period. I accessed the ATUS data for 2003 to 2019 using IPUM's American Time Use Survey Data Extract Builder (Hofferth, Flood, Sobek,

and Backman). I limited my sample to workers aged 18 to 65 who reported occupations (N=121,755).

Measures

Occupation Codes

The NSFH2 uses 1990 Census occupation codes. The 2003 to 2010 ATUS uses the 2002 Census occupation codes, while the 2011 to 2019 ATUS uses the 2010 Census occupation codes. The GSS provides occupation codes using both the 1980 and 2010 Census occupation coding systems. I conducted my analysis separately based on the GSS 1980 and 2010 occupation codes. However, if occupations were not represented in the GSS, estimates could not be calculated. Therefore, less common occupations may be excluded from analysis.

In order to facilitate merging across datasets via the Census occupation codes, I converted the 1980 GSS occupation codes to their 1990 equivalent for merging to NSFH2, and the 2003 to 2010 ATUS occupation codes to their 2010 equivalent before merging between the GSS and ATUS. This conversion process favored newer codes over the older Census occupation codes.

Occupational Nurturance and Authority

I explored three different approaches for the selection of GSS measures to be used for the development of new measures for occupational nurturance and authority. I first assessed the Dictionary of Occupational Titles (DOT) measure for relationship with people as it was consistent with England and colleagues' (1994) definition for occupational nurturance (i.e., substantial face-to-face time with clients or customers).

However, as previously mentioned, the issue with construct validity still remained and therefore the DOT measure for relationship with people would not serve as an optimal proxy for occupational nurturance.

I next examined existing and validated scales assessed in the GSS to determine if the scales could be repurposed or reconfigured as proxies for occupational nurturance and authority. I found a few scales that could potentially serve as proxies for occupational nurturance, including the Davis Empathy Scale (DES) (Davis 1994), altruistic values scale (Nickell 1998; Webb, Green, and Brashear 2000), and altruistic behaviors scale (Rushton 1981; Rushton, Chrisjohn, and Fekken 1981; Rushton and Fekken 1981; Johnson et al. 1989; Amato 1990; Smith 2000; Smith 2005) (Appendix B). Although promising, the scales created separate measurement problems. All three scales were only administered during the 2002 and 2004 GSS and were also only administered to a subset of survey respondents within those years.

Due to the limitations outlined above, I decided to select two GSS survey items (one for occupational nurturance and one for occupational authority). I conducted a search of the GSS using code words to find measures that may better operationalize nurturance and authority. For nurturance, I used the following code words to search through the GSS Data Explorer: “nurture,” “nutur” (to get at nurturance and nurturing), “social,” “provid” (for provide and providing), “help,” “people,” “encourag” (for encourage, encourages, encouraging), “develop,” “care,” “patient,” “car” (for care and caring), “welfare,” “love,” and “child” (for child and children). For authority, I used the following code words: “authority,” “boss,” “direct,” “team,” “supervis” (for supervise and supervisor), “lead,”

and “manag” (for manage, manager, and management). I also searched through a number of the related modules and subjects listed in the GSS Data Explorer.

My search resulted in numerous measures for occupational nurturance and a handful of measures for occupational authority. I further limited the measures by selecting those that were specific to the workplace. This resulted in two measures each for occupational nurturance and authority (Table 2-1). I then assessed the prevalence of the measures across GSS years, how well the measures aligned to the constructs, the percent of occupations with valid (non-missing) data, and the percent of occupations with only one respondent reporting on the measure. I completed this assessment separately for the 1980 and 2010 GSS Census occupation codes. Based on these considerations, I selected one measure for occupational nurturance and one measure for occupational authority (bolded below).

Table 2-1. Selected General Social Survey Measures

| Occupational gendered behavior | GSS measure | Available GSS years | Construct alignment | Occupations with valid data N (%) | | Occupations with only 1 respondent reporting N (%) | |
|--------------------------------|---|---|---------------------|--------------------------------------|---------------|---|---------------|
| | | | | 1980 | 2010 | 1980 | 2010 |
| Nurturance | In my job I can help other people (rhlpohs) | 1989, 1998, 2006, 2016 (4 years) | Yes | 355 (72.4) | 379 (72.6) | 86 (17.6) | 101 (19.4) |
| | My job is useful to society (rhlp soc) | 1989, 1998, 2006, 2016 (4 years) | No | 356 (72.7) | 379 (72.6) | 88 (18.0) | 102 (19.5) |
| Authority | Do you supervise or are you directly responsible for the work of other people? (supervis) | 1988 to 2018 (18 years) ^[2] | Yes | 267 (54.5) | 254 (48.7) | 104 (21.2) | 99 (19.0) |
| | Do you supervise the work of other employees (offsup) | 1991 | Yes | 255 (52.0) | 262 (50.2) | 99 (20.2) | 106 (20.3) |

Notes. Based on 490 Census occupations represented in the GSS using the 1980 Census occupation codes, and 522 Census occupations in the GSS for the 2010 Census occupation codes.

The responses were reverse coded.

^[2] The measure was collected annually from 1988 to 1991 then again in 1993, and every other year beginning in 1994 to present day.

Analytic Strategy

In order to construct the new measures for occupational nurturance and authority, I used a year fixed effects multilevel model of GSS respondents nested within occupations. I conducted two parallel sets of analyses (one using the GSS 1980 Census occupation codes, and separately using the 2010 codes). I examined the intra-class correlation (ICC) of the measures as test of reliability in order to assess how much of the variation lies at the group-level, or between (rather than within) the occupations (Hox, Moerbeek, and van de Schoot 2018). ICC can be interpreted as the estimated amount of variation in the GSS population that is between occupations. The ICC can also be interpreted as the correlation between two randomly selected GSS respondents' responses to the survey items on occupational nurturance, and separately occupational authority.

I then used the multilevel models to compute empirical Bayes (EB) estimates of the occupational effects. Rather than simply using the average scores of the new measures of occupational nurturance and authority, the EB estimates provide more sound estimates that are less prone to bias or error. The EB estimates consider the mean of each observation in the data set and “shrink” each of these toward the grand mean (Townsend, Buckley, Harada, and Scott 2013; Hox et al. 2018). The EB estimates were then merged to the NSFH2 and ATUS datasets via the appropriate Census occupation codes and used for analysis.

I also conducted a series of correlations in order to assess the association, direction, and strength of my newly constructed measures with the DOT measure of relationship with people (occupational nurturance only), occupational sex composition,

and England and colleagues' (1994) prior measures for occupational nurturance and authority. I also conducted a separate set of correlations comparing England and colleagues' measures to the DOT measure and occupational sex composition. I conducted all analyses using Stata version 16 (StataCorp 2019).

Results

Roughly 15% of the variation in the occupational nurturance measure occurred between (rather than within) the occupations when using the 1980 occupation codes (Table 2-2). The occupational nurturance measure had valid data for 72.4% of occupations, and 17.6% of occupations only contained one respondent using the GSS data (Table 2-1). The intra-class correlation for the occupational authority measure was higher at 23% (Table 2-2), although the measure only contained valid data for 54.5% of occupations and 21.2% of the reporting occupations were only represented by one respondent (Table 2-1). The estimates were fairly similar when using the 2010 Census occupation codes.

Table 2-2. GSS Respondents Nested within Occupations: Intra-class Correlation of Selected GSS Measures

| Occupational gendered behavior | GSS measure | ICC | |
|--------------------------------|---|---------------|---------------|
| | | 1980 ICC (SE) | 2010 ICC (SE) |
| Nurturance | In my job I can help other people (rhlpoths) | 0.15 (0.02) | 0.15 (0.02) |
| Authority | Do you supervise or are you directly responsible for the work of other people? (supervis) | 0.23 (0.04) | 0.26 (0.04) |

The constructed measures were then merged to the NSFH2 and ATUS datasets for analysis. The GSS constructed EB estimates merged to 97.6% of NSFH2 cases and 99.7% of ATUS cases via the Census occupation codes (Table 2-3). Within the merged data sets, the percentage of EB estimates with valid data (i.e., non-missing data) was higher for the new occupational nurturance measure (ranging from 96.1% to 97.1%). The new measure for occupational authority had more valid data using the GSS 2010 occupation codes with 95.0% valid data in the ATUS compared to 87.5% using the 1980 occupation codes for the NSFH2.

Table 2-3. GSS Empirical Bayes Estimates Merged to NSFH2 and ATUS

| | % Matched | | % EB estimates with valid data | |
|----------------------------|-----------|------|--------------------------------|-----------|
| | NSFH2 | ATUS | Nurturance | Authority |
| Using GSS occupation codes | | | | |
| 1980 | 97.6 | - | 96.1 | 87.5 |
| 2010 | - | 99.7 | 97.1 | 95.0 |

The newly constructed measures for occupational nurturance and authority were positively correlated with England and colleagues' (1994) measures. Occupational sex composition, measured as the percent of women in an occupation, was positively associated with occupational nurturance and negatively associated with occupational authority. England and colleagues' measures also followed similar patterns with occupational sex composition. The DOT measure for relationship with people was negatively correlated with both mine and England and colleagues' measures.

I assessed the association between my newly constructed measures for occupational nurturance and authority and England and colleagues' (1994) measures using the 2010 Census occupation codes. I found that the measures were positively correlated. England and colleagues' (1994) measures were positively correlated with the newly constructed measures for occupational nurturance ($r=0.5862$) and occupational authority ($r=0.7062$). The correlation for the occupational authority measures was strong, while the correlation between the occupational nurturance measures was moderate (Moore, Notz, and Flinger 2013). The positive correlations indicate that the measures move in the same direction.

I also assessed the correlation between the new measures for occupational nurturance and authority and occupational sex composition, or the percent of an occupation held by women. The correlation between the new measure of occupational nurturance and occupational sex composition was $r=0.2576$ using the 1980 GSS occupation codes and $r=0.2983$ using the 2010 codes indicating positive associations, although weak. The positive association suggests that as the percentage of women in an occupation increased, occupational nurturance also increased. The correlations between the new measures for occupational authority were $r=-0.1287$ in 1980 and $r=-0.1604$ in 2010 indicating negative associations, although weak. The negative association suggests that as the percentage of women in an occupation increased, occupational authority decreased.

I also assessed the correlations between the earlier measures of occupational nurturance and authority developed by England and colleagues' (1994) and occupational

sex composition. The correlations were $r=0.3531$ (i.e., weak) for occupational nurturance and $r=-0.0075$ (i.e., none or very weak) for occupational authority. England and colleagues' measure for occupational nurturance had a stronger association to occupational sex composition than mine, but a weaker association for occupational authority. However, the direction of the associations were the same when assessing both mine and England and colleagues' measures.

The correlation between the DOT measure for relationship with people was negatively associated with both mine and England and colleagues' measure for occupational nurturance. The correlations between the DOT measure on relationship with people and the newly constructed measures for occupational nurturance were $r=-0.4752$ (i.e., weak) using the 1980 Census occupation codes $r=-0.5062$ (i.e., moderate) for the 2010 codes. Similarly, the correlation between the DOT measure and England and colleagues' measure for occupational nurturance was $r=-0.3688$ (i.e., weak). This provides further support for issues with construct validity. Even though the operational definitions for England and colleagues' measure for occupational nurturance and the relationship with people DOT measure are similar, the measures are in fact negatively correlated (i.e., moving in the opposite direction).

Discussion

The year fixed effects multilevel model of General Social Survey (GSS) respondents nested within occupations indicated fairly respectable intra-class correlations of the measures. The former measures overlooked occupations that could be both nurturing and exert authority (e.g., physicians), and also used a definition reliant on face-to-face time

with clients or customers which sometimes included obscure occupations (e.g., parking lot attendants). The newly developed measures are not mutually exclusive or dichotomous and may offer better construct validity for occupational nurturance and authority. The GSS-constructed measures are based on actual workers' attitudes and beliefs rather than perceived characteristics as seen in England and colleagues' (1994) and the DOT measures (Temme 1975; U.S. Department of Labor 1991). The GSS-constructed measures for occupational nurturance and authority also incorporate the use of empirical Bayes estimates which are less prone to estimation error and therefore provide more sound estimates for analysis.

The correlations between the newly constructed GSS measures for occupational nurturance and authority were positively correlated to England and colleagues' (1994) measures. My measure for occupational nurturance was positively associated with the percent of women in an occupation, or occupational sex composition. The association between my new measure for occupational authority was also in the correct direction with occupational sex composition (England and McLaughlin 1979; England, Chassie, and Linda McCormick 1982; England, Farkas, Kilbourne, and Dou 1988; England 1992; England, Reid, and Kilbourne 1996; Budig and England 2001; England, Budig, and Folbre 2002; Bittman, England, Folbre, Sayer, and Matheson 2003; England 2005). The DOT measure for relationship with people was negatively correlated with my new measure for occupational nurturance, yet also negatively correlated with England and colleagues' measure despite a similar definition further emphasizing that the DOT

relationship with people measure should not be used as a proxy for occupational nurturance.

The correlations suggest that my newly constructed measures for occupational nurturance and authority are not too far off from England and colleagues' (1994) former measures. Although, the newly constructed measures make use of actual survey respondents' General Social Survey (GSS) data on two survey items specifically related to the workplace rather than the "noisy" definitions for occupational nurturance and authority used by England and colleagues (1994). The measures also move away from the dichotomy and mutually exclusivity of the former measures. The measures offer a range for occupational nurturance and authority, rather than an "all-or-nothing" approach. The measures also allow occupations to be both nurturing and exert authority.

The newly developed measures for occupational nurturance and authority may be easily merged to existing data sets via the United States Census occupations codes. I showed this utility using both the National Survey of Families and Households and the American Time Use Survey. I was also able to show the flexibility of incorporating these measures into data sets with different versions of the Census occupation codes (e.g., 1980, 2010) highlighting the potential for further application to other data sets. To further test out and show the utility of these newly constructed measures, I examine them within the housework literature in Chapter 3 and the child care literature in Chapter 4.

There are a few limitations to the newly constructed measures. First, if occupations are not represented in the GSS, I cannot estimate their occupational nurturance or authority using the current methodology. Missing data will have to be imputed (e.g., ICE

procedure) or excluded (e.g., listwise deletion). The newly constructed measures also do not address variation within occupation (e.g., pediatricians versus surgeons). The occupation codes unfortunately do not drill down to the level of detail needed to address this issue. Although, the methods I use to develop the alternative measures could address this limitation if more granular occupation codes were used. However, this remains a limitation for the measures developed by England and colleagues' (1994) as well as my own.

CHAPTER 3

**GENDER ATYPICAL OCCUPATIONS AND HOUSEWORK TIME USING
UPDATED MEASURES OF OCCUPATIONAL NURTURANCE AND
AUTHORITY**

Deviations from normative displays of gender performance are at odds with society's agreed upon social norms and may be viewed as threats to one's gender identity (West and Zimmerman 1987). Failed gender performance, or gender deviance, is more threatening for men than woman as illustrated by "failed masculinity." For married heterosexual couples, gender deviance may occur when wives out earn their husbands, and more visibly when men and women enter gender-atypical occupations (Schneider 2012). Perspectives of gender deviance neutralization (GDN) and gender conventionality, both falling under the umbrella of gender display theory, and economic dependency shed light on the ways in which men and women in gender-atypical occupations and their partners respond to deviations from society's view on normative gender behavior.

Gender Deviance Neutralization

Individuals who deviate from normative gender performance in the workplace may attempt to neutralize this deviant behavior by displaying normative gender behavior in the household (Greenstein 2000; Bittman, England, Folbre, Sayer, and Matheson 2003). This "neutralization" is known as gender deviance neutralization (GDN). Daniel Schneider states, "... couples turn to housework as a key site for deviance neutralization and the reconstruction of gender" (2012:1031). Husbands in gender-atypical occupations

will do less housework because it is socially perceived as a feminine task, and when they do complete housework it will consist of tasks perceived as masculine to support their fragile masculinity (Schneider 2012; McClintock 2017). For example, a husband working as a schoolteacher, a gender-atypical occupation, may neutralize the threat to his masculinity by performing less overall housework compared to his peers in gender-neutral occupations. The housework that he does complete may include more masculine tasks, such as exterior home maintenance, rather than feminine tasks, such as doing laundry.

Gender Conventionality

Men and women in gender-atypical occupations may hold more progressive gender ideologies compared to their peers in gender-typical or gender-neutral occupations (Okamoto & England 1999; Dodson and Borders 2006). Beyond ideologies, gender-atypical work experience may also reinforce gender-atypical skills at home. Gender conventionality suggests that men and women in gender-atypical occupations may be more likely to complete gender-atypical housework compared to their peers working in gender-typical and gender-neutral occupations (McClintock 2017). For example, a male nurse (a gender-atypical occupation for men) may be more likely to complete housework viewed as feminine, such as cooking and cleaning, than his peers in gender-typical or neutral occupations.

Economic Dependency

Economic dependency, an extension of Gary Becker's new home economics, theorizes housework as the exchange of unpaid labor from one partner for the monetary

resources gained through the paid labor of the other partner (Becker 1965; Walby 1986). The partner with lower income is viewed as dependent on the partner with main breadwinner status illustrating the “logic of the pocketbook” (Hochschild and Machung 1989). Unpaid household labor, such as housework, operates as a brokered exchange between the economically dependent partner and the economic support of the breadwinning partner (Gupta 2007; Sullivan 2011).

The rational exchange of dependency and support is further solidified by marital commitment. Married women dedicate more time to unpaid household labor compared to their cohabiting peers, and married men complete less unpaid household labor compared to their cohabiting peers (Bianchi, Sayer, Milkie, and Robinson 2012). However, exchanges between married partners do not purely reflect the exchange of goods and services within the free market (Curtis 1986). For example, women entered the labor market, but their unpaid household labor responsibilities remained the same (Hochschild 1989; Gerson 2010). Persistent gender inequalities in unpaid household labor remain as research continues to support that despite labor market gains, wives complete more unpaid household labor than husbands (Bianchi et al. 2012).

Women who participate in the labor force can bargain their way out of housework (Connelly & Kimmel 2010; Raley, Bianchi, and Wang 2012). Women’s bargaining power increases as relative wages increase to a certain extent. The economic exchange of the bargaining perspective works until husbands and wives reach parity in income share (Bittman, England, and Folbre 2003).

Beyond relative wages, those working more hours may also be able to bargain their way out of housework supporting a time availability perspective (Bianchi, Milkie, Sayer, and Robinson 2000).

The theory of economic dependency also supports the idea that the partner (regardless of gender) who is more dependent on the marital relationship will complete more unpaid household labor as a form of negotiation (Walby 1986). Partner dependency and negotiation do not have to be financial. Research by Badgett and Folbre (2003) suggests that partners in gender-atypical occupations are socially perceived as less desirable partners, and therefore, more dependent on their current marital partnering.

Present Study

The present study builds on the work of McClintock (2017) and Schneider (2012), while adding to the literature by incorporating newly developed measures of occupational nurturance and authority. I test the theories of gender display and economic dependency for married men and women working in gender atypical occupations (Table 3-1). In line with McClintock's findings, I predict to find support for gender conventionality, bargaining power, and time availability. I predict to find limited to no support for gender deviance neutralization.

I conduct a robustness check of McClintock's (2017) work by closely replicating her findings and then examining if my findings substantially differ when using the alternative measures of occupational nurturance and authority that I constructed in Chapter 2. I also assess more recent data from the American Time Use Survey (ATUS).

Table 3-1. Housework Hypotheses for Married Men and Women in Gender Atypical Occupations

| Theory | Group | | Outcome | Housework | | |
|---|--|---|--|--------------------|--------------------|-----------|
| | | | | Total | Feminine | Masculine |
| Gender Deviance Neutralization ^[1] | Men in gender atypical occupations will... | | ...complete more gender typical housework than their peers. ^[2] | --- | ---- | +++ |
| | Women in gender atypical occupations will... | | ...complete more gender typical housework than their peers. | + | + | - |
| Gender Conventionality ^[1] | Men in gender atypical occupations will... | | ...complete more gender atypical housework than their peers. | N/A ^[3] | + | - |
| | Women in gender atypical occupations will... | | ...complete more gender atypical housework than their peers. | | - | + |
| | Men in authoritative occupations will... | | ...complete more masculine housework than their peers. | | - | + |
| | Women in authoritative occupations will... | | ...complete more masculine housework than their peers. | | - | + |
| | Men in nurturing occupations will... | | ...complete more feminine housework than their peers. | | + | - |
| | Women in nurturing occupations will... | | ...complete more feminine housework than their peers. | | + | - |
| Economic Dependency | Bargain | Men and women with greater economic contributions will... | ...complete less housework than their peers | - | N/A ^[4] | |

Table 3-1 continued.

| Theory | | Group | Outcome | Total | Feminine | Masculine |
|---------------------|------|--|---|-------|--------------------|-----------|
| Economic Dependency | Time | Men and women who devote more time to paid labor will... | ...complete less housework than their peers | - | N/A ^[4] | |

Notes. ^[1] The theory assumes net of all wages. I control for income within my multivariate models.

^[2] The gender deviance neutralization findings for men are predicted to be more pronounced for men in gender atypical occupations compared to women in gender atypical occupations using the failed masculinity perspective.

^[3] Gender conventionality supports alignment between gendered workplace and home skills. Therefore, I focus on gendered housework tasks and exclude total housework from the gender conventionality hypotheses.

^[4] It is predicted that the more dependent partner will complete more housework overall (total housework). Therefore, I exclude the gendered housework tasks from the dependency hypotheses.

Gender Deviance Neutralization

The gender deviance neutralization hypotheses predict that those in gender atypical occupations will attempt to neutralize their deviation from social norms by completing gender typical housework. According to the gender deviance neutralization literature, it is hypothesized that:

- Married men in gender atypical occupations will complete more gender typical housework than their peers, which includes less total, less feminine, and more masculine housework; and
- Married women in gender atypical occupations will complete more gender typical housework than their peers, which includes more total, more feminine, and less masculine housework.

Gender Conventionality

The gender conventionality hypotheses predict that those in gender atypical occupations will show alignment between work and housework. The hypotheses cover both instances of gender atypical work and workplace characteristics (i.e., occupations characterized as nurturing or authoritative). According to the gender conventionality literature, it is hypothesized that:

- Married men in gender atypical occupations will complete more gender atypical housework than their peers, which includes more feminine and less masculine housework;

- Married women in gender atypical occupations will complete more gender atypical housework than their peers, which includes less feminine and more masculine housework;
- Married men and women in authoritative occupations will complete more masculine and less feminine housework than their peers; and
- Married men and women in nurturing occupations will complete more feminine and less masculine housework than their peers.

Economic Dependency

The economic dependency hypotheses cover two perspectives. The bargaining perspective suggests that those who contribute more to the household economically will be able to bargain their way out of housework. It is hypothesized that:

- Married men and women with greater economic contributions to the household will complete less housework than their peers.

The time availability perspective predicts that those who dedicate more time to the paid labor market will have less time to complete unpaid household labor. It is hypothesized that:

- Men and women who devote more time to paid labor will complete less housework than their peers.

Methodology

Data Sources

I use the second wave of the National Survey of Families and Households (NSFH2) as the primary data source for the present study in order to assess housework

for married couples. As a robustness check, I use more recent data from the American Time Use Survey (ATUS), although the ATUS only collects time use data on one partner. I describe the methods for constructing my analytic variables based on my primary data source (NSFH2). I follow the same methodology when using the ATUS and, if applicable, I highlight any differences throughout. Both data sources were used by Schneider (2012) and McClintock (2017). I also use two measures from the General Social Survey (GSS) to construct new measures for occupational nurturance and authority. I briefly describe the methods for measure construction. However, please refer to Chapter 2 for additional detail. After replicating the work of McClintock, I merged the new measures for occupational nurturance and authority to my data sets for analysis.

National Survey of Families and Households

Data collection for the National Survey of Families and Households (NSFH) began in 1987 and consists of three waves. The first wave (1987 to 1988) targeted a nationally representative sample of 13,017 households in the United States. The researchers oversampled underrepresented racial and ethnic groups, as well as diverse family forms (single-parent, step-parent, and cohabiting households) (Sweet & Bumpass 2002). One randomly selected adult was chosen as the primary respondent in each household. The primary respondent took part in a series of self-administered questionnaires and interviews. Additionally, a shorter self-administered questionnaire was given to the married spouse or cohabiting partners. The NSFH collects rich information on household composition, education, employment, time use, as well as attitudes and opinions. A five-year follow-up study, known as the NSFH2, was conducted

from 1992 to 1994. The NSFH2 includes personal interviews with 10,007 original primary respondents, 5,624 current partners of primary respondents, and 789 former partners of primary respondents (Sweet and Bumpass 2002). A third follow-up study was conducted from 2001 to 2002 using a similar format as NSFH2, although for a much smaller sample size.

American Time Use Survey

The American Time Use Survey (ATUS) is a time-use diary study (Horrigan and Herz 2004). The ATUS, funded by the United States Bureau of Labor Statistics (BLS), began in 2003 and data collection continues through today. The ATUS is a repeated cross-sections study. ATUS participants are meant to represent the larger United States population, with some oversampled groups. ATUS participants are selected using stratified random sampling from households completing the Current Population Survey (CPS). Participants are chosen from families based on stratified groupings of race/ethnicity, presence of children, age of children, and number of adults present in the household. ATUS oversamples families with Hispanic or non-Hispanic black parents, as well as families with children (Horrigan and Herz 2004). One household member, 15 years or older, is randomly selected and asked to self-report time-use within a designated 24-hour period (4am to 3:59am).

