The Emergence and Persistence of Gender Ambivalence:

A Latent Class Analysis from 1977 – 2014

By

RAY SIN

B.Soc. Sci, National University of Singapore, 2005
M.A., Minnesota State University, Mankato, 2008

DISSERTATION

Submitted as partial fulfillment of the requirements
for the degree of Doctor of Philosophy in Sociology
in the Graduate College of the
University of Illinois at Chicago, 2017

Committee:
　　　Barbara Risman, Chair and Advisor
　　　William Bielby
　　　Lorena Garcia
　　　Rachel Gordon
　　　Shannon Davis, George Mason University

ACKNOWLEDGEMENTS

I would like to thank my advisor, chair and mentor, Dr. Barbara Risman. Without her constant support, encouragement and mentorship, I would have never been able to finish. I would also like to express my gratitude to the rest of my committee – Lorena, Rachel, Bill and Shannon – for their unwavering support and guidance. And of course, I would like to thank my family, especially my husband Phillip Knoll, for being with me every step of the way.

RS

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

SUMMARY

The gender revolution aims to achieve gender equality in both the public and private spheres. Yet, empirical studies show that, despite enjoying progress in both spheres, women's advancements tend to be concentrated in the public sphere, while progress in the private sphere lags. I argue that underneath this lopsided gender progress between both spheres, is the uneven development in gender attitudes, embodied by a proportion of Americans who are gender ambivalents – that is they support gender equality in the public sphere but not in the private sphere. This article addresses two research questions: (a) how persistent are gender ambivalents; (b) how different are they from other subgroups? I used the General Social Survey (1977-2014) to conduct latent class analysis and multinomial logit latent class regression on four gender attitudes. Results showed that beginning from 1989 and persisting until 2014, more than 25% of Americans are gender ambivalents, constituting the second largest latent class after egalitarians who support gender equality in both spheres. Also, gender ambivalents tend to be pre-Baby-boomer men who have less than a high school education and are outside the workforce. I discuss the implications of my results for the current state and future of the gender revolution.

I.   Introduction

The gender revolution is a movement to achieve gender equality in the private and public spheres (Goldscheider, Bernhardt, and Lappegård 2015). While there has been progress in both spheres, empirical studies show that the relative pace of improvement between spheres is uneven. We see a steady growth of gender integration in the public sphere, reflected in the rise of women's representation in higher education, large corporations and politics (Brooks 2013; Catalyst 2014; Diprete and Buchmann 2013). In contrast, the pace of improvement in the private sphere, namely integrating men into domesticity and parenthood, lags behind (Gerson 2010; Goldscheider et al. 2015; Williams 2000). As England (2010: 150) aptly described, "change in the gender system has been uneven, changing the lives of some groups of people more than others and changing lives in some arenas more than others." This lopsided progress motivated a lively debate about the implications of these uneven trends, with one side wondering if the gender revolution has stalled, while the other arguing that it is still on track (Bergmann 2011; Cha and Weeden 2014; Cotter, Hermsen, and Vanneman 2011, 2014; Lang and Risman 2007; McCall 2011; Reskin and Maroto 2011; Sassler 2014; Schwartz 2014).

Instead of illuminating how the pace of improvement varies between the public and private spheres, recent studies are caught in a glass-half-empty/glass-half-full banter. One side emphasizes that despite tremendous progress in the public sphere, gender discrimination in the workplace nonetheless remains (Benard and Correll 2010; Bergmann 2011; Cha 2014; Cha and Weeden 2014; Reskin and Maroto 2011). The other side points to evidence to show that no matter how slow or small, there is some meaningful progress in the home (McClintock 2014; McGill 2014; Myers and Demantas 2014; Sassler 2014; Schwartz 2014; Schwartz and Han 2014; Sullivan and Coltrane 2010).

Attitudes may play a key role in shaping the differential pace of progress across the public and private sphere. A recent empirical analysis show that as structural barriers to women's access to the public sphere decline, support for women's participation in the public sphere correspondingly improves, but support for gender equality in the private sphere paradoxically declines (Yu and Lee 2013). Similarly, Donnelly et al (2015) find that Millennials are supportive of gender equality in the public sphere, yet they hold traditional attitudes about gender in the private sphere. While these studies imply that the pace as to which gender attitudes improve in the public sphere may outpace the private sphere, what is lacking is a systematic examination on when did this differential pace of progress in gender attitudes between the sphere occurs, how persistent and pervasive it is, and among whom.

Research Questions

I argue that as the gender revolution unfolds, there is a persistent and nontrivial subgroup of Americans who developed discordant gender attitudes, for example, endorsing the belief that women are as competent as men in the public sphere but remaining intransigent on traditional norms about the private sphere such as domesticity and motherhood.[1] I leverage the concept of "ambivalence" to refer to this subgroup as "gender ambivalents." I demonstrate that gender ambivalents are distinct in terms of their gender attitudinal response patterns from other subgroups such as gender egalitarians and gender traditionals, who are, respectively, consistent in their approval and disapproval of gender equality in both spheres.[2]

This dissertation addresses two main research questions that are informed by the

---

[1] This is a study on explicit gender attitudes and should not be confused with implicit gender attitudes or what some may call unconscious or implicit gender bias (Diekman and Eagly 2000). As far as I know, there is currently no longitudinal nationally representative dataset on implicit gender attitudes.

[2] I do recognize that the public and private spheres overlap (Ferree 1990; Gerson 1986, 2010; Lopata 1993). I separate gender attitudes on private and public spheres as a way to examine gender attitudes as a multidimensional construct, with each sphere representing different aspects of gender ideology (Davis and Greenstein 2009; McHugh and Frieze 1997).

integration of social psychological and sociological frameworks of ambivalence:

1) Over time, is there a persistent subgroup of Americans who are gender ambivalents?

2) If so, are gender ambivalents different from other subgroups (gender traditionals and gender egalitarians) in terms of their socio-demographic characteristics?

To answer both questions, I rely on the pooled General Social Survey (GSS) from 1977 to 2014 to conduct finite mixture modeling – a latent class analysis and a multinomial logit latent class regression – for each survey year. The GSS is a nationally representative dataset asking about multiple gender attitudes and is widely considered to be the best – and also the most frequently used – dataset available to study gender attitudes across time. For simplicity, I refer to the first research question as the "how persistent" question and the second as the "how different" question. Latent class analysis allows the empirical identification of distinct classes of people (or subgroups) based on similar response patterns across different gender attitudes, thus answering the "how persistent" question. To examine "how different" gender ambivalents are from other subgroups, I use multinomial logit latent class regression, which is an extension of latent class analysis that statistically predicts who occupies different subgroups based on socio-demographic characteristics like gender and education (Yamaguchi 2000).

Contributions

By placing ambivalence – a concept seldom incorporated into the study of gender – in the center of my analysis, I make three important contributions. First and theoretically, I encourage researchers to move past seeing the gender revolution in a dichotomous way, assuming people could only be either for or against gender equality and presupposing that gender change moves in a uni-directional and linear fashion from traditionalism to egalitarianism. As Abbott (1988) argued as early as in the late eighties, and Amato (2014) recently reiterated, sociological thinking, and by extension, our choice of analytical models, tends to be dominated by an assumption of a

general linear reality. In doing so, we gloss over non-linear trends or treat them as though they were noise. Moreover, gender is a multilevel structure that encompasses both individual, interactional and macro factors; and these different levels may not always be aligned (Risman 1998, 2004, forthcoming; Risman and Davis 2013). We should apply such complexities to understanding gender attitudes. There is a small chorus of scholars who challenge this linear presumption by showing that the belief in intrinsic gender differences can persist alongside the rise in support for equal opportunities between men and women (Cech 2013; Charles and Cech 2010; England 2010; Yu and Lee 2013). In a similar fashion, by leveraging the concept of ambivalence, I show that gender attitudinal change across the public and private sphere is uneven over time, resulting in the emergence of a subgroup of Americans who are ambivalent about gender equality.

The second contribution is methodological. Extending the argument above, one of the major consequences of assuming linearity is overlooking heterogeneity in outcomes. As a result, a majority of previous longitudinal studies on gender attitudes adopt a variable-centered approach (e.g. linear regressions) to examine average differences in the effects of a set of predictors on the change in gender attitudes over time. Accordingly, these studies combine attitudes on private and public sphere into a single summary index and examine how this index changes across time (Bolzendahl and Myers 2004; Brewster and Padavic 2000; Brooks and Bolzendahl 2004; Cotter et al. 2011, 2014; Mason, Czajka, and Arber 1976; for a notable exception, see Ciabattari 2001). This makes it impossible to tease out the relative disparity in attitudinal change in each sphere across time and thus overlooks the significance of ambivalence. Through the employment of people-centered or taxonomic techniques such as latent class analysis and multinomial logit latent class regression (Bergman and Trost 2006; Dyer and Day

2015), my analysis underscores multiplicity and non-linearity, documenting that even as some Americans evolve to support gender equality in both spheres, while others remain entrenched in the "old ways," a nontrivial proportion of Americans become ambivalent about gender change, supporting some aspects of gender equality while rejecting others. In sum, this project has the potential to yield new insights as to why gender remains a durable inequality, despite more than forty-years of mobilization.

My third contribution is filling an important gap in understanding how gender attitudes change over time. Scholars, after accounting for established predictors, tend to interpret large residuals in gender attitudinal change as evidence of unmeasured heterogeneity. For example, using the GSS data from 1977 to 2012, Cotter and his colleagues (2011, 2014) argue that there was a brief stall in progressive gender attitudes, primarily from the late nineties to early 2000s. After finding modest to no significant relationship between gender attitudes and established predictors such as cohort replacement and women's labor force participation, they conclude that the gender stall is due to unmeasured cultural changes, specifically a backlash against feminism. Accordingly, they theorized that the gender stall in attitudes is due to the emergence of an alternative cultural framework – essentialized egalitarianism, a concept that uses feminist rhetoric of choice to justify gender traditionalism.[3] However, as Dyer et al (2012) show, the absence of statistical significance in variable-centered regressions may not be due to a lack of statistical associations, but because of *varying effects*. More generally, *varying effects* refer to a predictor (or a set of predictors) having different effects across different subgroups in the population; subgroups that are defined primarily by an unmeasured latent characteristic. By using finite mixture modeling techniques such as latent class analysis, my study helps to explain

---

[3] Interestingly, Donnelly et al (2015) show that the brief dip in support for gender equality in the late 90s is due to period effects and the decline were made up by improvements in gender attitudes from 2000 onwards.

this unobserved heterogeneity by revealing the latent structure of gender attitudes. In doing so, I hope to discover whether gender attitude change occurs unevenly, resulting in the formation of different subgroups that comprise of members with distinct socio-demographic characteristics.

Overview of Chapters

Chapter 2 reviews three sets of literature: a) social science research on the state of the gender revolution, b) psychological research on ambivalence and gender, and c) sociological studies on ambivalence and gender. Chapter 3 elaborates on the methodological approaches and Chapter 4 discusses the dataset that I'm using to answering my research questions. Chapter 5 and 6 present the results. In my conclusion chapter, I discuss the implications of my research, elaborate on the limitations and propose some policy-relevant takeaway points.

II. RELATED LITERATURE AND CONCEPTUAL FRAMEWORK

A. <u>The Unfinished and Uneven Progress of Gender Revolution</u>

Gender revolution. Feminism. Women's movement. These are some of the myriad terms scholars have used to describe and represent the sweeping changes to the gender structure. While there isn't a single definition, what scholars have agreed upon is that what gender is like today is dramatically different in the past, say four decades ago. Hence, researchers look at how gender progressed in different dimensions (e.g. labor force participation, domestic labor etc) to assess how the gender structure has evolved across the years. Consistent with previous research (e.g. Goldscheider, Bernhardt, and Lappegård 2015; Guppy and Luongo 2015), I review social science research on gender change across different dimensions by grouping them into two broad categories – the public and private spheres – to illustrate the differential pace in gender progress between them. While I do acknowledge that the public and private spheres are interconnected, that is work and family do interface (Ferree 1990; Gerson 1986; Kanter 1977; Lopata 1993; Williams 2000), the gender revolution has such vast-reaching implications ranging from the intimate (e.g. sexual autonomy and reproductive rights) to the public (e.g. sex discrimination in the workplace) that we need a way to categorize these diverse issues into some coherent way that facilitates analysis. As limiting as the public-private dichotomy may be, it is still a useful approach to impose some coherence and structure by separating material changes to the gender structure (public sphere) from the cultural/intimate (private sphere) to make sense of this vast literature.

Progress in the Public Sphere

In the public sphere, scholars often point to changes to the gender gap in labor force participation, earnings, matriculation in higher education and leadership positions to illustrate the

declining significance of gender. Women now outnumber men in higher education, occupy almost half of the working force, and are increasingly visible in top positions in management and politics (Blau, Brinton, and Grusky 2006; Blau, Brummund, and Liu 2013; Brooks 2013; Catalyst 2009; Diprete and Buchmann 2013; Goldscheider et al. 2015; Thomas and Wilcox 2014). Women's educational advantage and the decline in manufacturing and other high paying jobs in traditionally male-dominated industries led toward a slow convergence of the gender wage gap (Blau and Kahn 2006). Moreover, a study on Millennials shows that, in 2012, young women's earnings are almost on parity (93%) with their male counterparts.[4] Overall, the improvement in women's representation in the public sphere, particularly leadership positions in organizations resulted in a decline in the gender wage gap (Cohen and Huffman 2007; Huffman 2013) as well as reduced gender segregation at lower organizational levels (Huffman, Cohen, and Pearlman 2010; Stainback, Kleiner, and Skaggs 2016). While these trends led some journalists to proclaim that women's progress in the public sphere reflects their ascendency as "the richer sex" (Mundy 2013), which to some conservative pundits point to as an evidence for the "end of men" (Rosin 2012), others disagree.

There is without doubt a dramatic improvement in women's status in the public sphere. However, scholars caution against overlooking the remnants of gender inequality in the workplace that inhibits the complete elimination of the gender gap. For example, gender segregation in the workplace persists because of in-group preference and unconscious gender beliefs (Stainback and Tomaskovic-Devey 2012). Social science research shows that homophily – preference for in-group members – is present in almost all social arena, ranging from voluntary associations to friendship networks (McPherson, Popielarz, and Drobnic 1992; McPherson, Smith-Lovin, and Cook 2001). As a result, homophily processes often lead to in-group

---

[4] http://www.pewsocialtrends.org/2013/12/11/on-pay-gap-millennial-women-near-parity-for-now/

preferences that influence perceptions and evaluations of others, leading to the development and reproduction of stereotypes and unconscious bias (Fiske 1993; Glick and Fiske 1998; Ridgeway 1997, 2011; Ridgeway and Correll 2004b; Ridgeway and Smith-Lovin 1999). Experimental and empirical studies support these theories, suggesting that both in-group favoritism and unconscious bias, both independently and interactionally, lead to gender disparities in workplace outcomes (Bielby 2000; Bobbitt-Zeher 2011; Correll 2004; Gorman 2005; Reskin 2000).

Studies using an intersectional framework show that it is white women who benefitted most in gender changes in the public sphere, relative to women of color (Mintz and Krymkowski 2010; Stainback and Tomaskovic-Devey 2012).Furthermore, working mothers are subjected to wage penalty but similarly situated fathers, instead, enjoy wage premiums (Benard and Correll 2010; Correll, Benard, and Paik 2007; Ridgeway and Correll 2004a). However, the disadvantage associated with motherhood penalty is smaller for Hispanic and African-American women than white women because racial minority men generally earn less in the labor force (Glauber 2007). Even though racial minority women have a smaller gender wage gap within their own racial/ethnic background, their gender wage gap, in relation to white men, are much larger than white women, illuminating the complex intersectional relationship between race, class and gender.[5]

Though women outnumber men in higher education, they tend to self-select themselves out of high-paying majors due to underestimating their own abilities and/or believing that their sex category is incompatible with certain high paying industries like computer science and engineering (Cech 2013; Zafar 2013). In fact, working women, in anticipation of future motherhood, are more likely than men to downshift their career paths (Bass 2014). Hence, Eagly and Carli (2007) proposed *labyrinth* as a metaphor that symbolizes the complex journey women

[5] http://www.aauw.org/2014/04/03/race-and-the-gender-wage-gap/

leaders (including those who aspire towards and are currently striving for leadership positions) undertake that captures both the concrete challenges that they encounter and the final goal that is ultimately worth striving for. Overall, despite the fact that there is still room for improvement, what is undeniable is that the rise in women's representation in the public sphere, has led toward a remarkable shift in the material lives of women.

The Spill-Over Effect?

Scholars who work in the political-economy and/or a developmental perspective argue that when macro-level gender inequalities, primarily economic independence and political autonomy, are reduced, this will lead to a spill-over effect into the private sphere, leading to a more gender equitable re-organization of family life (Elson 2000; Inglehart and Norris 2000, 2003). Based on these arguments, there has been an expectation by policy-makers, politicians and scholars that when they "de-gender" public institutions, for example, gender mainstreaming (see Walby 2011), the gendered home-maker/breadwinner model will slowly erode. Modern competitive pressures and egalitarian values will change public and private gender traditionalism. No doubt that the efforts to improve gender in the public sphere have led to observable betterments in the lives of women, notwithstanding the persistent gap between women from privileged background versus women from disadvantaged social locations. Still, an emerging literature suggest that these improvements are largely confined to the public sphere, with some – but ultimately insufficient – spillover onto the private realm.

Lagging Progress in the Private Sphere?

The area where gender progress in the private sphere is most visible is the declining stigma of having gender egalitarian partnerships. More and more young people today value and desire gender egalitarian heterosexual relationships (Gerson 2010; Pedulla and Thébaud 2015).

While there is a highly publicized study that purport to find a negative association between sexual frequency and gender egalitarian households (Kornrich, Brines, and Leupp 2013), research that uses more recent data show that this is no longer true (Sassler 2014). In fact, heterosexual couples with more equitable division of childcare report greater sexual intimacy and relationship satisfaction than those with a traditional arrangement (Carlson, Hanson, and Fitzroy 2016). Similarly, wives that have an educational advantage over their husbands are no longer at risk for marital dissolution, indicating an acceptance of more flexible and egalitarian partnerships among married heterosexual couples (Schwartz and Han 2014)., In the past, men were likely to exchange economic resources for an attractive spouse but now women, are as likely as men to do the same (McClintock 2014). Gender egalitarianism in intimate relationships is not yet the new normal, but is a goal which many are striving towards (Marsiglio and Roy 2012; McGill 2014; Risman and Johnson-Sumerford 1998; Townsend 2002).

Despite these seemingly progressive changes to gender norms in the private sphere, the pace of progress in the private sphere has not kept up with the pace of improvement in the public sphere. In fact, empirical studies from the late eighties onward consistently document that although there has been some change towards egalitarianism in the home, women's participation in the public sphere has not resulted in a radical reorganization of gendered division of labor at home. Instead, women are subjected to the near impossible task of balancing the expectations of being an ideal worker as well as intensive motherhood (Blair-Loy 2003; Hays 1998; Moen 1994; Williams 2000). As a result, working women take on caregiving as the "second shift" and this persists even up until today (Hochschild 1989; also see Moen 1994). Time-use studies show that despite a declining gender gap in hours spent on household chores and childrearing, wives still spend more hours in caregiving roles than their husbands (Bianchi et al. 2000, 2012; Hochschild

2001; Jacobs and Gerson 2004; Yavorsky, Kamp Dush, and Schoppe-Sullivan 2015). Sometimes, the pressure to be both effective workers and dedicated mothers can be so stressful that some working mothers "opt-out", or more accurately, are pushed out of full-time employment in favor of domesticity due to the absence of formal work-family balance policies (Jones 2012; Spar 2013; Stone 2007). Some call this the "maternal wall" (Crosby, Williams, and Biernat 2004; Williams 2004). To overcome this wall, working mothers with economic means rely on domestic help or nannies and, thus, redefine themselves as "mother managers" who manage their children's lives from the office (Hondagneu-Sotelo 2001; Macdonald 1998, 2011; Uttal 1996).