ATUS researchers collect rich interview-based participant responses, which are then coded into the coding structure's main groupings and subgroupings (Shelley 2005). The coding structure's main time-use groupings are: personal care, household activities, caring for and helping household members, caring for and helping non-household

members, working and work-related activities, education, consumer purchases, professional and personal care services, household services, government services and civic obligations, eating and drinking, socializing, relaxing and leisure, sports, exercise and recreation, religious and spiritual activities, volunteer activities, telephone calls, and traveling.

Measures

Dependent Variable

The dependent variable for the present study is self-reported housework hours. The Group Household Tasks section of the NSFH2 includes self-reported data from respondents, and separately, their partners. Respondents estimated the amount of hours they spent on nine household tasks in an average week. McClintock (2017) followed Schneider (2012) and gendered the housework tasks for analysis, but she also added two additional gender-neutral tasks. I also included all nine housework tasks using McClintock’s classifications of gendered tasks (Table 3-2).

Table 3-2. Household Tasks by Gendered Designation using McClintock’s (2017) Classification of Gendered Housework Using the NSFH2

| Household task | Gendered code |
|--|---------------|
| Preparing meals | Feminine |
| Washing dishes and cleaning up after meals | Feminine |
| Cleaning the house | Feminine |
| Shopping for groceries and other household goods | Feminine |
| Washing, ironing, or mending clothes | Feminine |
| Outdoor and other household maintenance tasks | Masculine |
| Automobile maintenance and repair | Masculine |
| Paying bills and keeping financial records | Neutral |
| Driving other household members to work, school, or other activities | Neutral |

The response options for the Group Household Tasks section consisted of whole number hours per week ranging from 0 to 50 hours. Beyond numerical responses, respondents were also able to self-select 51 or more hours, some time spent (amount of time unspecified), household task inapplicable, or leave the amount of hours blank.

Following McClintock (2017) and Schneider (2012), I excluded partners with missing data on two or more housework measures. Main respondents and current spouse/partners with one missing housework variable were assigned zeros for those household tasks. Partners who reported that they spent “some time” on a given household task were assigned one hour. Partners who reported that they spent on average 51 or more hours per week on a household task were assigned 51 hours. Household tasks were individually top-coded at the 95th percentile for each gender before summing the tasks to compute: 1) total housework hours, 2) total feminine housework hours, and 3) total masculine housework hours (Schneider 2012; McClintock 2017).

The ATUS only collects time diary data for one member of the household, so I cannot assess both partners’ housework time. Although, the ATUS includes additional and more detailed housework tasks (Table 3-3). The ATUS collects time spent on activities in minute increments for the diary day. I scale minutes per day to hours per day and then multiply by seven to construct weekly housework hours comparable to the NSFH2.

Table 3-3. Household Tasks by Gendered Designation using McClintock’s (2017) Classification of Gendered Housework Using the ATUS

| Household task | Gendered code |
|---|---------------|
| Interior cleaning | Feminine |
| Laundry | Feminine |
| Sewing | Feminine |
| Storing interior household items, including food | Feminine |
| Household activities, not elsewhere classified (“NEC”) | Feminine |
| Food and drink preparation | Feminine |
| Food presentation | Feminine |
| Kitchen and food clean-up | Feminine |
| Food and drink preparation, presentation, and clean-up, NEC | Feminine |
| Purchasing food (not groceries) | Feminine |
| Shopping, except groceries, food, and gas | Feminine |
| Interior arrangement, decoration, and repairs | Masculine |
| Building and repairing furniture | Masculine |
| Heating and cooling | Masculine |
| Interior maintenance, repair, and decoration, NEC | Masculine |
| Exterior cleaning | Masculine |
| Exterior repair, improvements, and decoration | Masculine |
| Exterior maintenance, repair, and decoration, NEC | Masculine |
| Lawn, garden, and houseplant care | Masculine |
| Ponds, pools, and hot tubs | Masculine |
| Lawn and garden, NEC | Masculine |
| Vehicle repair and maintenance (by self) | Masculine |
| Vehicles, NEC | Masculine |
| Appliance, tool, and toy set-up | Masculine |
| Appliances and tools, NEC | Masculine |
| Financial management | Neutral |
| Household and personal organization | Neutral |
| Home security | Neutral |
| Household management, NEC | Neutral |
| House activities, NEC | Neutral |
| Grocery shopping | Neutral |

Independent Variables

The main independent variable for the present study is occupational sex composition. Following McClintock (2017), I used the 1990 United States Decennial Census 5% state sample to construct the occupational sex composition measure for the NSFH2 and the Current Population Survey (CPS) to construct the measure for the ATUS.

I accessed the 1990 5% sample using the Integrated Public Use Microdata Series (IPUMS) (Ruggles et al. 2010) survey Documentation and Analysis (SDA) application. I computed occupational sex composition as the proportion of 1990 5% Census sample of women within each occupation code. To model nonlinearity, I constructed a categorical specification for occupational sex composition for: 0% to 25% women, 26% to 50% women, 51% to 75% women, and 76% to 100% women (McClintock 2017).

I constructed occupational sex composition using CPS data on detailed occupation codes for each year of the ATUS (2003 to 2019). The 2003 to 2011 ATUS used 2002 Census occupation codes, while the 2011 to 2019 ATUS used 2010 Census occupation codes. I converted all 2002 Census occupation codes to the 2010 equivalent using the United States Census Bureau's Industry and Occupation Code Lists and Crosswalks (United States Census Bureau 2011) to facilitate a streamlined merge with the two newly developed measures for occupational nurturance and authority from the General Social Survey (GSS).

Model Covariates

I included additional measures on occupational gendered behavior, economic attributes, education, demographic and household characteristics, and attitudes.

Occupational gendered behavior. I used pooled General Social Survey (GSS) data from all available years to construct new measures of occupational nurturance and authority. I used a year fixed effects multilevel model of GSS respondents nested within occupations to develop alternative measures for occupational nurturance and authority (see Chapter Two). I also conducted comparative analyses using England and colleagues' 1994 measures for occupational nurturance and authority as used by McClintock (2017) (see Appendix Two Tables 1 through 6). My results were comparable when using both sets of measures.

Economic and demographic attributes. I included model covariates for individual income, husband's income share, homeownership, and work hours for both partners.

The NSFH2 main respondents were asked additional survey questions beyond those asked to current spouse/partners, which created missing data on a set of model covariates. These measures included race, self-reported health, homeownership, and number of household children. Schneider (2012) also used age, education, and school enrollment reported by the main respondents as covariates for both main respondents and current spouse/partners. McClintock (2017) differed here, and used age, education, and school enrollment reported by the current spouse/partner in her models. Schneider indicated that his models did not substantively differ when using the main respondent or current spouse/partner's reported measures. I followed McClintock's approach and incorporated self-reported education, school enrollment, and age for current spouse/partners.

I used the main respondent's measures for race, self-reported health, homeownership, and number of household children for both partners (as reported by the main respondent).

Unlike the NSFH2, the ATUS includes separate measures for both the main respondent and their spouse, which were incorporated for analysis.

Attitudes. NSFH2 respondents rated their attitudes on housework and gender roles within the self-administered module on family attitudes. Following McClintock (2017) and Schneider (2012), I included one survey item on gendered housework (i.e., "A husband whose wife is working full-time should spend just as many hours doing housework as his wife.") and a gender ideology index based on three survey items: "It is much better for everyone if the man earns the main living and the woman takes care of the home and family;" "Preschool children are likely to suffer if their mother is employed;" and "It is all right for mothers to work full-time when their youngest child is under age five" (reverse coded).

The survey item on unequal, gendered housework was rated using a five-point Likert scale ranging from strongly agree (i.e., more progressive gender ideology) to strongly disagree (i.e., more traditional gender ideology). The three survey items on gender attitudes were also rated on a five-point strongly agree/strongly disagree Likert scale. I reverse coded the third survey item (listed above). Following McClintock (2017) and Schneider (2012), I constructed an average scale score with higher scores indicating more traditional gender attitudes. The ATUS does not contain measures on gender attitudes, and therefore these measures cannot be assessed within the robustness checks.

Sample

I limited my sample following McClintock's (2017) methodology by restricting the sample to married heterosexual couples aged 18 to 65 who reported occupations (N=2,292 couples). Results should only be generalizable to heterosexual married men and women from dual-earner households. I discuss issues with the sample selection and potential sample selection bias in Appendix F (Appendix F Tables F-1 and F-2). Following McClintock, I imputed missing data using chained equations (ICE procedure). Refer to Appendix D for a comparison between my results and McClintock's using multiple imputation (MI) (Appendix D Tables D-1 through D-3). The comparisons illustrate the sensitivity of the results to the MI methodology.

Analytic Strategy

I conducted parallel analyses of married men and women's time spent on housework using ordinary least squares (OLS) regression for continuous outcomes. I conducted three separate regression analyses for time spent on total, feminine, and masculine housework separately for married men and women.

I also conducted separate analyses using the occupational nurturance and authority measures used by McClintock (2017) (Appendix C Tables C-3 and C-4). The correlation between my GSS-constructed measures and those used in McClintock's analysis were positively correlated on both of the measures for men ($r=0.45$ for occupational nurturance and $r=0.75$ for occupational authority) and women ($r=0.61$ for occupational nurturance and $r=0.64$ for occupational authority) (Appendix C Tables C-1,

C-2, C-5, and C-6). These findings were similar with those from Chapter 2. All analyses were conducted using Stata 16.

Results

Married men completed 18.30 total housework hours per week compared to married women's 31.68 hours (Table 3-4). Married women completed more feminine housework tasks, while married men completed more masculine housework tasks. Only 4% of married men and 5% of married women were in highly gender atypical occupations that were characterized as 0% to 25% women for married women and 76% to 100% women for married men.

Married men reported more work hours and greater individual income than married women. Husbands earned 62% of the total couple income. Married men also scored higher on the more traditional gender ideology scales for beliefs on unequal housework and parenting ideology.

Table 3-4. Unadjusted Characteristics of Married Men and Women using the NSFH2 (N=2,229)

| Measure | Men | | Women | |
|--------------------------------------|-----------|-----------|-----------|-----------|
| | Mean | SD | Mean | SD |
| Housework | | | | |
| Total weekly housework hours | 18.30 | 10.01 | 31.68 | 16.50 |
| Feminine tasks | 9.51 | 6.72 | 26.65 | 14.28 |
| Masculine tasks | 6.34 | 4.74 | 1.73 | 2.03 |
| Occupational sex composition | | | | |
| Percent occupation women, 0% to 100% | 30.04 | 22.36 | 66.79 | 24.43 |
| Occupation 0% to 25% women | 0.42 | | 0.05 | |
| Occupation 26% to 50% women | 0.38 | | 0.22 | |
| Occupation 51% to 75% women | 0.15 | | 0.28 | |
| Occupation 76% to 100% women | 0.04 | | 0.45 | |
| Occupational gendered behavior | | | | |
| Occupation nurturing | -0.01 | 46.08 | 0.02 | 46.59 |
| Occupation authority | 0.08 | 46.26 | 0.05 | 44.49 |
| Economic attributes | | | | |
| Work hours | 45.57 | 12.35 | 35.82 | 13.68 |
| Total couple income | 57,516.56 | 34,343.01 | | |
| Individual income | 36,432.57 | 27,129.18 | 21,071.36 | 17,056.94 |
| Husband's income share | 0.62 | 0.23 | | |
| Husband's income share 0% to 25% | 0.07 | | | |
| Husband's income share 26% to 50% | 0.20 | | | |
| Husband's income share 51% to 75% | 0.45 | | | |
| Husband's income share 76% to 100% | 0.28 | | | |
| Own home | 0.85 | | | |
| Education | | | | |
| Less than high school | 0.08 | | 0.07 | |
| High school | 0.33 | | 0.35 | |
| Some college | 0.28 | | 0.31 | |
| College or more | 0.31 | | 0.28 | |
| Enrolled in school | 0.18 | | 0.23 | |
| Demographic attributes | | | | |
| Age | 40.94 | 8.70 | 38.84 | 8.21 |
| Number of children | 1.28 | 1.17 | 1.28 | 1.17 |
| White | 0.85 | | 0.85 | |
| Health is fair or poor | 0.15 | | 0.15 | |
| Attitudes | | | | |

Table 3-4 continued.

| Measure | Men | | Women | |
|---------------------------------------|-------|------|-------|------|
| | Mean | SD | Mean | SD |
| Advocates unequal, gendered housework | 2.36 | 0.95 | 2.17 | 0.95 |
| Traditional gender attitudes scale | 3.04 | 0.86 | 2.80 | 0.90 |
| Number of couples | 2,229 | | 2,229 | |

Note. Occupational gendered behavior measures were z-standardized.

Multivariate Results

The findings for married men and women's housework were consistent with McClintock's (2017) findings, which overwhelmingly supported gender conventionality. I describe the findings below. I also include standardized beta coefficients for statistically significant findings in Table 3-7 in order to show the relative importance of each coefficient. The standardized coefficients were calculated using the unstandardized coefficients multiplied by the standard deviation of the predictor divided by the standard deviation of the outcome for continuous predictors (i.e., $b * SD_x / SD_y$), or the unstandardized coefficient divided by the standard deviation of the outcome for categorical predictors (i.e., b / SD_y). It is worth noting that the absolute values of all standardized beta coefficients were quite small (i.e., 0.32 or less) indicating relatively weak effects for all multivariate findings.

Married Men

The multivariate results for married men supported gender conventionality, or that married men in gender atypical occupations complete more gender atypical housework than their peers (Table 3-5). Married men who worked in occupations with the highest concentration of women (i.e., 76% to 100% women) completed more feminine housework than their peers in occupations with the lowest concentration of women (i.e., 0% to 25% women) ($b=2.16$, $SE=0.74$), $p<0.05$) with an effect size of 0.32 (Table 3-7). This equates to roughly two additional hours of feminine housework each week.

All married men completed less masculine housework than married men in occupations with the lowest concentration of women (i.e., 0% to 25% women) with effect

sizes ranging from 0.14 to 0.25 (Table 3-7). These findings were consistent across all occupational sex composition categories (i.e., 26% to 50% women, 51% to 75% women, and 75% to 100% women) and provide further support for the gender conventionality hypothesis, or that married men in female-dominated occupations completed less masculine housework. McClintock (2017) found similar associations for these set of findings in terms of direction, although her findings were only statistically significant for the first comparison (i.e., occupations 0% to 25% women compared to 26% to 50% women).

In support of the time availability perspective, as married men's wives' work hours increased, so did men's total ($b=0.04$, $SE=0.02$, $p<0.05$) and feminine ($b=0.03$, $SE=0.01$, $p<0.05$) weekly housework hours (Table 3-5). The effect sizes ranged from 0.05 to 0.06 and indicate that with every increase of one standard deviation in married men's wives' work hours, married men's feminine weekly housework hours increased by 0.06 standard deviations and by 0.05 standard deviations for total weekly housework hours (Table 3-7). Similarly, as men's own work hours increased, their time spent on feminine housework decreased ($b=-0.03$, $SE=0.01$, $p<0.05$) with an effect size of 0.06.

Table 3-5. Multivariate Results of Married Men's Housework

| | Total Housework (Hours/week) | Feminine Housework (Hours/week) | Masculine Housework (Hours/week) |
|--|------------------------------------|---------------------------------------|--|
| | <i>b</i> (SE) | <i>b</i> (SE) | <i>b</i> (SE) |
| Occupational sex composition (ref: Job 0% to 25% women) | | | |
| Job 26% to 50% women | -0.10 (0.51) | 0.26 (0.34) | -1.18* (0.24) |
| Job 51% to 75% women | 0.32 (0.66) | 0.86 (0.44) | -0.67* (0.31) |
| Job 76% to 100% women | 1.30 (1.11) | 2.16* (0.74) | -1.14* (0.53) |
| Occupational gendered behavior | | | |
| Nurturance | -0.01 (0.01) | -0.01 (0.00) | -0.00 (0.00) |
| Authority | -0.01 (0.01) | -0.01 (0.00) | 0.00 (0.00) |
| Economic attributes | | | |
| Work hours | -0.03 (0.02) | -0.03* (0.01) | 0.01 (0.01) |
| Wife's work hours | 0.04* (0.02) | 0.03* (0.01) | -0.00 (0.01) |
| Own income | -0.00 (0.00) | -0.00 (0.00) | -0.00 (0.00) |
| Husband's income share | -1.83 (1.08) | -1.60* (0.72) | -0.13 (0.50) |
| Own home | 1.20* (0.60) | -0.94* (0.40) | 2.38* (0.28) |
| Education (ref: Less than high school) | | | |
| High school | -0.26 (0.84) | -0.24 (0.56) | -0.09 (0.40) |
| Some college | 0.71 (0.88) | 0.87 (0.58) | -0.51 (0.41) |
| College or more | -0.81 (0.92) | 0.32 (0.62) | -1.47* (0.44) |
| In school | 0.92 (0.56) | 0.53 (0.37) | -0.03 (0.27) |
| Demographic attributes | | | |
| Age (ref: 18 to 34) | | | |
| 35 to 40 years | -0.75 (0.58) | -0.50 (0.38) | -0.28 (0.27) |
| 41 to 47 years | -0.66 (0.60) | -0.90* (0.39) | 0.13 (0.28) |
| 48 years or older | -2.67* (0.67) | -2.05* (0.44) | -0.50 (0.32) |
| Number of children | 0.84* (0.20) | 0.22 (0.13) | 0.15 (0.09) |
| Is white | -2.97* (0.59) | -1.12* (0.39) | -0.73* (0.28) |
| Health is fair or poor | -1.13 (0.58) | -0.70 (0.38) | -0.32 (0.27) |
| Attitudes | | | |
| Unequal housework | -0.93* (0.22) | -0.89* (0.15) | 0.00 (0.10) |
| Traditional gender (TG) scale | -0.06 (0.28) | -0.54* (0.18) | 0.44* (0.13) |
| Wife's unequal housework | -0.21 (0.22) | -0.41* (0.15) | 0.17 (0.10) |
| Wife's TG scale | -0.47 (0.26) | -0.24 (0.17) | -0.17 (0.12) |
| N | 2,229 | 2,229 | 2,229 |

Notes. Data from the National Survey of Families and Households Wave 2 (1992 – 1994) and General Social Survey.

Ref = reference category.

Missing data are imputed.

Table 3-5 continued.

Notes. Estimates rounded to the nearest hundredth.

* $p < 0.05$

Married Women

The multivariate results for married women overwhelmingly supported gender conventionality (Table 3-6). Married women who work in occupations with the lowest concentration of women (i.e., gender atypical, 0% to 25% women) completed more masculine housework than their peers in occupations with the highest concentration of women (i.e., 76% to 100% women) supporting gender conventionality ($b=0.54$, $SE=0.22$, $p<0.05$). This equates to roughly one additional half-hour per week. This pattern was also seen for married women who worked in occupations that consisted of 51% to 75% women ($b=0.27$, $SE=0.11$, $p<0.05$). The effect sizes ranged from 0.13 to 0.27 (Table 3-7). I found no support for gender deviance neutralization for married women working in gender atypical occupations.

In further support of gender conventionality, married women who work in occupations with a lower concentration of women (i.e., gender atypical, 26% to 50% women) completed less feminine housework (by roughly two hours) than their peers in occupations with the highest concentration of women (i.e., 76% to 100% women) ($b=-2.22$, $SE=0.93$, $p<0.05$) (Table 3-6) with an effect size of 0.16 (Table 3-7).

I also found limited support for economic dependency and married women's housework hours. In support of the time availability perspective, as married women's work hours increased, her total ($b=-0.06$, $SE=0.03$, $p<0.05$) and feminine ($b=-0.05$, $SE=0.02$, $p<0.05$) housework hours decreased (Table 3-6). Married women's total and feminine weekly housework hours decreased by 0.05 standard deviations with each additional standard deviation in women's weekly work hours (Table 3-7). Further, as

married women's income increased her time spent on total ($b=-0.0001$, $SE= 0.00003$, $p<0.05$) and feminine ($b=-0.0001$, $SE=0.00002$), $p<0.05$) housework decreased with effect sizes of 0.10 and 0.12 showing support for the bargaining perspective (Table 3-6 and Table 3-7).

Table 3-6. Multivariate Results of Married Women's Housework

| | Total Housework (Hours/week) | Feminine Housework (Hours/week) | Masculine Housework (Hours/week) |
|--|------------------------------------|---------------------------------------|--|
| Measure | <i>b</i> (SE) | <i>b</i> (SE) | <i>b</i> (SE) |
| Occupational sex composition (ref: Job 76% to 100% women) | | | |
| Job 0% to 25% women | 1.64 (1.65) | 0.88 (1.44) | 0.54* (0.22) |
| Job 26% to 50% women | -1.96 (1.07) | -2.22* (0.93) | 0.17 (0.14) |
| Job 51% to 75% women | 0.02 (0.82) | -0.37 (0.71) | 0.27* (0.11) |
| Occupational gendered behavior | | | |
| Nurturance | 0.01 (0.01) | 0.01 (0.01) | 0.00 (0.00) |
| Authority | -0.01 (0.01) | -0.00 (0.01) | -0.00 (0.00) |
| Economic attributes | | | |
| Work hours | -0.06* (0.03) | -0.05* (0.02) | -0.01 (0.00) |
| Husband's work hours | 0.02 (0.03) | 0.00 (0.02) | 0.01 (0.00) |
| Own income | -0.00* (0.00) | -0.00* (0.00) | -0.00 (0.00) |
| Husband earns 51% to 75% of income (ref) | | | |
| Husband earns 0% to 25% of income | 3.44* (1.32) | 2.86* (1.16) | 0.43* (0.18) |
| Husband earns 26% to 50% of income | 2.63* (0.92) | 1.99* (0.80) | 0.25* (0.12) |
| Husband earns 76% to 100% of income | 1.06 (0.88) | 0.91 (0.77) | 0.19 (0.12) |
| Own home | 2.09* (0.93) | 1.46 (0.82) | 0.40* (0.12) |
| Education (ref: Less than high school) | | | |
| High school | -1.02 (1.35) | -1.58 (1.18) | 0.20 (0.18) |
| Some college | -2.97* (1.39) | -3.38* (1.21) | 0.04 (0.19) |
| College or more | -5.74* (1.49) | -5.81* (1.30) | -0.08 (0.20) |
| In school | -1.75* (0.80) | -1.60* (0.70) | -0.04 (0.11) |
| Demographic attributes | | | |
| Age (ref: 18 to 32) | | | |
| 33 to 38 years | -0.41 (0.91) | -0.51 (0.80) | 0.05 (0.12) |
| 39 to 44 years | 0.62 (0.94) | 0.37 (0.82) | 0.17 (0.13) |
| 45 years or older | 0.11 (1.00) | 0.18 (0.88) | 0.04 (0.13) |
| Number of children | 3.93* (0.31) | 2.92* (0.27) | 0.03 (0.04) |
| Is white | -1.20 (0.92) | -0.93 (0.80) | 0.41* (0.12) |
| Health is fair or poor | -0.38 (0.89) | -0.54 (0.78) | 0.06 (0.12) |
| Attitudes | | | |
| Unequal housework | 0.91* (0.35) | 0.83* (0.30) | 0.05 (0.05) |
| Traditional gender (TG) scale | 0.37 (0.41) | 0.42 (0.36) | 0.05 (0.05) |

Table 3-6 continued.

| | Total Housework (Hours/week) | Feminine Housework (Hours/week) | Masculine Housework (Hours/week) |
|-----------------------------|------------------------------------|---------------------------------------|--|
| Measure | <i>b</i> (SE) | <i>b</i> (SE) | <i>b</i> (SE) |
| Husband's unequal housework | 0.69* (0.34) | 0.51 (0.30) | 0.04 (0.05) |
| Husband's TG scale | 1.48* (0.43) | 1.42* (0.37) | 0.05 (0.06) |
| N | 2,229 | 2,229 | 2,229 |

Notes. Data from the National Survey of Families and Households Wave 2 (1992 – 1994) and General Social Survey.

Ref = reference category.

Missing data are imputed.

Estimates rounded to the nearest hundredth.

* $p < 0.05$

Table 3-7. Standardized Coefficients of Statistically Significant Findings: Married Men and Women's Housework Time Using the 1992 to 1994 National Survey of Families and Households (NSFH2)

| Men's Housework Time | | | |
|------------------------------------|---------------------------|------------------------------|-------------------------------|
| | Total (Hours/ Week) | Feminine (Hours/ Week) | Masculine (Hours/ Week) |
| Measure | β | β | β |
| Job 26% to 50% women | | | -0.25 |
| Job 51% to 75% women | | | -0.14 |
| Job 76% to 100% women | | 0.32 | -0.24 |
| Work hours | | -0.06 | |
| Wife's work hours | 0.05 | 0.06 | |
| Husband's income share | | -0.05 | |
| Husband's unequal housework | -0.09 | -0.13 | |
| Husband's traditional gender scale | | -0.07 | 0.08 |
| Wife's unequal housework | | -0.06 | |
| Women's Housework Time | | | |
| | Total (Hours/ Week) | Feminine (Hours/ Week) | Masculine (Hours/ Week) |
| Measure | β | β | β |
| Job 0% to 25% women | | | 0.27 |
| Job 26% to 50% women | | -0.16 | |
| Job 51% to 75% women | | | 0.13 |
| Work hours | -0.05 | -0.05 | |
| Income | -0.10 | -0.12 | |
| Husband earns 0% to 25% income | 0.21 | 0.20 | 0.21 |
| Husband earns 26% to 50% income | 0.16 | 0.14 | 0.12 |
| Wife's unequal housework | 0.05 | 0.06 | |
| Husband's unequal housework | 0.04 | | |
| Husband's traditional gender scale | 0.08 | 0.09 | |

Gender Ideology

I also uncovered interesting findings for the gender ideology measures and married men and women's housework time. Married men who held more traditional views on gendered divisions of household labor completed less total ($b=-0.93$, $SE=0.22$, $p<0.05$) and less feminine ($b=-0.89$, $SE=0.15$, $p<0.05$) housework than their peers (Table 3-5). The standardized coefficients suggest that as married men's support for more traditional views on the gendered divisions of housework increased by one standard deviation, their feminine weekly housework hours decreased by 0.13 standard deviations and by 0.09 standard deviations for total weekly housework hours (Table 3-7).

Similarly, men who held more traditional views on family life completed less feminine ($b=-0.54$, $SE=0.18$, $p<0.05$) and more masculine ($b=0.44$, $SE=0.13$, $p<0.05$) housework (Table 3-5). The standardized coefficients indicate that as married men's support for traditional family values increased by one standard deviation, their masculine weekly housework hours increased by 0.08 standard deviations yet decreased by 0.07 standard deviations for feminine weekly housework hours (Table 3-7). Also, married men whose wives held more traditional views on gendered divisions of household labor completed less feminine housework than their peers ($b=-0.41$, $SE=0.15$, $p<0.05$) with an effect size of 0.06 (Table 3-5 and Table 3-7).

The findings were also consistent for married women. Married women who held more traditional views on gendered divisions of household labor completed more total ($b=0.91$, $SE=0.35$, $p<0.05$) and more feminine ($b=0.83$, $SE=0.30$, $p<0.05$) housework than their peers (Table 3-6). The standardized coefficients suggest that as married

women's support for more traditional views on the gendered divisions of housework increased by one standard deviation, their feminine weekly housework hours increased by 0.06 standard deviations and by 0.05 standard deviations for total weekly housework hours (Table 3-7). Married women also completed more total and feminine housework if their husbands held more traditional views on gender with effects sizes of 0.08 and 0.09 (Table 3-7).

Discussion

My findings overwhelmingly supported gender conventionality for married men and women working in gender atypical occupations. Married men who worked in gender atypical occupations completed more feminine and less masculine housework than their peers, and married women in gender atypical occupations completed more masculine housework than their peers. I also found limited support for the theories of economic dependency. Both married men's and women's housework hours supported the time availability perspective. As work hours increased, time spent on housework decreased. I also found limited support for the bargaining perspective. As married women's income increased, their housework hours decreased.

The gender ideology findings supported that married men and women with more traditional views on housework and gender acted differently at home in terms of time allocated to housework. Married men who held more traditional views on housework completed less total and feminine housework. Further, married men with more traditional gender views completed less feminine and more masculine housework than their peers.

The traditional views on housework findings were also consistent for married women who completed more total and feminine housework than their peers.

Beyond their own gender ideologies, married men and women's housework was also impacted by their spouse's views on traditional gender roles. Married men with wives who held more traditional views on gendered housework completed less feminine housework than their peers. Similarly, married women with husbands who held more traditional views on housework and gender spent more time on housework when compared to their peers.

In this chapter, I conducted a robustness check of prior work by McClintock (2017) by examining if my findings substantially differed when using the alternative measures of occupational nurturance and authority constructed in Chapter 2. My findings did not substantially differ when I used England and colleagues' (1994) measures for occupational nurturance and authority instead of the newly constructed GSS measures (Appendix C Tables C-3 and C-4). The differences between mine and McClintock's multivariate findings using the same measures for occupational nurturance and authority developed by England and colleagues' highlight the overall sensitivity of the models to multiple imputation methods. The overall story between the two sets of analyses did not drastically change, but the sheer amount of differences in statistically significant findings illustrate this sensitivity.

The ATUS findings (Appendix E Tables E-1 through E-3) for married men and women also primarily supported gender conventionality. Married men in occupations characterized by a greater percentage of women completed more feminine and less

masculine housework. The ATUS findings for married women further supported a time availability perspective. Married women who worked additional hours completed less total housework, and completed more total housework when their husband's work hours increased. There was also limited support for economic dependency. As husband's income share increased, so did married women's total housework hours. The overall story did not change between the two data sources, although the ATUS findings offer a more recent view into the division of unpaid household labor for married men and women.

The overwhelming support for gender conventionality for married men and women working in gender atypical occupations suggests less stereotypical displays of gendered behavior at home. These findings align to McClintock's (2017) work, which critiqued the dominant gender display theory of gender deviance neutralization for men and women working in gender atypical occupations. However, separate of gender atypical, neutral, or typical work, my findings also provided support for the influence of gender ideology on married men and women's gendered display of housework at home. Those with more traditional views completed more stereotypically gendered housework tasks. And interestingly, spousal views on traditional gendered housework and family life provided similar support for married men and women's own gendered displays of housework. Based on these findings, ideology matters when it comes to gendered behavior at home.

CHAPTER 4

THE INFLUENCE OF WORK ON PARENTAL TIME ALLOCATED TO CHILD CARE IN DUAL-EARNER HOUSEHOLDS

Both married men and women have scaled back housework hours over the past few decades (Bianchi, Sayer, Milkie, and Robinson 2012). However, the housework literature continues to support the gendering of housework as married women still complete more than married men despite increased labor force participation. Further, research suggests that men and women complete housework tasks in line with their workplace characteristics. For example, those in nurturing occupations or occupations characterized with a greater proportion of women, complete more feminine household tasks illustrating gender conventionality (McClintock 2017).

The child care literature is more complex. Mothers and fathers have both increased their time allocated to child care responsibilities compared to earlier periods (Bianchi, Robinson, and Milkie 2006; Bianchi 2011). Parenting has become a more intense and time intensive task, especially for mothers who continue to complete more child care hours compared to their husbands despite employment characteristics.

The literature on time allocated to unpaid household labor primarily focuses on two overarching theoretical perspectives—gender display and economic dependency. Both theories attempt to conceptualize how working parents manage workplace and family responsibilities, or the work-family time bind (Hochschild 1997). Candace West and Don Zimmerman's (1987) gender display theory focuses on the social construction of

gender identity operating as a performed behavior. Gary Becker's theory of economic dependency suggests that unpaid household labor is exchanged from one partner for the monetary resources gained through the paid labor of the other partner (Becker 1965; Walby 1986).

Gender Display

In Western culture, gender takes on a socially constructed performance in our everyday interactions (West and Zimmerman 1987). Displays of gender performance, or simply referred to as "doing gender," embody society's social norms. Social norms situate masculine performances for men and feminine performances for women as agreed upon normative behavior. Housework, an unpaid form of household labor, is often viewed as the primary setting for men and women, or husbands and wives, to "do gender."

Women, culturally characterized as caregivers, may also produce femininity through caregiving for household children, whereas men, culturally characterized as providers, produce masculinity by financially providing for the family (West and Zimmerman 1987; Schneider 2012). This parenting ideology of fathers as breadwinners and mothers as caregivers falls under the gender display theory.

The involved parenting ideology touts the line between gender display theory and a more progressive parenting ideology. Children are seen as an investment, especially in middle- and upper-class families. Parents' concerted cultivation of children is often embodied by increased organized activities and management of children's schedules (Lareau 2003). Involved parenting is consistent with gender display theory for mothers

who despite increased labor force participation are increasingly seen as caregivers. However, fathers also show greater involvement and responsibility over children compared to fathering of the past (Raley, Bianchi, and Wang 2012). Fathers' involved parenting is inconsistent with gender display theory and suggests a more progressive gender and family ideology for the modern involved father (Milkie, Mattingly, Nomaguchi, Bianchi, and Robinson 2004).

Economic Dependency

In two-partner households, the paid labor of one partner is exchanged for the unpaid household labor of the dependent partner (Becker 1965; Walby 1986). The marriage contract is viewed as a way of solidifying partner commitment to the exchange of unpaid household labor and financial support (Walby 1986). However, married women dedicate more time to unpaid household labor compared to their cohabiting peers, and married men complete less unpaid household labor compared to their cohabiting peers (Bianchi, Sayer, Milkie, and Robinson 2012). Exchanges between married partners do not purely reflect the exchange of goods and services within the free market (Curtis 1986). As more women entered the labor market, their unpaid household labor responsibilities mostly remained the same (Hochschild and Machung 1989; Gerson 2010). This "stalled revolution" highlighted persistent gender inequalities in unpaid household labor as wives completed more housework and child care than husbands despite labor market gains (Bianchi et al. 2012).

Women who participate in the labor force are more readily able to bargain their way out of unpaid household labor than women who do not participate in the labor force

illustrating the bargaining perspective (Connelly & Kimmel 2010; Raley, Bianchi, and Wang 2012). This is especially true for time spent on housework. The economic exchange of the bargaining perspective works until husbands and wives reach parity in income share (Bittman, England, and Folbre 2003). However, Raley, Bianchi, and Wang (2012) did find support for bargained negotiations between husbands and wives attempting to manage child care tasks even when women attained breadwinner status. Wives may use their income share to bargain out of less desirable forms of child care, such as the routine tasks related to physical care and the management of children's activities, freeing up time for more meaningful child care activities (e.g., playing, arts and crafts, talking with children). Raley, Bianchi, and Wang also found that fathers spent more time with children as the one solely responsible for their children's well-being and also on routine child care as their wives spent more time in the labor market.

There are only so many hours in a day. The time availability perspective attempts to make sense of working parents' time crunch (Jacobs and Gerson 2004). Unlike the gendering of housework, the time availability perspective views child care as gender-neutral as parents are simply trying to meet the needs of their children under time constraints. When families are pressed for time, the recreational, or "fun," child care activities lose out to more vital child care tasks bringing additional focus to the type of child care task, rather than simply parents' total child care time.

Raley, Bianchi, and Wang (2012) examined the relationship between partner economic characteristics and time allocated to child care using data from the 2003 to 2007 American Time Use Survey (ATUS). They found that the total and solo time fathers

spent with their children, and fathers' involvement in physical care and managerial child care activities were positively associated with maternal employment status, maternal work hours, and maternal breadwinner status. There was a negative relationship between maternal work hours and both maternal and paternal time spent on recreational activities illustrating how families are pressed for time leaving little time for fun activities. Their findings illuminated factors that influence fathers' time with children. Although, an important perspective was not assessed in their study—parenting ideologies. The ATUS does not collect data on parenting ideologies. Therefore, the present study will examine whether or not employment characteristics influence time allocated to unpaid household labor, while controlling for ideology. To measure ideology, the proposed study will implement additional analyses using the second wave of the National Survey of Families and Households (NSFH2).

Present Study

The present study will implement Raley and colleagues' (2012) methodology with additional years of the American Time Use Survey (ATUS). I also conduct parallel analyses using the NSFH2. My analyses serve as a generalization test of Raley and colleagues' earlier analysis since my analyses are informed by their prior research although I deviate in methods (Freese and Peterson 2017). I include additional measures, a separate data source, and I also limit my sample differently. There are two benefits to examining the NSFH2 in addition to the ATUS. The NSFH2 includes time use data for both partners and includes an assessment of ideology. Both of these are unavailable in the ATUS and were cited as limitations by Raley and colleagues. However, the ATUS offers

time diary and more recent data as the NSFH2 data were collected between 1992 and 1994.

My sample inclusion criteria deviate slightly from Raley and colleagues' who included couples with at least one partner participating in the labor force. By limiting my sample to parents in dual-earner households, I am able to more closely assess the work-family time bind. I conducted descriptive analyses to compare my sample to Raley and colleagues' before I limited to parents in dual-earner households (Appendix G Table G-1 and Appendix H Table H-1). Finally, I also plan to go beyond Raley and colleagues' (2012) dichotomous measures of physical, recreational, and managerial child care tasks by analyzing the total care typed as physical, recreational, and managerial similar to how McClintock (2017) measured total, feminine, and masculine housework in Chapter 3.

Hypotheses

My hypotheses focus on three domains: time and money, occupation, and gender (Table 4-1).

Table 4-1. Hypotheses for Fathers' and Mothers' Time Spent with Children

| Theoretical perspective | Fathers | Mothers |
|-------------------------|--|---|
| Time availability | <p>Fathers will complete less child care time as their own work hours increase, especially on recreational care activities.</p> <p>Fathers will also complete less recreational, but more total, solo, primary, physical, and managerial child care as their wives' work hours increase.</p> | <p>Mothers will complete less child care time as their own work hours increase, especially on recreational care activities.</p> <p>Mothers will also complete less recreational, but more total, solo, primary, physical, and managerial child care as their husbands' work hours increase.</p> |
| Bargaining power | <p>Fathers will complete less recreational, but more total, solo, primary, physical, and managerial child care as their wives' earnings and portion of the couples' income increase.</p> | <p>Mothers will complete less recreational, but more total, solo, primary, physical, and managerial child care as their husbands' earnings increase.</p> <p>Mothers will complete more recreational and less total, solo, primary, physical, and managerial child care as their own portion of the couples' income decreases.</p> |
| Gender conventionality | <p>Fathers and mothers in occupations with a greater percentage of women or in nurturing occupations will complete more primary and physical child care and less recreational child care than their peers.</p> | |
| Gender ideology | <p>Fathers with more traditional views on housework and child care will complete less child care than their peers.</p> | <p>Mothers with husbands' who have more traditional views on housework and child care will complete more child care than their peers.</p> |
| Gender differences | <p>Mothers will complete less recreational child care, but more total, solo, primary, physical, and managerial child care than fathers.</p> | |

For time and money, I use the time availability and bargaining power perspectives to hypothesize how parents in dual-earner households will spend their time with children. Both perspectives fall under the larger economic dependency theory. Using the time availability perspective, I hypothesize that fathers and mothers in dual earner households will experience a “time crunch” as their work hours increase resulting in less time with children, especially on the “fun” child care tasks (Table 4-1). Beyond parents’ own work hours, I also hypothesize that fathers and mothers will complete more routine child care activities when their spouses’ work hours increase. This will similarly leave less time for recreational child care activities. For the bargaining perspective, parents will complete more routine care child care and less recreational child care when their spouses’ earnings increase. Fathers will also complete more routine care and less recreational child care when their wives’ portion of the couple’s income increases. Mothers will complete less routine care and more recreational child care activities as their own portion of the couple’s income increases.

For occupation, I attempt to translate the gender conventionality perspective, which is common in the housework literature (see Chapter 3), to a separate form of unpaid household labor—child care. I hypothesize that gendered work may impact gendered child care activities at home (Schneider 2012; McClintock 2017). Mothers and fathers in occupations with a greater proportion of women, or in nurturing occupations, may complete more primary and physical care of children than their peers (Table 4-1). Similarly, mothers and fathers in occupations described as authoritative, may complete more masculine child care, or the “fun” recreational child care activities, compared to

their peers. Although, the gendered division of child care responsibilities is suggested to have dissipated in dual-earner families (Jacobs & Gerson 2004), so the gender conventionality perspective may not be as successful in the child care literature as it was for housework.

For gender, I hypothesize separately about parents' gender ideologies and the differences between mothers' and fathers' time with children. First, I hypothesize that fathers who hold more traditional views on gender and family will complete less child care than fathers who hold more progressive views (Table 4-1). Similarly, mothers who have husbands with more traditional views on gender and family will also complete more child care compared to their peers. Finally, I hypothesize that mothers will complete more child care hours than fathers across all types of child care with the exception of recreational, or "fun," child care activities.

Methodology

I used all available years of the American Time Use Survey (ATUS) (2003 to 2019) to assess how parents in dual-earner households spend their time. I conducted parallel analyses using the National Survey of Families and Households (NSFH2) to leverage data on couples and measures on gender and family ideology. I describe the data sources, methods for measure development, and analytic strategy below. I describe the methods for constructing my analytic variables based on my primary data source (ATUS). I follow the same methodology when using the NSFH2 and, if applicable, I highlight any differences throughout.

Data Sources

American Time Use Survey

The American Time Use Survey (ATUS) is a time-use diary study (Horrigan and Herz 2004). The ATUS, funded by the United States Bureau of Labor Statistics (BLS), began in 2003 and data collection continues through today. The ATUS is a repeated cross-sections study. ATUS participants are meant to represent the larger United States population, with some oversampled groups. ATUS participants are selected using stratified random sampling from households completing the Current Population Survey (CPS). Participants are chosen from families based on stratified groupings of race/ethnicity, presence of children, age of children, and number of adults present in the household. ATUS oversamples families with Hispanic or non-Hispanic black parents, as well as families with children (Horrigan and Herz 2004).

ATUS data collection occurs over the phone. One household member, 15 years or older, is randomly selected and asked to self-report time-use within a designated 24-hour period (4am to 3:59am). More specifically, respondents are called at random and asked to report their activity for the prior 24-hour period. ATUS researchers collect rich interview-based participant responses, which are then coded into the coding structure's main groupings and subgroupings (Shelley 2005). The coding structure's main time-use groupings are: personal care, household activities, caring for and helping household members, caring for and helping non-household members, working and work-related activities, education, consumer purchases, professional and personal care services, household services, government services and civic obligations, eating and drinking,

socializing, relaxing and leisure, sports, exercise and recreation, religious and spiritual activities, volunteer activities, telephone calls, and traveling. The ATUS also collects information on who was present during each time diary activity throughout the day.

National Survey of Families and Households

Unlike the ATUS, the National Survey of Families and Households (NSFH) is not a time diary study. Data collection for the NSFH began in 1987 and consists of three waves. The first wave (1987 to 1988) targeted a nationally representative sample of 13,017 households in the United States. The researchers oversampled underrepresented racial and ethnic groups, as well as diverse family forms (single-parent, step-parent, and cohabiting households) (Sweet and Bumpass 2002). One randomly selected adult was chosen as the primary respondent in each household. The primary respondent took part in a series of self-administered questionnaires and interviews. The interviews took place in person. Additionally, a shorter self-administered questionnaire was given to the married spouse or cohabiting partners. The NSFH collects rich information on household composition, education, employment, time use, as well as attitudes and opinions. The survey also collects self-reported estimates on time spent on housework and limited measures on time spent with children by asking respondents, on average, how much time they spend per week or in the last week on a given task. A five-year follow-up study, known as the NSFH2, was conducted from 1992 to 1994. The NSFH2 includes personal interviews with 10,007 original primary respondents, 5,624 current partners of primary respondents, and 789 former partners of primary respondents (Sweet & Bumpass 2002).

A third follow-up study was conducted from 2001 to 2002 using a similar format as NSFH2, although for a much smaller sample size.

Measures

In the present study, I assessed the influence of economic characteristics (independent variables) on parents' in dual-earner households time spent on child care (dependent variable). I also included additional occupation, gender and family ideology, and time diary characteristics as model covariates.

Child Care

Following Raley, Bianchi, and Wang (2012), I constructed three continuous measures for time spent with children: total time, solo time, and primary care time. Total time was specified as any time during the diary day when a household child was present. This included time spent with parents' own children and foster children reported as living in the household. The time diary activities did not need to be specific to providing care for a child, but a child had to be present during the activity. Solo care time measured the amount of time parents spent with their children without their spouse present. Other non-household members may have been present during solo care time. Primary care time consisted of time spent on activities *specific* to caring for children. I scaled each of the continuous time measures from minutes in a day to hours per week for analysis.

Primary care time was further stratified into three different types of child care activities (Table 4-2). Raley and colleagues (2012) assessed dichotomous measures of whether any time was spent providing physical, recreational, and managerial care during

the diary day. I deviated from these dichotomous measures by analyzing the amount of physical, recreational, and managerial care that occurred.

Table 4-2. Child Care Time Based on Raley, Bianchi, and Wang's (2012) Classifications Using the American Time Use Survey (ATUS)

| ATUS child care activity | Type |
|---|-------------------|
| Physical care for household children | Physical care |
| Providing medical care to household children | Physical care |
| Reading to or with household children | Recreational care |
| Playing with household children, not sports | Recreational care |
| Arts and crafts with household children | Recreational care |
| Playing sports with household children | Recreational care |
| Talking with or listening to household children | Recreational care |
| Helping or teaching household children (not related to education) | Recreational care |
| Organization and planning for household children | Managerial care |
| Looking after household children (as a primary activity) | Managerial care |
| Attending household children's events | Managerial care |
| Waiting for or with household children | Managerial care |
| Picking up or dropping off household children | Managerial care |
| Caring for and helping household children, not elsewhere classified ("NEC") | Managerial care |
| Activities related to household children's education | Managerial care |
| Homework (household children) | Managerial care |
| Meetings and school conferences (household children) | Managerial care |
| Home schooling of household children | Managerial care |
| Waiting associated with household children's education | Managerial care |
| Activities related to household child's education, NEC | Managerial care |
| Activities related to household children's health | Managerial care |
| Obtaining medical care for household children | Managerial care |
| Waiting associated with household children's health | Managerial care |
| Activities related to household child's health, NEC | Managerial care |
| Travel related to caring for and helping household children | Managerial care |
| Travel related to household children's education | Managerial care |

The NSFH2 does not contain measures on total, solo, primary care, or physical care time with children. However, I assessed recreational and managerial care time with children (Table 4.3) and I aligned these measures as much as possible to the classifications used by Raley and colleagues (2012). The items on recreational care asked both parents how often they spent time with their children in each individual activity. The response options included never or rarely, once a month or less, several times a month, about once a week, several times a week, and almost every day. A follow-up question asked for the amount of hours parents typically spent with their children across all five of the recreational activities during the past week. I used this measure to construct parental time spent with children on recreational activities. The items on managerial care asked parents how many hours per week on average they spent on each of the organized youth activities either as a participant, advisor, coach, or leader. I summed the four items to construct a measure for the amount of managerial child care time.

Table 4-3. Child Care Time Based on Raley, Bianchi, and Wang's (2012) Classifications Using the National Survey of Families and Households (NSFH2)

| NSFH2 child care activity | Type |
|---|-------------------|
| Leisure activities away from home (picnics, movies, sports, etc.) | Recreational care |
| Working on a project or playing together | Recreational care |
| Having private talks | Recreational care |
| Helping with reading or homework | Recreational care |
| Watching television or videos | Recreational care |
| Parent-teacher organizations or other school activities | Managerial care |
| Religious youth group | Managerial care |
| Community youth groups (for example, Scouts) | Managerial care |
| Team sports or youth athletic clubs | Managerial care |

Economic Characteristics

The main independent variables consisted of a set of economic attributes, which included: weekly employment hours, weekly earnings, and wife's portion of the couples' income.

The ATUS is embedded in the larger Current Population Survey (CPS), which collects rich information on household composition and economic characteristics. Although, neither data source collects information on self-employment earnings. Therefore, following Raley and colleagues (2012), I excluded working parents who reported being self-employed. Beyond self-employment, I also excluded working parents and their spouses who did not report labor force participation or occupations to better assess dual-earner households.

Usual work hours and weekly earnings were both collected as part of the CPS and only updated in the ATUS if hours and earnings changed. Although there were no missing data on usual work hours, ATUS and CPS respondents and their spouses were able to indicate that their work hours varied (4.20% of respondents and 2.64% of spouses). There were no missing data on earnings for ATUS respondents. However, 2.21% of spouses had missing data on weekly earnings. Raley, Bianchi, and Wang (2012) used mean imputation to address the missing data on work hours and replaced missing spousal earnings values with zero. I instead imputed the missing data using chained equations (ICE procedure), and then constructed a measure for wife's portion of the couples' income.

The NSFH2 economic characteristics were fairly comparable to the ATUS,⁷ however, I scaled yearly earnings in the NSFH2 to weekly earnings and subtracted the husband's income share measure from Chapter 3 from one in order to construct wife's portion of the couple's income to better align with the ATUS analyses.

Occupation Characteristics

I also included continuous measures for occupational sex composition, occupational nurturance, and occupational authority. For the ATUS, I constructed occupational sex composition using CPS data on detailed occupation codes for each year of the ATUS (2003 to 2019). For the NSFH2, I used the 1990 United States Decennial Census 5% state sample data to construct the measure for occupational sex composition (see Chapter 3). Finally, I constructed two measures for occupational gendered behavior using pooled General Social Survey (GSS) data (see Chapter 2). I standardized both occupational gendered behavior measures using z-score calculations so that results for these measures would be easier to interpret.

Gender and Family Ideology

NSFH2 respondents rated their attitudes on housework and gender roles within the self-administered module on family attitudes. I included one survey item on gendered housework (i.e., "A husband whose wife is working full-time should spend just as many hours doing housework as his wife.") and a gender and family ideology index based on three survey items: "It is much better for everyone if the man earns the main living and the woman takes care of the home and family;" "Preschool children are likely to suffer if

their mother is employed;” and “It is all right for mothers to work full-time when their youngest child is under age five” (reverse coded).