Most research suggests women still do more than their share of housework, although there are some signs of change. For example, Myers and Demantas (2014) show that men who became unemployed during the recent economic recession did take on traditionally feminine caregiving responsibilities and housework, framing these tasks as masculine. We do not know if these men, once re-employed, will continue to break gender norms. In fact, in a preliminary presentation of their follow-up study at an academic conference, Demantas and Myers (2015) report that most of their sample reverts back to sex-differentiated division of labor once their husbands rejoined the labor force. This is consistent with other studies showing that as long as husbands are in the labor force, regardless of relative earnings disparity, wives still shoulder a larger share of household chores (Miller and Sassler 2012; Tichenor 2005), and at times even prioritizing their husbands' careers over their own (Cha 2010), despite the fact that both partners subscribe to gender egalitarian beliefs (Ely, Stone, and Ammerman 2014). However, others find that gender ideology still matter. Husband who have more egalitarian gender beliefs do participate more in domestic labor (Davis and Greenstein 2009; Greenstein 1996a, 1996b). Men who volunteer to stay home and assume full-time caregiver roles, commonly referred to as stay-

at-home fathers, are increasing, but they, nonetheless, constitute the smallest proportion (3.5%) of American households (Kramer, Kelly, and McCulloch 2015). Hence, in a slightly facetious manner to illuminate the disparity in gender progress between the home relative to material gains for women in the public sphere, journalist Helen Lewis (2016) wrote that mopping the floor is one great contribution men can make to feminism. As a result, in recognizing the differential pace in improvement between the public and private spheres, England (2010) concluded that the gender revolution is both uneven and unfinished.

Competing Explanations for the Uneven and Unfinished Gender Revolution

How can we explain this differential pace in gender improvement – with progress in the public sphere outpacing the private sphere? On one hand, scholars argue that structural constraints are the main factors contributing to the uneven progress in the gender revolution. For example, studies show that even though individuals profess a desire to be equal partners in caregiving and childrearing, inflexible workplace policies that often demand long working hours led them to fall back on neotraditional sex-differentiated division of domestic labor – typically as a last resort – when work and family obligations are in conflict (Cha 2010; Gerson 2010; Pedulla and Thébaud 2015; Stone 2007). Using survey-experimental data, Pedulla and Thébaud (2015) examine how couples' preference for sex-differentiated domestic division of labor change when the degree of workplace constraints (e.g. support work-family policies) were experimentally manipulated. Their results show that once workplace constraints are removed, couples opted for more egalitarian relationships, though the effect is stronger for women than men. Thus Pedulla and Thébaud call for a need to have supportive work-family policies that embrace a "dual-earner/dual-caregiver" model. Arguing along the same lines, in a controlled randomized quasi-experiment, Moen and her colleagues (2016) show that the institutionalization of flexible work

practices that focuses on results rather than putting face time at the office (e.g. working from home, communicating via instant messenger), not only increases work satisfaction and reduces attrition, but participants actually report spending more time with their families, have less work-family conflicts and are, overall, more efficient and productive at work. Similarly, Cha (2010) shows that when there is a work-family conflict among dual-career couples who work long hours, wives are more likely to quit their jobs, resulting in a traditional separate spheres arrangement; and the effect is stronger if they have young children. Thus she concludes that the current trend of overworking can have the unintended consequence of reverting back to the male-breadwinner/female-homemaker model. In other words, the pace of progress in the private sphere has not kept pace with improvements in the public sphere because of ongoing structural constraints in the workplace.

On the other hand, others take a cultural approach, pointing to the importance of, but often overlooked, gendered preferences or choice as a central reason why gender progress lags in the private sphere, relative to the public sphere. Small and his colleagues (2010) note that any consideration of culture in relation to inequality is considered the "third rail" in U.S. sociology. Similarly, Paula England (2016), in her presidential speech at 2015 American Sociological Association annual meeting notes that sociologists tend to eschew cultural explanations in favor of structural ones to avoid "blaming the victim." To correct this tendency, England reconceptualizes personal characteristics such as preferences or aspirations as an "indirect" social constraint based on one's social location or position such as gender or race. The social, she claims, can become personal (England 2016: 4).

For example, England (2010) looks at how occupational sex segregation persists because of differential occupational aspirations based on class. Sex segregation in white collar jobs are

decreasing over time because middle to upper class working women aspire to and are entering traditionally male-dominated upper-middle-class occupations such as law and medicine. Conversely, sex segregation in blue-collar jobs persists because working class women aspire to enter women-dominated middle-class jobs like teaching instead of integrating into male-dominated blue-collar occupations such as plumbing. Thus England concludes that, though both working and middle class women aim to achieve social mobility, their differential class status led to different gendered choices with respect to career preferences that inadvertently result in a gender revolution that is both uneven and stalled. Similarly, others find that gendered preferences and self-selection do play a part in the perpetuation of occupational sex segregation and the persistence of the gender pay gap (Cech 2013; Charles and Bradley 2009; England 2011; Okamoto and England 1999). For example, in a longitudinal study of college students from four universities to understand how gender schemas factor into career decisions, Cech (2013) find that women with more stereotypical self-assessment of their gender identity tend to select into careers with a higher concentration of women. The same goes for men – men with higher masculine self-assessment self-select into male-dominated occupations. Consequently, personal characteristics such as gendered preferences and self-selection are important factors in the perpetuation of occupational sex segregation.

While this debate on whether demand or supply-side factors are more salient (or the degree to which *both* are significant) in explaining the stalled and uneven gender revolution is productive and important, the assumption that the pace of gender progress is uneven across the public and private sphere remains under-interrogated. In fact, it is assumed rather than explicitly tested. Understanding the differential pace of progress across the spheres is important because while, on the whole, previous studies imply that the pace of improvement in the public sphere

outpaces that in the private sphere, these studies are addressing different levels of the gender structure (Risman 2004; Risman and Davis 2013). Some look at individual level factors such as gendered preferences (e.g. Cech 2013; England 2010, 2011), while others focus on the interactional level such as negotiating sex in egalitarian relationships (e.g. Kornrich et al. 2013; Sassler 2014) or the macro level such as institutional constraints (Cha 2010; Pedulla and Thébaud 2015) and gender attitudes (Cotter et al. 2011). We are not comparing apples to apples. Thus, we really do not know with any certainty if this differential pace of improvement between the spheres is present along one level of the gender structure, allowing for a more direct analysis and comparison. Accordingly, in this dissertation, I aim to examine the relative pace of gender progress across the public and private spheres by focusing only on the macro-level of the gender structure, that is gender attitudes.

B. <u>Reviewing The Literature on Changing Gender Attitudes</u>

What Trend?

Understanding how gender attitudes change over time is one way to assess the state of the gender revolution. From the sixties to the mid-seventies, studies show that gender attitudes improved rapidly (Ferree 1974; Mason, Czajka, and Arber 1976; Thornton and Freedman 1979). However, since then, the trend is not so clear. On one hand, scholars argue that the trend toward unabated improvement in gender attitudes will continue (Bolzendahl and Myers 2004; Brooks and Bolzendahl 2004; Mason and Lu 1988; McBroom 1986; Thornton, Alwin, and Camburn 1983). For example, using the General Social Survey (GSS) from 1974-1998, Bolzendahl and Myers (2004) show that there has been a consistent improvement in gendered expectations affixed to social roles and expect that this trend will persist. Similarly, Brooks and his coauthors

(2004: 107) state that "changes in US attitudes toward gender roles during the past three decades have been large and generally monotonic".

On the other hand, others demonstrate that the pace of improvement is slowing down (Brewster and Padavic 2000; Cherlin and Walters 1981; Cotter, Hermsen, and Vanneman 2011; Helmreich, Spence, and Gibson 1982; Thornton and Young-DeMarco 2001). Cherlin and Walters (1981) were early to observe that improvements in gender attitudes could plateau at some point. Using the GSS from 1972 to 1978, they show that gender attitudes liberalized rapidly from 1972 to 1975 and, after 1975, gender attitudes essentially remained constant. Using more recent data across a longer time period, Cotter et al. (2011) show that gender attitudes did improved monotonically from the seventies up to the nineties. However, from the mid-nineties onwards, the pace of improvement has begun to level off. Expressing similar reservations about the prospects of continued improvement in gender attitudes, Brewster and Padavic (2000: 403) admitted that they "are not entirely sanguine about the egalitarian nature of future attitude shifts."   But the consensus seems to be that the plateau was temporary. A handful of studies show that the slowing down in progressive gender attitudes was short-lived, lasting from the mid-90s to early 2000s and has rebounded ever since (Cotter, Hermsen, and Vanneman 2014; Donnelly et al. 2015). Once the GSS data through 2014 was incorporated, Cotter and his coauthors (2014) find that the stall in progressive gender attitudes was transient. Progressive gender attitudes have resumed from 2006 onwards.

In sum, these studies suggest that gender attitudes may not change in a linear fashion, but ebbing and flowing in different points in history. Both psychometricians (e.g. McHugh and Frieze 1997) and empirical researchers (e.g. Bolzendahl and Myers 2004) show that gender attitudes encompass multiple domains and each domain change at a different pace over time,

leading to this non-linear change in gender attitudes. However, a majority of sociologists examining the changing trend in gender attitudes still assume linearity and do not distinguish changes in one domain from the other. Accordingly, the conventional approach adopted by most scholars is to combine different gender attitudes into a summary index. In doing so, it is impossible to tease apart differential pace in improvements between different gender attitude domains. Thus, it still remains an empirical puzzle as to how gender attitudes from different dimensions changed over time and if or when divergence might occur.

Who Changed?

Beyond debating the patterns of trends in attitudes toward gender, there is also an ongoing conversation about the determinants of changing gender attitudes. While multiple factors have been identified as important variables associated with changing gender attitudes (see Davis and Greenstein 2009), there are two main drivers – cohort replacement and socio-structural changes. In fact, this twin process of cohort replacement and socio-structural changes such as rising education attainment is what Davis (2013) dubbed as the Stouffer/Whig framework. Stouffer (1955) conducted one of the first national probability sample of attitudes and he documented two findings: (a) net all other variables, better educated Americans were more liberal on social issues within age categories; (b) within educational levels and net of all other variables, older Americans were less tolerant. Whig is a historical concept that interprets historical events as an uninterrupted and inevitable progress toward liberty and enlightenment. Integrating both, Davis hypothesizes that birth cohort and rising educational attainment will lead to an unabated improvement in attitudes across all social issues.

Cohort Replacement

Cohort effect is often seen as the main determinant driving the liberalization of gender attitudes (Davis 2013). Ryder (1965:845) defined cohort as "the aggregate of individuals who experienced the same event within the same time interval." As a result, each cohort has a distinctive composition reflecting the unique circumstances and material conditions of society at a particular historical moment. The basic principle of cohort replacement is that those raised in more recent times are socialized and exposed to a different belief system under a different socio-economic condition than those who were born in earlier cohorts. In each cohort, values, attitudes and beliefs were developed in formative years and endure through their life course. In other words, older people who hold more conservative views on gender are replaced by younger, more educated and secular individuals with more liberal views. From the demographic perspective, cohort replacement – often to referred to as demographic metabolism – is one of the main drivers of social change.

Socio-Structural Changes

The second driver is socio-structural changes like rising levels of education and the growing proportion of women participating in the labor force. Conventional wisdom has long held that the more education one receives, the more liberal one becomes across a variety of social issues, including but not limited to gender. Those who have higher educational attainment are more likely to identify as a feminist (McCabe 2005) and tend to have more gender egalitarian attitudes (Marks, Lam, and McHale 2009). In short, rising level of education in the population has led to the improvement in gender attitudes (Davis 2013; Fischer and Hout 2006).

Along a similar line, the greater the proportion of women in the labor force, the more egalitarian gender attitudes are, on average. While it is difficult to ascertain cause and effect

between the two, Bolzendahl and Myers (2004) posit that the association between women's

employment and egalitarian gender attitudes can be explained through two mechanisms. The first

is interest-based mechanism. The interest-based mechanism works in so far as people adopt

gender egalitarian attitudes when it is in their interest to do so. Thus, women's participation in

the labor force is due to the financial benefits attached to their employment, and this encourages

attitudes towards gender egalitarianism. The exposure-based mechanism suggests that women's

participation in the labor force improves gender attitudes because it dispels myths about

women's capabilities and breaks down traditional gendered expectations attached to social roles.

Declining Significance or Varying Effect?

Recent empirical studies show that these two well established determinants of gender

attitudes have become less powerful over time (Bolzendahl and Myers 2004; Cotter et al. 2011;

Davis 2013). James Davis (2013) examines the liberalizing effect of cohort replacement and

socio-structural variables on 43 different attitudes, including gender attitudes, in the GSS from

1972 to 2010. He finds that these established predictors did help to push attitudes in the liberal

direction, the current generation is more liberal than their parents. However, the effect is

gradually decreasing over time. In fact, he predicts that cohort replacement and socio-structural

changes will no longer be significant by 2023. Thus, Davis (2013: 581) concludes that "the main

liberalizing mechanism (cohort replacement driving both liberal social climates and higher

educational attainment) began to lose steam and the predicted future is far from strikingly or

pervasively more liberal."

Looking specifically at gender attitudes alone, Cotter and his colleagues (2011) reached

similar conclusions. While each successive cohort tends to be more liberal than the previous, the

difference from 1952 onwards, is decreasing in size, therein indicating that recent cohorts (i.e. Generation X and Millennials) maybe be no more liberal than Baby-boomers. Additionally, they also note that cohort controls have little effect post 2000. This same process seems to be working for socio-structural variables. The predictive power of socio-structural variables is plateauing in response to the decreasing pace of rising education levels in recent cohorts. Because both cohort replacement and social structural changes seem to have decreasing power as explanations for gender attitude changes, we might expect a slower pace in gender attitudes as well. Because Cotter and his co-authors find modest to no statistical significance among established predictors, they conclude that the gender stall is due to unmeasured cultural changes, specifically a backlash against feminism. Accordingly, they theorized that the gender stall in attitudes can be attributed to the emergence of an alternative cultural framework – essentialized egalitarianism, a concept that uses feminist rhetoric of choice to justify gender traditionalism.

However, Dyer et al (2012) show that the absence of statistical significance in variable-centered regressions may not be due to a lack of statistical associations, but because of *varying effects*. More generally, *varying effects* refer to a predictor (or a set of predictors) having different effects across different subgroups in the population; subgroups that are defined primarily by an unmeasured latent characteristic. This is the direction I will take in this dissertation.

To recap, my review shows that there are currently two gaps in the literature. First, it is unclear if the ebb and flow in gender attitudinal change is due to differential pace in improvements among different gender attitude domains, leading to the emergence of distinct subgroups of people holding different combinations of gender attitudes – some are consistent across different domains, while others are discordant. In this dissertation, I limit and identify the

analysis to two different dimensions – the public and private spheres. The second gap is understanding the varying effects of social determinants of gender attitude change (e.g. birth cohort etc) across these distinct subgroups. I rely on the cross-disciplinary concept of ambivalence to frame my dissertation. Why ambivalence? Theoretically speaking, ambivalence is a multidimensional concept that helps to frame my research questions by (a) focusing the analytical lens on the discordance between different dimensions of gender attitudes; and (b) the characteristics of those who are ambivalent and those who are not (i.e. univalent).

In the following sections, I begin by juxtaposing how psychology and sociology define ambivalence to derive an operational definition of ambivalence. Next, I review the literature on psychological ambivalence and gender, followed by sociological ambivalence and gender.

C. <u>Conceptual Review of Ambivalence in Psychology and Sociology</u>

Defining Ambivalence

Generally, ambivalence has been defined in two ways – a unidimensional versus a multidimensional concept. Traditionally, attitudes are assumed to be unidimensional. They exist on a bipolar continuum with positive and negative evaluations existing on either polar ends (Thurstone 1928, 1931). Accordingly, attitudinal ambivalence represents the midway point on the continuum, and is often seen as being indifferent or neutral. This approach however has been critiqued, arguing that attitudes are more complex and cannot be reduced onto a single bipolar continuum (Kaplan 1972). It is possible to simultaneously love and hate smoking, and though these are conflicting attitudes, they are logically consistent. For example, one could love the high associated with smoking and yet hate what it does to one's health. Following this, positive and negative evaluations are reconceptualized as separate attitude measures and ambivalence represents the co-existence of both positive and negative evaluations of a single attitudinal object

(Conner and Armitage 2008; Conner and Sparks 2002; Eagly and Chaiken 1993; Jonas, Broemer, and Diehl 2000; Kaplan 1972; Priester and Petty 1996; Thompson et al. 1995). For example, one can admire the wealthy for their success and yet resent them for monopolizing society's resources. This multidimensional perspective on attitudes represents the new consensus on attitudinal ambivalence and is the position that I ascribe to in this dissertation. Also, it is important to note that research on ambivalence has been extended beyond attitudes alone to include discordance between attitudes and behavior, within an attitude structure and between different attitude structures (see Armitage and Conner 2000; Conner and Sparks 2002; Eagly and Chaiken 1993; Jonas, Diehl, and Brömer 1997; Petty 2006). For the purpose of this dissertation, I limit my definition of ambivalence to discordance between different dimensions within the gender attitude structure, specifically attitudes toward the public and private spheres. Next, I review the literature on how attitudinal ambivalence and gender are studied in psychology and sociology to identify the debates and gaps and to derive concrete research questions.

Psychological Ambivalence and Gender

From a social psychological framework, ambivalence generally, though not exclusively, refers to the simultaneous possession of discordant or conflicting attitudes, usually in the form of positive and negative valences about a single attitudinal object (Ajzen 2001; Conner and Sparks 2002; Eagly and Chaiken 1993; Jonas, Broemer, and Diehl 2000; Petty, Wegener, and Fabrigar 1997; Smelser 1998). Conventionally, scholars working with the cognitive consistency paradigm (e.g. cognitive dissonance theory [Festinger 1957] and balance theories [Heider 1946, 1958]) posit that ambivalence is often a central but unwanted feature of basic cognitive processes (Eagly and Chaiken 1993; Gawronski 2012; Gawronski and Strack 2012). When individuals experience

attitudinal ambivalence, they suffer from a psychological discomfort, commonly referred to as cognitive dissonance, and are driven to change attitudes towards consistency. For example, Davis (2007) argues that individuals alter their gender attitudes in circumstances when they experience cognitive dissonance due to a discrepancy between egalitarian gender attitudes and gender traditional behaviors.

However, some social psychologists contest the premise that attitudinal ambivalence necessarily leads to cognitive dissonance which ultimately steers people towards resolving their conflicting attitudes (Craig and Martinez 2005a, 2005b; Meffert, Guge, and Lodge 2004; Priester and Petty 1996; Thompson and Holmes 1996). Attitudes are complex, and inconsistencies are part and parcel of basic cognitive processes. As Priester and Petty (1996: 448) elaborate, "rather than being driven to reduce all inconsistencies in evaluation by any means possible, humans are viewed instead as being capable of maintaining, as well as reducing, their conflicting reactions." Psychometricians who analyze gender attitudes concur, showing that gender attitudes are multidimensional, including but not limited to attitudes about reproductive justice, gendered expectations attached to social roles, gender stereotypes; and they do not always align (Beere 1990; King and King 1997; McCreary, Newcomb, and Sadava 1998; McCreary, Rhodes, and Saucier 2002; McHugh and Frieze 1997; Spence 1993; Spence and Helmreich 1979). In short, some scholars see ambivalence as common and psychologically normative.