The survey item on unequal, gendered housework was rated using a five-point Likert scale ranging from strongly agree (i.e., more progressive gender ideology) to strongly disagree (i.e., more traditional gender ideology). The three survey items on gender attitudes were also rated on a five-point strongly agree/strongly disagree Likert scale. Following McClintock (2017) and Schneider (2012), I constructed an average scale score with higher scores indicating more traditional gender and family attitudes. The ATUS does not contain measures on gender ideology, and therefore these measures cannot be assessed.

Demographic and Time Diary Characteristics

The demographic characteristics consisted of measures to assess the age ranges of the youngest household child, total number of household children, parental age, educational attainment, and race/ethnicity. Each of these measures differ slightly by data source. The age of the youngest household child was categorized as 0 to 2 years old, 3 to 5 years old, and 6 to 12 years old using the ATUS and 0 to 4 years old, 5 to 6 years old, and 7 to 13 years old using the NSFH2.

The educational attainment measure for the ATUS included five categories: less than high school, high school, some college, college graduate, and postgraduate education. The educational attainment measure for the NSFH2 consisted of four categories: less than high school, high school, some college, and college or more. The race/ethnicity measure combined two ATUS survey items on race and ethnicity. The

constructed measure included the following four categories: Hispanic, non-Hispanic black, non-Hispanic white, and non-Hispanic other. The NSFH2 race measure assessed whether or not the main respondent was white. The race measure was not collected for current spouses or partners in the NSFH2, so following McClintock (2017) and Schneider (2012) I use the main respondent's self-reported race as a proxy for both spouses.

The ATUS diary characteristics included three measures for diary season, weekend day, and survey year. The diary season measure assessed whether the diary day occurred during the summer months of June, July, or August since these along with a weekend day may involve greater amount of child care time. I included a measure for season for the NSFH2. However, I did not assess diary year since the survey took place over a shorter timeframe. I also did not assess weekend day since the NSFH2 time use measures are based on weekly estimates.

Samples

I limited the ATUS sample to married parents of children under 13 years old as younger children require more hands-on care and supervision (Marsiglio 1991; Sayer, Bianchi, and Robinson 2004). I similarly limited the NSFH2 sample using these criteria, although I retained parents of 13-year-olds based on measure availability in the NSFH2.

I also excluded parents who were self-employed in the ATUS since the ATUS or CPS do not collect earnings data for these individuals. Beyond the sample exclusions used by Raley, Bianchi, and Wang (2012), I further limited both the ATUS and NSFH2 samples to parents in dual-earner heterosexual households who reported occupations. Following McClintock (2017) and Schneider's (2012) approach to missing data in the

NSFH2, I excluded parents with missing data on the total parental time spent with children in recreational activities. I assigned zero hours per week for parents with missing data on two of the four items used to construct the managerial care time measure. I excluded parents with missing data on more than two of the four managerial care items. Refer to Table 4-4 for an overview of the samples of married parents for each data set.

Table 4-4. Analytic Samples of Married Parents using the American Time Use Survey (ATUS) and National Survey of Families and Households (NSFH2)

| Data source | Married Fathers | Married Mothers |
|-------------|-----------------|-----------------|
| ATUS | 10,403 | 11,627 |
| NSFH2 | 509 | 509 |

Note: The NSFH2 sample is based on couple-level data.

Analytic Strategy

I conducted parallel analyses of married fathers and mothers' time spent with children and, separately, time spent on housework using ordinary least squares (OLS) regression for continuous outcomes. I assessed total, solo, primary, physical, recreational, and managerial child care time for mothers and fathers using the ATUS. I then assessed recreational and managerial child care time for mothers and fathers using the NSFH2. The ATUS findings are based on two independent groups of mothers and fathers, whereas the NSFH2 findings are based on couple-level data. I separately calculated the predicted means of fathers' and mothers' time in order to assess gender differences. I adjusted findings using survey weights to account for the oversampling of certain

demographic groups. I imputed missing data using chained equations (ICE procedure). All analyses were conducted using Stata 16.

Results

The descriptive findings for child care do not show as wide of a disparity between fathers and mothers (Table 4-5) as seen with housework hours between men and women in Chapter 3. However, mothers reported greater child care than fathers on all types across both data sources. Compared to fathers, mothers spent 4.47 additional hours with their children each week (Table 4-5). The smallest gap between mothers and fathers' time spent with children was on recreational, or "fun," child care activities. However, mothers still spent on average 0.33 more hours on recreational child care time than fathers each week. Mothers and fathers also reported similar time with children on recreational and managerial child care in the NSFH2, although the gap between mothers and fathers was the smallest for managerial child care time (Table 4-6).

Fathers reported slightly higher weekly work hours than mothers in the ATUS (36.32 hours compared to 35.95 hours) (Table 4-5). The gap between fathers and mothers' weekly work hours was greater in the NSFH2 (45.83 hours compared to 34.11 hours) (Table 4-6). Fathers out-earned mothers in both data sources. The wife's portion of the couple's income was similar across both data sources (40% in the ATUS and 36% in the NSFH2). Occupational sex composition, or percent of an occupation held by women, was fairly similar for both fathers (31.72% in the ATUS and 31.57% in the NSFH2) and mothers (65.84% in the ATUS and 69.47% in the NSFH2).

Finally, fathers in the NSFH2 held more traditional gender ideologies for views on housework and parenting than mothers (Table 4-6).

Table 4-5. Unadjusted Characteristics of Parents in Dual-Earner Households Using the 2003 to 2019 American Time Use Survey

| Measure | Fathers | | Mothers | |
|-------------------------------------|----------|--------|----------|--------|
| | Mean | SD | Mean | SD |
| Unpaid household labor (hours/week) | | | | |
| Average child care | 32.13 | 27.87 | 36.26 | 27.44 |
| Average solo child care | 6.41 | 13.37 | 12.26 | 18.54 |
| Average primary child care | 9.16 | 12.38 | 13.82 | 13.88 |
| Average physical child care | 2.63 | 5.19 | 5.32 | 7.70 |
| Average recreational child care | 3.32 | 7.62 | 3.65 | 7.27 |
| Average managerial child care | 3.22 | 7.43 | 4.85 | 7.77 |
| Economic attributes | | | | |
| Wife's weekly employment hours | 36.32 | 11.37 | 35.95 | 11.08 |
| Wife's weekly earnings | 822.15 | 584.96 | 819.13 | 614.11 |
| Husband's weekly employment hours | 44.28 | 8.95 | 43.99 | 9.45 |
| Husband's weekly earnings | 1,198.61 | 683.91 | 1,158.90 | 668.55 |
| Wife's portion of couple's earnings | 0.40 | 0.17 | 0.40 | 0.17 |
| Occupation percent women | 31.72 | 23.56 | 65.84 | 24.07 |
| Occupational nurturance | 0.00 | 100.54 | -0.02 | 107.28 |
| Occupational authority | -0.02 | 99.25 | -0.06 | 104.55 |
| Demographic attributes | | | | |
| Youngest child aged 0-2 | 31.31 | | 30.45 | |
| Youngest child aged 3-5 | 22.81 | | 23.22 | |
| Youngest child aged 6-12 | 45.88 | | 46.32 | |
| Number of children | 1.96 | 0.85 | 1.95 | 0.84 |
| Parent's age | 38.98 | 7.17 | 36.96 | 6.53 |
| Less than high school education | 4.74 | | 3.71 | |
| High school education | 20.61 | | 15.70 | |
| Some college | 27.02 | | 26.09 | |
| College graduate | 29.55 | | 32.79 | |
| Postgraduate education | 18.08 | | 21.72 | |
| Hispanic | 10.72 | | 11.73 | |
| Non-Hispanic Black | 5.68 | | 5.20 | |
| Non-Hispanic Other | 6.93 | | 7.47 | |
| Non-Hispanic White | 76.67 | | 75.60 | |
| Diary characteristics | | | | |
| Summer | 23.30 | | 23.91 | |
| Weekend | 50.93 | | 50.71 | |
| N | 10,403 | | 11,627 | |

Table 4-6. Unadjusted Characteristics of Parents in Dual-Earner Households Using the 1992 to 1994 National Survey of Families and Households

| Measure | Fathers | | Mothers | |
|-------------------------------------|---------|--------|---------|--------|
| | Mean | SD | Mean | SD |
| Unpaid household labor (hours/week) | | | | |
| Average recreational child care | 14.08 | 11.28 | 17.64 | 12.86 |
| Average managerial child care | 3.61 | 7.56 | 4.62 | 11.66 |
| Economic attributes | | | | |
| Wife's weekly employment hours | 34.11 | 14.97 | 34.11 | 14.97 |
| Wife's weekly earnings | 383.83 | 352.83 | 383.83 | 352.83 |
| Husband's weekly employment hours | 45.83 | 13.33 | 45.83 | 13.33 |
| Husband's weekly earnings | 681.53 | 473.04 | 681.53 | 473.04 |
| Wife's portion of couple's earnings | 0.36 | 0.23 | 0.36 | 0.23 |
| Occupation percent women | 31.57 | 24.24 | 69.47 | 23.59 |
| Occupational nurturance | -0.01 | 23.67 | 0.03 | 23.53 |
| Occupational authority | -0.01 | 22.68 | 0.03 | 22.38 |
| Demographic attributes | | | | |
| Youngest child aged 0-4 | 30.85 | | 30.85 | |
| Youngest child aged 5-6 | 10.85 | | 10.85 | |
| Youngest child aged 7-13 | 58.31 | | 58.31 | |
| Number of children | 2.02 | 0.78 | 2.02 | 0.78 |
| Parent's age | 37.58 | 5.82 | 35.47 | 5.22 |
| Less than high school education | 5.98 | | 4.92 | |
| High school education | 31.78 | | 35.42 | |
| Some college | 31.22 | | 29.83 | |
| College graduate | 31.02 | | 29.83 | |
| Is white | 85.76 | | 85.76 | |
| Gender ideology | | | | |
| Unequal housework | 2.34 | 0.89 | 2.11 | 0.94 |
| Traditional gender scale | 3.03 | 0.86 | 2.81 | 0.92 |
| Diary characteristics | | | | |
| Summer | 14.75 | | 15.08 | |
| N | 590 | | 590 | |

Multivariate Results

I present multivariate findings for fathers' and mothers' time spent on child care using both the ATUS and NSFH2. I discuss findings across three domains in alignment with my hypotheses: time and money, occupation, and gender. I report summarized findings in the multivariate tables (Table 4-7 to Table 4-11), although full multivariate results are available in Appendix I Tables I-1 through I-6. I also include standardized beta coefficients for statistically significant findings in Table 4-10 in order to show the relative importance of each coefficient. The standardized coefficients were calculated using the unstandardized coefficients multiplied by the standard deviation of the predictor divided by the standard deviation of the outcome for continuous predictors (i.e., $b * SD_x / SD_y$), or by dividing the unstandardized coefficient by the standard deviation of the outcome for categorical predictors (i.e., b / SD_y). It is worth noting that the absolute values of all standardized beta coefficients are quite small (i.e., 0.17 or less) indicating relatively weak effects for all multivariate findings.

Table 4-7. Findings for Fathers' and Mothers' Time Spent with Children

| Theoretical perspective | Fathers | Mothers |
|-------------------------|--|--|
| Time availability | Fathers spent less total, solo, primary, physical, recreational, and managerial care time children as their work hours increased (ATUS only). | Mothers spent less total, solo, primary, recreational (ATUS and NSFH2), and managerial care time children as their work hours increased (rest, ATUS only). Mothers completed more solo and managerial child care as their husbands' work hours increased (ATUS only). |
| Bargaining power | Fathers completed more total, primary, and physical child care as their wives' earnings increased (ATUS only). | Mothers completed less total child care as their own portion of the couples' income increased (ATUS only). |
| Gender conventionality | Fathers in occupations with a greater percentage of women completed more physical child care than their peers (ATUS only). Mothers in nurturing occupations completed more primary and physical child care than their peers (ATUS only). | |
| Gender ideology | Fathers with more traditional views on unequal housework spent less time on recreational child care (NSFH2). Fathers whose wives' had more traditional views on housework spent more recreational child care (NSFH2). | |
| Gender differences | Mothers completed less recreational child care, but more total, solo, primary, physical, and managerial child care than fathers (ATUS). | |

Time and Money

Overall, parents spent less time with children as their labor force participation increased illustrating the time crunch for working parents in dual-earner households. In the ATUS, fathers spent less time with children on all six types of care as their own work hours increased. This includes less total ($b=-0.22$, $SE=0.03$, $p<0.05$), solo ($b=-0.07$, $SE=0.02$, $p<0.05$), primary ($b=-0.10$, $SE=0.01$, $p<0.05$), physical ($b=-0.03$, $SE=0.01$, $p<0.05$), recreational ($b=-0.03$, $SE=0.01$, $p<0.05$), and managerial care ($b=-0.04$, $SE=0.01$, $p<0.05$) (Table 4-8). The standardized coefficients (Table 4-10) show that with every additional standard deviation in fathers' work hours, fathers' time with children decreased by 0.07 standard deviations for total; 0.05 standard deviations for solo, physical, and managerial; and 0.04 standard deviations for recreational care time.

The pattern was similar for mothers who also spent less time with children as their own work hours increased. Mothers spent less total ($b=-0.19$, $SE=0.03$, $p<0.05$), solo ($b=-0.15$, $SE=0.02$, $p<0.05$), primary ($b=-0.13$, $SE=0.02$, $p<0.05$), recreational ($b=-0.06$, $SE=0.01$, $p<0.05$), and managerial care ($b=-0.05$, $SE=0.01$, $p<0.05$) time with children (Table 4-8). The standardized coefficients (Table 4-10) show that with every increase of one standard deviation in mothers' work hours, mothers' time with children decreased by 0.10 standard deviations for primary, 0.09 standard deviations for solo and recreational, 0.08 standard deviations for total, and 0.07 standard deviations for managerial care time.

Mothers' physical care time with children, which included actual physical care (e.g., providing medical care), was the only finding that was not statistically significant based on mothers' own work hours in the ATUS. However, the coefficient was in the

same negative direction suggesting that as work hours increased time spent on these activities decreased. This time crunch was also apparent in the NSFH2 analyses (Table 4-9). Mothers' recreational care time with children decreased as their own work hours increased ($b=-0.14$, $SE=0.06$, $p<0.05$), or with every additional standard deviation in mothers' work hours, mothers' recreational care time with children decreased by 0.16 standard deviations (Table 4-10). Similar patterns were seen with fathers' recreational and managerial care time, as well as mothers' managerial care time. However, these findings were not statistically significant.

In further support of the time availability perspective, mothers' solo care time with children increased as their husbands' work hours increased ($b=0.10$, $SE=0.03$, $p<0.05$) (Table 4-8). Mothers also spent more time on managerial child care tasks as their husbands' work hours increased ($b=0.02$, $SE=0.01$, $p<0.05$). More specifically, the standardized coefficients (Table 4-10) indicate that with every increase of one standard deviation in their husbands' work hours, mothers' time with children increased by 0.05 standard deviations for solo and 0.02 standard deviations for managerial care time with children. There was one statistically significant finding that was counterintuitive to the time availability perspective for fathers in the ATUS. As wives' work hours increased, fathers spent less time with children ($b=-0.05$, $SE=0.02$, $p<0.05$) (Table 4-8) which equates to a decrease of 0.02 standard deviations in fathers' total time with children for every additional standard deviation in wives' work hours (Table 4-10).

Table 4-8. Summary of Multivariate Results of Parent's Child Care Time Using the 2003 to 2019 American Time Use Survey

| Fathers' Time (N=10,403) | | | | | | |
|-------------------------------------|---------------------------|--------------------------|-----------------------------|------------------------------|--------------------------|----------------------------|
| | Total (hours/ week) | Solo (hours/ week) | Primary (hours/ week) | Physical (hours/ week) | Rec. (hours/ week) | Manag. (hours/ week) |
| Measure | <i>b</i> (SE) | <i>b</i> (SE) | <i>b</i> (SE) | <i>b</i> (SE) | <i>b</i> (SE) | <i>b</i> (SE) |
| Economic attributes | | | | | | |
| Wife's work hours | -0.05* (0.02) | 0.02 (0.01) | 0.01 (0.01) | 0.00 (0.01) | 0.00 (0.01) | 0.01 (0.01) |
| Wife's earnings | 0.00* (0.00) | 0.00 (0.00) | 0.00* (0.00) | 0.00* (0.00) | 0.00 (0.00) | 0.00 (0.00) |
| Husband's work hours | -0.22* (0.03) | -0.07* (0.02) | -0.10* (0.01) | -0.03* (0.01) | -0.03* (0.01) | -0.04* (0.01) |
| Husband's earnings | -0.00 (0.00) | 0.00 (0.00) | 0.00 (0.00) | -0.00 (0.00) | -0.00 (0.00) | 0.00 (0.00) |
| Wife's portion of couple's earnings | -4.77 (3.50) | 1.07 (2.07) | 0.88 (1.69) | -0.95 (0.85) | -0.07 (0.98) | 1.88 (1.04) |
| Occupation percent women | -0.01 (0.01) | -0.00 (0.01) | 0.01 (0.01) | 0.01* (0.00) | 0.00 (0.00) | 0.00 (0.00) |
| Occupational nurturance | 0.00 (0.00) | 0.00 (0.00) | 0.00 (0.00) | -0.00 (0.00) | 0.00* (0.00) | -0.00 (0.00) |
| Occupational authority | -0.00 (0.00) | 0.00 (0.00) | -0.00 (0.00) | -0.00 (0.00) | -0.00 (0.00) | 0.00 (0.00) |
| Mothers' Time (N=11,627) | | | | | | |
| Economic attributes | | | | | | |
| Wife's work hours | -0.19* (0.03) | -0.15* (0.02) | 0.13* (0.02) | -0.02 (0.01) | -0.06* (0.01) | 0.05* (0.01) |
| Wife's earnings | 0.00* (0.00) | -0.00 (0.00) | 0.00 (0.00) | 0.00 (0.00) | -0.00 (0.00) | 0.00 (0.00) |
| Husband's work hours | 0.05 (0.03) | 0.10* (0.03) | 0.03 (0.02) | 0.01 (0.01) | -0.00 (0.01) | 0.02* (0.01) |
| Husband's earnings | -0.00* (0.00) | -0.00 (0.00) | 0.00 (0.00) | -0.00 (0.00) | 0.00 (0.00) | 0.00 (0.00) |

Table 4-8 continued.

| Mothers' Time (N=11,627) | | | | | | |
|---|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Wife's portion of couple's earnings | -9.31* | -3.82 | -2.83 | -1.67 (1.17) | 0.37 (0.98) | -1.53 (1.25) |
| Occupation percent women | -0.00 (0.01) | -0.01 (0.01) | -0.00 (0.01) | -0.00 (0.00) | -0.00 (0.00) | 0.00 (0.00) |
| Occupational nurturance | 0.01* (0.00) | 0.01* (0.00) | 0.00* (0.00) | 0.00* (0.00) | 0.00* (0.00) | -0.00 (0.00) |
| Occupational authority | -0.00 (0.00) | -0.00 (0.00) | 0.00 (0.00) | -0.00 (0.00) | 0.00 (0.00) | - (0.00) |

Notes: Data from the American Time Use Survey (2003 -2019).

Missing data are imputed.

Findings based on OLS regression.

Estimates rounded to the nearest hundredth.

* $p < 0.05$

Table 4-9. Summary of Multivariate Results of Type of Parent's Child Care Time Using the 1992 to 1994 National Survey of Families and Households (NSFH2)

| Fathers' Time (N=509) | | |
|-------------------------------------|---|---|
| Measure | Recreational Care Time (hours/ week) <i>b</i> (SE) | Managerial Care Time (hours/ week) <i>b</i> (SE) |
| Economic attributes | | |
| Wife's work hours | 0.01 (0.03) | -0.00 (0.02) |
| Wife's earnings | -0.00 (0.00) | -0.00 (0.00) |
| Husband's work hours | -0.05 (0.05) | -0.03 (0.03) |
| Husband's earnings | -0.00 (0.00) | 0.00 (0.00) |
| Wife's portion of couple's earnings | 0.22 (4.68) | 1.80 (2.06) |
| Occupation percent women | -0.00 (0.03) | 0.00 (0.02) |
| Occupational nurturance | 0.00 (0.03) | 0.01 (0.02) |
| Occupational authority | -0.01 (0.03) | -0.00 (0.02) |
| Gender ideology | | |
| Husband's unequal housework | -2.11* (0.65) | 0.18 (0.54) |
| Wife's unequal housework | 1.41* (0.62) | 0.25 (0.32) |
| Husband's traditional gender | -0.75 (0.71) | 0.33 (0.41) |
| Wife's traditional gender | 0.95 (0.79) | 0.19 (0.36) |
| Mothers' Time (N=509) | | |
| Economic attributes | | |
| Wife's work hours | -0.14* (0.06) | 0.03 (0.04) |
| Wife's earnings | -0.00 (0.00) | 0.00 (0.00) |
| Husband's work hours | 0.01 (0.06) | -0.02 (0.03) |
| Husband's earnings | -0.00 (0.00) | 0.00 (0.00) |
| Wife's portion of couple's earnings | -0.04 (5.13) | -1.68 (2.74) |
| Occupation percent women | -0.04 (0.04) | 0.04 (0.04) |
| Occupational nurturance | 0.00 (0.04) | 0.04 (0.05) |
| Occupational authority | -0.04 (0.04) | -0.02 (0.06) |
| Gender ideology | | |
| Husband's unequal housework | 0.08 (0.97) | 0.57 (0.64) |
| Wife's unequal housework | 0.25 (0.84) | -0.55 (0.93) |

Table 4-9 continued.

| | Mothers' Time (N=509) | |
|------------------------------|-----------------------|-------------|
| Husband's traditional gender | 1.01 (0.86) | 1.15 (0.66) |
| Wife's traditional gender | 0.60 (0.97) | 1.30 (0.96) |

Notes: Data from the National Survey of Families and Households.

Missing data are imputed.

Findings based on OLS regression.

Estimates rounded to the nearest hundredth.

* $p < 0.05$

Table 4-10. Standardized Coefficients of Statistically Significant Findings: Parents' Child Care Time Using the American Time Use Survey (2003 to 2019) and National Survey of Families and Households (NSFH2) (1992 to 1994)

| Measure | Data Source | Fathers' Time | | | | | |
|-----------------------------|-------------|--------------------|-------------------|--------------------|--------------------|-------------------|---------------------|
| | | Total (hours/Week) | Solo (hours/week) | Prim. (hours/week) | Phys. (hours/week) | Rec. (hours/week) | Manag. (hours/week) |
| | | β | β | β | β | β | β |
| Wife's work hours | ATUS | -0.02 | | | | | |
| Wife's earnings | ATUS | 0.04 | | 0.05 | 0.08 | | |
| Husband's work hours | ATUS | -0.07 | -0.05 | -0.07 | -0.05 | -0.04 | -0.05 |
| Occupation percent women | ATUS | | | | 0.05 | | |
| Occupational nurturance | ATUS | | | | | 0.03 | |
| Husband's unequal housework | NSFH 2 | | | | | -0.17 | |
| Wife's unequal housework | NSFH 2 | | | | | 0.11 | |
| | | Mothers' Time | | | | | |
| | | Total (hours/Week) | Solo (hours/week) | Prim. (hours/week) | Phys. (hours/week) | Rec. (hours/week) | Manag. (hours/week) |
| | | β | β | β | β | β | β |
| Wife's work hours | ATUS | -0.08 | -0.09 | -0.10 | | -0.09 | -0.07 |
| Wife's earnings | ATUS | 0.04 | | | | | |
| Husband's work hours | ATUS | | 0.05 | | | | 0.02 |
| Husband's earnings | ATUS | -0.05 | | | | | |

Table 4-10 continued.

| | | Mothers' Time | | | | | |
|--|-----------|---------------------------|--------------------------|---------------------------|---------------------------|--------------------------|----------------------------|
| | | Total (hours/ Week) | Solo (hours/ week) | Prim. (hours/ week) | Phys. (hours/ week) | Rec. (hours/ week) | Manag. (hours/ week) |
| | | β | β | β | β | β | β |
| Wife's portion of couple's earnings | ATUS | -0.06 | | | | | |
| Occupational nurturance | ATUS | 0.04 | 0.06 | 0.03 | 0.03 | 0.03 | |
| Wife's work hours | NSFH 2 | | | | | -0.16 | |

There were no statistically significant findings for fathers' own income and time spent with children in the ATUS or NSFH2. However, I found support for the bargaining perspective with regards to fathers' and mothers' time with children in the ATUS. As mothers' portion of the couple's income increased their total time with children decreased ($b=-9.31$, $SE=3.46$, $p<0.05$) (Table 4-8) with an effect size of 0.06 (Table 4-10). Further, as wives' weekly earnings increased, fathers spent more time on total ($b=0.002$, $SE=0.001$, $p<0.05$), primary ($b=0.001$, $SE=0.001$, $p<0.05$), and physical ($b=0.0007$, $SE=0.0003$, $p<0.05$) child care (Table 4-8). For example, as wives' weekly earnings increased by \$500 per week, fathers spent roughly one additional hour on total child care, an additional half hour on primary child care, and an additional twenty minutes on physical child care each week. The standardized coefficients (Table 4-10) show that with every additional standard deviation in wives' weekly earnings, fathers' time with children increased by 0.08 standard deviations for physical, 0.05 standard deviations for primary, and 0.04 standard deviations for total care time.

There were a few statistically significant findings that were counterintuitive to the bargaining perspective. As their husbands' earnings increased, mothers spent less time with children ($b=-0.002$, $SE=0.001$, $p<0.05$), and as mothers' earnings increased, so did their total time with children ($b=0.002$, $SE=0.001$, $p<0.05$) (Table 4-8). Mothers' time with children decreased by 0.05 standard deviations with every additional standard deviation in husband's earnings (Table 4-10). However, mothers' time with children increased by 0.04 standard deviations for each standard deviation increase in their own earnings.

Occupation

The findings for the gendered occupation measures provided limited support for gender conventionality. Fathers in occupations with a greater proportion of women spent more physical care time with their children ($b=0.01$, $SE=0.003$, $p<0.05$) (Table 4-8) with an effect size of 0.05 (Table 4-10). Physical child care involves tasks such as feeding, bathing, and providing medical care to children. These caregiving activities align to feminine displays of gender. These findings align to gender conventionality, or that fathers in occupations with more women may exhibit these traits. Similarly, mothers in occupations described as nurturing completed more primary ($b=0.004$, $SE=0.002$, $p<0.05$) and physical ($b=0.002$, $SE=0.001$, $p<0.05$) child care activities than their peers. Although not specified in the gender conventionality hypotheses, mothers in nurturing occupations also completed more total ($b=0.01$, $SE=0.003$, $p<0.05$) and solo ($b=0.01$, $SE=0.002$, $p<0.05$) child care hours. The standardized coefficients indicate that with every additional standard deviation in occupational nurturance, mothers' time with children increased by 0.06 standard deviations for solo care, 0.04 standard deviations for total care, and 0.03 standard deviations for primary and physical care time with children (Table 4-10). There were no statistically significant findings for occupational authority and fathers' or mothers' time spent with children using the ATUS or NSFH2.

There was an interesting finding for recreational or "fun" activities, which are often described in the literature as completed by more fathers, whereas mothers complete more primary and physical care of children. I hypothesized that fathers and mothers in nurturing occupations would complete less recreational child care. Although, both fathers

($b=0.002$, $SE=0.001$, $p<0.05$) and mothers ($b=0.002$, $SE=0.001$, $p<0.05$) in nurturing occupations completed more recreational care time with children than their peers. Both estimates had effect sizes of 0.03 (Table 4-10).

Gender

Beyond couple-level data, the NSFH2 includes measures of gender ideology. The first gender ideology measure supports unequal, or gendered, housework for women. The second ideology measure speaks to traditional views on parenting (i.e., father as breadwinner, mother as caregiver). I found no statistical support for the parenting ideology measure in the NSFH2 (Table 4-9). I found limited support for the gendered housework ideology and recreational time spent with children. Fathers who supported unequal divisions of housework spent less time on recreational child care activities ($b=-2.11$, $SE=0.65$, $p<0.05$). For example, as fathers moved one item up on the five-point unequal housework scale (more traditional views), they completed two fewer child care hours than their peers. Separately, fathers whose wives' supported unequal divisions of housework spent more recreational time with children ($b=1.41$, $SE=0.62$, $p<0.05$). The standardized coefficients suggest that as fathers' support for unequal housework increased by one standard deviation, their recreational care time with children decreased by 0.17 standard deviations (Table 4-10). However, as fathers' wives' support for unequal housework increased by one standard deviation, fathers' recreational care time with children increased by 0.11 standard deviations. For reference, recreational care time in the NSFH2 consisted of leisure activities away from home, working on a project or

playing together, having private talks, helping with reading or homework, and watching television or videos.

I also calculated the predicted means of parents' time with children in both the ATUS and NSFH2 (Table 4-11). The predicted means indicate the average child care hours for mothers and fathers holding all else equal, which allows us to see the gender differences, or inequalities, in hours between the two groups.

In the ATUS, mothers spent more time on all types of child care than fathers with the exception of recreational, or "fun," child care activities. Mothers spent close to double the amount of time on solo and primary care of children. Further, mothers spent almost six times as much time on the physical care of children than fathers. The predicted means for the NSFH2 findings were less straightforward. Mothers spent more time than fathers on recreational child care activities, and fathers spent more time on managerial care activities than mothers.

Table 4-11. Predicted Means of Parents' Time with Children (hours/week)

| Group | ATUS | | | | | | NSFH2 | |
|---------|-------|------|---------|----------|------|--------|-------|--------|
| | Total | Solo | Primary | Physical | Rec. | Manag. | Rec. | Manag. |
| Fathers | 17.15 | 4.91 | 5.01 | 0.56 | 1.28 | 3.17 | 16.91 | 2.96 |
| Mothers | 18.59 | 9.76 | 9.15 | 3.15 | 1.13 | 4.87 | 18.89 | 0.17 |

Discussion

I found consistent support for fathers' and mothers' time spent with children and the time availability perspective. Both mothers and fathers spent less time with children as their own work hours increased (Table 4-7). These findings illustrate the "time crunch" that dual-earner parents face as they attempt to navigate work and family obligations. Beyond their own time, mothers also spent more alone time with children, as the one solely responsible for their care, when their husbands' work hours increased further supporting the time availability perspective.

For the bargaining perspective, my findings were fairly consistent with Raley, Bianchi, and Wang's (2012) earlier findings on fathers' time with children. Fathers spent more time with children as their wives' labor force participation increased, especially as wives' earnings increased. As wives' weekly earnings increased, fathers spent more overall time with children and also more primary care time with children completing tasks such as feeding, bathing, and caring for children.

I attempted to translate the gender conventionality perspective, which is common in the housework literature, to the present study on child care. According to this perspective, occupation-based characteristics, such as the proportion of an occupation held by women or occupations characterized as nurturing or authoritative, impact activities at home. The common application in the housework literature posits that both men and women in occupations with a greater concentration of women will complete more feminine housework at home, such as doing the dishes and laundry (Chapter 3). For child care, care activities focused on the routine care of children (primary and physical

child care activities) are more associated with women, while the recreational, or “fun” child care activities are more associated with men. I found limited support for gender conventionality in the present child care study (Table 4-7). Findings suggest that mothers in nurturing occupations completed more routine child care activities than their peers. Also, fathers in the ATUS in occupations with a greater proportion of women spent more time feeding, bathing, and providing medical care to children, which are often viewed as feminine displays of gender. However, the coefficients were quite small. There were also interesting findings for occupational nurturance and fathers’ and mothers’ recreational care time with children. Fathers and mothers in occupations characterized as nurturing completed more recreational care time with children than their peers in the ATUS. Overall, these findings suggest a need for additional assessment of occupational gendered behavior and parents’ child care activities.

I found limited support for gender ideology and parents’ time spent with children using the NSFH2, which may suggest that gender ideology is more salient for housework (Chapter 3) than child care. However, I did find that fathers with more traditional views on housework spent less time on recreational child care, and fathers whose wives’ had more traditional views on housework spent more time on recreational child care. Recreational child care is often seen as the “fun” type of care completed by men. Although, there were definite limitations with the recreational child care measure constructed in the NSFH2. Unlike the ATUS, the NSFH2 is not a time diary study. The NSFH2 measures relating to recreational child care activities were less detailed than in the ATUS and were also collected as a self-reported estimate on time spent with children

during the past week on five combined activities (i.e., leisure activities away from home, working on a project or playing together, having private talks, helping with reading or homework, and watching television videos).

I found no statistically significant findings between the NSFH2 gender ideology measure on parenting and parents' time spent with children. The NSFH2 measure on parenting ideology may be less relevant for the division of child care in dual-earner households. Although, the findings for this measure were still quite gendered when assessing time allocated to housework in Chapter 3.

There are a few data limitations to highlight. I was only able to assess recreational and managerial time with children using the NSFH2. The NSFH2 sample was quite small (i.e., 509 couples), and therefore, my NSFH2 analyses may have been underpowered and unable to detect statistically significant associations. The underpowered NSFH2 analyses may also explain why the findings for parents' time with children were less straightforward in the NSFH2 than the ATUS. In separate analyses (not shown) I found fewer statistically significant findings for housework time in this smaller sample than in the larger NSFH2 sample assessed in Chapter 3.

I conducted a generalizability test of Raley, Bianchi, and Wang's (2012) study on fathers' time with children by incorporating more recent waves of the ATUS, measures of occupational gendered behaviors, gender ideology, and a separate data set. Although, I did find some alignment to their findings. For example, fathers showed greater responsibility for routine child care tasks as their wives' earnings increased. I also found that mothers completed more child care hours than fathers across almost *all* tasks while

holding all other factors constant. My decision to solely focus on parents in dual-earner families may have led to more deviations in findings between my study and Raley and colleagues' (2012). Although, by deviating from their methodology, I was able to illustrate how complex child care responsibilities are for fathers and mothers in dual-earner households.

CHAPTER 5

CONCLUSION

The present studies examined how dual-earner households manage housework and child care responsibilities by focusing on the relationship between employment characteristics and unpaid household labor. I tested the common theoretical perspectives across the housework and child care literature, more specifically, gender display and economic dependency, in order to assess remaining inequalities in time dedicated to housework and child care. I developed new measures for occupational nurturance and authority and then applied these measures to a housework study and a child care study. I used three different data sources throughout my analyses to show the utility of the newly constructed measures and to test the housework and child care perspectives. Finally, I showed replication in quantitative sociology.

In Chapter 2, I used the General Social Survey (GSS) to develop alternative measures for occupational nurturance and authority that were first developed by England, Herbert, Kilbourne, Reid, and Megdal (1994). I based these measures on how workers responded to attitudes, beliefs, and behaviors exhibiting nurturance and authority and how these attitudinal measures varied across occupations. I used the following GSS survey item to construct occupational nurturance, “In my job I can help other people.” For occupational authority, I used responses to “Do you supervise or are you directly responsible for the work of other people?.” I used multilevel models that nested GSS

respondents in occupations and empirical Bayes predictions to construct the new measures.

The newly constructed measures offer alternative ways to assess occupational traits, which are valued differently in society. Occupations classified as nurturing, a feminine trait, are devalued in society and receive less pay than occupations characterized as authoritative, a masculine trait (England and McLaughlin 1979; England, Chassie, and Linda McCormick 1982; England, Farkas, Kilbourne, and Dou 1988; England 1992; England, Reid, and Kilbourne 1996; Budig and England 2001; England, Budig, and Folbre 2002; Bittman, England, Folbre, Sayer, and Matheson 2003; England 2005).

England and colleagues' work helped uncover the existence of gender inequality in the labor market, and more specifically, the continuing gender pay gap in the United States. However, their measures for occupational nurturance and authority had limitations. The measures were mutually exclusive, dichotomous, and may suffer from issues with construct validity. My new measures are correlated with England and colleagues' measures and also occupational sex composition. Further, my new measures for occupational nurturance and authority are not mutually exclusive or dichotomous and may offer better construct validity as they incorporate actual workers' attitudes and beliefs rather than perceived workplace characteristics. After measure development, I showed the utility of the newly constructed measures by merging them to two different data sets via Census occupation codes and by applying them to a housework study in Chapter 3 and a child care study in Chapter 4.

In Chapter 3, I tested the gender display theory's perspectives of gender deviance neutralization and gender conventionality and economic dependency's bargaining and time availability perspectives to assess housework time for married men and women in gender atypical occupations using the second wave of the National Survey of Families and Households (NSFH2) and American Time Use Survey (ATUS). I performed a robustness test of prior work conducted by McClintock (2017) by incorporating her methodology and data sources. I also incorporated more recent waves of the ATUS and, importantly, swapped out England and colleagues' measures of occupational nurturance and authority for my own.

Similar to McClintock, who performed a robustness test of Schneider's (2012) work, I also found support for gender conventionality. Married men who worked in gender atypical occupations completed more feminine and less masculine housework, and married women who worked in gender atypical occupations completed more masculine housework. The application of my newly developed measures of occupational nurturance and authority may offer more precise estimates, or refinements, to those developed by England and colleagues' (1994).

I found overwhelming support for gender conventionality for married men and women working in gender atypical occupations who displayed less stereotypical gendered behavior at home. However, separate from occupational sex composition, my findings also provided support for the influence of gender ideology on married men and women's gendered display of housework at home. Those with more traditional views, and whose spouses held more traditional views on gendered housework and family life,

completed more stereotypically gendered housework tasks suggesting that ideology matters when it comes to the division of housework at home.

In Chapter 4, I examined how parents in dual-earner households spent their time with children by focusing on economic characteristics and the type of child care activity. The chapter was informed by the prior work of Raley, Bianchi, and Wang (2012). However, I conducted a generalizability assessment of their work as I deviated from their methodology, assessed additional waves of the ATUS, and incorporated a separate data source, the NSFH2. I deviated from Raley and colleagues' (2012) methodology to more closely assess the work-family time bind of working parents from dual-earner households and their gender ideologies. I also incorporated the newly constructed measures for occupational nurturance and authority, as well as occupational sex composition, in order to examine the occupational traits of working parents and their time spent with children.

I found consistent and overwhelming support for fathers' and mothers' time spent with children and economic dependency's time availability perspective. These results illuminated the "time crunch" that dual-earners face as they juggle work and family obligations. I found limited support for gender conventionality and attitudes in child care time through my incorporation of the measures for occupation and gender ideology. However, similar to Raley, Bianchi, and Wang (2012), I found that although fathers completed more child care directly related to the physical needs of children as their wives' earnings increased, mothers completed more child care than fathers on almost all tasks. My findings partially supported a generalization of Raley and colleagues' (2012)

work on parents from households with at least one parent participating in the labor force to my assessment of dual-earner households.

Across both studies of unpaid household labor, the overall findings suggest a gendered picture. Married women completed more housework than married men, and mothers completed more child care than fathers. The housework findings were further supported by gender ideology, or that those with more traditional views on housework and family life completed more traditionally gendered housework tasks. Although, my findings also suggested more nuanced housework for those in gender atypical workplaces in support of gender conventionality. Those in gender atypical work completed more gender atypical housework. These findings align with McClintock's (2017) that challenged the dominant perspective of gender deviance neutralization. Those in gender atypical workplaces did not attempt to neutralize their deviation from normative displays of gender by performing hypered gendered housework at home. These individuals more so aligned their gender atypical work to gender atypical housework tasks. Finally, even though I found strong support for economic dependency theory's time availability perspective for time spent with children in dual-earner households, mothers still completed more child care than fathers regardless of all other factors further highlighting a stalled revolution for working mothers. Women made strides in the workplace, but still faced gendered unpaid household labor at home.

It is also important to note that I am not suggesting causal relationships between gender atypical work and behavior. Rather, my findings highlight associations between the two. I am not suggesting that men who enter occupations predominantly filled by

women or in occupations characterized as nurturing are changed in some way by their occupations, and therefore, act differently at home as evidenced by housework hours and type. I am unable to make a temporal argument that the gendered occupational characteristics occurred first, and attitudes or behavior were changed at a later time using my data sources, which are not longitudinal.

Further, I believe that self-selection may play a bigger role between these gendered occupational characteristics and attitudes or behaviors. More specifically, men who opt into a gender atypical occupation or an occupation described as nurturing may be different than men who opt out of those occupations. These men may hold more progressive gender ideologies and be more likely to perform gender atypical housework, or child care, than their peers even in the absence of gender atypical work or nurturing occupations. Beyond self-selection into occupations, my analyses are also impacted by the self-selection between married partners who may hold similar views on gender and family life. My findings highlight associations between the effects of occupational characteristics and behavior, which are in no way causal but more than likely influenced by self-selection.

Throughout my studies, I built on the great work of leaders in the field of housework and child care through replication. I conducted robustness and generalizability checks of prior work and made a case for replication studies in quantitative sociology. My robustness test of McClintock's (2017) work attempted to replicate her methodology while incorporating alternative specifications for occupational nurturance and authority, which were described by McClintock as "noisy" measures of gender performance

(McClintock 2017:6). Although my findings were fairly comparable to McClintock's, the use of multiple imputation (MI) to address missing data did create differences between our multivariate models. This illustrates the sensitivity of MI methodology. However, I was able to build a solid foundation from her work in order to test my alternative specifications of occupational nurturance and authority. There were also some similarities between my work and Raley and colleagues' (2012). Even though I deviated from their methodology quite a bit, I was able to partially generalize their findings for mothers' and fathers' time spent with children.

Replication studies, which are common to the medical field and other social science fields, are less common in quantitative sociology (Freese and Peterson 2017). From my work, I am able to add to the field by conducting replication studies in the forms of robustness and generalizability checks of prior research. My work supports the relationship between employment characteristics and remaining gender inequalities in unpaid household labor. I was able to shed light on how dual-earner households attempt to manage the complicated work-family time bind. Finally, I showed the utility of my new measures for occupational nurturance and authority, which have the potential to add to the field.

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APPENDIX A

ENGLAND, HERBERT, KILBOURNE, REID, AND MEGDAL'S (1994) CODING OF OCCUPATIONAL NURTURANCE AND AUTHORITY

Table A-1. England, Herbert, Kilbourne, Reid, and Megdal's (1994) Coding of Occupations Involving Nurture

| Title | Census Code |
|---|-------------|
| Physicians | 084 |
| Dentists | 085 |
| Optometrists | 087 |
| Podiatrists | 088 |
| Health diagnosing practitioners, not elsewhere classified (n.e.c.) | 089 |
| Registered nurses | 095 |
| Inhalation therapists | 098 |
| Occupational therapists | 099 |
| Physical therapists | 103 |
| Speech therapists | 104 |
| Therapists, n.e.c. | 105 |
| Physicians' assistants | 106 |
| Dental hygiene | 204 |
| Licensed practical nurses | 207 |
| Dental assistants | 445 |
| Health aides, except nursing | 446 |
| Earth, environmental, and marine science teachers, higher education | 113 |
| Biological science teachers, higher education | 114 |
| Chemistry teachers, higher education | 115 |
| Physics teachers, higher education | 116 |
| Natural science teachers, higher education | 117 |
| Psychology teachers, higher education | 118 |
| Economics teachers, higher education | 119 |
| History teachers, higher education | 123 |
| Political science teachers, higher education | 124 |
| Sociology teachers, higher education | 125 |
| Social science teachers, n.e.c., higher education | 126 |
| Engineering teachers, higher education | 127 |
| Mathematical science teachers, higher education | 128 |
| Computer science teachers, higher education | 129 |

Table A-1 continued.

| Title | Census Code |
|--|-------------|
| Medical science teachers, higher education | 133 |
| Health specialties teachers, higher education | 134 |
| Business, commerce, and marketing teachers, higher education | 135 |
| Agriculture and forestry teachers, higher education | 136 |
| Art, drama, and music teachers, higher education | 137 |
| Physical education teachers, higher education | 138 |
| Education teachers, higher education | 139 |
| English teachers, higher education | 143 |
| Foreign language teachers, higher education | 144 |
| Law teachers, higher education | 145 |
| Social work teachers, higher education | 146 |
| Theology teachers, higher education | 147 |
| Trade and industrial teachers, higher education | 148 |
| Home economics teachers, higher education | 149 |
| Teachers, postsecondary, n.e.c. (higher education) | 153 |
| Postsecondary teachers, subject not specified (high education) | 154 |
| Prekindergarten and kindergarten teachers | 155 |
| Elementary school teachers | 156 |
| Secondary school teachers | 157 |
| Special education teachers | 158 |
| Teachers, n.e.c. | 159 |
| Educational and vocational counselors | 163 |
| Teachers' aides | 387 |
| Motor vehicles and boats sales workers | 263 |
| Apparel sales workers | 264 |
| Shoe sales workers | 265 |
| Furniture and home furnishing sales workers | 266 |
| Radio, television, hi-fi, and appliances sales workers | 267 |
| Hardware and building supplies sales workers | 268 |
| Parts sales workers | 269 |
| Other commodities sales workers | 274 |
| Sales counter clerks | 275 |
| Cashiers Hotel clerks | 276 |
| Hotel clerks | 317 |
| Transportation ticket and reservation agents | 318 |
| Bartenders | 434 |
| Waiters and waitresses | 435 |
| Child care workers, private household | 406 |
| Child care workers, except private household | 468 |

Table A-1 continued.

| Title | Census Code |
|---|-------------|
| Librarians | 164 |
| Social workers | 174 |
| Recreation workers | 175 |
| Clergy | 176 |
| Religious workers | 177 |
| Receptionists | 319 |
| Information clerks, n.e.c. | 323 |
| Bank tellers | 383 |
| Elevator operators | 454 |
| Barbers | 457 |
| Hairdressers and cosmetologists | 458 |
| Attendants, amusement and recreation facilities | 459 |
| Guides | 463 |
| Ushers | 464 |
| Public transportation attendants | 465 |
| Baggage porters and bellhops | 466 |
| Welfare service aides | 467 |
| Personal service occupations, n.e.c. | 469 |
| Taxicab drivers and chauffeurs | 809 |
| Parking lot attendants | 813 |

Table A-2. England, Herbert, Kilbourne, Reid, and Megdal's (1994) Coding of Occupations Involving Authority

| Title | Census Code |
|--|-------------|
| Chief executives and general administrators, public administration | 004 |
| Administrators and officials, public administration | 005 |
| Administrators, protective services | 006 |
| Financial managers | 007 |
| Personnel and labor relations managers | 008 |
| Purchasing managers | 009 |
| Managers, marketing, advertising, and public relations | 013 |
| Administrators, education and related fields | 014 |
| Managers, medicine and health | 015 |
| Managers, properties and real estate | 016 |
| Postmasters and mail superintendents | 017 |
| Funeral directors | 018 |
| Managers and administrators, not elsewhere classified (n.e.c.) | 019 |
| Supervisors and proprietors, sales occupation | 243 |
| Supervisors, general office | 303 |
| Supervisors, computer operators | 304 |
| Supervisors, financial records processing | 305 |
| Chief communications operators | 306 |
| Supervisors, distribution, scheduling, and adjusting clerks | 307 |
| Supervisors, fire fighting and fire prevention occupations | 413 |
| Supervisors, police and detectives | 414 |
| Supervisors, guards | 415 |
| Supervisors, food preparation and service occupations | 433 |
| Supervisors, cleaning and building service workers | 448 |
| Supervisors, personal service occupations | 456 |
| Managers, farms, except horticultural | 475 |
| Managers, horticultural specialty farms | 476 |
| Supervisors, farm workers | 477 |
| Supervisors, related agricultural occupations | 485 |
| Supervisors, forestry and logging workers | 494 |
| Captains and other officers, fishing vessels | 497 |
| Supervisors, mechanics and repairers | 503 |
| Supervisors, brickmasons, stonemasons, and tile setters | 553 |
| Supervisors, carpenters and related workers | 554 |
| Supervisors, electricians and power transmission installers | 555 |

Table A-2 continued.

| Title | Census Code |
|---|-------------|
| Supervisors, painters, paperhangers, and plasterers | 556 |
| Supervisors, plumbers, pipe fitters, and steamfitters | 557 |
| Supervisors, construction, n.e.c. | 558 |
| Supervisors, motor vehicle operators | 803 |
| Ship captains and mates, except fishing boats | 828 |
| Supervisors, material moving equipment operators | 843 |
| Supervisors, handlers, equipment cleaners, and laborers | 863 |
| n.e.c. | |

APPENDIX B
EXISTING GENERAL SOCIAL SURVEY SCALES RELATED TO
NURTURANCE

Davis Empathy Scale. The Davis Empathy Scale (DES) consists of seven GSS items (listed below) assessing empathy toward others (Davis 1994). Respondents rate how well each statement describes them on a scale of 1 (“Doesn’t Describe Well”) to 5 (“Describes Well”). Three items are reverse coded before summing the responses to construct an additive scale. The average empathy score is 28.0 (N = 2,635) and ranges from 7 to 35 using GSS data from 2002 to 2004 (Smith 2005). The scale had a Cronbach’s reliability coefficient of 0.75.

1. I often have tender, concerned feelings for people less fortunate than me.
2. (Reverse code): Sometimes I don't feel very sorry for other people when they are had in problems.
3. When I see someone being taken advantages of, I feel kind of protective toward them.
4. (Reverse code): Other people's misfortunes do not usually disturb me a great deal.
5. (Reverse code): When I see someone treated unfairly, I sometimes don't feel very much pity for them.
6. I am often quite touched by things that I see happen.
7. I would describe myself as a pretty soft-hearted person.

Altruistic Values Scale. The altruistic values scale measures respondent beliefs on helping those in need (Nickell 1998; Webb, Green, and Brashear 2000). The scale consists of four GSS items (listed below). Respondents rated how much they agreed with each statement using a five-point scale ranging from 1 (“Strongly Disagree”) to 5 (“Strongly Agree”). Two items are reverse coded before summing the responses to construct an additive scale. The scale ranges from 4 (least altruistic) to 20 (most altruistic) with an average scale score of 14.2 (N = 2,660) using GSS data from 2002 to 2004 (Smith 2005). The altruistic values scale has a Cronbach’s reliability coefficient of 0.55.