Prejudice scholars apply ambivalence to understand contemporary biases. In contrary to early research that relies on antipathy or negative attitudes to explain prejudice (e.g. Allport 1954), social psychologists, today, argue that prejudices are more complex and cannot be explained by just hostile attitudes. To take a case in point, research shows that contemporary sexism is driven by ambivalence – that is the co-presence of contradictory evaluative positions or

feelings about gender (Glick et al. 2000, 2004; Glick and Fiske 1996, 1997, 2011). Ambivalent sexism captures two different but complementary forms of sexism – benevolent and hostile sexism. Benevolent sexism encapsulates paternalistic attitudes about gender that extend chivalrous protection and affection towards women that, even though potentially well-intended, justify their relative subordinate and weak position vis-à-vis men. Hostile sexism, on the other hand, refers to explicitly antagonistic attitudes about women that rely on negative stereotypes. Using two measures from the Ambivalent Sexism Inventory, for example, one might agree that women should be cherished and protected by men (benevolent sexism), but at the same time, also endorse the belief that women seek to gain power by getting control over men (hostile sexism).

In sum, these social psychological studies show that attitudinal ambivalence on gender is more common than previously considered. However, almost all of the social psychological research on gender ambivalence uses cross-sectional data at a single time-point. We do not know if gender ambivalence is something that emerged only recently, or is something that has persisted over a longer period of time. While there are a handful of studies that use latent class analysis to study ambivalent sexism specifically (e.g. Sibley and Becker 2012), as far as I know, there are no psychological studies that used this same technique to study ambivalence on gender equality between the public and private spheres. My project uses an innovative approach that adds a temporal dimension to the social psychological study of gender ambivalence and expands this body of literature to include ambivalence about gender equality.

Sociological Ambivalence and Gender

While social psychological studies on ambivalence tend to highlight its normative and widespread nature, sociological studies on ambivalence, instead, tend to emphasize structural

differences between those who are ambivalent and those who are not. Robert Merton (1976), one of the first to study ambivalence from a sociological perspective, argues that psychological ambivalence and sociological ambivalence are distinct but interrelated. The former refers to incongruent attitudes while the latter encapsulates conflicting normative tendencies embedded in social roles and statuses, and is thought to be an antecedent to the former. That is, psychological ambivalence is experienced because of contradictory normative expectations embedded in the structural conditions surrounding a person's social location. Merton described multiple ways of studying sociological ambivalence, and this diversity is certainty borne out in gender research.

The most common approach to studying sociological ambivalence is to conceive of it as arising from contradictory normative demands imposed upon a social role (Merton 1976: 8). For example, scholars demonstrate that the conflicting normative demands associated with motherhood (cultural expectations of a good mother, attachment to child, and work-family balance, among others) lead to maternal ambivalence, manifesting as the co-existence of love and hate towards one's child (Brown 2010, 2011; Lupton 2000; Parker 1995). Some family scholars question if sociological ambivalence applies only to mothers and young children but, instead, represents an overarching pattern in intergenerational relationships between parents (not just mothers) and their children, even as adults (Connidis and McMullin 2002a, 2002b; Lorenz-Meyer 2001; Lüscher 2002; Lüscher and Pillemer 1998; Pillemer and Lüscher 2004; Willson et al. 2006; Wilson, Shuey, and Elder Jr. 2003). In doing so, these family scholars pushed sociological conceptualizations of ambivalence beyond role conflicts to recognize the importance of social relationships (Hillcoat-Nalletamby and Phillips 2011; also see Coser 1966).

Another sociological approach conceptualizes ambivalence as "the disjuncture between culturally prescribed aspirations and socially structured avenues for realizing those aspirations"

(Merton 1976: 11). Applied to gender, Sjöberg (2010) shows, using a cross-cultural comparison between 25 countries, that gender ambivalence emerges when there is a mismatch between women's desire to be successful in the workplace and have a family, and the opportunity structure to realize these aspirations, primarily due to work-family conflicts. Hence Sjöberg concludes that the greater the gap in the rates of change between women's participation in higher education and the structural opportunities that facilitate work-family balance, the greater the amount of gender ambivalence. Interestingly, in this research, gender ambivalents and non-gender-ambivalents do not vary much in terms of socio-demographic characteristics. Gender ambivalent attitudes differ little between men and women, and between women who work fulltime and those who do not. In fact, he finds that only class matters, namely, women with college degrees are less likely to hold gender ambivalent attitudes. His analysis does not permit a deeper understanding of why gender ambivalence is present only among working-class women. Overall, his results point to the fact that gender ambivalence may not be limited to only incumbents of role conflicts (e.g. working mothers) but represents a widespread multivalent attitude about gender change (Smelser 1998).

Overall, from a sociological framework, gender ambivalence emerges due to social structures and norms surrounding groups of people sharing a particular social location. However, there are disagreements regarding whether gender ambivalence is found only among people who share a social location or is more widely shared than expected, extending beyond the incumbents of role conflicts. Thus, what is lacking is a systematic examination regarding whether the socio-demographic characteristics of ambivalents differ significantly from non-ambivalents. Put differently, the unanswered question we need to know is how different are gender ambivalents from gender univalents?

In sum, I hypothesize that as the gender revolution progresses over time, underneath the surface of extensive change to the gender structure, there is an uneven pace of gender attitudinal change, leading to the emergence and persistence of a subgroup of people who are ambivalent about gender equality. I draw inspiration from social psychological and sociological studies on ambivalence to refer to these people as gender ambivalents – that is they support gender equality in one sphere but not in the other.

Taken together, this dissertation addresses two research questions:

3) Over time, is there a differential pace of improvement in gender attitudes, resulting in the emergence and persistence of a subgroup of Americans who are gender ambivalents?

4) If so, are gender ambivalents different from other subgroups (gender traditionals and gender egalitarians) in terms of their socio-demographic characteristics?

In the next chapter, I review different methodological approaches (direct versus indirect approach) to analyzing ambivalence and propose a group-based approach, specifically latent class analysis, as an alternative.

III.   METHODOLOGY: Different Approaches to Studying Ambivalence

Direct Approach

There is deep ambivalence as to how to best analyze ambivalence. At the core of this is a debate whether to treat ambivalence as a manifest (respondents are aware of their ambivalence) or a latent (ambivalence is unconscious) condition. Those who consider ambivalence to be a manifest construct advocate for the direct approach by basing the analysis on the respondent's own self-reporting of ambivalence. In doing so, ambivalence is treated as a meta-attitudinal aspect or a phenomenological judgment of one's attitudes (Jonas et al. 2000; Thompson, Zanna, and Griffin 1995). Because respondents are aware of their ambivalence, this approach is often seen as capturing felt or experienced ambivalence. For example, Lipkus and his co-authors (2001) construct a 6-item measure (e.g. you have strong feelings both for and against smoking; you find yourself feeling torn between wanting to smoke and not wanting to smoke) to examine the relationship between attitudinal ambivalence towards smoking and the desire to quit. Similarly, Schneider and her colleagues (2013) asked their participants to indicate their experienced ambivalence (on a scale from 1, *no mixed feelings at all* to 7, *extremely mixed feeling*s) in relation to body movement.

We also see the reliance on self-reported ambivalence used in qualitative studies. Carolan (2010) drew on in-depth interviews with 23 individuals to garner a deeper understanding of one's attitudes toward climate change. He found that, generally, people are neither for nor against climate change; instead, they express ambivalence. When asked whether, in their lifetime, global warming will pose a serious threat to them and their way of life, several respondents expressed both "yes" and "no" to the question, therein conveying mixed feelings about the subject.

One advantage of the direct approach is that researchers are able to tap directly onto the

participant's sense of ambivalence. A disadvantage is that such direct measurement is open to extraneous factors that could undermine validity, for example, conveying a lack of attitudinal strength instead (Bassili 1996; Erber, Hodges, and Wilson 1995; Miller and Peterson 2004). In short, even though participants may express ambivalence, we do not know why and where does the source of ambivalence come from (e.g. explicit or implicit attitudes) (Jonas et al. 2000).

Indirect Approach

While the first approach treats ambivalence as a manifest construct, the second approach conceptualizes ambivalence as a latent condition. Ambivalence exists on the level of the sub-conscious and individuals may not even be conscious of their own ambivalence. Accordingly, the second approach takes seriously the definition of ambivalence as the simultaneous co-existence of positive and negative evaluation of the same attitudinal object by combining both positive and negative evaluations into a single index (Kaplan 1972; Priester and Petty 1996; Thompson et al. 1995). While there isn't an ideal ambivalence formula, the most commonly used one is the Griffin Index, developed by Thompson, Zanna and Griffin (1995):

$$\text{Griffin Index of Ambivalence} = \frac{|A|+|B|}{2} - |A - B|$$

where A and B, respectively, are scores derived from unipolar scales measuring positive and negative ratings toward the same object. The left side of the formula captures attitudinal intensity by averaging the number of positive and negative reactions. The right side of the formula captures attitudinal similarity by taking the absolute value of the difference between the number of positive and negative ratings. Based on the formula, ambivalence is present if two necessary and sufficient conditions are met. First, positive and negative components are of the same magnitude. Thus, if one component is stronger than the other, ambivalence is reduced and the attitude is considered polarized. Second, positive and negative components should have

moderate intensity so ambivalence is present due to conflicting multiple reactions as opposed to the lack of reactions. The Griffin Index has been applied in diverse research fields that includes but is not limited to political attitudes (Basinger and Lavine 2005), intergeneration family ties (Wilson, Shuey, and Elder Jr. 2003), romantic relationships (Mikulincer et al. 2010) and gender attitudes (Sjöberg 2010).

An advantage of using a formula is that, unlike the direct measurement approach that relies on the assumption that respondents have to be conscious of their own ambivalence, ambivalence can be identified and analyzed independent of the respondents' cognizance. The second advantage is that using formulas facilitate comparisons across studies. A disadvantage is that this index is only applicable if positive and negative components are measured using a Likert scale and assumes that both components are to be weighed equally and assumes that respondents are fully capable (and willing) to suspend evaluating the opposite valence while making their judgment (e.g. not considering the negative aspects of smoking while asking respondents to rate the positive aspects of smoking). A second disadvantage is that the formula is applicable to studying both positive and negative components within a dimension of an attitude structure (e.g. positive and negative evaluations on abortion), but it is unclear how to apply the Griffin formula to study ambivalence across different dimensions (e.g. abortion is all circumstances vs abortion only in certain circumstances). For example, Sjöberg (2010) applied the formula-based approach to studying different dimensions of gender attitudes by using a pair of questions to compute the ambivalence score for each dimension and then averaging across all dimension. A limitation is that each pair of items that are used to calculate the ambivalence score are decided arbitrarily and, for some dimensions, the items are used more than once.

Some scholars have investigated both approaches to assess which approach is better

(Lipkus et al. 2001; e.g. Priester and Petty 1996; Thompson et al. 1995). The results show that there is a moderate correlation (ranging from 0.36 to 0.44) between both approaches and a high correlation between different formula-based indices (ranging from 0.71 to 0.98). While some scholars argue that the direct measurement is the "gold standard" because it is conceptually superior (Priester and Petty 1996; Thompson et al. 1995:374–5), others remain agnostic (e.g. Conner and Sparks 2002; Jonas et al. 2000), reminding us that it remains debatable if respondents are always conscious of their ambivalence or if they are capable of only ignoring the opposite valence while making a judgment. Perhaps, a more productive move forward is to compare which approach is more consequential at predicting behavior. For example Lipkus (2001) show that, while correlated, the results from direct measurement of ambivalence toward smoking, relative to formula-based ones, have greater predictive power when it comes to smoking cessation.

Typology-Centered Approach

Thus far, methodological approaches analyzing ambivalence are dominated by psychologists, aimed at capturing ambivalence on the individual level. As Smelser (1998) and Merton (1976) had mentioned, while ambivalence is felt on the individual level, there are shared group dynamics that can be captured and analyzed. Ambivalence is simultaneously an individual as well as a group characteristic. While there are certainly advantages and disadvantages when it comes to the direct and indirect approach to operationalizing ambivalence, the main limitation is that we tend to gloss over those who are not ambivalent and the degree to which both ambivalents and non-ambivalents are similar or different.

In this dissertation, I leverage the strengths and limitations of both the direct and indirect approach to propose finite mixture modeling, specifically latent class analysis (together with

32

ancillary analyses like multinomial logit latent class regression), as an alternative and sociological approach to analyzing ambivalence. My suggested approach treats ambivalence as a latent condition, encompassing either discordance across different dimensions (e.g. gender attitudes toward the public and private spheres) or within a particular dimension (e.g. positive and negative attitudes toward abortion) that focuses on groups and not on the individual level. The advantages of using finite mixture modeling is that it (a) facilitates comparisons between ambivalents and non-ambivalents; (b) includes multiple dimensions of a single attitude structure simultaneously; and (c) is a systematic analysis that enables comparisons across time and across different studies.

There are two general approaches to social analyses – the variable-centered approach and the people-centered (also called the typology or taxonomic-centered) approach (Bergman and Magnusson 1997; Bergman and Trost 2006; Dyer and Day 2015; Mandara 2003). A variable-centered approach, which includes techniques such as OLS regressions, identifies the average effect of a set of predictors on an outcome variable across all observations, net of the effects of control variables. The assumption is that the predictor variable's effect is the same across all observations, that is, regardless of the other variables (both independent and control) in the model, one-unit change in the independent variable has the same effect on the dependent variable. This assumption generally holds if the distribution of the population cannot be subdivided into multiple "smaller" distributions or subdistributions, now commonly referred to as mixed distributions. Though the idea of a mixed distribution was proposed more than a century ago by Karl Pearson in 1894, it is only with the availability of high-speed computer processing and the formalization of EM Algorithm that it is possible to both identify the components within a mixed distributions and apply flexible analytic techniques (collectively called finite mixture modeling)

(McLachlan and Peel 2000). Unlike OLS regressions which belong to a variable-centered approach, finite mixture modeling is a typology-centered one.

Unlike variable-centered techniques that take an additive and linear approach to statistical analyses, typology-centered techniques focus on non-linear multidimensional analyses. Thus each variable added to the model represents an inclusion of a different dimension, and not an additive component (Mandara 2003). These typology-centered techniques have been growing in popularity and have been applied in a diversity of social issues such as marital satisfaction (Lavner and Bradbury 2010), alcohol use (Auerbach and Collins 2006) and hooking up (Uecker, Pearce, and Andercheck 2015), just to name a few.

There are three advantages to using a typology-centered approach such as latent class analysis to studying ambivalence in general, and gender ambivalence in particular. First, unlike the direct and indirect approaches where ambivalence is defined *a priori*, latent class analysis, through an iterative algorithm, identifies different subgroups based on the response patterns across different gender attitudes. For example, by using multiple gender attitudes in a latent class analysis, it is possible to partition the sample into subgroups, discerning those who support gender equality across both spheres, those who oppose gender equality across both spheres and those who support gender equality in one sphere but not the other. Accordingly, this allows the discordance between different dimensions of gender attitudes to emerge empirically from the data, and therefore facilitates falsifiability. Using the same example, it is entirely possible that the latent class analysis reveal only two subgroups – those who support and reject gender equality across the public and private spheres, therein indicating that gender ambivalence is not present.

Second, unlike gender attitude scales that obscure the proportion of people who endorse,

reject or are ambivalent across all gender attitudes, latent class analysis shows how different gender attitudes cluster together and how the configurations of the clusters change over time. In doing so, we are able to discern the proportion of Americans who support, reject and are ambivalent about gender change. By identifying subgroups of people with empirically different gender attitude response patterns, we are able to apply ancillary techniques in which latent classes could be used as either predictors of an observed distal outcome (e.g. are members from one latent class, say gender ambivalents, more likely to support equitable division of labor at home, relative to other classes such as gender traditionals and gender egalitarians?), an outcome (i.e. including covariates to examine the characteristics of prototypical members in each cluster) or leverage both in a mixture regression (i.e. controlling for the characteristics of the prototypical member in each cluster, are gender ambivalents, relative to gender traditionals and gender egalitarians, more likely to share division of labor at home more equally?). Typology-centered techniques such as latent class analysis allow flexibility by uncovering underlying patterns that variable-centered analyses are unable to perform.

The third advantage is identifying varying effects across different subgroups defined by unmeasured characteristics. Scholars, after accounting for established predictors, tend to interpret large residuals in gender attitudinal change as evidence of unmeasured heterogeneity (e.g. Cotter et. al. 2011). We do not know if it is really the declining significance of established predictors or if there is varying effect across different latent classes (see Dyer et al 2012). It is important to note that the idea that a sample may be comprised of multiple groups is not new. Scholars consistently documented the differential impact between a dependent and independent variable of interest, say enrollment in charter school on educational attainment across different subgroups such as socio-economic status, race/ethnicity, family structure and so on (Hoxby and Rockoff

2004). However, by conducting such multi-group analyses or treating them as moderators, what is captured is varying effects across measured characteristics. We need alternative techniques in the circumstance where observed variables (such as race/ethnicity and gender) are inadequate in explaining the heterogeneity in the sample – also known as unobserved heterogeneity. Finite mixture modeling and its techniques such as latent class analysis is one exemplar way to identify the varying effect across *unmeasured* characteristics (Dyer and Day 2015; Dyer et al. 2012; McLachlan and Peel 2000). Through the use of latent class analysis and multinomial logit latent class regression, my study helps to explain this unobserved heterogeneity by revealing the latent structure of gender attitudes. By integrating theoretical frameworks on ambivalence from psychology and sociology, I aim to discover, when it comes to gender attitudes on the public and private spheres, if there is a differential impact established predictors have on different latent subgroups that are comprised of members with distinct socio-demographic characteristics.

In sum, through the incorporation of ambivalence and using latent class analysis, this dissertation contributes both theoretically and methodologically. Analytic techniques from typology-centered approach such as latent class analysis overcomes the limitations of the direct and indirect approaches because it (a) facilitates comparisons between ambivalents and non-ambivalents, (b) includes multiple dimensions of a single attitude structure simultaneously; and (c) allows falsifiability because the latent classes emerge organically from the data and are not predetermined by the researcher.

IV. Data and Analytic Approaches

A. Data: General Social Survey, 1977 to 2014

To answer my research questions, I analyze the pooled General Social Survey (GSS) from 1977 to 2014 using two applications of finite mixture modeling: (a) latent class analysis (LCA) and (b) multinomial logit latent class regression (MNLLCR) (McLachlan and Peel 2000). The GSS is a repeated cross-sectional survey drawing nationally representative samples of people aged 18 and over who live in non-institutionalized settings within the United States. I used only 19 surveys between 1977 to 2014 as data because GSS transitioned from an annual to a biennial survey from 1994 onwards. On average, the GSS achieved more than 70% response rates for each survey year. In the preceding sections below, I discuss each aspect of the methodology separately and how they are operationalized in detail.

B. Conceptual Model, Measures And Analytic Approaches

Conceptually, finite mixture modeling assumes that the sample population consists of more than one subgroup and these subgroups are defined by an unmeasured latent characteristic and have their own unique distributions (McLachlan and Peel 2000). The purpose of conducting finite mixture modeling is to identify a latent variable that associates observations into clusters, representing distinct subgroups. Latent class analysis and multinomial logit latent class regressions are two applications of finite mixture modeling and they are represented in Figure 1 as Blocks A (LCA) and B (MNLLCR), respectively. Together, they identify latent classes and illustrate the varying effects of a set of covariates across these different latent classes. The descriptive statistics for all study variables are included in Table 1. Next, I elaborate on how this model is measured and operationalized.

Table 1. Descriptive Statistics for Study Variables (General Social Survey, 1977 to 2014, N=27,213)

Indicators for Latent Class Analysis	Description	Mean	S.D.	N	Range
Women in Public Offices	Most men are better suited emotionally for politics than are most women	1.73	0.44	25,264	0,1
Family Social Roles	It is much better for everyone involved if the man is the achiever outside the home and the woman takes care of the home and family.	2.68	0.87	26,658	1-4
Working Motherhood (Child)	A working mother can establish just as warm and secure a relationship with her children as a mother who does not work	2.82	0.87	26,944	1-4
Working Motherhood (Preschool Child)	A preschool child is likely to suffer if his or her mother works	2.57	0.81	26,639	1-4

Covariates Used in Multinomial Logit Latent Class Regression				
Race				
White	0.81	0.40	27,213	0,1
Black	0.14	0.34	27,213	0,1
Other	0.06	0.24	27,213	0,1
Female	0.56	0.5	27,213	0,1
Education Attainment				
Less than high school	0.18	0.39	27,163	0,1
high school	0.52	0.50	27,163	0,1
some college	0.06	0.24	27,163	0,1
bachelor's and higher	0.23	0.42	27,163	0,1
Marital				
married	0.50	0.50	27,200	0,1
widowed/divorced/separated*	0.27	0.45	27,200	0,1
never married	0.23	0.42	27,200	0,1
Parenthood	0.72	0.45	27,213	0,1
Employment Status				

work full-time	0.51	0.50	27,203	0,1
work part-time	0.11	0.31	27,203	0,1
not in paid labor force	0.39	0.49	27,203	0,1
Birth cohort				
Pre-Babyboomers	0.35	0.48	27,128	0,1
Babyboomers	0.39	0.49	27,128	0,1
Generation-X	0.22	0.42	27,128	0,1
Millennials	0.04	0.20	27,128	0,1

*I combined widowed, separated and divorced into a single variable to avoid having zero counts in any of the latent classes.

Latent class indicators (Block A)

| Women in Public Offices | Family Social Roles | Working Motherhood (child) | Working Motherhood (preschool child) |

Covariates (Block B)

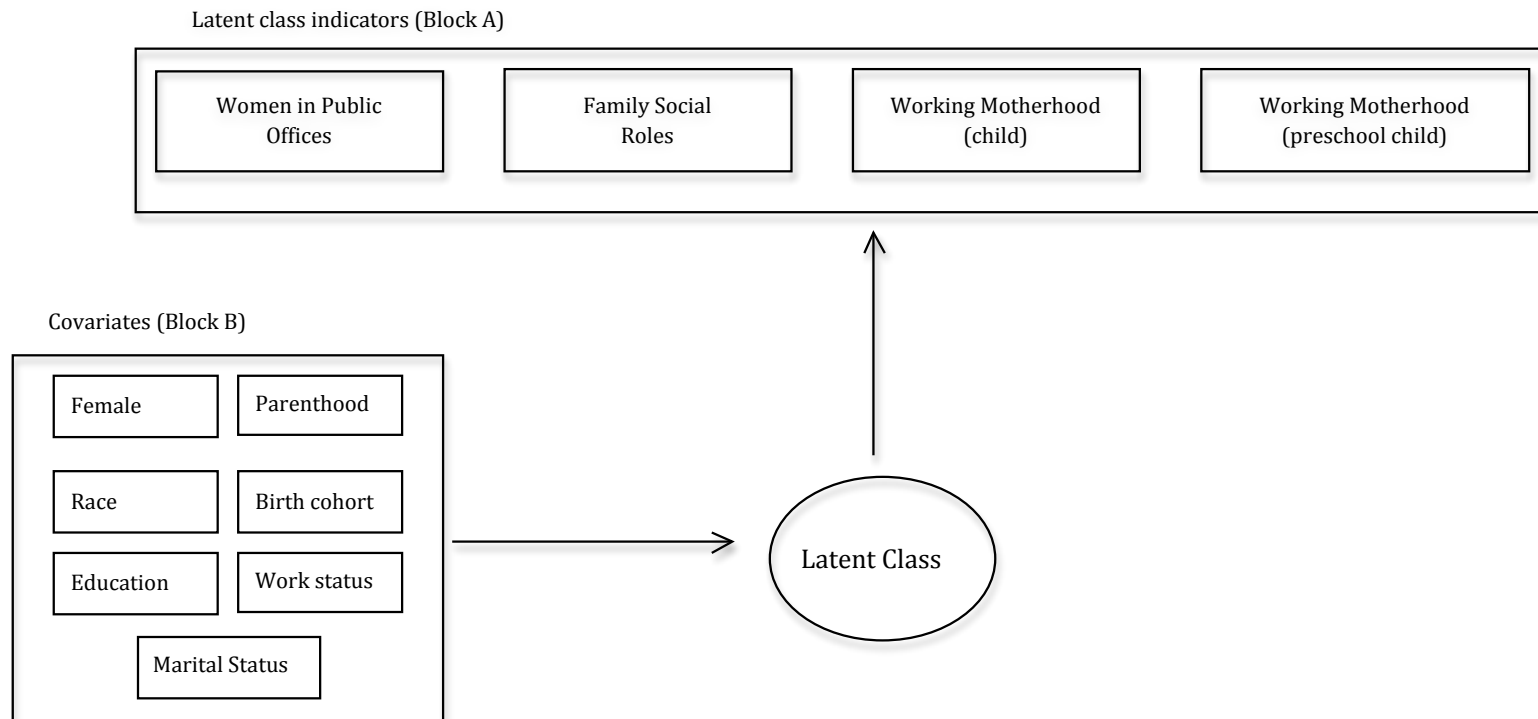| Female | Parenthood |
Race	Birth cohort
Education	Work status
Marital Status	

Latent Class

Figure 1. Working Conceptual Framework (Finite Mixture Model)
(Blocks A and B indicate how latent class analysis and multinomial logit latent class regression
are operationalized, respectively)

Indicators and Analytic Approach for LCA (Block A)

  LCA is a sophisticated statistical technique that uses observed (or manifest) variables to uncover the presence of underlying subgroups within a population. Using three manifest variables (*A, B* and *C*, with *i, j,* and *k levels*) as an example, LCA assumes that the association between *A, B* and *C* can be explained by a categorical latent variable, *X* (with *t* indicating the number of classes). When *X* is accounted for, the manifest variables are independent from one another. Mathematically, this assumption implies:

$$\pi_{ijkt}^{ABC|X} = \pi_{it}^{A|X} \pi_{jt}^{B|X} \pi_{kt}^{C|X}$$

Then,

$$\pi_{ijkt}^{ABCX} = \pi_{t}^{X} \pi_{it}^{A|X} \pi_{jt}^{B|X} \pi_{kt}^{C|X}$$

where π_{t}^{X} is the probability of an observation being at the level of *t* of the latent variable *X*. $\pi_{it}^{A|X}$ is the conditional probability that an observation in class *t* of the latent variable *X* will be located at level *i* of variable *A*. The same goes for variable *B* and *C.*

  Taking this from the abstract to the concrete, I constructed the latent classes based on indicators of four gender attitudes: (1) women in public office ("most men are better suited emotionally for politics than are most women"), (2) gendered expectations affixed to family social roles ("the man is the achiever outside the home and the woman takes care of the home and family"), (3) quality of relationship a working mother has with her children ("a working mother can establish just as warm and secure a relationship with her children as a mother who does not work", and (4) the perceived impact maternal employment has on her young child ("a preschool child is likely to suffer if his or her mother works"). The indicator measuring attitudes

about women in public office is a binary variable, while the rest are ordinal variables.[6] I recoded

all variables so higher values indicate greater support for gender equality.

Theoretically speaking, the first indicator taps into gendered beliefs about the public

sphere, specifically gendered status expectations – the evocation of gender stereotypes in the

assessment of women's competency in politics in relation to men (Brooks 2011, 2013; Dolan

2014; Thomas and Wilcox 2014). On first blush, this item should be limited to women in

political office and should not be generalized to other aspects of the public sphere such as the

workplace. However, scholars who study gender in politics attest that attitudes about women in

public offices actually reflect a more generalized gendered expectations about the public sphere,

particularly about sex-based stereotypes on the presumed incompetence of women, because

women lawmakers are publicly elected (Banwart 2010; Brooks 2011; Dolan 2014; Thomas and

Wilcox 2014). Accordingly, a successfully elected woman comes with the recognition that not

only can women leaders govern and lead as well as men, but also reflects the concomitant

erosion of the ultimate glass ceiling and sex-based stereotypes. Thus attitude about women in

politics can be regarded as a relatively good measure of gender attitudes in the public sphere.

The remaining three indicators correspond to two different types of gendered

expectations about the private sphere: one concerning gendered family social roles (economic

provider/home-maker) based on the structural-functionalist model (Parsons and Bales 1955) and

the last two concerning working motherhood (Ciabattari 2001). There is ambiguity if the

indicator for gendered family social roles ("the man is the achiever outside the home and the

---

[6] An alternative way to construct the latent classes is to dichotomize all of the indicators. However, this will lead to a
loss in information and variation. As Yamaguchi (2000) has pointed out, the decision to construct latent classes
using dichotomous or polytomous variables depends on the preference for discreteness in latent attitudes (agree vs.
disagree) or attitudinal strength (strongly agree, agree vs disagree, strongly disagree). I chose the latter because the
use of polytomous variables increases the likelihood of generating latent classes with "mixed" response patterns
(agree on one variable but disagree on the other), which is the central focus of my paper.

woman takes care of the home and family") measures gender attitudes on the public or the

private sphere. For instance, Yamaguchi (2000) used this indicator to measure gender attitudes

on the public sphere while Donnelly et al (2015) did the converse. I based my decision to treat

this indicator as a measure of the private sphere on two reasons. First, Donnelley and her

colleagues conducted an item response theory model with three indicators on the private sphere

(the same ones that are in my model) confirming that all three variables measure a common

latent construct. Second, I've conducted a sensitivity analysis by dropping the indicator,

gendered family social roles, for three survey years (1977, 1993 and 2014). The results from the

sensitivity analyses revealed that the number and the meaning of the latent classes remained the

same, and the change in latent class proportions were modest, with an average difference of five

percentage points. Thus, despite some ambiguity, there is evidence supporting my decision to use

the indicator, gendered family social role, as one measure of the private sphere. As a shorthand, I

use the term "work" and "home" to, respectively, represent attitudes about the public and private

spheres.

There are two sets of parameters that are estimated in LCA: class membership

probabilities and item-response probabilities. With regards to the former, instead of assuming

that each person belongs exclusively to one latent class, the model accounts for a degree of

uncertainty in class membership by generating posterior probabilities, that is the probability of

each respondent belonging to each identified latent class. The item-response probabilities are the

conditional probabilities that a particular individual within a latent class would respond

affirmatively to each of the four gender attitude questions. I use the item-response probabilities

to help assess the qualitative nature – or meaning – of each latent class.[7]

---

[7] It is important to note that there is no statistical test in interpreting the meaning of latent classes or item-response
patterns. Decisions on the meanings of latent classes were exclusively based on visual inspection.

The first step in LCA is to identify the number of classes. For each survey year, I examined models with one to five latent classes. Class enumeration depends on several criteria: theory, substantive meaning and fit indices (Collins and Lanza 2010). Regarding fit statistics, I relied on log-likelihood ratio statistics (G^2), Vuong-Lo-Mendell-Rubin likelihood ratio test (VLMR), Bayesian Information Criterion (BIC), adjusted BIC, parametric bootstrapped likelihood ratio test (BLRT) and Entropy (Asparouhov and Muthén 2012; Nylund, Asparouhov, and Muthén 2007). In instances where fit statistics did not agree on the best model, I relied on the recommendation by LCA experts to choose the number of latent classes based on the most conceptually defensible and meaningful model that is theoretically informed (Collins and Lanza 2010). Table 2 provides an example of the fit indices for survey year 1989 (a full table for all 19 years is available upon request).

Conventionally, the lower the AIC, BIC and adjusted BIC indices, the better the fit. In contrast, entropy reflects how distinct the classes are from one another, and the higher the value, the better the fit. VLMR and BLRT compare the improvement in fit between neighboring class models. A significant p-value indicates that k class model is a better fit than the neighboring $k-1$ model. The AIC and adjusted BIC declined for each additional class added, suggesting that the 5-class was a better fit than the 4-class model. The entropy index was also higher for the 5-class model versus the 4-class model. However, the BIC increased when I added the fifth latent class to a 4-class model, suggesting the 4-class model was better. VLMR and BLRT provided little information because the results were significant across the models. I chose the 4-class model because the addition of one more class only yielded marginal improvement to the model fit and the interpretation of the 4-class model was more meaningful than the 5-class model, which subdivided the gender ambivalent classes into different types of ambivalence. While this is an

interesting finding, the additional ambivalent class is small and unstable. Because I'm more

interested in making substantial observations across time, the 4-class model was more

meaningful.

Table 2. Latent Class Model Fit Statistics For An Example Year 1989;
N=1,004

	Classes			
	2	3	4	5
AIC	7798.36	7651.422	7557.83	7530.163
BIC	7901.507	7808.598	7769.04	7795.398
Adjusted BIC	7834.809	7706.964	7632.47	7623.89
df	106	95	84	73
G^2	444.095	275.157	159.57	109.899
VLMR (p-value)	0.00	0.00	0.00	0.00
BLRT (p-value)	0.00	0.00	0.00	0.00
Entropy	0.69	0.72	0.71	0.76

Shaded latent class indicates model with best fit.
AIC = Akaike Information Criterion
BIC = Bayesian Information Criterion
df = degrees of freedom
G^2 = Log-likelihood ratio statistics
VLMR = Vuong-Lo-Mendell-Rubin likelihood ratio rest
BLRT = parametric bootstrapped likelihood ratio test

Covariates and Analytical Approach for MNLLCR (Block B)

MNLLCR is an extension of LCA with the purpose of predicting latent class membership

(Yamaguchi 2000). Conceptually, latent classes are analogous to a multinomial variable with

discrete unordered categories.[8] Hence, I used covariates (socio-demographic variables) in a

multinomial logistic regression predicting class membership. The covariates included race,

---

[8] Latent classes can be examined as ordinal instead of nominal by adding additional constraints (Croon 2002; McLachlan and Peel 2000). However, ascertaining if the latent classes are ordinal or categorical is not of substantive interest to this paper and adds little to the analysis. Hence the latent classes are treated as nominal instead.

gender, education, birth cohort, labor force participation, marital status and parenthood and they have been identified by prior research as important variables predicting gender attitude change (Brewster and Padavic 2000; Brooks and Bolzendahl 2004; Cotter et al. 2011).

Because I was interested in stability or change in the latent classes and their covariates over time, I followed the analytical strategies of other methodologically similar studies (e.g. O'Brien and Noy 2015; Silverwood et al. 2011) and conducted the LCA and MNLLCR separately for each of the 19 survey years between 1977 to 2014, using a two-stage estimate strategy. In the first stage, I followed the three-step procedure to conduct the LCA and MNLLCR in Mplus 7.31 (Asparouhov and Muthén 2014). In the second stage, I imported the conditional probabilities generated from Mplus into Stata 13 to conduct post-estimation analyses, specifically obtaining predicted probabilities, which Mplus is not equipped to do. After dropping non-responses (not all respondents in GSS were asked the same questions) and missing observations on all four gender attitudes, the final sample size is 27,213.

To recap, in this dissertation, I aim to answer two questions: first, how persistent is gender ambivalence; and second, how different are gender ambivalents from gender univalent, conceptually who could either be egalitarians or traditionals. LCA helps to answer the first question by empirically clustering respondents with similar attitudinal response patterns and thus enabling the identification of gender ambivalents who support gender equality in one sphere but not the other. MNLLCR helps to answer the second question by using socio-demographic variables to predict class membership.

V.   How Persistent?

To recap, the sociological puzzle that I address in this dissertationis the differential pace in the improvement of attitudes toward gender equality across the public and private spheres. By focusing only on the macro level of the gender structure, specifically gender attitudes, I hypothesize that the uneven improvement in gender equality is due to the growth of gender ambivalents – people who support gender equality in the public but not the private spheres.

I have two research questions, one that looks at the trends in gender ambivalent attitudes, and the other that compares gender ambivalents with other subgroups who are not ambivalent about gender equality. In this chapter, I use latent class analysis to answer my first research question – over time, is there a differential pace of improvement in gender attitudes across the public and private spheres that results in the emergence and persistence of a subgroup of Americans who are gender ambivalents?

Types of Latent Classes

A central feature of latent class analysis is that, though the models provide latent class proportions (percentage of the sample that belong in each latent class), the meanings of the latent classes are interpreted by the researcher relying primarily on item-response patterns. There is no statistical technique or test to determine the meanings behind each latent class. Therefore, it is very important for the researcher to walk readers through the logic behind the interpretation to ascertain validity and reliability.

I've identified a total of six distinct types of latent classes of people with different item-response patterns in their attitudes about gender from 1977 to 2014. Out of these six latent classes, four were gender univalents (*strong egalitarians, egalitarians, strong traditionals* and *traditionals*) reflecting the respondents' consistency in their dis/approval of gender equality

across both spheres. The remaining two classes were gender ambivalents (*pro-work traditional and pro-work strong traditional*) in which the respondents' dis/approval of gender equality were inconsistent across both spheres. However, at each year from 1977 to 2014, out of six latent classes, only a combination of four emerged. The main reason for the combination of four per survey year is because the meaning of the latent classes shift over time. This will be elaborated in detail below.

Table 3. Two Illustrative Examples of Item-Response Patterns for Each Identified Latent Class

Conditional Probabilities of Responses	1977				2012			
	Strong Egalitarians (8%)	Egalitarians (38%)	Traditionals (33%)	Strong Traditionals (21%)	Strong Egalitarians (20%)	Egalitarians (43%)	Pro-Work Traditionals (29%)	Pro-Work Strong Traditionals (8%)
Most men are better suited emotionally for politics than are most women (women in public offices).								
Agree	0.10	0.33	**0.63**	**0.63**	0.15	0.09	0.35	0.40
Disagree	**0.89**	**0.67**	0.37	0.31	**0.85**	**0.91**	**0.65**	**0.60**
It is much better for everyone involved if the man is the achiever outside the home and the woman takes care of the home and family (family social roles).								
Strongly agree	0.02	0.03	0.07	**0.69**	0.06	0.01	0.07	**0.42**
Agree	0.17	0.34	**0.85**	0.25	0.07	0.10	**0.56**	0.35
Disagree	0.30	**0.60**	0.08	0.05	0.24	**0.78**	0.33	0.17
Strongly Disagree	**0.51**	0.04	0.01	0.02	**0.63**	0.11	0.04	0.07
A working mother can establish just as warm and secure a relationship with her children as a mother who does not work (child).								
Strongly disagree	0.06	0.01	0.13	**0.59**	0.03	0.00	0.04	**0.42**
Disagree	0.02	0.13	**0.69**	0.27	0.02	0.11	**0.53**	0.30
Agree	0.21	**0.66**	0.16	0.08	0.18	**0.70**	0.38	0.16
Strongly agree	**0.72**	0.21	0.02	0.07	**0.77**	0.19	0.05	0.12
A preschool child is likely to suffer if his or her mother works (preschool child).								
Strongly agree	0.02	0.06	0.08	**0.75**	0.01	0.02	0.07	**0.68**
Agree	0.11	0.30	**0.90**	0.21	0.04	0.10	**0.71**	0.17
Disagree	0.31	**0.64**	0.03	0.03	0.24	**0.87**	0.26	0.13
Strongly Disagree	**0.56**	0.00	0.00	0.01	**0.71**	0.01	0.01	0.02

Bold indicates largest conditional item-response probability.

The values surrounded by double-lined boxes illustrates the key differences in item-response probabilities between strong traditionals and traditionals vs. pro-work strong traditionals and pro-work traditionals.

The four types of gender univalent were *strongly egalitarians, egalitarians, traditionals* and *strong traditionals. Strong egalitarians* and *egalitarians*, respectively, are those who *strongly* agreed and agreed, with gender equality across both spheres. In the opposite direction, *strong traditionals* and *traditionals* were respondents who, respectively, *strongly* disagreed and disagreed with gender equality in both spheres. To illustrate this more clearly, the first four columns in Table 3 showed the item-response probabilities for each of the four gender univalent classes. Specifically, each survey item response was assigned the probability that each member in the latent class would response affirmatively. The response with the largest predicted probabilities for each survey question were bolded in Table 3.

For example, in column 1 of Table 3 (comprising of 8% of the total sample), we see that in 1977, the members had a 89% chance that they disagreed with the statement that most men are more emotionally suitable for political office than most women. Also, they were more likely (51%) to disagree with a sex-differentiated family social role, had a 72% chance that they strongly agreed that a working mother, relative to a mother who does not work, could establish a warm and secure a relationship with her children and had 56% chance that they disagreed that maternal employment will negatively affect her children. Because respondents in this latent class strongly support gender equality in both the public and private sphere, I interpret this latent class as representing a cluster of respondents who are *strong egalitarians*.