1. (Reverse code): People should be willing to help others who are less fortunate.
2. Those in need have to learn to take care of themselves and not depend on others.
3. (Reverse code): Personally assisting people in trouble is very important to me.
4. These days people need to look after themselves.

Altruistic Behaviors. The GSS contains two separate altruistic behavior scales. The first scale consists of 11 items (1 through 11, listed below) (Amato 1990; Johnson, et al., 1989; Khanna, et al., 1992; Rushton and Fekker, 1981a, 1981b; Smith 2000). The second scale adds four additional survey items to the first 11 for a total of 15 (1 through 15, listed below). The four additional survey items (12 through 15 below) are a subset of the social network module from the International Social Survey Program (ISSP). For both altruistic behavior scales, respondents reported how often they performed the 15 behaviors. The four additional survey items are more personal as respondents rated how often they performed the behaviors for people they knew (e.g., family, friends, relatives,

neighbors, etc.). However, these survey items were not administered for all 2002 to 2004 GSS respondents. In 2002, these survey items were only administered for respondents administered the ISSP supplemental questionnaire.

1. Talked to Depressed Person
2. Helped Others with Housework
3. Allowed Someone to Cut Ahead
4. Gave Directions
5. Gave Money to Charity
6. Volunteered for Charity
7. Give to Homeless
8. Helped Someone Find Job
9. Helped Someone Who Was Away
10. Gave Up Seat
11. Carried Belongings
12. Loaned Item
13. Lent Money
14. Returned Extra Change
15. Gave Blood

All 15 items were converted to a numeric count based on the item response options for altruistic behaviors over the past 12 months: Not at all = 0; Once = 1; At least 2 or 3 times = 3; Once a month = 12; Once a week = 52; and More than once a week = 75

The first altruistic behavior scale ranged from 0 (no altruistic behaviors performed over the past 12 months) to 825 (all altruistic behaviors performed once a week over the past 12 months), and the average scale score was 64.1 (N = 2,623) (Smith 2005). The Cronbach's alpha was 0.61. The second altruistic behavior scale ranged from 0 to 1,125 and the average scale score was 114.3 (N = 2,418) (Smith). The Cronbach's alpha was 0.68.

APPENDIX C

COMPARISON TO ENGLAND AND COLLEAGUES' MEASURES OF OCCUPATIONAL NURTURANCE AND AUTHORITY

Table C-1. Correlations of Hitchcock's (2021) and England and Colleagues' (1994) Measures of Occupational Nurturance and Authority – Married Men (N=2,229)

| Measure | Multiple Imputation | Correlations | | Pooled Correlation Coefficient using Fisher's Z Transformation |
|------------|---------------------|--------------|-----------|--|
| | | | Hitchcock | |
| Nurturance | 1 | England | 0.4559 | 0.4539 |
| | 2 | | 0.4572 | |
| | 3 | | 0.4521 | |
| | 4 | | 0.4577 | |
| | 5 | | 0.4531 | |
| | 6 | | 0.4503 | |
| | 7 | | 0.4528 | |
| | 8 | | 0.4495 | |
| | 9 | | 0.4547 | |
| | 10 | | 0.4556 | |
| Authority | 1 | England | 0.7472 | 0.7464 |
| | 2 | | 0.7396 | |
| | 3 | | 0.7411 | |
| | 4 | | 0.7516 | |
| | 5 | | 0.7455 | |
| | 6 | | 0.7482 | |
| | 7 | | 0.7523 | |
| | 8 | | 0.7463 | |
| | 9 | | 0.7398 | |
| | 10 | | 0.7516 | |

Notes. Data from the National Survey of Families and Households Wave 2 (1992 – 1994) and General Social Survey.
Missing data are imputed.

Table C-2. Correlations of Hitchcock's (2021) and England and Colleagues' (1994) Measures of Occupational Nurturance and Authority – Married Women (N=2,229)

| Measure | Multiple Imputation | Correlations | | Pooled Correlation Coefficient using Fisher's Z Transformation |
|------------|---------------------|--------------|-----------|--|
| | | | Hitchcock | |
| Nurturance | 1 | England | 0.6115 | 0.6110 |
| | 2 | | 0.6113 | |
| | 3 | | 0.6099 | |
| | 4 | | 0.6097 | |
| | 5 | | 0.6108 | |
| | 6 | | 0.6112 | |
| | 7 | | 0.6104 | |
| | 8 | | 0.6116 | |
| | 9 | | 0.6111 | |
| | 10 | | 0.6122 | |
| Authority | 1 | England | 0.6341 | 0.6350 |
| | 2 | | 0.6398 | |
| | 3 | | 0.6330 | |
| | 4 | | 0.6398 | |
| | 5 | | 0.6375 | |
| | 6 | | 0.6416 | |
| | 7 | | 0.6334 | |
| | 8 | | 0.6191 | |
| | 9 | | 0.6355 | |
| | 10 | | 0.6362 | |

Notes. Data from the National Survey of Families and Households Wave 2 (1992 – 1994) and General Social Survey.
Missing data are imputed.

Table C-3. Multivariate Results of Married Men's Housework: Comparison of Hitchcock's (2021) to England and Colleagues' (1994) Measures for Occupational Nurturance and Authority

| Measure | Total Housework (hours/week) | | Feminine Housework (hours/week) | | Masculine Housework (hours/week) | |
|---|------------------------------|------------------|---------------------------------|------------------|----------------------------------|------------------|
| | H | E | H | E | H | E |
| | <i>b</i> (SE) | <i>b</i> (SE) | <i>b</i> (SE) | <i>b</i> (SE) | <i>b</i> (SE) | <i>b</i> (SE) |
| Occupational sex composition (ref: Job 0% to 25% women) | | | | | | |
| Job 26% to 50% women | -0.10* (0.51) | -0.98 (0.50) | 0.26 (0.34) | 0.15 (0.33) | -1.18* (0.24) | -1.08* (0.24) |
| Job 51% to 75% women | 0.32 (0.66) | 0.34 (0.65) | 0.86 (0.44) | 0.76 (0.43) | -0.67* (0.31) | -0.54 (0.31) |
| Job 76% to 100% women | 1.30 (1.11) | 1.33 (1.13) | 2.16* (0.74) | 1.94* (0.75) | -1.14* (0.53) | -0.86 (0.53) |
| Occupational gendered behavior | | | | | | |
| Nurturance | -0.01 (0.01) | -0.94 (0.75) | -0.01 (0.01) | -0.16 (0.50) | -0.00 (0.00) | -0.71* (0.35) |
| Authority | -0.01 (0.01) | -0.98 (0.53) | 0.01 (0.01) | -0.47 (0.35) | 0.10 (0.60) | -0.35 (0.25) |
| Economic attributes | | | | | | |
| Work hours | -0.03 (0.02) | -0.03 (0.02) | -0.03* (0.01) | -0.03* (0.01) | 0.01 (0.01) | 0.01 (0.01) |
| Wife's work hours | 0.04* (0.02) | 0.04* (0.02) | 0.03* (0.01) | 0.03* (0.01) | -0.00 (0.01) | -0.00 (0.01) |
| Own income | -0.00 (0.00) | -0.00 (0.00) | -0.00 (0.00) | -0.00 (0.00) | -0.00 (0.00) | -0.00 (0.00) |
| Husband's income share | -1.83 (1.08) | -1.80 (1.08) | -1.60* (0.72) | -1.58* (0.72) | -0.13 (0.50) | -0.12 (0.50) |
| Own home | 1.20* (0.60) | 1.21* (0.60) | -0.94* (0.40) | -0.93* (0.40) | 2.38* (0.28) | 2.37* (0.28) |
| Education (ref: Less than high school) | | | | | | |
| High school | -0.26 (0.84) | -0.34 (0.84) | -0.24 (0.56) | -0.32 (0.56) | -0.09 (0.40) | -0.08 (0.40) |
| Some college | 0.71 (0.88) | 0.65 (0.88) | 0.87 (0.58) | 0.76 (0.58) | -0.51 (0.41) | -0.47 (0.41) |
| College or more | -0.81 (0.92) | -0.94 (0.92) | 0.32 (0.62) | 0.08 (0.61) | -1.47* (0.44) | -1.35* (0.43) |

Table C-3 continued.

| Measure | Total Housework (hours/week) | | Feminine Housework (hours/week) | | Masculine Housework (hours/week) | |
|-------------------------------|---------------------------------|-----------------------|------------------------------------|-----------------------|-------------------------------------|-----------------------|
| | H <i>b</i> (SE) | E <i>b</i> (SE) | H <i>b</i> (SE) | E <i>b</i> (SE) | H <i>b</i> (SE) | E <i>b</i> (SE) |
| In school | 0.92 (0.56) | 0.90 (0.57) | 0.53 (0.37) | 0.50 (0.37) | -0.03 (0.27) | -0.02 (0.27) |
| Demographic attributes | | | | | | |
| Age (ref: 18 to 34) | | | | | | |
| 35 to 40 years | -0.75 (0.58) | -0.73 (0.58) | -0.50 (0.38) | -0.50 (0.38) | -0.28 (0.27) | -0.26 (0.27) |
| 41 to 47 years | -0.66 (0.60) | -0.63 (0.60) | -0.90* (0.39) | -0.89* (0.40) | 0.13 (0.28) | 0.15 (0.28) |
| 48 years or older | -2.67* (0.67) | -2.65* (0.67) | -2.05* (0.44) | -2.07* (0.44) | -0.50 (0.32) | -0.47 (0.32) |
| Number of children | 0.84* (0.20) | 0.83* (0.20) | 0.22 (0.13) | 0.20 (0.13) | 0.15 (0.09) | 0.16 (0.09) |
| Is white | -2.97* (0.59) | -2.99* (0.59) | -1.12* (0.39) | -1.16* (0.39) | -0.73* (0.28) | -0.71* (0.28) |
| Health is fair or poor | -1.13 (0.58) | -1.12 (0.58) | -0.70 (0.38) | -0.69 (0.38) | -0.32 (0.27) | -0.33 (0.27) |
| Attitudes | | | | | | |
| Unequal housework | -0.93* (0.22) | -0.93* (0.22) | -0.89* (0.15) | -0.88* (0.15) | 0.00 (0.10) | 0.01 (0.10) |
| Traditional gender (TG) scale | -0.06 (0.28) | -0.06 (0.28) | -0.54* (0.18) | -0.54* (0.18) | 0.44* (0.13) | 0.43* (0.13) |
| Wife's unequal housework | -0.21 (0.22) | -0.21 (0.22) | -0.41* (0.15) | -0.41* (0.15) | 0.17 (0.10) | 0.17 (0.10) |
| Wife's TG scale | -0.47 (0.26) | -0.46 (0.26) | -0.24 (0.17) | -0.23 (0.17) | -0.17 (0.12) | -0.17 (0.12) |
| Sample size | 2,229 | 2,229 | 2,229 | 2,229 | 2,229 | 2,229 |

Notes: Data from the National Survey of Families and Households Wave 2 (1992 – 1994) and General Social Survey.

Ref = reference category.

Gray = Difference in statistical significance between results.

Missing data are imputed.

Findings based on OLS regression.

Estimates rounded to the nearest hundredth.

* $p < 0.05$

Table C-4. Multivariate Results of Married Women’s Housework using England and Colleagues’ (1994) Measures for Occupational Nurturance and Authority: Comparison of Hitchcock’s (2021) to England and Colleagues’ (1994) Measures for Occupational Nurturance and Authority

| Measure | Total Housework (hours/week) | | Feminine Housework (hours/week) | | Masculine Housework (hours/week) | |
|---|------------------------------|------------------|---------------------------------|------------------|----------------------------------|------------------|
| | H | E | H | E | H | E |
| | <i>b</i> (SE) | <i>b</i> (SE) | <i>b</i> (SE) | <i>b</i> (SE) | <i>b</i> (SE) | <i>b</i> (SE) |
| Occupational sex composition (ref: Job 76% to 100% women) | | | | | | |
| Job 0% to 25% women | 1.64 (1.65) | 1.79 (1.63) | 0.88 (1.44) | 0.90 (1.43) | 0.54* (0.22) | 0.55* (0.22) |
| Job 26% to 50% women | -1.96 (1.07) | -1.56 (1.07) | -2.22* (0.93) | -2.06* (0.94) | 0.17 (0.14) | 0.27 (0.14) |
| Job 51% to 75% women | 0.02 (0.82) | 0.33 (0.86) | -0.37 (0.71) | -0.23 (0.75) | 0.27* (0.11) | 0.31* (0.12) |
| Occupational gendered behavior | | | | | | |
| Nurturance | 0.01 (0.01) | 1.20 (0.82) | 0.01 (0.01) | 0.69 (0.72) | 0.00* (0.00) | 0.17 (0.11) |
| Authority | -0.01 (0.01) | -0.65 (1.04) | -0.00 (0.01) | -0.37 (0.90) | -0.14 (0.33) | -0.23 (0.14) |
| Economic attributes | | | | | | |
| Work hours | -0.06* (0.03) | -0.06* (0.03) | -0.05* (0.02) | -0.05* (0.02) | -0.01 (0.00) | -0.01 (0.00) |
| Husband’s work hours | 0.02 (0.03) | 0.02 (0.03) | 0.00 (0.02) | 0.00 (0.02) | 0.01 (0.00) | 0.01 (0.00) |
| Own income | -0.00* (0.00) | -0.00* (0.00) | -0.00* (0.00) | -0.00* (0.00) | -0.00 (0.00) | -0.00 (0.00) |
| Husband earns 51% to 75% of income (ref) | | | | | | |
| Husband earns 0% to 25% of income | 3.44* (1.32) | 3.45* (1.32) | 2.86* (1.16) | 2.87* (1.16) | 0.43* (0.18) | 0.44* (0.18) |
| Husband earns 26% to 50% of income | 2.63* (0.92) | 2.67* (0.92) | 1.99* (0.80) | 2.01* (0.80) | 0.25* (0.12) | 0.26* (0.12) |
| Husband earns 76% to 100% of income | 1.06 (0.88) | 1.01 (0.88) | 0.91 (0.77) | 0.88 (0.77) | 0.19 (0.12) | 0.18 (0.12) |
| Own home | 2.09* (0.93) | 2.09* (0.93) | 1.46 (0.82) | 1.46 (0.82) | 0.40* (0.12) | 0.40* (0.12) |
| Education (ref: Less than high school) | | | | | | |

Table C-4 continued.

| Measure | Total Housework (hours/week) | | Feminine Housework (hours/week) | | Masculine Housework (hours/week) | |
|--------------------------------|------------------------------------|------------------|---------------------------------------|------------------|--|-----------------|
| | H | E | H | E | H | E |
| | <i>b</i> | <i>b</i> | <i>b</i> | <i>b</i> | <i>b</i> | <i>b</i> |
| | (SE) | (SE) | (SE) | (SE) | (SE) | (SE) |
| High school | -1.02 (1.35) | -0.96 (1.35) | -1.58 (1.18) | -1.54 (1.18) | 0.20 (0.18) | 0.23 (0.18) |
| Some college | -2.97* (1.39) | -2.89* (1.39) | -3.38* (1.21) | -3.32* (1.21) | 0.04 (0.19) | 0.09 (0.19) |
| College or more | -5.74* (1.49) | -5.69* (1.46) | -5.81* (1.30) | -5.75* (1.28) | -0.08 (0.20) | -0.03 (0.20) |
| In school | -1.75* (0.80) | -1.75* (0.79) | -1.60* (0.70) | -1.59* (0.69) | -0.04 (0.11) | -0.03 (0.11) |
| Demographic attributes | | | | | | |
| Age (ref: 18 to 32) | | | | | | |
| 33 to 38 years | -0.41 (0.91) | -0.42 (0.91) | -0.51 (0.80) | -0.52 (0.80) | 0.05 (0.12) | 0.05 (0.12) |
| 39 to 44 years | 0.62 (0.94) | 0.70 (0.93) | 0.37 (0.82) | 0.42 (0.81) | 0.17 (0.13) | 0.20 (0.12) |
| 45 years or older | 0.11 (1.00) | 0.22 (1.00) | 0.18 (0.88) | 0.25 (0.87) | 0.04 (0.13) | 0.08 (0.13) |
| Number of children | 3.93* (0.31) | 3.92* (0.31) | 2.92* (0.27) | 2.92* (0.27) | 0.03 (0.04) | 0.03 (0.04) |
| Is white | -1.20 (0.92) | -1.25 (0.92) | -0.93 (0.80) | -0.96 (0.80) | 0.41* (0.12) | 0.41* (0.12) |
| Health is fair or poor | -0.38 (0.89) | -0.42 (0.89) | -0.54 (0.78) | -0.56 (0.78) | 0.06 (0.12) | 0.06 (0.12) |
| Attitudes | | | | | | |
| Unequal housework | 0.91* (0.35) | 0.91* (0.35) | 0.83* (0.30) | 0.83* (0.30) | 0.05 (0.05) | 0.05 (0.05) |
| Traditional gender (TG) scale | 0.37 (0.41) | 0.35 (0.41) | 0.42 (0.36) | 0.41 (0.36) | 0.05 (0.05) | 0.04 (0.05) |
| Husband's unequal housework | 0.69* (0.34) | 0.69* (0.34) | 0.51 (0.30) | 0.51 (0.30) | 0.04 (0.05) | 0.04 (0.05) |
| Husband's TG scale | 1.48* (0.43) | 1.48* (0.43) | 1.42* (0.37) | 1.41* (0.37) | 0.05 (0.06) | 0.05 (0.06) |
| Sample size | 2,229 | 2,229 | 2,229 | 2,229 | 2,229 | 2,229 |

Table C-4 continued.

Notes: Data from the National Survey of Families and Households Wave 2 (1992 – 1994) and General Social Survey.

Ref = reference category.

Gray = Difference in statistical significance between results.

Missing data are imputed.

Findings based on OLS regression.

Estimates rounded to the nearest hundredth.

* $p < 0.05$

Table C-5. Correlations of Hitchcock’s (2021) and England and Colleagues’ (1994) Measures of Occupational Nurturance and Authority – Married Men (N=19,493)

| Measure | Multiple Imputation | Correlations | | Pooled Correlation Coefficient using Fisher’s Z Transformation |
|------------|---------------------|--------------|-----------|--|
| | | | Hitchcock | |
| Nurturance | 1 | England | 0.5480 | 0.5478 |
| | 2 | | 0.5489 | |
| | 3 | | 0.5479 | |
| | 4 | | 0.5475 | |
| | 5 | | 0.5482 | |
| | 6 | | 0.5471 | |
| | 7 | | 0.5481 | |
| | 8 | | 0.5470 | |
| | 9 | | 0.5475 | |
| | 10 | | 0.5478 | |
| Authority | 1 | England | 0.7492 | 0.7499 |
| | 2 | | 0.7498 | |
| | 3 | | 0.7497 | |
| | 4 | | 0.7508 | |
| | 5 | | 0.7499 | |
| | 6 | | 0.7497 | |
| | 7 | | 0.7501 | |
| | 8 | | 0.7494 | |
| | 9 | | 0.7504 | |
| | 10 | | 0.7499 | |

Notes. Data from the American Time Use Survey (2003 to 2019) and General Social Survey.

Missing data are imputed.

Table C-6. Correlations of Hitchcock’s (2021) and England and Colleagues’ (1994) Measures of Occupational Nurturance and Authority – Married Women (N=20,933)

| Measure | Multiple Imputation | Correlations | | Pooled Correlation Coefficient using Fisher’s Z Transformation |
|------------|---------------------|--------------|-----------|--|
| | | | Hitchcock | |
| Nurturance | 1 | England | 0.6859 | 0.6863 |
| | 2 | | 0.6861 | |
| | 3 | | 0.6862 | |
| | 4 | | 0.6869 | |
| | 5 | | 0.6862 | |
| | 6 | | 0.6858 | |
| | 7 | | 0.6866 | |
| | 8 | | 0.6868 | |
| | 9 | | 0.6867 | |
| | 10 | | 0.6860 | |
| Authority | 1 | England | 0.6912 | 0.6915 |
| | 2 | | 0.6911 | |
| | 3 | | 0.6912 | |
| | 4 | | 0.6908 | |
| | 5 | | 0.6923 | |
| | 6 | | 0.6919 | |
| | 7 | | 0.6925 | |
| | 8 | | 0.6913 | |
| | 9 | | 0.6911 | |
| | 10 | | 0.6914 | |

Notes. Data from the American Time Use Survey (2003 to 2019) and General Social Survey.
Missing data are imputed.

APPENDIX D

COMPARISON ANALYSES TO MCCLINTOCK (2017)

Table D-1. Sample Characteristics of Heterosexual Married Couples using NSFH2:
Comparison to McClintock (2017)

| Measure | Present Study | | | | McClintock (2017) | | | |
|--------------------------------------|---------------|-------|-------|-------|-------------------|-------|-------|-------|
| | Men | | Women | | Men | | Women | |
| | Mean | SD | Mean | SD | Mean | SD | Mean | SD |
| Housework | | | | | | | | |
| Total weekly housework hours | 18.30 | 10.01 | 31.68 | 16.50 | 19.00 | 11.75 | 31.91 | 16.81 |
| Feminine tasks | 9.51 | 6.72 | 26.65 | 14.28 | 10.23 | 8.60 | 26.61 | 14.16 |
| Masculine tasks | 6.34 | 4.74 | 1.73 | 2.03 | 6.23 | 4.54 | 2.00 | 2.86 |
| Occupational gender composition | | | | | | | | |
| Percent occupation women, 0% to 100% | 30.04 | 22.36 | 66.79 | 24.43 | 29.65 | 11.75 | 66.37 | 24.60 |
| Occupation 0% to 25% women | 0.42 | | 0.05 | | 0.44 | | 0.05 | |
| Occupation 26% to 50% women | 0.38 | | 0.22 | | 0.37 | | 0.22 | |
| Occupation 51% to 75% women | 0.15 | | 0.28 | | 0.15 | | 0.30 | |
| Occupation 76% to 100% women | 0.04 | | 0.45 | | 0.04 | | 0.43 | |
| Occupational gendered behavior | | | | | | | | |
| Occupation nurturing | 0.11 | | 0.40 | | 0.12 | | 0.35 | |
| Occupation authority | 0.26 | | 0.15 | | 0.27 | | 0.17 | |
| Economic attributes | | | | | | | | |
| Work hours | 45.57 | 12.35 | 35.82 | 13.68 | 46.25 | 12.85 | 36.38 | 13.99 |
| Total couple income | 57,51 | 34,34 | 57,51 | 34,34 | 62,26 | 37,15 | 62,26 | 37,15 |
| Individual income | 6.56 | 3.01 | 6.56 | 3.01 | 6.30 | 2.04 | 6.30 | 2.04 |
| | 36,43 | 27,12 | 21,07 | 17,05 | 39,90 | 29,56 | 22,36 | 17,20 |
| | 2.57 | 9.18 | 1.36 | 6.94 | 0.66 | 9.34 | 5.64 | 0.96 |
| Husband's income share | 0.62 | 0.23 | 0.62 | 0.23 | 0.63 | 0.19 | 0.63 | 0.19 |

Table D-1 continued.

| Measure | Present Study | | | | McClintock (2017) | | | |
|---------------------------------------|---------------|------|-------|------|-------------------|------|-------|------|
| | Men | | Women | | Men | | Women | |
| | Mean | SD | Mean | SD | Mean | SD | Mean | SD |
| Husband's income share 0% to 25% | 0.07 | | | | 0.03 | | 0.03 | |
| Husband's income share 26% to 50% | 0.20 | | | | 0.22 | | 0.22 | |
| Husband's income share 51% to 75% | 0.45 | | | | 0.49 | | 0.49 | |
| Husband's income share 76% to 100% | 0.28 | | | | 0.27 | | 0.27 | |
| Own home | 0.85 | | | | 0.81 | | 0.81 | |
| Education | | | | | | | | |
| Less than high school | 0.08 | | 0.07 | | 0.08 | | 0.06 | |
| High school | 0.33 | | 0.35 | | 0.32 | | 0.33 | |
| Some college | 0.28 | | 0.31 | | 0.28 | | 0.31 | |
| College or more | 0.31 | | 0.28 | | 0.32 | | 0.29 | |
| Enrolled in school | 0.18 | | 0.23 | | 0.18 | | 0.23 | |
| Demographic attributes | | | | | | | | |
| Age | 40.94 | 8.71 | 38.84 | 8.21 | 40.94 | 8.70 | 38.84 | 8.21 |
| Number of children | 1.28 | 1.17 | 1.28 | 1.17 | 1.31 | 1.19 | 1.31 | 1.19 |
| White | 0.85 | | 0.85 | | 0.84 | | 0.84 | |
| Health is fair or poor | 0.15 | | 0.15 | | 0.16 | | 0.16 | |
| Attitudes | | | | | | | | |
| Advocates unequal, gendered housework | 2.36 | 0.95 | 2.17 | 0.95 | 2.36 | 0.95 | 2.17 | 0.95 |
| Traditional gender attitudes scale | 3.04 | 0.86 | 2.80 | 0.90 | 3.04 | 0.86 | 2.81 | 0.90 |
| N | 2,229 | | | | | | | |