Similarly, members in the third column (comprising of a-third of the sample in 2012) were more likely (63%) to agre that men are better suited emotionally in politics than women, more likely (85%) to agree that it is better for men to be the achiever outside the house while women takes care of the home and family, more likely (69%) to disagree that a working mother could have a warm and secure relationship with her children and had a 90% chance that they

agreed that a preschool child of a working mother is likely to suffer. Based on these item-response probabilities, I interpret this latent class as *gender traditionals* because they consistently disapproved of gender equality across both spheres. Correspondingly, because respondents in column 4 not only disapprove of gender equality across both spheres but they do so in a more intense way, I label this latent class as *strong traditionals*.

There were two types of gender ambivalent latent classes – *pro-work traditionals* and *pro-work strong traditionals*, and they are represented in the last two columns in Table 3, comprising of 29% and 8% of the sample in 2012, respectively. Though the term *pro-work traditionals* and *pro-work strong traditionals* may appear a little clunky, it is useful to highly the nature of their gender ambivalence – supportly women in the public sphere of paid work but not in the private sphere.

In the last column of Table 3, in 2012, members had a 60% chance that they disagreed with the statement that women are not as emotionally suitable as men for politics, but had a 42% chance that they strongly agreed with sex-differentiated family social roles, a 42% chance that they strongly disagreed that working mothers can have a warm and secure relationship with her children and a 68% chance they strongly agreed that a preschool child will suffer if his or her mother works. I interpret this class as *pro-work strong traditionals* (in other words, a gender ambivalent latent class) to reflect their endorsement of gender equality in the public sphere but disapproval of gender equality in the home. Correspondingly, *pro-work strong traditionals* share the same ambivalence for gender equality, supporting equality in the workplace but not in the home, but in a more intense fashion. I repeat these same interpretive processes across all 19 survey-years. In doing so, we are able to see how one latent class transition to another.

The main difference between t*raditionals* and *strong traditionals*, and both gender

ambivalent classes (*pro-work traditionals* and *pro-work strong traditionals*) were outlined in Table 3 using double-lined boxes. And to reiterate, *pro-work traditionals* and *pro-work strong traditionals* differed from *traditionals* and *strong traditionals*, respectively, only in terms of the former's support for gender equality in the public sphere.

It is also important to remember that even though there were a total of six distinct latent classes, only a combination of four (out of the six) latent classes were present in each of the 19 survey years from 1977 to 2014. Next, I look at how the different latent classes evolved over time, and how to understand these patterns.

Stability and Changing Latent Classes Over Time

One of the advantage of using GSS is that we can analyze different gender attitudes across a long time horizon. A disadvantage, however, is that GSS is a repeated cross-sectional dataset and not panel data. As such, latent class transitions (does the meaning of latent class change over time, for example, from *gender traditionals* to *gender ambivalent* classes?) has to be inferred. By inferring, I'm specifically looking at the latent class results for each survey year and whether the types of latent classes remain the same or change over time.

At first blush, the analyses show that though there were only four latent classes at each survey year, two of the latent classes evolved, while the other two remained stable over time. To elaborate, Figure 2a represented the latent class probabilities (proportion of the sample that belong in the latent classes for each year) for the two stable latent classes, while Figure 2b depicted the same results but for the evolving latent classes.

From Figure 2a, we see that though the proportion of people who were *strong egalitarians* (strongly support gender equality across both spheres) and *egalitarians* (support

gender equality across both spheres) ebbed and flowed over this almost 4-decade time period, generally, both of these latent classes grew in size. In 1977, slightly less than 10% of the American people were *strong egalitarians*, but that doubled to 20% by 2014. Similarly, *egalitarians* comprised of almost 40% of the American people in 1977 and increased by slightly more than 10 percentage point, to about 50% in 2014. Taken together, this illustrated that, by 2014, 70% of the American population endorsed gender equality in both spheres. The gender revolution is still unfolding. It has not stalled.

While *egalitarians* and *strong egalitarians* remained stable latent classes over time, others evolved from one type of latent class to another. Figure 2b, on the other hand, graphically depicted the transition from *traditionals* and *strong traditionals* into *pro-work traditionals* and *pro-work strong traditionals*, respectively. *Traditionals* opposed gender equality in both spheres from 1977 to 1986, but from 1989 onwards, they began to exhibit ambivalent attitudes about gender equality by supporting gender equality only in the public sphere while remaining intransigent about traditional gender norms in the private sphere. In short, *traditionals* evolved into *pro-work traditionals* and they remained so thereafter. Unlike *egalitarians* and *strong egalitarians* whose proportions grew over time, the proportion of Americans who are *pro-work traditionals* actually remained relatively the same from 1989 to 2014, albeit some minor fluctuations in between the years (I'll discuss the fluctuations in the next section). In 1989, 28% of the American people were *pro-work traditionals* and 25% remained so by 2014.

In contrast, the evolution of *strong traditionals* to *pro-work strong traditionals* was comparatively unstable. For example, in 1996, *strong traditionals* evolved into *pro-work strong traditionals* but they transitioned back into *strong traditionals* in 1998. And this oscillation between *pro-work traditionals* and *strong traditionals* continued until 2014. This begets the

question: why is the replacement of *traditionals* with *pro-work traditionals* more stable than the replacement of *strong traditionals* with *pro-work strong traditionals*? In short, why is one ambivalent class (*pro-work traditionals)* more stable than the other (*pro-work strong traditionals)*?

This dilemma can be understood by returning back to the theoretical debate between different social psychological camps on attitudinal ambivalence. On the one hand, social psychologists working in the cognitive consistency paradigm argue that discordant attitudes lead to cognitive dissonance, which motivates the incumbents to resolve the ambivalence by changing their attitudes toward either direction. Others contend that human beings are cognitively more resilient than previously assumed and are capable of maintaining ambivalence, without a pressing cognitive need to resolve it. My results seem to suggest that both positions are correct, albeit overlooking a key nuance – intensity of ambivalence. The more polarizing the attitudes, that is the greater the intensity of discordance, the greater the likelihood of constant attitudinal adjustment, as exemplified by respondents oscillating between strongly disapproving of gender equality across both spheres or only in the private sphere. In contrast, the stability of *pro-work traditionals* suggests that individuals are fully capable of maintaining ambivalence, if the intensity of ambivalence is not severe.

Figure 2c combined Figures 2a and 2b to show the overall trends. With few exceptions (1986 and 2004), *egalitarians* were the largest latent class, comprising of more than 50% of the American population by 2014, followed by *pro-work traditionals* at about a quarter of the American public in 2014. *Pro-work traditionals* remain the smallest latent class, representing less than 5% of Americans in 2014, while *egalitarians* were somewhere in between at slightly more than 20%.
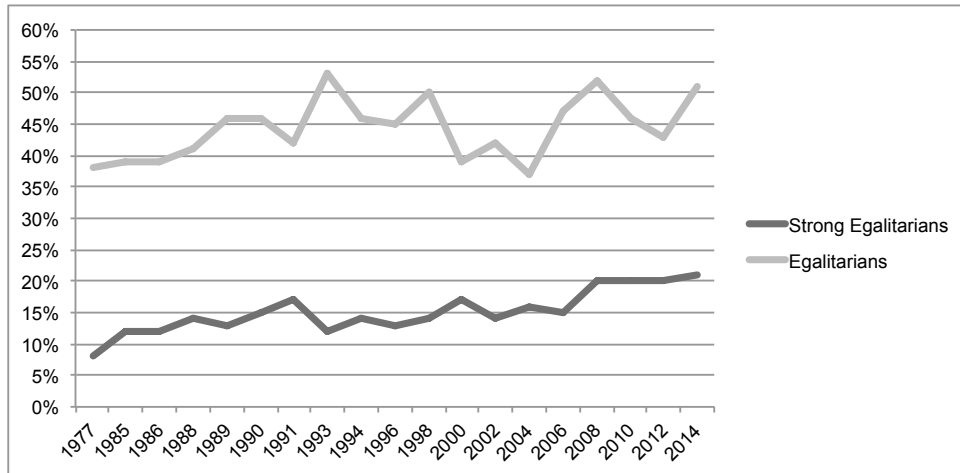
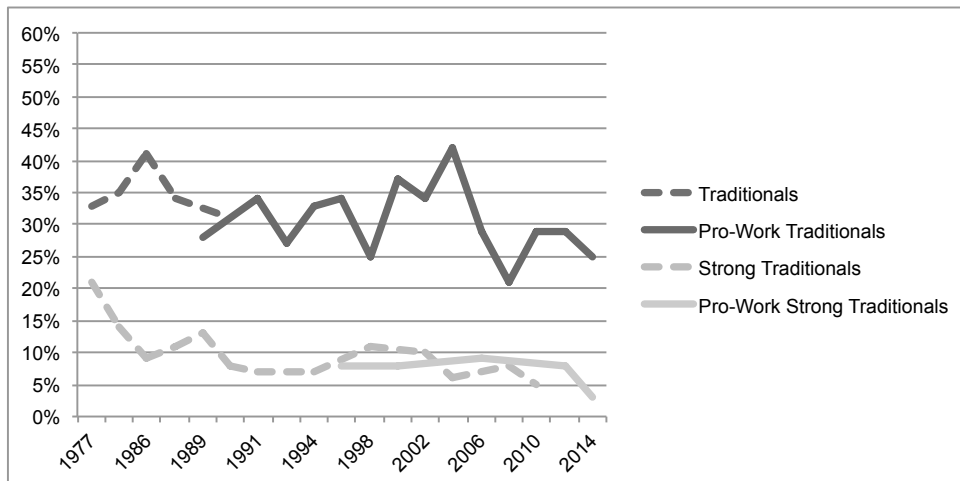**Figure 2a:** Latent Classes That Were Stable Over Time

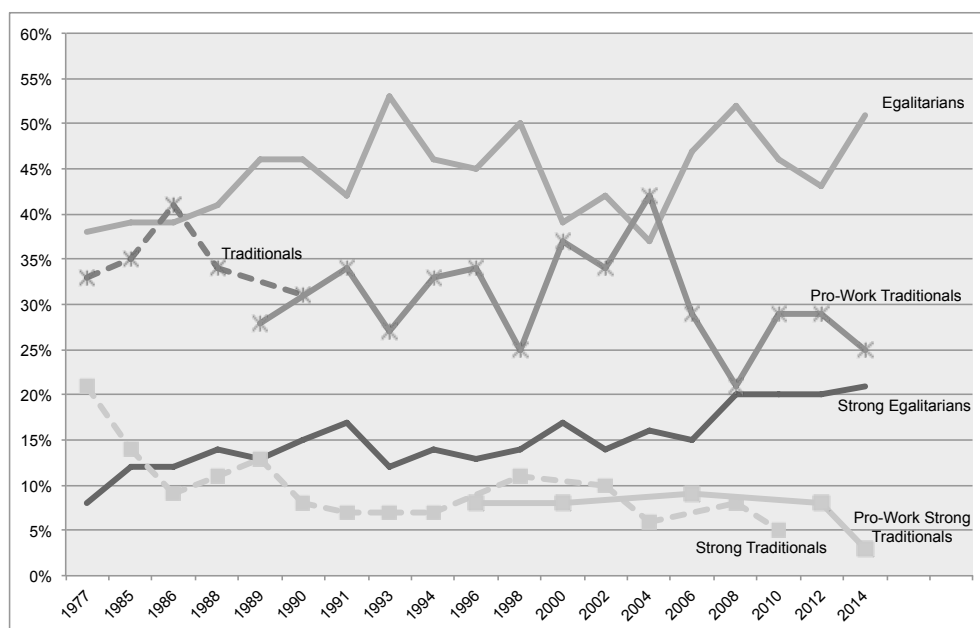**Figure 2b:** Latent Classes That Transitioned Over Time

Figure 2c: Nature of Each Identified Latent Class and Their Proportions from 1977 to 2014 (A combination of Figures 2a and 2b)

The major finding here is that as the gender revolution unfolded, there have been two general trends in cultural logics held by Americans. First, there was a growth in the proportion of Americans who support gender equality in both spheres. By 2014, *egalitarians* and *strong egalitarians* together, constitute 72% of the American public, increasing by 26 percentage points since 1977. There is much to celebrate about the expansion of gender equality across America. To delve into the specifics of what segment of the American population support gender equality while others remained intransigent is important and will be addressed in the next chapter.

Second, the replacement of *traditionals* and *strong traditionals* with gender ambivalents indicates that the gender revolution also had some success among Americans who hold traditional views about gender. Their worldviews have changed as well, women are now seen as equals but only in the public sphere. My results show that gender attitudes have neither improved uniformly between the public and private spheres across the years nor have they stalled

completely. Most importantly, the very fact that ambivalent classes persisted from 1989 onwards and reliably constituted more than a quarter of the American population demonstrates both the prevalence and significance of gender ambivalence; a trend that a large majority of previous analyses that used variable-centered regressions on gender attitudes have missed. In short, gender ambivalence has been an enduring obstacle preventing the gender revolution from completing its course.

Conclusion

Understanding how gender equality change over time is a challenging endeavor, primarily because gender is a multi-dimensional concept, encompassing almost all facets of social and personal lives. Looking at how gender attitudes evolved over time is one important, though not exhaustive way, to look at the past, current and perhaps, even future state of the gender revolution.

A common way to analyze different gender attitudes over time is to construct a gender attitude scale. An advantage of this approach is that you are analyzing the correlation between different measures used to construct the scale and seeing if it increases or decreases with time, with the assumption that the correlation is a proxy for gender equality. However, there are some disadvantages. First, the pace of improvement may differ across the different measures. Hence any changes in the scale could be drive by only a small selection of the measurement variables in the scale. Second, scale construction is widely used because it enables the reduction of information. What is foregrounded is the correlation between the variables, that is what is common between the measurement variables. What becomes receded to the background is what makes these variables distinct in the first place. In short, using a scale to analyze changes to

gender attitudes sacrifices complexity and nuance, in exchange for clean and neat results. One way to strike a balance between highlighting commonality between different gender attitude variables while recognizing their differences is to use latent class analysis.

In this chapter, I address the question: over time, is there a differential pace of improvement in gender attitudes across the public and private spheres that results in the emergence and persistence of a subgroup of Americans who are gender ambivalents? Using GSS data from 1977 to 2015 that contains four consistently asked survey questions on different gender attitudes to conduct a latent class analysis, my findings showed that gender ambivalence (Americans who support gender equality in the public but not the private spheres) emerged in 1989 and persisted through 2014, and presumably to now as well. Additionally, the proportion of the American public who are gender ambivalents is not trivial – they reliably constitute the second largest latent class from 1989 onwards.

In the next chapter, I examine if gender ambivalents are different from other subgroups (*gender traditionals* and *gender egalitarians*) in terms of their socio-demographic characteristics.

VI. HOW DIFFERENT?

In the previous chapter, I show that from 1977 to 1988, Americans were gender univalent, either for (e.g. *gender egalitarians*) or against gender (e.g. *gender traditionals*) equality in both the public and private spheres, albeit some were stronger in their convictions (e.g. *strong egalitarians*) than their counterparts. However, from 1989 onwards, those who were against gender equality in both spheres evolved into gender ambivalents, they began to embrace gender equality in the public but not in the private spheres. Hence I use the term *pro-work traditionals* (and *pro-work strong traditionals*) to reflect traditionals' acceptance of gender equality in the public sphere but not in the private. For expediency, I use gender ambivalents as a collective term to refer to both *pro-work traditionals* and *pro-work strong traditionals*. The same goes for gender univalent.

However, it is not enough, empirically, to show that gender ambivalents exist. Who are they? Are they different from people who are not ambivalent about gender equality whom support or oppose gender equality in both the public and private spheres? Do the characteristics of gender ambivalents change over time?

The latent classes derived in the analyses in the last chapter were treated as multinomial variables. In this chapter, I include sociodemographic variables as covariates to conduct a multinomial logistic regression to predict who occupies different latent classes based on characteristics like gender and education. Because of the sheer number of covariates and the large number of survey years, it is neither feasible nor useful to discuss all the coefficients, standard errors and statistical significance for all of the multinomial logit latent class regression in a comprehensible fashion (the full table is nonetheless presented in Appendix A). Instead, a more productive way to discuss the results is to use predicted probabilities following the

marginal effects at the mean (MEMS) (Long and Freese 2014: 341) or the "average then predict" approach (Gordon 2012: 592). In other words, would the probability of being in one latent class relative to other latent classes for an average person in the sample change with the change of a single characteristic? Let me elaborate by starting with a familiar example about reporting coefficients from a multivariate regression and then contrasting it to reporting predicted probabilities.

Regression models are used to analyze the statistical association between the dependent (e.g. income) and independent variable of interest (e.g. parental education attainment). However, there are multiple ways to report the results. The most conventional way is to report coefficients – the statistical association between two variables of interest – while controlling for all other variables. An advantage of this approach is that you are reporting the relationship between the dependent and the independent variable without worrying about the effect from other variables. However, a challenge is that we do not know how meaningful the coefficients are, above and beyond the statistical association. This is where reporting predicted probabilities is useful, as an alternative.

Instead of "controlling" away the effects of other variables in the model, the MEM approach includes them at their means and reports predicted probabilities. That is, the MEM approach examines the probability of how the dependent variable changes when a predictor variable change for an average person in the model. Using the same example above of analyzing the effect of parental education attainment on income, the MEM approach reports the probability of how an average person's income in the model would change if we change their parental education attainment from, say, high school to having a college degree. To put it simply, if you had two otherwise average person in the model, one whose parents had a high school diploma

and the other with a college degree, what is the probability that the latter would make more money than the former? This gives us a clearer picture of how parental's education attainment matter in a more meaningful way than by simply reporting coefficients.

Circling back to the focus of this chapter on understanding if gender ambivalents differ in terms of sociodemographics variables from those who are not ambivalents, reporting predicted probabilities allows us to understand, for an average person, how the probability of being in one latent class (e.g. gender ambivalent) will change to another (e.g. gender univalent) if I change a single sociodemographic variable like gender or race or education.

I focus on two types of comparison: (a) strong egalitarians and egalitarians vs. traditionals and strong traditionals (a comparison among gender univalent classes); (b) strong egalitarians and egalitarians vs. pro-work traditionals and pro-work strong traditionals (a comparison between gender univalent and gender ambivalent classes). Also, among the covariates, I highlighted only gender, education, birth cohort and work status because they were statistically significant for a large majority of the survey years across the latent classes. Variables such as race were only significant sporadically. One of the reasons for this is the limitation of the data. Because I'm using the GSS data from 1977 onwards, the racial categories in the GSS are limited to only White, Black and others. The sporadic significance could reflect that the survey data does not capture accurately the changing racial landscape of the US.

Comparing Among Gender Univalent Latent Classes

I begin by comparing *strong egalitarians* and *egalitarians* vs. strong traditionals and traditionals across the survey years (1977, 1985, 1986 and 1988) when these four classes emerged. In 1977, there was no gender effect on latent class membership, that is, holding all other variables constant at their means, being male or female had no statistical association with

latent class membership (Figure 3). But that changed from 1985 onwards where females were more likely to be strong *egalitarians* (category "E") and *egalitarians* (category "e") and less likely to be *traditionals* (category "t") and/or *strong traditionals* (category "T"). This change in the gender effect suggests that over time, men and women began to diverge in their gender attitudes, with women more likely to support gender equality across both spheres while men were less likely to do so.
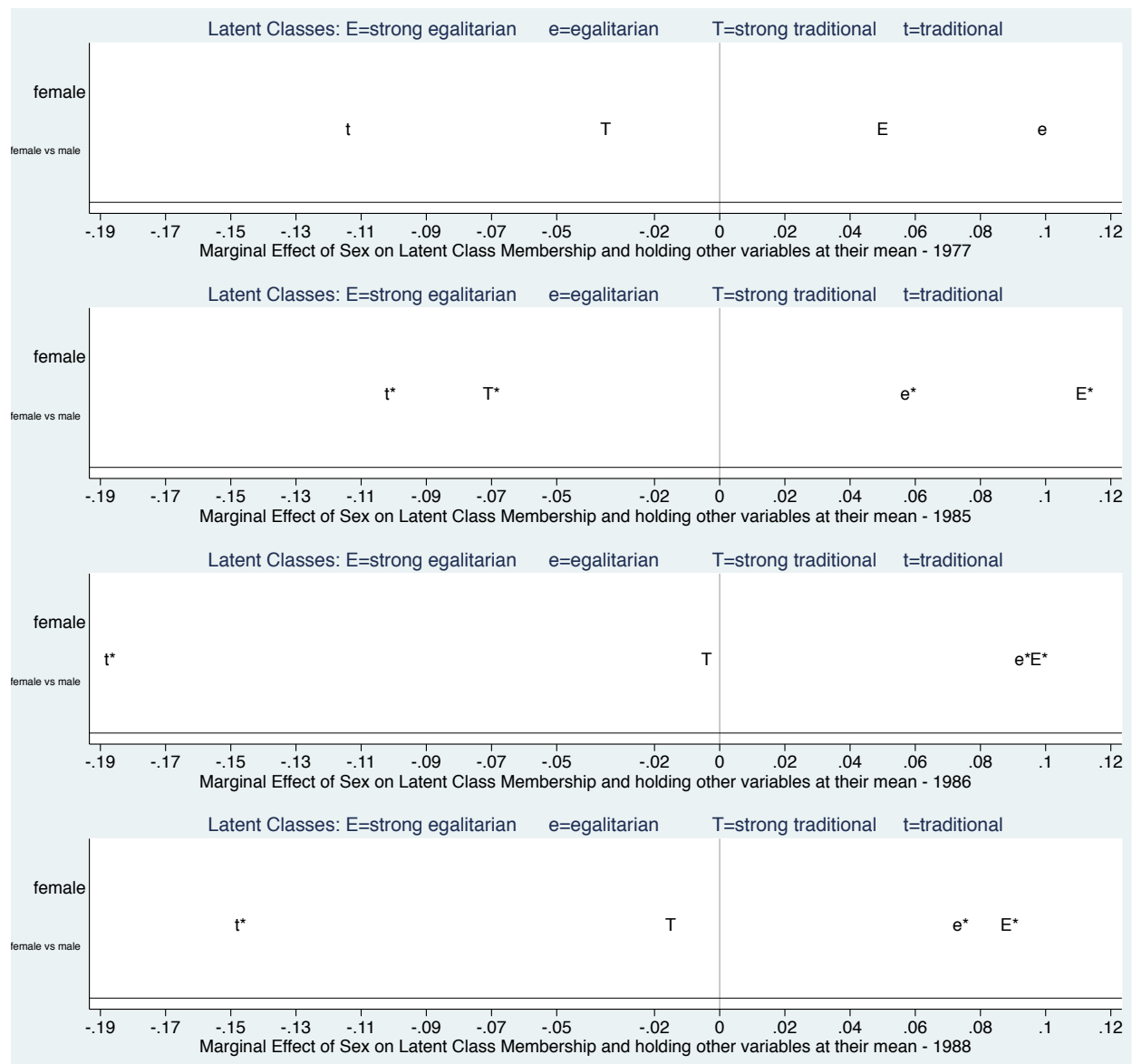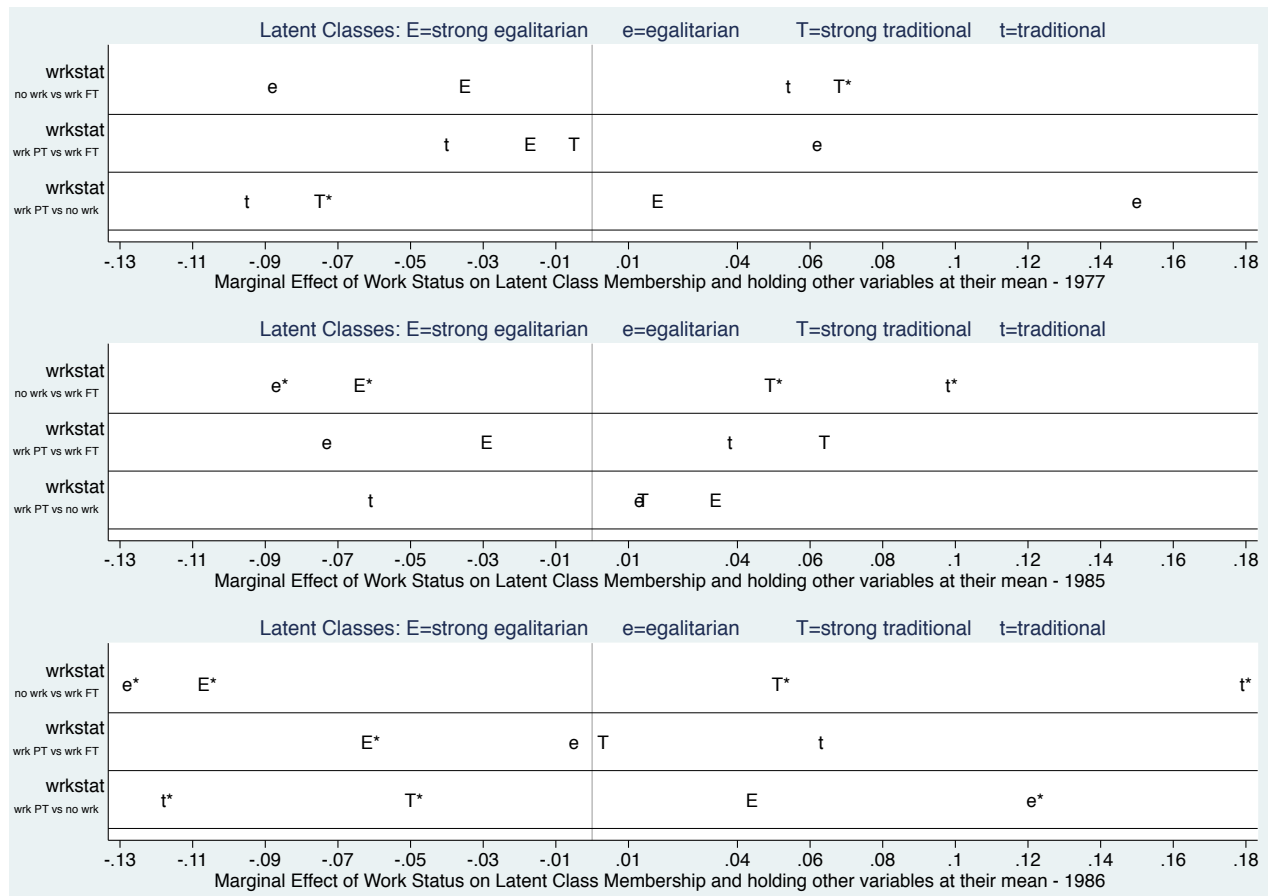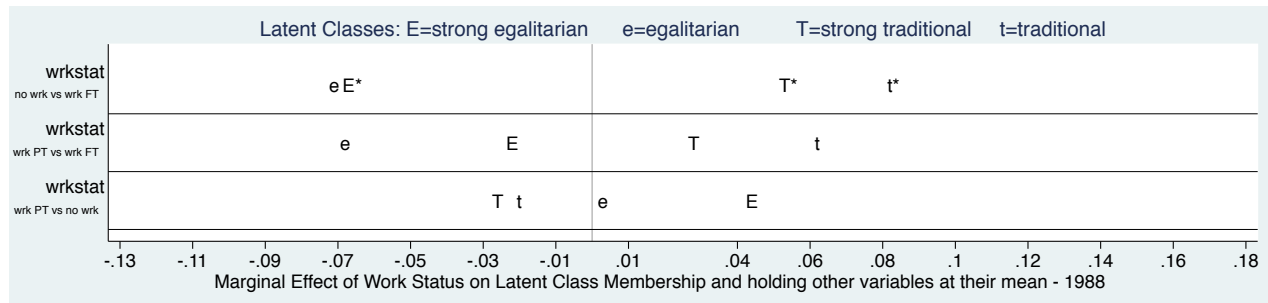

Figure 3. Predicted Probabilities of Being Female on Latent Class Membership, 1977-1988 (asterisks denote statistical significance at p-value <.05)

Figure 4 presents the marginal change in work status on latent class membership. The most stable marginal effect is the change from working fulltime to being outside the workforce. Consistently from 1977 to 1988, those who were outside the workforce, relative to those who were working fulltime, were more likely to be strong traditionals and/or traditionals and less likely to be egalitarians and/or strong egalitarians. In contrast, working part-time vs. working full-time and working part-time vs. being outside the workforce had low to no predictive power when it comes to latent class membership. In sum, then, my results here support the conclusions of previous studies (e.g. Bolzendahl and Myers 2004; Kroska and Elman 2009) that show that participating in the workforce on a fulltime basis for both men and women, relative to working part-time or being outside the workforce, increases the probability of endorsing gender equality across both spheres.

Latent Classes: E=strong egalitarian   e=egalitarian   T=strong traditional   t=traditional

Latent Classes: E=strong egalitarian   e=egalitarian   T=strong traditional   t=traditional

wrkstat no wrk vs wrk FT	e E* T* t*
wrkstat wrk PT vs wrk FT	e E T t
wrkstat wrk PT vs no wrk	T t e E

-.13   -.11   -.09   -.07   -.05   -.03   -.01   .01   .04   .06   .08   .1   .12   .14   .16   .18
Marginal Effect of Work Status on Latent Class Membership and holding other variables at their mean - 1988

no wrk = outside the work force
wrk FT = working fulltime
wrk PT = working part time

Figure 4. Predicted Probabilities of Work Status (wrkstat) on Latent Class Membership, 1977-1988 (asterisks denote statistical significance at p-value <.05)

In comparison to work status, the patterns of the marginal change in education on latent class membership were more complicated (Figure 5). By and large, one marginal increase in level of education (i.e. from less than a high school education to completing high school; from having a high school education to having some college education; from having some college education to obtaining a college education and higher) did not yield a significant change in latent class membership, with the exception of a change from having less than a high school education to completing high school. Across the years, the former was more likely than the latter to be *traditional* and/or *strong traditional* and less likely to be *strong egalitarians* and/or *egalitarians*. In contrast, two marginal increase in levels of education (i.e. from a high school diploma to a college degree or higher and less than high school education to having some college education) yielded more stable effects. Those with a college degree or higher, relative to having a high school diploma, were less likely to be *traditionals* and more likely to be *strong egalitarians* and/or *egalitarians*. Similarly, those with less than a high school education, in comparison to having some college education, were more likely to be *traditionals* and/or *strong traditionals* and less likely to be *egalitarians*. The effect size is the strongest across the years between the extreme ends of the education levels, namely, comparing those with less than high school

education and those who have a college degree and higher. The former are more likely to be

traditionals and/or strong traditionals and less likely to be egalitarians and/or strong egalitarians,

relative to the latter. Taken together, these patterns suggest that the wider the education gap, the

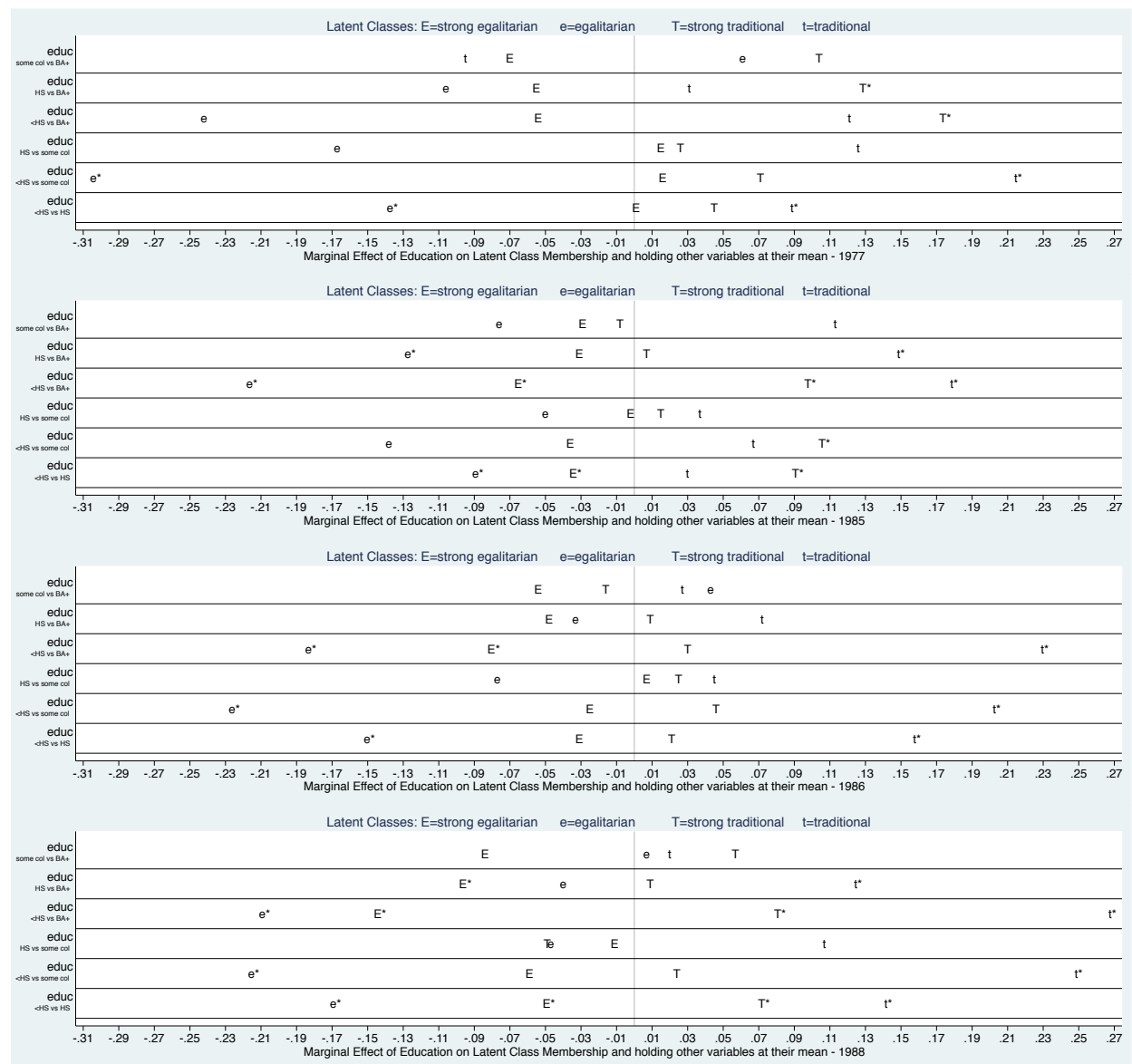greater the marginal effect on predicting latent class membership.

Figure 5. Predicted Probabilities of Education on Latent Class Membership,
1977-1988 (asterisks denote statistical significance at p-value <.05)

Figure 6 illustrated the marginal change in birth cohort on latent class membership. The marginal change between adjacent birth cohorts (i.e. from pre-Baby-boomers to Baby-boomers or Baby-boomers to Generation-X) had inconsistent results. Relative to Baby-boomers, pre-Baby-boomers were more likely to be traditionals and/or strong traditionals and less likely to be egalitarians and/or strong egalitarians, and this effect persisted from 1977 to 1988. However, the pattern between Baby-boomers and Generation-X was vastly different than the pattern between pre-Baby-boomers and Baby-boomers. In 1985, even though Generation-Xers, relative to Baby-boomers, were more likely to be egalitarians, they were, surprisingly, less likely to be strong egalitarians. Interestingly, in 1986, Baby-boomers and Generation-X, reflected by the lack of statistical significance, were no more likely to be in one latent class over the other. However, that changed by 1988 where Generation-Xers, relative to Baby-boomers, were more likely to be egalitarians and less likely to be either *traditionals* or *strong traditionals*. Similar to the patterns related to marginal change in education, the wider the gap in birth cohort, the stronger and more consistent the effect size was. Pre-Baby-boomers, relative to participants belonging to Generation-X, were more likely to be *traditionals* and/or *strong traditionals* and less likely to be *egalitarians* and/or *strong egalitarians*.
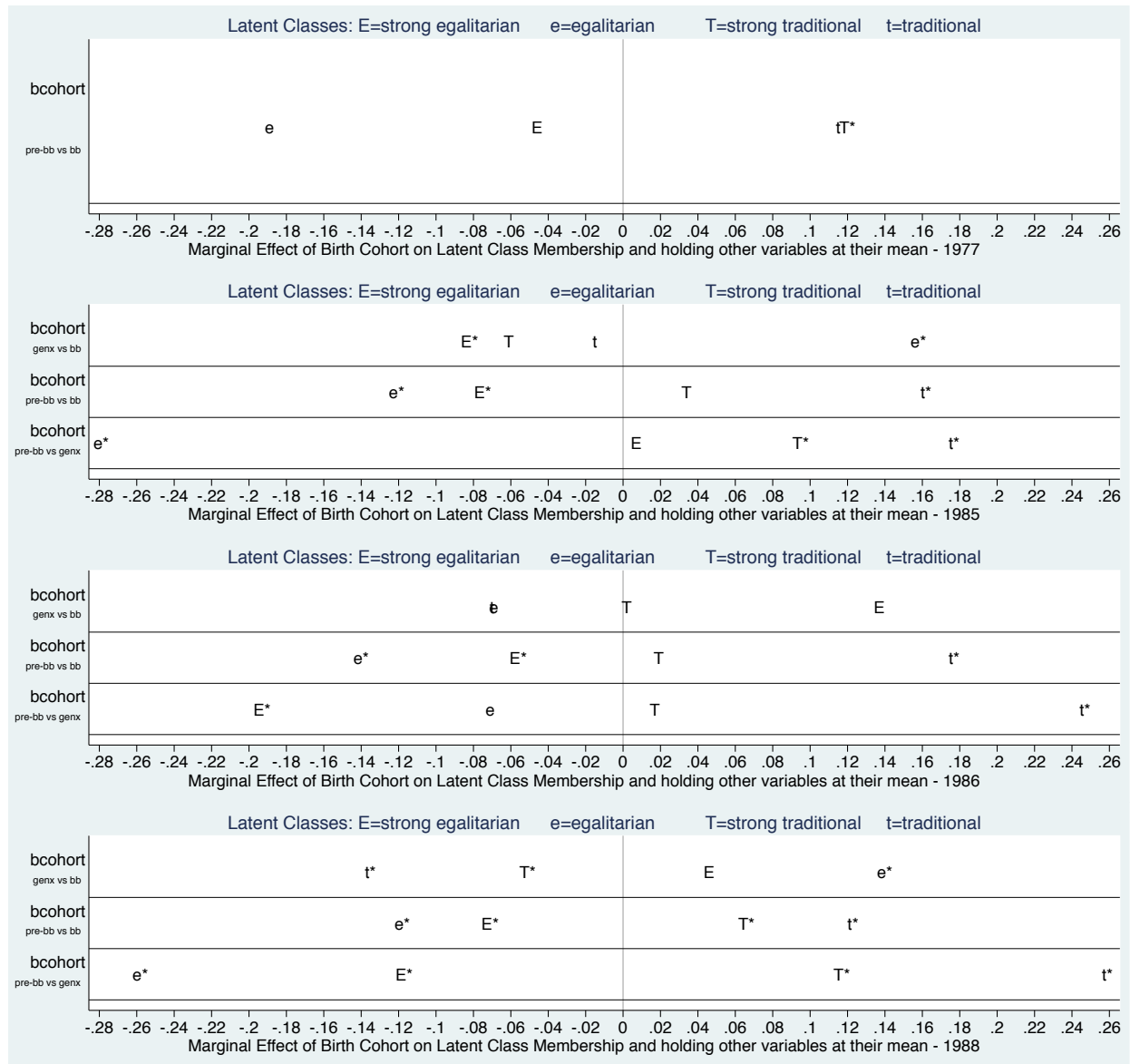
Figure 6. Predicted Probabilities of Birth Cohort on Latent Class Membership, 1977-1988 (asterisks denote statistical significance at p-value <.05)