Table D-2. Multivariate Results of Married Men's Housework using England and Colleagues' (1994) Measures for Occupational Nurturance and Authority: Hitchcock (2021) to McClintock (2017) Comparison

| | Total Housework (hours/week) | | Feminine Housework (hours/week) | | Masculine Housework (hours/week) | |
|---|------------------------------|---------------|---------------------------------|---------------|----------------------------------|---------------|
| | H <i>b</i> (SE) | M <i>b</i> | H <i>b</i> (SE) | M <i>b</i> | H <i>b</i> (SE) | M <i>b</i> |
| Occupational sex composition (ref: Job 0% to 25% women) | | | | | | |
| Job 26% to 50% women | -0.98 (0.50) | -0.54 | 0.15 (0.33) | 0.43 | -1.08* (0.24) | -0.97* |
| Job 51% to 75% women | 0.34 (0.65) | 0.96 | 0.76 (0.43) | 1.20* | -0.54 (0.31) | -0.48 |
| Job 76% to 100% women | 1.33 (1.13) | 3.51* | 1.94* (0.75) | 3.84* | -0.86 (0.53) | -0.57 |
| Occupational gendered behavior | | | | | | |
| Nurturance (England) | -0.94 (0.75) | -1.81* | -0.16 (0.50) | -0.78 | -0.71* (0.35) | -0.85* |
| Authority (England) | -0.98 (0.53) | -1.23 | -0.47 (0.35) | -0.68 | -0.35 (0.25) | -0.32 |
| Economic attributes | | | | | | |
| Work hours | -0.03 (0.02) | -0.01 | -0.03* (0.01) | -0.03 | 0.01 (0.01) | 0.01 |
| Wife's work hours | 0.04* (0.02) | 0.03 | 0.03* (0.01) | 0.03* | -0.00 (0.01) | -0.00 |
| Own income | -0.00 (0.00) | -0.05 | -0.00 (0.00) | -0.01 | -0.00 (0.00) | -0.06 |
| Husband's income share | -1.80 (1.08) | -5.06* | -1.58* (0.72) | -4.44* | -0.12 (0.50) | 0.00 |
| Own home | 1.21* (0.60) | 0.81 | -0.93* (0.40) | -0.94* | 2.37* (0.28) | 1.93* |
| Education (ref: Less than high school) | | | | | | |
| High school | -0.34 (0.84) | -0.77 | -0.32 (0.56) | -0.70 | -0.08 (0.40) | -0.13 |
| Some college | 0.65 (0.88) | 0.25 | 0.76 (0.58) | 0.27 | -0.47 (0.41) | -0.39 |
| College or more | -0.94 (0.92) | -1.59 | 0.08 (0.61) | -0.62 | -1.35* (0.43) | -1.31* |
| In school | 0.90 (0.57) | 0.70 | 0.50 (0.37) | 0.33 | -0.02 (0.27) | -0.03 |

Table D-2 continued.

| | Total Housework (hours/week) | | Feminine Housework (hours/week) | | Masculine Housework (hours/week) | |
|----------------------------------|---------------------------------|------------------|---------------------------------------|------------------|--|------------------|
| | H | M | H | M | H | M |
| | <i>b</i> (SE) | <i>b</i> (SE) | <i>b</i> (SE) | <i>b</i> (SE) | <i>b</i> (SE) | <i>b</i> (SE) |
| Demographic attributes | | | | | | |
| Age (ref: 18 to 34) | | | | | | |
| 35 to 40 years | -0.73 (0.58) | 0.17 | -0.50 (0.38) | 0.12 | -0.26 (0.27) | -0.19 |
| 41 to 47 years | -0.63 (0.60) | -0.15 | -0.89* (0.40) | -0.72 | 0.15 (0.28) | 0.36 |
| 48 or older | -2.65* (0.67) | -2.35* | -2.07* (0.44) | -1.93* | -0.47 (0.32) | -0.38 |
| Number of children | 0.83* (0.20) | 0.87* | 0.20 (0.13) | 0.29 | 0.16 (0.09) | 0.10 |
| Is white | -2.99* (0.59) | -3.85* | -1.16* (0.39) | -2.03* | -0.71* (0.28) | -0.55* |
| Health is fair or poor | -1.12 (0.58) | -1.49* | -0.69 (0.38) | -0.69 | -0.33 (0.27) | -0.73* |
| Attitudes | | | | | | |
| Unequal housework | -0.93* (0.22) | -1.14* | -0.88* (0.15) | -1.08* | 0.01 (0.10) | -0.00 |
| Traditional gender (TG) scale | -0.06 (0.28) | -0.21 | -0.54* (0.18) | -0.66* | 0.43* (0.13) | 0.39 |
| Wife's unequal housework | -0.21 (0.22) | -0.14 | -0.41* (0.15) | -0.35 | 0.17 (0.10) | 0.18 |
| Wife's TG scale | -0.46 (0.26) | -0.29 | -0.23 (0.17) | -0.12 | -0.17 (0.12) | -0.12 |
| Sample size | 2,229 | 2,229 | 2,229 | 2,229 | 2,229 | 2,229 |

Table Notes: Data from the National Survey of Families and Households Wave 2 (1992 – 1994) and General Social Survey.

Ref = reference category.

Gray = Difference in statistical significance between results.

Missing data are imputed.

Findings based on OLS regression.

Estimates rounded to the nearest hundredth.

* $p < 0.05$

Table D-3. Multivariate Results of Married Women’s Housework using England and Colleagues’ (1994) Measures for Occupational Nurturance and Authority: Hitchcock (2021) to McClintock (2017) Comparison

| Measure | Total Housework (hours/week) | | Feminine Housework (hours/week) | | Masculine Housework (hours/week) | |
|--|------------------------------|---------------|---------------------------------|---------------|----------------------------------|---------------|
| | H <i>b</i> (SE) | M <i>b</i> | H <i>b</i> (SE) | M <i>b</i> | H <i>b</i> (SE) | M <i>b</i> |
| Occupational sex composition (ref: Job76% to 100% women) | | | | | | |
| Job 0% to 25% women | 1.79 (1.63) | 1.97 | 0.90 (1.43) | 0.96 | 0.55* (0.22) | 0.90* |
| Job 26% to 50% women | -1.56 (1.07) | -1.01 | -2.06* (0.94) | -1.56 | 0.27 (0.14) | 0.44* |
| Job 51% to 75% women | 0.33 (0.86) | 0.32 | -0.23 (0.75) | -0.14 | 0.31* (0.12) | 0.35* |
| Occupational gendered behavior | | | | | | |
| Nurturance (England) | 1.20 (0.82) | 1.98* | 0.69 (0.72) | 1.35* | 0.17 (0.11) | 0.38* |
| Authority (England) | -0.65 (1.04) | -0.65 | -0.37 (0.90) | -0.29 | -0.23 (0.14) | -0.35 |
| Economic attributes | | | | | | |
| Work hours | -0.06* (0.03) | -0.05* | -0.05* (0.02) | -0.04* | -0.01 (0.00) | -0.01 |
| Husband’s work hours | 0.02 (0.03) | 0.03 | 0.00 (0.02) | 0.00 | 0.01 (0.00) | 0.01* |
| Own income | -0.00* (0.00) | -1.38* | -0.00* (0.00) | -1.24* | -0.00 (0.00) | -0.05 |
| Husband earns 51% to 75% of income (ref) | | | | | | |
| Husband earns 0% to 25% of income | 3.45* (1.32) | 4.16* | 2.87* (1.16) | 3.03 | 0.44* (0.18) | 0.92* |
| Husband earns 26% to 50% of income | 2.67* (0.92) | 1.29 | 2.01* (0.80) | 0.97 | 0.26* (0.12) | 0.21 |
| Husband earns 76% to 100% of income | 1.01 (0.88) | 0.53 | 0.88 (0.77) | 0.32 | 0.18 (0.12) | 0.34* |

Table D-3 continued.

| Measure | Total Housework (hours/week) | | Feminine Housework (hours/week) | | Masculine Housework (hours/week) | |
|--|---------------------------------|-----------------------|------------------------------------|-----------------------|-------------------------------------|-----------------------|
| | H <i>b</i> (SE) | M <i>b</i> (SE) | H <i>b</i> (SE) | M <i>b</i> (SE) | H <i>b</i> (SE) | M <i>b</i> (SE) |
| Own home | 2.09* (0.93) | 2.55* | 1.46 (0.82) | 1.92* | 0.40* (0.12) | 0.47* |
| Education (ref: Less than high school) | | | | | | |
| High school | -0.96 (1.35) | -0.42 | -1.54 (1.18) | -1.21 | 0.23 (0.18) | 0.40 |
| Some college | -2.89* (1.39) | -2.34 | -3.32* (1.21) | -2.97* | 0.09 (0.19) | 0.16 |
| College or more | -5.69* (1.46) | -5.53* | -5.75* (1.28) | -5.58* | -0.03 (0.20) | -0.10 |
| In school | -1.75* (0.79) | -1.66* | -1.59* (0.69) | -1.44* | -0.03 (0.11) | -0.07 |
| Demographic attributes | | | | | | |
| Age (ref: 18 to 32) | | | | | | |
| 33 to 38 years | -0.42 (0.91) | 0.52 | -0.52 (0.80) | 0.55 | 0.05 (0.12) | -0.02 |
| 39 to 44 years | 0.70 (0.93) | 0.20 | 0.42 (0.81) | 0.14 | 0.20 (0.12) | 0.08 |
| 45 years or older | 0.22 (1.00) | 0.06 | 0.25 (0.87) | 0.30 | 0.08 (0.13) | -0.03 |
| Number of children | 3.92* (0.31) | 3.67* | 2.92* (0.27) | 2.68* | 0.03 (0.04) | 0.02 |
| Is white | -1.25 (0.92) | -1.10 | -0.96 (0.80) | -0.94 | 0.41* (0.12) | 0.42* |
| Health is fair or poor | -0.42 (0.89) | -0.40 | -0.56 (0.78) | -0.49 | 0.06 (0.12) | 0.09 |
| Attitudes | | | | | | |
| Unequal housework | 0.91* (0.35) | 0.82* | 0.83* (0.30) | 0.74* | 0.05 (0.05) | 0.07 |
| Traditional gender (TG) scale | 0.35 (0.41) | 0.26 | 0.41 (0.36) | 0.31 | 0.04 (0.05) | 0.05 |
| Husband's unequal housework | 0.69* (0.34) | 0.78* | 0.51 (0.30) | 0.49 | 0.04 (0.05) | 0.05 |

Table D-3 continued.

| Measure | Total Housework (hours/week) | | Feminine Housework (hours/week) | | Masculine Housework (hours/week) | |
|--------------------|------------------------------|----------|---------------------------------|----------|----------------------------------|----------|
| | H | M | H | M | H | M |
| | <i>b</i> | <i>b</i> | <i>b</i> | <i>b</i> | <i>b</i> | <i>b</i> |
| | (SE) | | (SE) | | (SE) | |
| Husband's TG scale | 1.48* | 1.46* | 1.41* | 1.34* | 0.05 | 0.09 |
| | (0.43) | | (0.37) | | (0.06) | |
| N | 2,229 | 2,229 | 2,229 | 2,229 | 2,229 | 2,229 |

Table Notes: Data from the National Survey of Families and Households Wave 2 (1992 – 1994) and General Social Survey.

Ref = reference category.

Gray = Difference in statistical significance between results.

Missing data are imputed.

Findings based on OLS regression.

Estimates rounded to the nearest hundredth.

* $p < 0.05$

APPENDIX E

AMERICAN TIME USE SURVEY FINDINGS USING NEWLY DEVELOPED MEASURES OF OCCUPATIONAL NURTURANCE AND AUTHORITY

Table E-1. Unadjusted Characteristics of Married Men and Women Using the 2003 to 2019 American Time Use Survey

| Measure | Men | | Women | |
|---------------------------------|-----------|-----------|-----------|-----------|
| | Mean | SD | Mean | SD |
| Housework | | | | |
| Total weekly housework hours | 13.48 | 16.54 | 19.26 | 17.13 |
| Feminine tasks | 7.36 | 10.29 | 16.47 | 15.23 |
| Masculine tasks | 5.13 | 12.31 | 1.67 | 6.45 |
| Occupational gender composition | | | | |
| Occupation 0% to 25% women | 0.45 | | 0.06 | |
| Occupation 26% to 50% women | 0.33 | | 0.21 | |
| Occupation 51% to 75% women | 0.17 | | 0.29 | |
| Occupation 76% to 100% women | 0.05 | | 0.44 | |
| Occupational gendered behavior | | | | |
| Occupation nurturing | 0.07 | 136.98 | 0.07 | 143.86 |
| Occupation authority | 0.25 | 138.54 | 0.04 | 143.79 |
| Economic attributes | | | | |
| Work hours | 45.21 | 10.20 | 37.33 | 11.31 |
| Individual income | 61,257.36 | 35,557.29 | 42,198.63 | 30,751.92 |
| Husband's income share | 0.60 | | 0.59 | |
| Own home | 0.87 | | 0.87 | |
| Education | | | | |
| Less than high school | 0.05 | | 0.04 | |
| High school | 0.23 | | 0.20 | |
| Some college | 0.16 | | 0.15 | |
| College or more | 0.55 | | 0.61 | |
| Enrolled in school | 0.05 | | 0.07 | |
| Demographic attributes | | | | |
| Age | 43.35 | 9.84 | 41.46 | 9.54 |
| Number of children | 1.28 | 1.01 | 1.28 | 1.09 |
| White | 0.87 | | 0.86 | |
| Diary characteristics | | | | |
| Weekend day | 0.50 | | 0.51 | |
| N | 19,493 | | 20,933 | |

Note. Occupational gendered behavior measures were z-standardized.

Table E-2. Multivariate Results of Married Men's Housework Using the 2003 to 2019 American Time Use Survey

| | Total Housework (hours/week) | Feminine Housework (hours/week) | Masculine Housework (hours/week) |
|--|------------------------------------|---------------------------------------|--|
| Measure | <i>b</i> (SE) | <i>b</i> (SE) | <i>b</i> (SE) |
| Occupational sex composition (ref: Job 0% to 25% women) | | | |
| Job 26% to 50% women | -0.91* (0.27) | 0.35* (0.17) | -1.20* (0.21) |
| Job 51% to 75% women | -0.90* (0.33) | 0.48* (0.21) | -1.39* (0.25) |
| Job 76% to 100% women | 0.64 (0.57) | 1.52* (0.36) | -0.98* (0.44) |
| Occupational gendered behavior | | | |
| Nurturance | -0.00 (0.00) | -0.00 (0.00) | -0.00 (0.00) |
| Authority | 0.00 (0.00) | -0.00 (0.00) | 0.00 (0.00) |
| Economic attributes | | | |
| Work hours | -0.09* (0.01) | -0.06* (0.01) | -0.02* (0.01) |
| Wife's work hours | 0.00 (0.01) | 0.02 (0.01) | -0.00 (0.01) |
| Own income | 0.00 (0.00) | 0.00* (0.00) | -0.00 (0.00) |
| Husband's income share | -1.45 (0.91) | -2.04* (0.58) | 0.96 (0.69) |
| Own home | 2.81* (0.35) | 0.00 (0.22) | 2.84* (0.27) |
| Education (ref: Less than high school) | | | |
| High school | 1.03 (0.55) | 0.20 (0.35) | 0.51 (0.42) |
| Some college | 1.28* (0.57) | 0.78* (0.37) | 0.04 (0.44) |
| College or more | 1.11* (0.55) | 1.14* (0.35) | -0.69 (0.42) |
| In school | -1.60* (0.64) | -0.62 (0.38) | -0.81 (0.49) |
| Demographic attributes | | | |
| Age (ref: 18 to 36) | | | |
| 37 to 43 years | 1.03* (0.32) | 0.27 (0.20) | 0.74* (0.24) |
| 44 to 51 years | 1.93* (0.32) | 0.20 (0.20) | 1.62* (0.24) |
| 52 years or older | 2.16* (0.34) | -0.11 (0.22) | 2.04* (0.26) |
| Number of children | 0.38* (0.11) | 0.51* (0.07) | -0.10 (0.09) |
| Is white | 1.92* (0.33) | -0.16 (0.21) | 1.75* (0.25) |
| Diary characteristics | | | |
| Weekend day | 10.87* (0.22) | 5.36* (0.14) | 4.89* (0.17) |
| Year | -0.05* (0.02) | 0.04* (0.01) | -0.08* (0.02) |
| N | 19,493 | 19,493 | 19,493 |

Notes. Data from the American Time Use Survey (2003 -2019).

Ref = reference category.

Missing data are imputed.

Findings based on OLS regression.

Estimates rounded to the nearest hundredth.

**p* <0.05

Table E-3. Multivariate Results of Married Women's Housework Using the 2003 to 2019 American Time Use Survey

| Measure | Total Housework (hours/week) | Feminine Housework (hours/week) | Masculine Housework (hours/week) |
|---|------------------------------|---------------------------------|----------------------------------|
| | <i>b</i> (SE) | <i>b</i> (SE) | <i>b</i> (SE) |
| Occupational sex composition (ref: Job 76% to 100% women) | | | |
| Job 0% to 25% women | 0.39 (0.53) | 0.22 (0.47) | 0.38 (0.21) |
| Job 26% to 50% women | -0.65 (0.36) | -0.54 (0.33) | -0.17 (0.15) |
| Job 51% to 75% women | -0.79* (0.30) | -0.81* (0.27) | 0.04 (0.12) |
| Occupational gendered behavior | | | |
| Nurturance | -0.00 (0.00) | -0.00 (0.00) | 0.00 (0.00) |
| Authority | -0.00 (0.00) | -0.00 (0.00) | 0.00 (0.00) |
| Economic attributes | | | |
| Work hours | -0.10* (0.01) | -0.08* (0.01) | -0.01 (0.00) |
| Husband's work hours | 0.03* (0.01) | 0.01 (0.01) | 0.01 (0.01) |
| Own income | -0.00 (0.00) | -0.00 (0.00) | -0.00 (0.00) |
| Husband's income share | 2.59* (0.90) | 1.44 (0.81) | 0.46 (0.36) |
| Own home | 1.08* (0.35) | 0.15 (0.31) | 0.76* (0.14) |
| Education (ref: Less than high school) | | | |
| High school | -3.22* (0.62) | -4.05* (0.56) | 0.52* (0.25) |
| Some college | -3.26* (0.64) | -4.42* (0.58) | 0.61* (0.26) |
| College or more | -3.74* (0.62) | -4.88* (0.55) | 0.47 (0.24) |
| In school | -1.69* (0.49) | -1.15* (0.44) | -0.36 (0.19) |
| Demographic attributes | | | |
| Age (ref: 18 to 34) | | | |
| 35 to 41 years | 1.87* (0.32) | 1.61* (0.28) | 0.18 (0.13) |
| 42 to 49 years | 4.13* (0.32) | 3.55* (0.28) | 0.38* (0.13) |
| 50 years or older | 4.48* (0.36) | 3.50* (0.32) | 0.62* (0.14) |
| Number of children | 1.24* (0.12) | 1.39* (0.11) | -0.19* (0.05) |
| Is white | 1.01* (0.33) | -0.20 (0.29) | 0.92* (0.13) |
| Diary characteristics | | | |
| Weekend day | 10.39* (0.22) | 8.45* (0.20) | 1.50* (0.09) |
| Year | -0.15* (0.02) | -0.09* (0.02) | -0.05* (0.01) |
| N | 20,933 | 20,933 | 20,933 |

Notes. Data from the American Time Use Survey (2003 -2019).

Ref = reference category.

Missing data are imputed.

Findings based on OLS regression.

Estimates rounded to the nearest hundredth.

* $p < 0.05$

APPENDIX F

SAMPLE SELECTION BIAS

James Heckman (1974, 1978, 1979) developed the sample selection model to address an ongoing measurement problem with limited dependent variables. Heckman's primary example focused on how to estimate the average wage of women when a substantial proportion of the population was excluded from the statistical model. Women who were out of the labor market due to self-selection (e.g., housewives) represented an issue of incidental truncation of the dependent variable. These women would be excluded from the analysis altogether due to missing data on the dependent variable (i.e., zero wages), which biases a researcher's ability to make sound estimates since the sample is no longer randomly selected. Results would no longer be generalizable to the larger population of women due to the exclusion, or selection bias, of an entire subset of the population.

Heckman's sample selection model uses probability to predict the likelihood of labor force participation (Levitt). The model leverages the sample data (i.e., women in the labor force) to estimate the multivariate results of not only women in the labor force, but also women not in the labor force. A two-step process is used to correct for incidental truncation. First, a regression equation is used to estimate the dependent variable, wage. If a wage is observed (i.e., wage not equal to zero), women were predicted to participate in the labor force. The second step consists of a selection equation for the portion of the sample for which a wage is observed to understand the selection process (Heckman 1978,

1979). Heckman used education and age to estimate wage in step one, and marital status and number of children to estimate the probability that a wage is observed (step two).

The present study presents a sample selection issue. I limit my sample to married women ages 18 to 65 in the labor force who report occupations to estimate time spent on unpaid household labor. My sample excludes women who are unmarried, older or younger, out of the labor force, and/or do not report an occupation. To further complicate the selection bias, I also limit my sample to those whose husband also met the sample inclusion criteria. These sample exclusion criteria bias my estimates. For example, housewives, who may be more conservative than women who participate in the labor force, would be excluded from my analysis. The housework of housewives may look entirely different from the housework of employed women not only due to time availability, but also due to differences in conservative or more progressive values. Housewives may hold more traditional gender views, and therefore, complete more traditional (i.e., gendered) housework.

The issue of sample selection is common to the field and I recognize this as a methodological limitation within my analysis. Prior methodological work (Heckman 1974, 1978, 1978; Levitt) addressed these limitations using Heckman's two-step sample selection model. However, the measures used to estimate the labor force participation of women are already included in my statistical models as covariates (i.e., age and education). I also incorporate the measures used in Heckman's second step into my models. Marital status is used to limit my sample, and the number of children is used as a model covariate. My results will only be generalizable to those selected into my sample,

heterosexual married women ages 18 to 65 who participate in the labor force and report occupations. Since the focus of my chapter was on married couples, results should also only be generalized to women whose husbands also meet the sample inclusion criteria.

To illustrate, I compared characteristics of the NSFH2 women in my sample to those excluded based on the sample inclusion criteria (Table F-1). The two samples were different on all characteristics ($p < 0.05$) except for responses to the advocates unequal gender scale. Those included in my sample are younger, more educated, and hold less traditional gender views than the women excluded from my sample. They were also more likely to be in school and have more children. They also completed less housework.

Table F-1. Characteristics of NSFH2 Women Included and Excluded from Sample Estimates

| Measure | Included (N=2,229) | Excluded (N=6,624) |
|--|-----------------------|-----------------------|
| Age* (Mean, SD) | 38.84 (8.21) | 48.99 (16.92) |
| Education* (%) | | |
| Less than high school | 6.50 | 24.59 |
| High school | 39.69 | 41.20 |
| Some College | 28.31 | 20.52 |
| College or more | 25.49 | 13.70 |
| In school* (%) | 23.73 | 17.07 |
| Number of children* (Mean, SD) | 1.30 (1.15) | 0.84 (1.25) |
| Traditional gender scale* (Mean, SD) | 2.80 (0.90) | 3.12 (0.91) |
| Advocates unequal housework (Mean, SD) | 2.17 (0.95) | 2.19 (0.99) |
| Total housework hours* (Mean, SD) | 34.44 (25.06) | 36.74 (28.28) |
| Feminine housework hours* (Mean, SD) | 28.49 (20.35) | 30.53 (23.18) |
| Masculine housework hours* (Mean, SD) | 2.14 (3.79) | 2.54 (5.03) |

Notes: Item-level missing data excluded.

Statistical significance assessed using t-tests for continuous measures and Chi² tests for categorical measures.

* $p < 0.05$

I also compared characteristics of the NSFH2 men in my sample to those excluded based on the sample inclusion criteria (Table F-2). The two samples were similarly different on all characteristics ($p < 0.05$) except for responses to the advocates unequal gender scale and total housework. They completed less feminine and masculine housework.

Table F-2. Characteristics of NSFH2 Men Included and Excluded from Sample Estimates

| Measure | Included (N=2,229) | Excluded (N=4,547) |
|--|-----------------------|-----------------------|
| Age* (Mean, SD) | 40.94 (8.71) | 48.73 (16.33) |
| Education* (%) | | |
| Less than high school | 6.92 | 23.01 |
| High school | 34.69 | 33.83 |
| Some College | 27.39 | 21.94 |
| College or more | 31.00 | 21.23 |
| In school* (%) | 18.70 | 12.72 |
| Number of children* (Mean, SD) | 1.25 (1.19) | 0.64 (1.11) |
| Traditional gender scale* (Mean, SD) | 3.04 (0.86) | 3.35 (0.85) |
| Advocates unequal housework (Mean, SD) | 2.36 (0.95) | 2.33 (0.98) |
| Total housework hours (Mean, SD) | 20.42 (16.90) | 20.98 (19.52) |
| Feminine housework hours* (Mean, SD) | 10.52 (10.55) | 11.55 (13.19) |
| Masculine housework hours* (Mean, SD) | 6.99 (7.31) | 6.50 (8.02) |

Notes: Item-level missing data excluded.