Comparing Between Gender Univalent and Gender Ambivalent Latent Classes

Next, I discuss the comparisons between *strong egalitarians* and *egalitarians* vs. *pro-work traditionals* and *pro-work strong traditionals* across four survey years – 1996, 2000, 2006 and 2014. Figure 7 illustrates the marginal effect of being female on latent class membership. Across the years, females were consistently more likely to be strong egalitarians and/or

egalitarians. In contrast, females were less likely to be *pro-work traditionals* (category "a") and

this effect declined after 1996 and stayed relatively stable from 2000 onwards. Generally, there is

no gender difference in predicting membership of *pro-work strong traditionals* (category "A")

with the exception of 2000. Interestingly, the effect size for *strong egalitarians* increased over

time while the effect size for pro-work traditionals stayed relatively the same. This suggests that

the gender gap among strong *egalitarians* was increasing while the gender gap among *pro-work*

traditionals stayed relatively the same. Part of the reason why the gender gap is increasing for

strong egalitarians is not surprising from the position of interest-based perspective. Women have

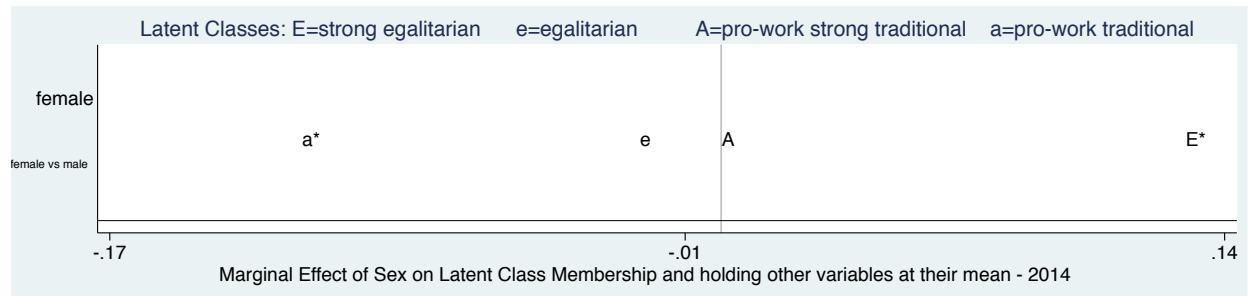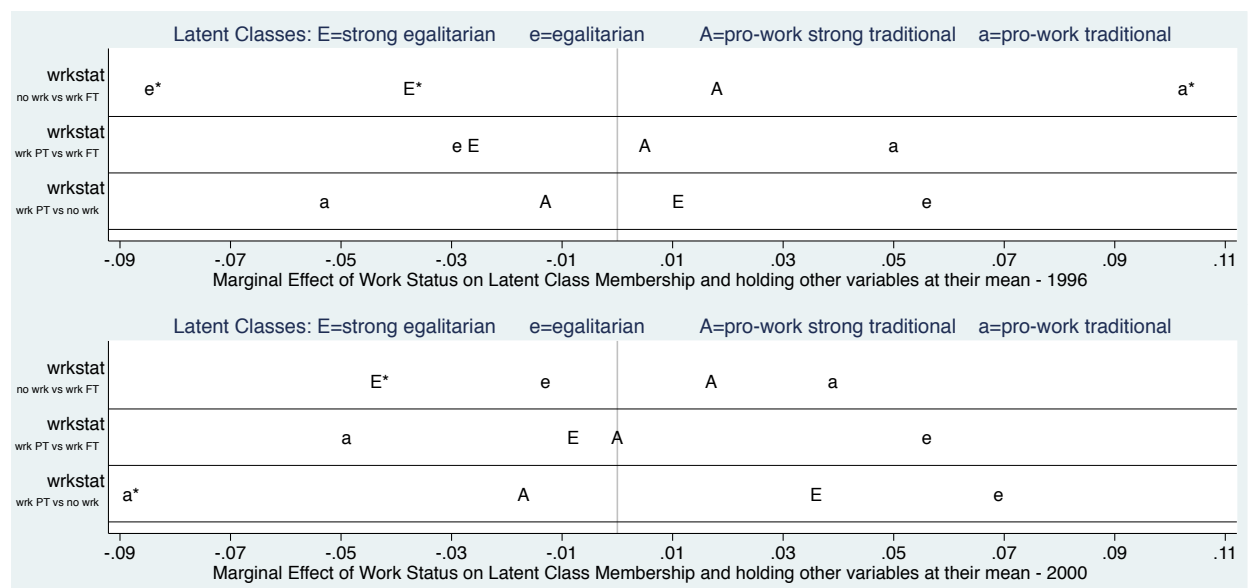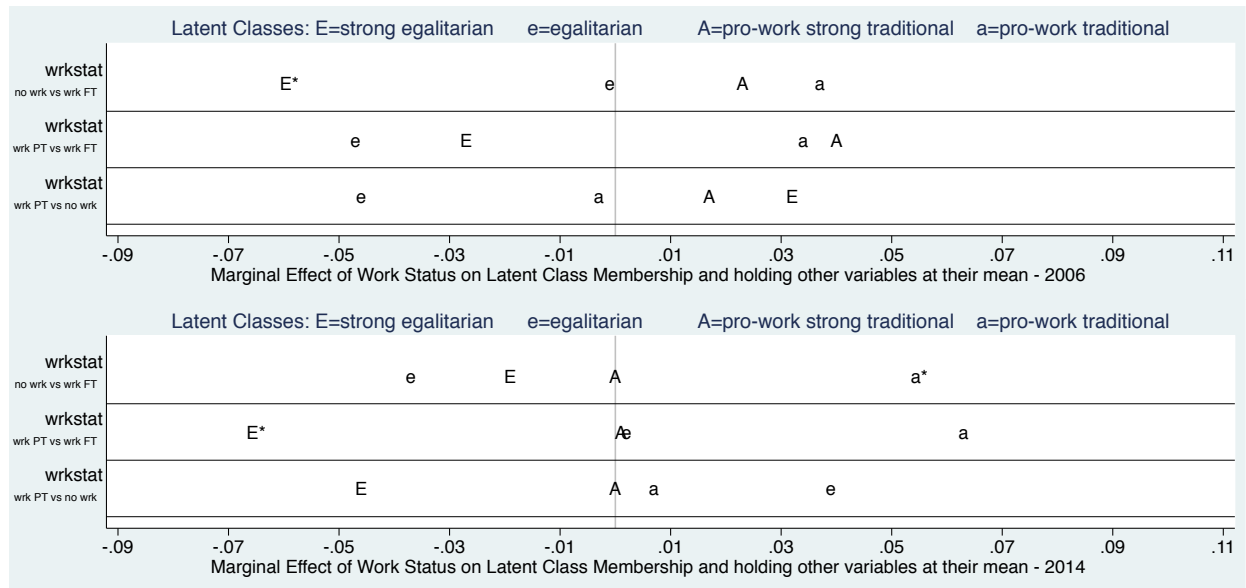more to gain for gender equality across both spheres.

Latent Classes: E=strong egalitarian   e=egalitarian   A=pro-work strong traditional   a=pro-work traditional

Figure 7. Predicted Probabilities of Being Female on Latent Class Membership, 1996-2014 (asterisks denote statistical significance at p-value <.05)

Figure 8 presents the marginal effect of a change in predicted probabilities of latent class membership due to a discrete change in work status, while holding all other variables at their mean. Generally, marginal changes in work status yielded no consistent statistical association. This pattern even applies to work status at the extremes. In 1996, those who were outside the workforce versus those who work fulltime were more likely to be ambivalents (both *pro-work traditionals* and *pro-work strong traditionals*) and less likely to be *egalitarians* and/or *strong egalitarians*. However, this statistical relationship mostly went away by 2014, with the exception of ambivalents. In contrary to previous studies, this pattern suggests that, over time, work status is less able to predict latent class membership.

Latent Classes: E=strong egalitarian   e=egalitarian   A=pro-work strong traditional   a=pro-work traditional

Marginal Effect of Work Status on Latent Class Membership and holding other variables at their mean - 1996

Latent Classes: E=strong egalitarian   e=egalitarian   A=pro-work strong traditional   a=pro-work traditional

Marginal Effect of Work Status on Latent Class Membership and holding other variables at their mean - 2000

Latent Classes: E=strong egalitarian   e=egalitarian   A=pro-work strong traditional   a=pro-work traditional

no wrk = outside the work force
wrk FT = working fulltime
wrk PT = working part time

Figure 8. Predicted Probabilities of Work Status (wrkstat) on Latent Class Membership, 1996-2014 (asterisks denote statistical significance at p-value <.05)

Figure 9 presents the marginal change in education on latent class membership. A change in one level of education (i.e. comparing adjacent educational levels) became significant over time between only two sets of adjacent education levels. The first is those with less than a high school education, relative to those with a high school diploma, were more likely to be ambivalents and less likely to be *egalitarians/strong egalitarians*. The second is the change from some college education to a college degree and more yielded no statistical significance until 2014 with the former being more likely to be *pro-work traditionals* and less likely to be *strong egalitarians*.

In contrast, the predicted probabilities were more stable over time when it came to changes beyond adjacent education levels (i.e. high school education to having a college and more; less than high school to having some college education). Those who finished high school (relative to completing a bachelor's degree or more) and those who had less than a high school

education (relative to having some college education) were more likely to be ambivalents and less likely to be either *egalitarians* and/or *strong egalitarians*; and these patterns persisted across time. Thus, the more education one receives, the greater the likelihood of being a *strong egalitarian* or *egalitarian*; a pattern that is also observed in other studies (e.g. Sjöberg 2010).
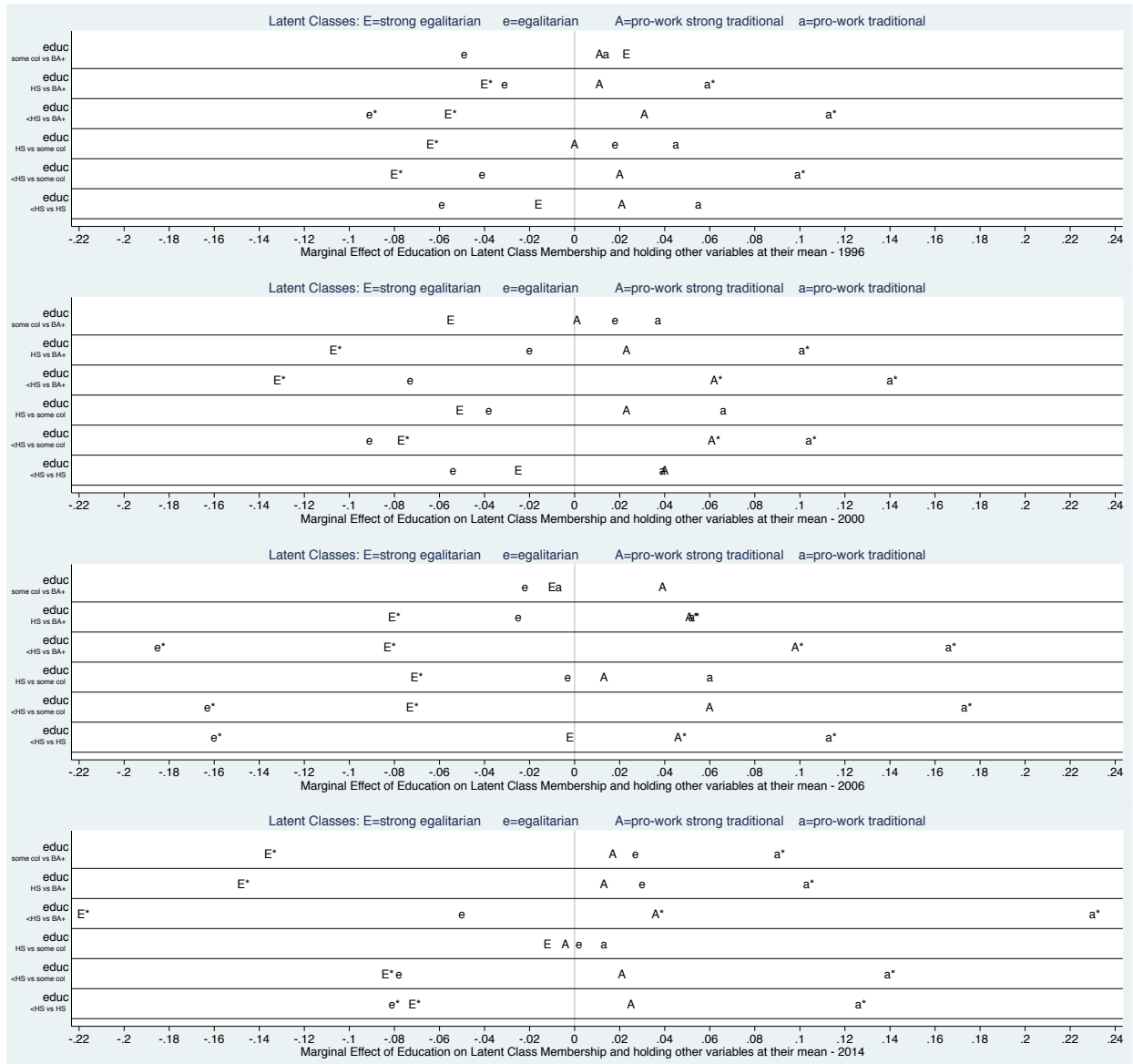

Figure 9. Predicted Probabilities of Education on Latent Class Membership, 1996-2014 (asterisks denote statistical significance at p-value <.05)

Similar to education, the marginal change in adjacent birth cohorts on class membership can be conceived of one unit change in birth cohort (e.g. pre-Baby-boomers to Baby-boomers) while marginal change beyond adjacent levels of birth cohort (e.g. pre-Baby-boomers to Millennials) can be thought of as more than one unit change in birth cohort (Figure 10). Comparing pre-Baby-boomers with Baby-boomers, the marginal effect remained relatively stable across time. Pre-Baby-boomers were less likely than Baby-boomers to be strong egalitarians and egalitarians, and more likely to be pro-work traditionals. In contrast, the marginal change between Baby-boomers and Generation-X appeared to be declining over time. In 1996, Generation-Xers were more likely than Baby-boomers to be *egalitarians* and less likely to be gender ambivalents but those patterns were not significant over the years. In 2006, respondents who belonged to Generation-X were more likely than Millennials to be *pro-work traditionals* and less likely to be *egalitarians* but that effect also disappeared by 2014. Taken together, there appeared to be marked differences between pre-Baby-boomers and Baby-boomers and this difference endured across time. In contrast, the differences between Baby-boomers and Generation-X were less pronounced, suggesting that Baby-boomers and Generation-X were more similar than Baby-boomers and pre-Baby-Boomers. Similarly, even though there were significant differences between Generation-X and Millennials, those differences disappeared by 2014, thus indicating that Generation-X and Millennials were also progressively becoming similar. In all, each set of adjacent birth cohorts were becoming more similar in gender attitudes with the exception of pre-Baby-boomers and Baby-boomers.
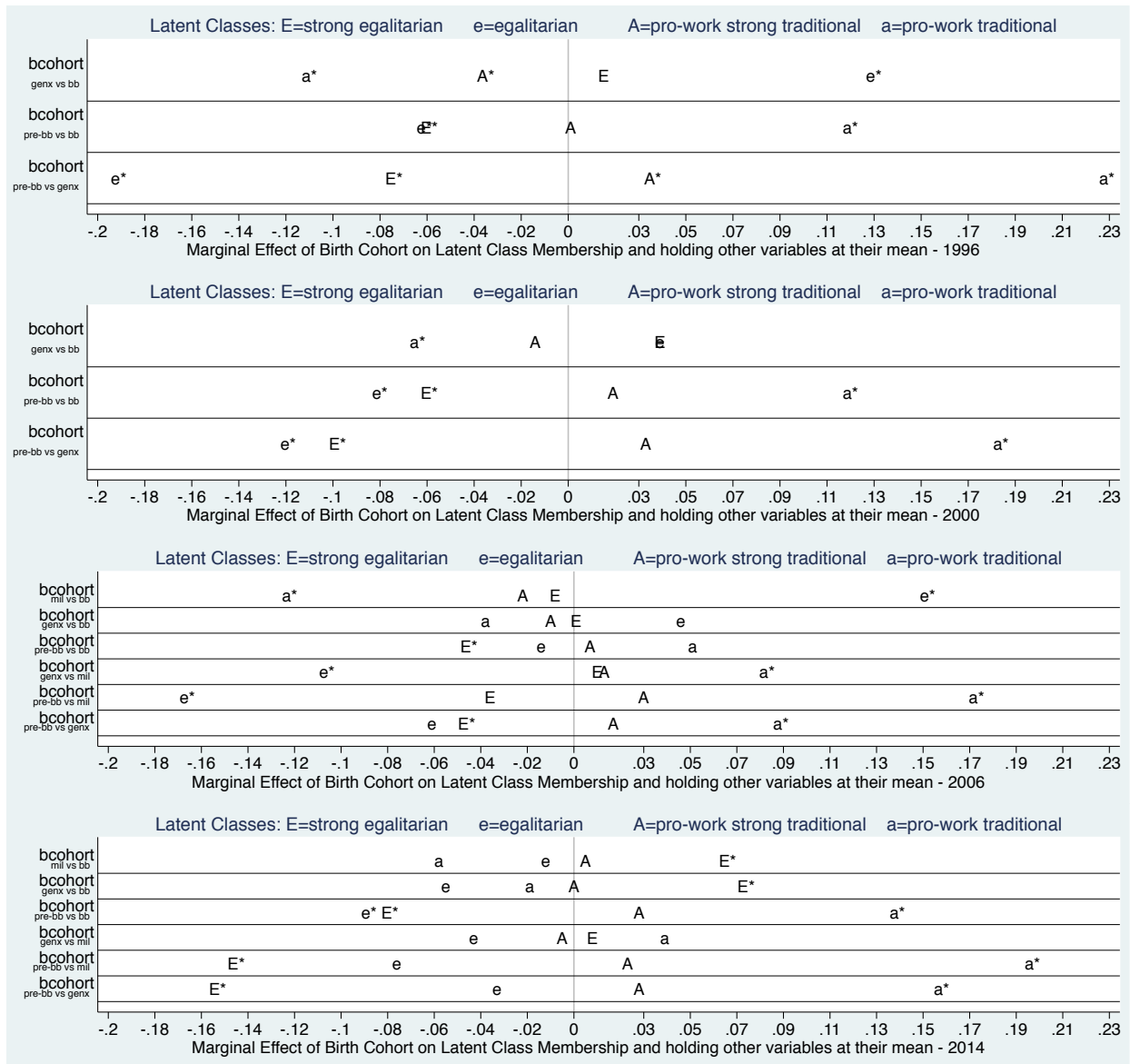
Figure 10. Predicted Probabilities of Birth Cohort on Latent Class Membership, 1996-2014 (asterisks denote statistical significance at p-value <.05)

In contrast, the marginal change beyond adjacent levels of birth cohorts yielded more stable patterns across time, but only in comparison to the earliest birth cohort, pre-Baby-boomers. Relative to pre-Baby-boomers, Millennials and Generation-Xers were more likely to be *egalitarians* and/or *strong egalitarians* and less likely to be ambivalents. However, even though Millennials were more likely to be *egalitarians* and less likely to be *pro-work traditionals*,

relative to Baby-boomers, the pattern changed by 2014 where Millennials were only more likely to be *strong egalitarians* and the effect size also attenuated. Taken together, these results suggests that over time, the marginal change in predicted probabilities of birth cohort became more significant for *strong egalitarians* and *pro-work traditionals* and less so for the remaining latent classes; thus illustrating the varying effects of birth cohort across latent classes and over time.