Statistical significance assessed using t-tests for continuous measures and Chi² tests for categorical measures.

* $p < 0.05$

There are substantial differences between the women and men included and those excluded from my sample illustrating sample selection bias. My results should only be generalized to women and men in dual earner households.

APPENDIX G

COMPARISON TO RALEY, BIANCHI, AND WANG (2012)

Table G-1. Unadjusted Characteristics of Parents Using the 2003 to 2007 American Time Use Survey

| Measure | Fathers | | | Mothers | | |
|-------------------------------------|-----------------------------|--------------------------|--------|-----------------------------|--------------------------|--------|
| | Raley et al. (2012) Mean | Hitchcock (2021) Mean | SD | Raley et al. (2012) Mean | Hitchcock (2021) Mean | SD |
| Average time with children | 31.4 | 32.21 | 27.85 | 49.8 | 39.26 | 28.36 |
| Average solo time with children | 10.7 | 5.69 | 12.76 | 30.2 | 14.62 | 21.14 |
| Average primary child care time | 7.7 | 8.65 | 12.35 | 16.2 | 15.92 | 15.48 |
| Types of child care time | | | | | | |
| % who do any physical care | 38.0 | 40.79 | | 71.0 | 70.71 | |
| % who do any recreational care | 24.0 | 29.62 | | 34.0 | 41.66 | |
| % who do any managerial care | 28.0 | 30.91 | | 50.0 | 50.44 | |
| Economic attributes | | | | | | |
| Wife's employment status | 0.61 | 0.64 | | 0.63 | 0.62 | |
| Wife's weekly employment hours | 22.27 | 22.47 | 19.48 | 22.71 | 21.89 | 19.33 |
| Wife's weekly earnings | 391.97 | 414.14 | 504.22 | 409.53 | 413.33 | 526.34 |
| Husband's employment status | 0.95 | 0.93 | | 0.94 | 0.93 | |
| Husband's weekly employment hours | 43.74 | 41.32 | 15.00 | 41.93 | 41.60 | 14.94 |
| Husband's weekly earnings | 964.18 | 1,024.65 | 711.98 | 922.34 | 923.32 | 681.18 |
| Wife's portion of couple's earnings | 0.27 | 0.27 | | 0.29 | 0.28 | |
| Demographic attributes | | | | | | |
| Child age 0-2 | 0.37 | 0.36 | | 0.38 | 0.35 | |
| Child age 3-5 | 0.24 | 0.24 | | 0.22 | 0.24 | |
| Child age 6-12 | 0.39 | 0.41 | | 0.40 | 0.41 | |

Table G-1 continued.

| Measure | Fathers | | | Mothers | | |
|------------------------------------|-----------------------------------|--------------------------------|------|-----------------------------------|--------------------------------|------|
| | Raley et al. (2012) Mean | Hitchcock (2021) Mean SD | | Raley et al. (2012) Mean | Hitchcock (2021) Mean SD | |
| Number of children | 1.98 | 2.08 | 0.95 | 1.97 | 2.07 | 0.94 |
| Parent's age | 37.99 | 38.23 | 7.47 | 35.94 | 35.76 | 6.93 |
| Less than high school education | 0.13 | 0.09 | | 0.12 | 0.09 | |
| High school education | 0.28 | 0.24 | | 0.26 | 0.22 | |
| Some college | 0.24 | 0.26 | | 0.26 | 0.28 | |
| College graduate | 0.22 | 0.26 | | 0.25 | 0.28 | |
| Postgraduate education | 0.12 | 0.15 | | 0.11 | 0.13 | |
| Hispanic | 0.21 | 0.15 | | 0.20 | 0.16 | |
| Non-Hispanic Black | 0.09 | 0.06 | | 0.07 | 0.05 | |
| Non-Hispanic Other | 0.06 | 0.07 | | 0.06 | 0.06 | |
| Non-Hispanic White | 0.64 | 0.73 | | 0.67 | 0.73 | |
| Diary characteristics | | | | | | |
| Season of diary is summer | 0.24 | 0.24 | | 0.25 | 0.25 | |
| Day of week is weekend | 0.29 | 0.51 | | 0.29 | 0.51 | |
| Year of diary | | | | | | |
| 2003 | 0.28 | 0.28 | | 0.28 | 0.28 | |
| 2004 | 0.19 | 0.19 | | 0.18 | 0.18 | |
| 2005 | 0.17 | 0.18 | | 0.19 | 0.19 | |
| 2006 | 0.19 | 0.18 | | 0.19 | 0.19 | |
| 2007 | 0.17 | 0.17 | | 0.17 | 0.17 | |
| N | 6,572 | 6,806 | | 7,376 | 7,758 | |

APPENDIX H

CHARACTERISTICS OF ALL PARENTS REGARDLESS OF LABOR FORCE

PARTICIPATION

Table H-1. Unadjusted Characteristics of All Parents Regardless of Labor Force Participation Using the 2003 to 2019 American Time Use Survey

| Measure | Fathers | | Mothers | |
|-------------------------------------|----------|--------|----------|--------|
| | Mean | SD | Mean | SD |
| Average time with children | 33.54 | 28.41 | 40.84 | 28.16 |
| Average solo time with children | 6.18 | 13.25 | 15.25 | 21.15 |
| Average primary child care time | 9.14 | 12.54 | 16.15 | 15.61 |
| Types of child care time | | | | |
| % who do any physical care | 43.91 | | 71.40 | |
| % who do any recreational care | 31.81 | | 42.83 | |
| % who do any managerial care | 32.83 | | 51.77 | |
| Economic attributes | | | | |
| Wife's employment status | 64.58 | | 63.43 | |
| Wife's weekly employment hours | 23.27 | 19.72 | 22.80 | 19.43 |
| Wife's weekly earnings | 515.01 | 616.39 | 518.58 | 630.70 |
| Husband's employment status | 91.94 | | 92.14 | |
| Husband's weekly employment hours | 40.55 | 15.16 | 40.75 | 15.79 |
| Husband's weekly earnings | 1,136.49 | 782.47 | 1,040.71 | 771.02 |
| Wife's portion of couple's earnings | 0.28 | | 0.30 | |
| Demographic attributes | | | | |
| Child age 0-2 | 34.86 | | 35.02 | |
| Child age 3-5 | 37.35 | | 37.39 | |
| Child age 6-12 | 66.76 | | 66.59 | |
| Number of children | 2.07 | 0.94 | 2.06 | 0.94 |
| Parent's age | 38.83 | 7.67 | 36.35 | 6.95 |
| Less than high school education | 8.28 | | 7.43 | |
| High school education | 21.53 | | 18.73 | |
| Some college | 24.89 | | 26.18 | |
| College graduate | 27.17 | | 30.37 | |
| Postgraduate education | 18.12 | | 17.29 | |
| Hispanic | 15.36 | | 16.27 | |
| Non-Hispanic Black | 5.56 | | 4.98 | |
| Non-Hispanic Other | 8.05 | | 8.00 | |
| Non-Hispanic White | 71.03 | | 70.76 | |

Table H-1 continued.

| Measure | Fathers | | Mothers | |
|---------------------------|---------|----|---------|----|
| | Mean | SD | Mean | SD |
| Diary characteristics | | | | |
| Season of diary is summer | 24.25 | | 24.59 | |
| Day of week is weekend | 50.74 | | 50.75 | |
| N | 18,480 | | 20,675 | |

APPENDIX I

FULL MULTIVARIATE RESULTS OF PARENTAL CHILD CARE TIME

Table I-1. Multivariate Results of Fathers' Child Care Time Using the 2003 to 2019 American Time Use Survey

| | Total Time (hours/ week) | Solo Time (hours/ week) | Primary Care Time (hours/ week) |
|-------------------------------------|-----------------------------------|----------------------------------|---|
| Measure | <i>b</i> (SE) | <i>b</i> (SE) | <i>b</i> (SE) |
| Economic attributes | | | |
| Wife's work hours | -0.05* (0.02) | 0.02 (0.01) | 0.01 (0.01) |
| Wife's earnings | 0.00* (0.00) | 0.00 (0.00) | 0.00* (0.00) |
| Husband's work hours | -0.22* (0.03) | -0.07* (0.02) | -0.10* (0.01) |
| Husband's earnings | -0.00 (0.00) | 0.00 (0.00) | 0.00 (0.00) |
| Wife's portion of couple's earnings | -4.77 (3.50) | 1.07 (2.07) | 0.88 (1.69) |
| Occupation percent women | -0.01 (0.01) | -0.00 (0.01) | 0.01 (0.01) |
| Occupational nurturance | 0.00 (0.00) | 0.00 (0.00) | 0.00 (0.00) |
| Occupational authority | -0.00 (0.00) | 0.00 (0.00) | -0.00 (0.00) |
| Demographic attributes | | | |
| Youngest child (ref: 6 to 12 years) | | | |
| 0 to 2 years | 5.00* (0.66) | 1.54* (0.38) | 6.95* (0.38) |
| 3 to 5 years | 2.64* (0.64) | 1.48* (0.37) | 3.20* (0.31) |
| Number of household children | 3.70* (0.29) | 3.79* (0.20) | 6.95* (0.14) |
| Age | -0.09* (0.04) | 0.04 (0.02) | 3.20* (0.02) |

Table I-1 continued.

| | Total Time (hours/ week) | Solo Time (hours/ week) | Primary Care Time (hours/ week) |
|--|-----------------------------------|----------------------------------|---|
| Measure | <i>b</i> (SE) | <i>b</i> (SE) | <i>b</i> (SE) |
| Education (ref: High school) | | | |
| Less than high school | 1.14 (1.28) | -0.23 (0.73) | -1.33* (0.63) |
| Some college | 1.26 (0.71) | -0.18 (0.41) | 1.04* (0.37) |
| College graduate | 1.55* (0.75) | -0.09 (0.45) | 1.60* (0.39) |
| Postgraduate education | 2.22* (0.93) | -0.49 (0.51) | 1.95* (0.49) |
| Race/ethnicity (ref: Non-Hispanic White) | | | |
| Non-Hispanic Black | -5.94* (0.98) | -0.94 (0.61) | -2.62* (0.49) |
| Non-Hispanic Other | 0.12 (0.96) | 0.36 (0.53) | -0.03 (0.46) |
| Hispanic | -0.91 (0.82) | -0.81 (0.45) | -1.40* (0.42) |
| Diary characteristics | | | |
| Summer | 1.60* (0.60) | 0.51 (0.35) | -1.00* (0.30) |
| Weekend day | 25.77* (0.53) | 2.26* (0.28) | 0.74* (0.25) |
| Year | 0.12* (0.05) | -0.01 (0.03) | 0.01 (0.03) |
| N | | 10,403 | |

Notes. Data from the American Time Use Survey (2003 -2019).

Ref = reference category.

Missing data are imputed.

Findings based on OLS regression.

Estimates rounded to the nearest hundredth.

* $p < 0.05$

Table I-2. Multivariate Results of Mothers' Child Care Time Using the 2003 to 2019 American Time Use Survey

| | Total Time (hours/ week) | Solo Time (hours/ week) | Primary Care Time (hours/ week) |
|-------------------------------------|-----------------------------------|----------------------------------|---|
| Measure | <i>b</i> (SE) | <i>b</i> (SE) | <i>b</i> (SE) |
| Economic attributes | | | |
| Wife's work hours | -0.19* (0.03) | -0.15* (0.02) | -0.13* (0.02) |
| Wife's earnings | 0.00* (0.00) | -0.00 (0.00) | 0.00 (0.00) |
| Husband's work hours | 0.05 (0.03) | 0.10* (0.03) | 0.03 (0.02) |
| Husband's earnings | -0.00* (0.00) | -0.00 (0.00) | 0.00 (0.00) |
| Wife's portion of couple's earnings | -9.31* (3.46) | -3.82 (2.54) | -2.83 (2.17) |
| Occupation percent women | -0.00 (0.01) | -0.01 (0.01) | -0.00 (0.01) |
| Occupational nurturance | 0.01* (0.00) | 0.01* (0.00) | 0.00* (0.00) |
| Occupational authority | -0.00 (0.00) | -0.00 (0.00) | 0.00 (0.00) |
| Demographic attributes | | | |
| Youngest child (ref: 6 to 12 years) | | | |
| 0 to 2 years | 7.61* (0.72) | 2.94* (0.53) | 11.62* (0.49) |
| 3 to 5 years | 3.77* (0.65) | 2.73* (0.50) | 4.21* (0.37) |
| Number of household children | 6.36* (0.31) | 6.78* (0.24) | 0.85* (0.19) |
| Age | -0.15* (0.05) | -0.05 (0.04) | 0.00 (0.03) |
| Education (ref: High school) | | | |
| Less than high school | -1.32 (1.56) | -0.91 (1.20) | -3.03* (0.86) |
| Some college | -0.44 (0.84) | -0.48 (0.65) | -0.70 (0.54) |

Table I-2 continued.

| | Total Time (hours/ week) | Solo Time (hours/ week) | Primary Care Time (hours/ week) |
|--|-----------------------------------|----------------------------------|---|
| Measure | <i>b</i> (SE) | <i>b</i> (SE) | <i>b</i> (SE) |
| College graduate | 1.42 (0.84) | -0.12 (0.66) | 1.40* (0.52) |
| Postgraduate education | 1.23 (1.00) | -0.33 (0.78) | 1.57* (0.62) |
| Race/ethnicity (ref: Non-Hispanic White) | | | |
| Non-Hispanic Black | -6.26* (1.03) | -1.41 (0.76) | -2.61* (0.56) |
| Non-Hispanic Other | 1.30 (1.00) | -0.76 (0.73) | 0.00 (0.64) |
| Hispanic | 0.00 (0.87) | -1.57* (0.60) | -1.05* (0.52) |
| Diary characteristics | | | |
| Summer | 3.47* (0.63) | 2.25* (0.48) | -1.65* (0.34) |
| Weekend day | 22.37* (0.51) | 0.10 (0.36) | -2.64* (0.28) |
| Year | 0.30* (0.06) | 0.15* (0.04) | 0.11* (0.04) |
| N | | 11,627 | |

Notes. Data from the American Time Use Survey (2003 -2019).

Ref = reference category.

Missing data are imputed.

Findings based on OLS regression.

Estimates rounded to the nearest hundredth.

* $p < 0.05$

Table I-3. Multivariate Results of Fathers' Child Care Time Using the 2003 to 2019 American Time Use Survey

| | Physical Care Time (hours/week) | Recreational Care Time (hours/week) | Managerial Care Time (hours/week) |
|--|---------------------------------------|---|---|
| Measure | <i>b</i> (SE) | <i>b</i> (SE) | <i>b</i> (SE) |
| Economic attributes | | | |
| Wife's work hours | -0.00 (0.01) | -0.00 (0.01) | 0.01 (0.01) |
| Wife's earnings | 0.00* (0.00) | 0.00 (0.00) | 0.00 (0.00) |
| Husband's work hours | -0.03* (0.01) | -0.03* (0.01) | -0.04* (0.01) |
| Husband's earnings | -0.00 (0.00) | -0.00 (0.00) | 0.00 (0.00) |
| Wife's portion of couple's earnings | -0.95 (0.85) | -0.07 (0.98) | 1.88 (1.04) |
| Occupation percent women | 0.01* (0.00) | 0.00 (0.00) | 0.00 (0.00) |
| Occupational nurturance | -0.00 (0.00) | 0.00* (0.00) | -0.00 (0.00) |
| Occupational authority | -0.00 (0.00) | -0.00 (0.00) | 0.00 (0.00) |
| Demographic attributes | | | |
| Youngest child (ref: 6 to 12 years) | | | |
| 0 to 2 years | 3.56* (0.18) | 3.72* (0.23) | -0.34 (0.22) |
| 3 to 5 years | 1.48* (1.48) | 1.65* (0.19) | 0.07 (0.21) |
| Number of household children | 0.14* (0.06) | -0.30* (0.08) | 0.73* (0.09) |
| Age | 0.00 (0.01) | 0.00 (0.01) | 0.04* (0.01) |
| Education (ref: High school) | | | |
| Less than high school | -0.02 (0.19) | -0.70* (0.29) | -0.62 (0.46) |
| Some college | 0.64* (0.16) | -0.02 (0.22) | 0.42 (0.23) |
| College graduate | 0.74* (0.15) | 0.37 (0.23) | 0.49* (0.24) |
| Postgraduate education | 1.09* (0.23) | 0.54 (0.30) | 0.31 (0.27) |
| Race/ethnicity (ref: Non-Hispanic White) | | | |
| Non-Hispanic Black | -0.96* (0.26) | -1.60* (0.22) | -0.05 (0.35) |
| Non-Hispanic Other | -0.51* (0.20) | 0.05 (0.31) | 0.43 (0.28) |
| Hispanic | -0.86* (0.15) | -0.78* (0.22) | 0.24 (0.27) |
| Diary characteristics | | | |
| Summer | -0.33* (0.15) | 0.03 (0.17) | -0.70* (0.19) |
| Weekend day | 0.01 (0.11) | 1.16* (0.15) | -0.43* (0.16) |
| Year | 0.00 (0.11) | 0.01 (0.02) | 0.00 (0.02) |
| N | | 10,403 | |

Table I-3 continued.

Notes. Data from the American Time Use Survey (2003 -2019).

Ref = reference category.

Missing data are imputed.

Findings based on OLS regression.

Estimates rounded to the nearest hundredth.

* $p < 0.05$

Table I-4. Multivariate Results of Mothers' Child Care Time Using the 2003 to 2019 American Time Use Survey

| | Physical Care Time (hours/week) | Recreational Care Time (hours/week) | Managerial Care Time (hours/week) |
|--|---------------------------------------|---|---|
| Measure | <i>b</i> (SE) | <i>b</i> (SE) | <i>b</i> (SE) |
| Economic attributes | | | |
| Wife's work hours | -0.02 (0.01) | -0.06* (0.01) | -0.05* (0.01) |
| Wife's earnings | 0.00 (0.00) | -0.00 (0.00) | 0.00 (0.00) |
| Husband's work hours | 0.01 (0.01) | -0.00 (0.01) | 0.02* (0.01) |
| Husband's earnings | -0.00 (0.00) | 0.00 (0.00) | 0.00 (0.00) |
| Wife's portion of couple's earnings | -1.67 (1.17) | 0.37 (0.98) | -1.53 (1.25) |
| Occupation percent women | -0.00 (0.00) | -0.00 (0.00) | 0.00 (0.00) |
| Occupational nurturance | 0.00* (0.00) | 0.00* (0.00) | -0.00 (0.00) |
| Occupational authority | -0.00 (0.00) | 0.00 (0.00) | -0.00 (0.00) |
| Demographic attributes | | | |
| Youngest child (ref: 6 to 12 years) | | | |
| 0 to 2 years | 7.76* (0.32) | 4.89* (0.21) | -1.04* (0.24) |
| 3 to 5 years | 2.46* (0.20) | 2.03* (0.15) | -0.28 (0.23) |
| Number of household children | 0.21 (0.11) | -0.52* (0.08) | 1.15* (0.11) |
| Age | -0.04* (0.02) | -0.01 (0.01) | 0.05* (0.02) |
| Education (ref: High school) | | | |
| Less than high school | -1.77 (0.44) | -0.67* (0.31) | -0.59 (0.59) |
| Some college | -0.25 (0.33) | -0.26 (0.24) | -0.19 (0.30) |
| College graduate | 0.17 (0.33) | 0.34 (0.26) | 0.88* (0.30) |
| Postgraduate education | 0.57 (0.38) | 0.29 (0.31) | 0.72* (0.34) |
| Race/ethnicity (ref: Non-Hispanic White) | | | |
| Non-Hispanic Black | -1.02* (0.30) | -1.67* (0.25) | 0.09 (0.38) |
| Non-Hispanic Other | 0.48 (0.48) | -0.22 (0.28) | -0.26 (0.27) |
| Hispanic | -0.49 (0.30) | -1.16* (0.21) | 0.59 (0.34) |
| Diary characteristics | | | |
| Summer | -0.83* (0.19) | 0.35* (0.17) | -1.18* (0.19) |
| Weekend day | -0.92* (0.16) | 0.81* (0.14) | -2.53* (0.16) |
| Year | 0.01 (0.02) | 0.05* (0.02) | 0.04* (0.02) |
| N | | 11,627 | |

Table I-4 continued.

Notes. Data from the American Time Use Survey (2003 -2019).

Ref = reference category.

Missing data are imputed.

Findings based on OLS regression.

Estimates rounded to the nearest hundredth.

* $p < 0.05$

Table I-5. Multivariate Results of Fathers' Child Care Time Using the 1992 to 1994 National Survey of Families and Households

| Measure | Recreational Care Time | Managerial Care Time |
|---------------------------------------|------------------------|----------------------|
| | (hours/week) | (hours/week) |
| | <i>b</i> (SE) | <i>b</i> (SE) |
| Economic attributes | | |
| Wife's work hours | 0.01 (0.03) | -0.00 (0.02) |
| Wife's earnings | -0.00 (0.00) | -0.00 (0.00) |
| Husband's work hours | -0.05 (0.05) | -0.03 (0.03) |
| Husband's earnings | -0.00 (0.00) | 0.00 (0.00) |
| Wife's portion of couple's earnings | 0.22 (4.68) | 1.80 (2.06) |
| Occupation percent women | -0.00 (0.03) | 0.00 (0.02) |
| Occupational nurturance | 0.00 (0.03) | 0.01 (0.02) |
| Occupational authority | -0.01 (0.03) | -0.00 (0.02) |
| Demographic attributes | | |
| Youngest child (ref: 5 to 6 years) | | |
| 0 to 4 years | -0.90 (1.70) | -1.08 (0.84) |
| 7 to 13 years | 0.04 (1.93) | -1.96* (0.68) |
| Number of household children | 0.83 (1.03) | 0.38 (0.52) |
| Age | -0.28* (0.09) | -0.08 (0.05) |
| Education (ref: High school) | | |
| Less than high school | -0.39 (2.38) | 3.33* (1.66) |
| Some college | 1.25 (1.71) | 0.60 (0.84) |
| College or more | -0.67 (1.53) | 1.89* (0.82) |
| Is white | -0.98 (2.36) | -0.52 (1.02) |
| Gender ideology | | |
| Husband's unequal housework | -2.11* (0.65) | 0.18 (0.54) |
| Wife's unequal housework | 1.41* (0.62) | 0.25 (0.32) |
| Husband's traditional gender ideology | -0.75 (0.71) | 0.33 (0.41) |
| Wife's traditional gender ideology | 0.95 (0.79) | 0.19 (0.36) |
| Diary characteristics | | |
| Summer | 0.66 (2.02) | 1.10 (1.24) |
| N | 590 | |

Notes. Data from the National Survey of Families and Households (1992-1994).

Ref = reference category.

Missing data are imputed.

Findings based on OLS regression.

Estimates rounded to the nearest hundredth.

* $p < 0.05$

Table I-6. Multivariate Results of Mothers' Child Care Time Using the 1992 to 1994 National Survey of Families and Households

| Measure | Recreational Care Time | Managerial Care Time |
|---------------------------------------|------------------------|----------------------|
| | (hours/week) | (hours/week) |
| | <i>b</i> (SE) | <i>b</i> (SE) |
| Economic attributes | | |
| Wife's work hours | -0.14* (0.06) | 0.03 (0.04) |
| Wife's earnings | -0.00 (0.00) | 0.00 (0.00) |
| Husband's work hours | 0.01 (0.06) | -0.02 (0.03) |
| Husband's earnings | -0.00 (0.00) | 0.00 (0.00) |
| Wife's portion of couple's earnings | -0.04 (5.13) | -1.68 (2.74) |
| Occupation percent women | -0.04 (0.04) | 0.04 (0.04) |
| Occupational nurturance | 0.00 (0.04) | 0.04 (0.05) |
| Occupational authority | -0.04 (0.04) | -0.02 (0.06) |
| Demographic attributes | | |
| Youngest child (ref: 5 to 6 years) | | |
| 0 to 4 years | -0.57 (2.14) | -2.84 (2.04) |
| 7 to 13 years | -2.64 (2.34) | -2.48 (1.58) |
| Number of household children | 0.91 (1.17) | 1.91 (1.19) |
| Age | -0.10 (0.15) | 0.12 (0.19) |
| Education (ref: High school) | | |
| Less than high school | -5.83 (3.23) | -3.16 (1.92) |
| Some college | 1.90 (1.97) | -1.45 (1.57) |
| College or more | 2.43 (2.20) | -1.21 (1.86) |
| Is white | 0.72 (2.64) | -4.26 (3.07) |
| Gender ideology | | |
| Husband's unequal housework | 0.08 (0.97) | 0.57 (0.64) |
| Wife's unequal housework | 0.25 (0.84) | -0.55 (0.93) |
| Husband's traditional gender ideology | 1.01 (0.86) | 1.15 (0.66) |
| Wife's traditional gender ideology | 0.60 (0.97) | 1.30 (0.96) |
| Diary characteristics | | |
| Summer | -0.35 (1.92) | -1.09 (0.97) |
| N | 590 | |

Notes. Data from the National Survey of Families and Households (1992-1994).

Ref = reference category.

Missing data are imputed.

Findings based on OLS regression.

Estimates rounded to the nearest hundredth.

* $p < 0.05$