Broadly speaking, the patterns in marginal change in birth cohorts illustrated the mechanisms of cohort replacement with respect to gender attitudes but also illuminated the limitations. While I expected each successive birth cohort to be more likely than the previous birth cohort to be egalitarians and/or strong egalitarians, as birth cohort theory suggested (Ryder 1965), the results were not so straightforward. Even though, later cohorts were largely more likely to be *strong egalitarians* and/or *egalitarians* than earlier cohorts, my results showed that this is primarily true between pre-Baby-boomers and each earlier cohort, with this pattern sustaining over time. The effect of cohort replacement between adjacent cohorts was not significant over time.

Thus, similar to Donnelly et al (2014), I find evidence that Baby-boomers were the pioneering birth cohort that broke from previous birth cohort (pre-Baby-boomers) to embrace gender equality across both spheres. Despite this, my results did not support Donnelly and her colleagues' findings that Millennials were more likely to hold discordant gender attitudes. Instead, my results suggest that it is pre-Baby-boomers who were more likely to be ambivalent about gender change. At the same time, my results also differ from others (e.g. Howe and Strauss 2000; Kott 2014) who assumed that Millennials are the 'next great generation' who will push the boundaries of gender and sexuality forward. In contrary, my results showed that Millennials do

not differ much from either Generation-X or Baby-boomers. Millennials and Generation-Xers merely continue the trend toward gender egalitarianism that Baby-boomers had started.

Conclusion

Circling back to the question as to how different are gender ambivalents from gender univalents, namely *strong egalitarians* and *egalitarians*, I find that, generally, gender ambivalents are more likely than *strong egalitarians* and/or *egalitarians* to be male pre-Baby-boomers with less than a high school education who are outside the workforce. However, work status has been slowly losing its statistical significance and may continue to do so in the future.

The findings in this chapter addresses a debate in the literature about the determinants of changing gender attitudes. On the one hand, some argue that the effect of established deeterminants of gender attitudes such as birth cohort and socio-structural variables are waning over time. On the other hand, others highlight that the supposedly declining in statistical significance is not due to a lack of statistical association, but varying effects – the predictors have different effects across different subgroups. My results support both positions. Established predictors such as work status is progressively less significant over time and may continue to be in this direction. Part of the reason is because dual-income households have become the norm. At the same time, my results show that established predictors such as birth cohort do have varying effects – it is more significant for *strong egalitarians* and *pro-work traditionals* and less so for the remaining latent classes. What will be interesting to see if this trend continues as the majority of Millennials enter late adulthood and become parents and grandparents.

VII.   CONCLUSION

Re-Assessing the Current State and Future of the Gender Revolution

Indra K. Nooyi left work early to share the good news that she's the next CEO of PepsiCo.[9] When she got home, even before she could share her good news, her mother insisted that she immediately go to the grocery store and get milk. She complied begrudgingly. Upon returning, Indra protested, asking why is it her responsibility to get milk, even though her husband was home even before she was and they have hired domestic help? Her mother responded, "You might be president of PepsiCo... But when you enter this house, you're the wife, you're the daughter, you're the daughter-in-law, you're the mother … So leave that damn crown in the garage. And don't bring it into the house." Nooyi later added, "I don't think women can have it all… we pretend we *have* it all. We pretend we *can* have it all."

This story motivates and encapsulates the essence of this dissertation – what is the current state of the gender revolution and what are the possible directions it is heading in the future? Without a doubt, women had made tremendous progress over the past four decades or so. Women are entering higher education and professional schools at a higher rate than men and are increasing their representation in top positions in both business and politics (Blau, Brinton, and Grusky 2006; Blau, Brummund, and Liu 2013; Brooks 2013; Catalyst 2009; Diprete and Buchmann 2013; Goldscheider et al. 2015; Thomas and Wilcox 2014). In fact, 2016 is the first time in American history where a woman, Hillary Clinton, became the Presidential nominee of a major political party. On first blush, it appears that the gender revolution is still unfolding.

Yet some observed that the growth of gender equality in the public sphere has been accompanied by a backlash. A body of literature shows that starting around the late nineties and early 2000s, gender progressivism has begun to level off and possibly showing some signs of

---

[9] http://www.theatlantic.com/business/archive/2014/07/why-pepsico-ceo-indra-k-nooyi-cant-have-it-all/373750/

attitudinal reversal towards traditional gender norms (Cotter et al 2011; Brewster and Padavic 2000). From this perspective, the gender revolution has stalled. Figuring out whether the gender revolution has continued to move forward or have shown signs of slowing down led to a much-spirited debate among feminist scholars (England 2010; 2011).

Recently, a much smaller body of research emerged to argue that the state of the gender revolution is more complicated – highlighting that the pace of gender equality is uneven where progress in the public sphere outpaced that in the private sphere (Yu and Lee 2013; Donnelly et. al. 2015). In short, there could be an emergence of people developing ambivalence with respect to gender equality, supporting equality in the workplace but not in the home. In this dissertation, I continue this thread by addressing two research questions:

5) Over time, is there a differential pace of improvement in gender attitudes, resulting in the emergence and persistence of a subgroup of Americans who are gender ambivalents?

6) If so, are gender ambivalents different from other subgroups (*gender traditionals* and *gender egalitarians*) in terms of their socio-demographic characteristics?

My results show that starting from 1989 onwards, Americans who used to disapprove of gender equality in both the public and private spheres – *gender traditionals* – cease to exist as an empirical group and have embraced egalitarianism in the workplace, though not at home. In short, gender traditionals have given way to ambivalence. This is important because it demonstrates that the conflicting positions that we see in the literature about whether the gender revolution has stalled or is it still unfolding are both correct, in a way. If one limits the scope of gender equality to be in the public sphere exclusively, then the gender revolution is still on track. Alternatively, if the state of the gender revolution is to be considered only from the position of the home, then, the evidence shows that there is more work to be done. My results support a more nuanced view of the gender revolution where the uneven pace of improvements in gender attitudes across the

public and private spheres led to the emergence and persistence of gender ambivalence.

The disappearance of gender traditionals deserves a more in-depth discussion. On one hand, feminists and allies should celebrate the fact that Americans who disapprove of gender equality in both spheres are now empirically extinct. So what this indicates that it is no longer a carte-blanch objection to women being leaders and economically productive as barriers to pushing the gender revolution forward. Instead, what holds women back is the persistent expectations that they are still the caregivers and nurturers, in spite of their workplace commitments – as evidently shown by the story of Ingrid Nooya at the beginning of this chapter. So while the disappearance of *gender traditionals* may give us a reason to celebrate, we see a more complicated problem that impeded the progress towards full gender equality in the workplace and the home.

Another important result is that though gender ambivalents are distinct from *egalitarians* and strong *egalitarians*, that distinction may erode with time. Currently, gender ambivalents are more likely to be male pre-Baby-boomers with less than a high school education who are outside the workforce. However, work status is slowly losing its statistical significance and may continue to do so in the future. This begets a question - since ambivalents tend to be older, would they eventually die out with time? The evidence shows that it is highly possible that gender ambivalents may recede into history like traditionals did.

Despite the fact that ambivalents were the second largest latent class, they are gradually declining in size. Ambivalents (both pro-work traditionals and strong pro-work traditionals) constituted more than 45% of the American public in 2004 but had declined to around 25% by 2014. At the same time, egalitarians and strong egalitarians increased their size from slightly less than 45% in 2004 to around 75%. If this trend continues, we may see an important shift in the

gender revolution where Americans differ not in their stance towards women in the private sphere (i.e. egalitarians vs ambivalents), but their intensity in how much they support gender equality in both spheres (i.e. egalitarians vs strong egalitarians). Will sociodemographics still be able to predict class membership then? That is an open empirical question that future researchers should explore.

It is also important to understand gender in the context of intersectionality. One unexpected finding is the absence of a consistent statistical significance with regards to race over time. Part of the reason is due to weak measurement of race. Since the seventies, the GSS only had 3 racial categories – White, Black and Others. Although racial classifications for the GSS have become more expansive to include other categories such as Hispanic/Latinos over time, I used the older three classifications in the analyses for the sake of consistency. GSS remains the only nationally representative survey that includes multiple measures of gender attitudes for a long period of time.

Re-Centering the Home as the Next Frontier for Gender Equality

The gender revolution has primarily centered its struggle for equality in the public sphere. We see several different laudable attempts for gender equity in the public sphere – suffrage, access to paid work, comparable worth, pay parity, equal representation and so on. When one strategy to fight for equality does not work out (e.g. comparable worth), feminists switch to another (e.g. implicit bias in the workplace). Innovation is at the heart of the gender revolution in the public sphere. It is understandable why the struggle for gender equality has primarily been in the workplace as being economically independent is key to middle-class heterosexual women freeing themselves from the shackles of male control. Unfortunately, we do not see the same

amount of activity and innovation at establishing gender equality in the home.

Perhaps feminists presume that the gender revolution will have a spill-over effect – as women gain economic independence and resources, gender equality in the home will follow suit. My results show that this is not necessarily the case. Progress in the public sphere has outpaced progress in the private sphere. So what are our options moving forward?

The most obvious change we need to see is the workplace (I'm aware of the irony that in order to improve gender parity in the home, workplace has to change) adopting work-family friendly policies such as greater flexibility and employees having greater control over their own time (Moen et al. 2016). As Gerson (2010) has showed, young men mentioned they will resort to gender-traditional relationships if they are unable to balance work and family commitments. Second, instituting parental leave that is mandatory and is built on a sharp disconnection from work. This is important because studies show that if parental leaves are elective, fathers are less likely to take it. In addition to that, fathers are more likely than mothers to use parental leave to catch up with work. This prevents the exploiting of well-intended workplace policies from exacerbating gender inequality in the home. These suggestions are by no means exhaustive but a starting place for debates, discussions and innovations to happen. We need the same amount of fervor and activity to experiment with different strategies to bring about gender equality in the home.

Emphasizing the Sociality in Attitudinal Research

These results contribute theoretically to our understanding of the sociology of public opinion. Conventionally, public opinion research in sociology tends to highlight the attitudes of a population, generally the United States, on a specific or a set of topics. Some examples are

sociological studies on racial attitudes (Schuman et al. 1997) and same-sex marriage (Baunach 2012). What most sociological studies that are based on public opinion fail to highlight is the social dimension of public opinion. Perrin and McFarland (2011) aptly recommend a performative approach that conceptualizes public opinions as "collective, not just aggregated; dynamic, not static, and reactive, not unidirectional" (p. 101). Citizens are both producers and consumers of public opinion research, and consequently, public opinion polls and surveys, if properly sampled, are constituted by the public (reflecting what the average citizens think and feel) and constitute what society is (the sociological cues that the responses reflect).

I agree with Perrin and McFarland that the sociological implications of public opinion research goes beyond attitudinal responses and trends. Instead, what is of sociological importance is the sociality of opinion – how attitudes coalesce or reflect social groupings. Public opinion research has a social dimension.

To achieve this, I depart from previous sociological research on public opinion - whom are mostly focused on trends - underscore the sociality and complexity of gender attitudes. Using latent class analyses, I show that attitudes on gender equality do not improve at the same pace and this uneven cadence results in the emergence and persistence of distinct social groups – gender ambivalents and gender univalents. I encourage other researchers who are interested in understanding attitudes to adopt this approach to understand not only attitudinal trends but also the sociality of public opinions. At the same time, my analyses are limited to just attitudes and their socio-demographic characteristics. Future researchers should explore if different latent classes have distinct behavioral patterns. For example do gender ambivalents have a more traditional domestic division of labor than gender egalitarians? Attitudes and behaviors need not correspond and it will be interesting to study if the behaviors of gender ambivalents are distinct

from gender egalitarians, and in what way.

Complicating the Assumed Recursive Relationship of the Gender Structure

My findings also inform our understanding of gender as a multilevel – more accurately, a multi-dimensional – structure that pays attention at the individual, the interactional and the macro level (Martin 2004; Risman 1998, 2004; Risman and Davis 2013). While the individual and the interactional levels of the gender structure have undergone decades of conceptualization, theorizing on the macro level is, by comparison, lacking. By bringing the sociological and psychological theories of ambivalence into a dialogue, I bring an additional theoretical perspective to understanding the cultural logic of societal gender attitudes, and by extension, the gender structure. For example, is there a similar discordance across the different levels of the gender structure, where the pace of improvement, say on the macro level, outpaces that of other levels? Or perhaps this finding should lead researchers to explore how differently egalitarians and ambivalents expect their interactional partners to behave. If so, what are the implications of the presumed, but under-tested, assumption on the recursive relationship between the different levels of the gender structure (see Risman 2004)? Can we trace any impact of the societal shift toward egalitarianism as a cultural logic on the expectations young people have for their partners in marriage? How closely coupled are levels of the gender structure? These are important theoretical discussions feminists should explore.

CITED LITERATURE

Abbott, Andrew. 1988. "Transcending General Linear Reality." *Sociological Theory* 6(2):169–86.

Amato, Paul R. 2014. *President's Report: Hypotheses Are Many Splendored Things*. Retrieved (https://www.ncfr.org/ncfr-report/current-issue/presidents-report-hypotheses-are-many-splendored-things).

Armitage, Christopher J. and Mark Conner. 2000. "Attitudinal Ambivalence: A Test of Three Key Hypotheses." *Personality and Social Psychology Bulletin* 26(11):1421–32.

Auerbach, Karen J. and Linda M. Collins. 2006. "A Multidimensional Developmental Model of Alcohol Use During Emerging Adulthood." *Journal of Studies on Alcohol* 67(6):917–25.

Basinger, Scott J. and Howard Lavine. 2005. "Ambivalence, Information, and Electoral Choice." *The American Political Science Review* 99(2):169–84.

Bassili, John N. 1996. "Meta-Judgmental Versus Operative Indexes of Psychological Attributes: The Case of Measures of Attitude Strength." *Journal of Personality and Social Psychology* 71:637–53.

Bass, Brooke Conroy. 2014. "Preparing for Parenthood? Gender, Aspirations, and the Reproduction of Labor Market Inequality." *Gender & Society* 29(3):362-85.

Benard, Stephen and Shelley J. Correll. 2010. "Normative Discrimination and the Motherhood Penalty." *Gender and Society* 24(5):616–46.

Bergman, Lars R. and David Magnusson. 1997. "A Person-Oriented Approach in Research on Developmental Psychopathology." *Development and Psychopathology* 9(02):291–319.

Bergman, Lars R. and Kari Trost. 2006. "The Person-Oriented Versus the Variable-Oriented Approach: Are They Complementary, Opposites, or Exploring Different Worlds?" *Merrill-Palmer Quarterly* 52(3):601–32.

Bergmann, Barbara R. 2011. "Sex Segregation in the Blue-Collar Occupations: Women's Choices or Unremedied Discrimination? Comment on England." *Gender & Society* 25(1):88–93.

Bianchi, Suzanne M., Melissa A. Milkie, Liana C. Sayer, and John P. Robinson. 2000. "Is Anyone Doing the Housework? Trends in the Gender Division of Household Labor." *Social Forces* 79(1):191–228.

Bianchi, Suzanne M., Liana C. Sayer, Melissa A. Milkie, and John P. Robinson. 2012. "Housework: Who Did, Does or Will Do It, and How Much Does It Matter?" *Social Forces* 91(1):55–63.

Bielby, William T. 2000. "Minimizing Workplace Gender and Racial Bias." *Contemporary Sociology* 29(1):120–29.

Blair-Loy, Mary. 2003. *Competing Devotions*. Cambridge: Harvard University Press.

Bobbitt-Zeher, Donna. 2011. "Gender Discrimination at Work Connecting Gender Stereotypes, Institutional Policies, and Gender Composition of Workplace." *Gender & Society* 25(6):764–86.

Bolzendahl, Catherine and Daniel J. Myers. 2004. "Feminist Attitudes and Support for Gender Equality: Opinion Change in Women and Men, 1974-1998." *Social Forces* 83(2):759–89.

Brewster, Karin L. and Irene Padavic. 2000. "Change in Gender-Ideology, 1977-1996: The Contributions of Intracohort and Change Population Turnover." *Journal of Marriage and Family* 62(2):477–87.

Brooks, Clem and Catherine Bolzendahl. 2004. "The Transformation of US Gender Role Attitudes: Cohort Replacement, Social-Structural Change, and Ideological Learning." *Social Science Research* 33(1):106–33.

Brooks, Deborah Jordan. 2013. *He Runs, She Runs: Why Gender Stereotypes Do Not Harm Women Candidates*. Princeton: Princeton University Press.

Carlson, Daniel L., Sarah Hanson, and Andrea Fitzroy. 2016. "The Division of Child Care, Sexual Intimacy, and Relationship Quality in Couples." *Gender & Society* 30(3):442-466.

Carolan, Michael. 2010. "Sociological Ambivalence and Climate Change." *Local Environment* 15(4):309–21.

Catalyst. 2014. *Statistical Overview of Women in the Workplace*. Retrieved (http://www.catalyst.org/knowledge/statistical-overview-women-workplace).

Cech, Erin A. 2013. "The Self-Expressive Edge of Occupational Sex Segregation." *American Journal of Sociology* 119(3):747–89.

Charles, Maria and Erin Cech. 2010. "Beliefs about Maternal Employment." Pp. 147–74 in *Dividing the Domestic: Men, Women, and Household Work in Cross-National Perspective*, edited by J. Treas and S. Drobinic. Stanford: Stanford University Press.

Cha, Youngjoo. 2010. "Reinforcing Separate Spheres The Effect of Spousal Overwork on Men's and Women's Employment in Dual-Earner Households." *American Sociological Review* 75(2):303–29.

------. 2014. *Overwork May Explain 10 Percent of Men's Wage Advantage Over Women*. Council on Contemporary Families. Retrieved August 13, 2014 (https://contemporaryfamilies.org/wp-content/uploads/2014/07/2014_Symposium_Gender_Rebound.docx).

------ and Kim A. Weeden. 2014. "Overwork and the Slow Convergence in the Gender Gap in Wages." *American Sociological Review* 79(3):457–84.

Cherlin, Andrew and Pamela Barnhouse Walters. 1981. "Trends in United States Men's and Women's Sex-Role Attitudes: 1972 to 1978." *American Sociological Review* 46(4):453–60.

Cohen, Philip N. and Matt L. Huffman. 2007. "Working for the Woman? Female Managers and the Gender Wage Gap." *American Sociological Review* 72(5):681–704.

Conner, Mark and Christopher J. Armitage. 2008. "Attitudinal Ambivalence." Pp. 261–88 in *Attitudes and Attitude Change*, edited by W. D. Crano and R. Prislin. New York: Taylor & Francis.

Conner, Mark and Paul Sparks. 2002. "Ambivalence and Attitudes." *European Review of Social Psychology* 12(1):37–70.

Correll, Shelley J. 2004. "Constraints into Preferences: Gender, Status, and Emerging Career Aspirations." *American Sociological Review* 69(1):93–113.

------, Stephen Benard, and In Paik. 2007. "Getting a Job: Is There a Motherhood Penalty?" *American Journal of Sociology* 112(5):1297–1338.

Cotter, David A., Joan M. Hermsen, and Reeve Vanneman. 2011. "The End of the Gender Revolution? Gender Role Attitudes from 1977 to 2008." *American Journal of Sociology* 117(1):259–89.

------. 2014. *Brief: Back on Track? The Stall and Rebound in Support for Women's New Roles in Work and Politics, 1977-2012*. Council on Contemporary Families. Retrieved August 13, 2014 (https://contemporaryfamilies.org/wp-content/uploads/2014/07/2014_Symposium_Gender_Rebound.docx).

Davis, James A. 2013. "A Generation of Attitude Trends among US Householders as Measured in the NORC General Social Survey 1972–2010." *Social Science Research* 42(3):571–83.

Davis, Shannon N. and Theodore N. Greenstein. 2009. "Gender Ideology: Components, Predictors, and Consequences." *Annual Review of Sociology* 35(1):87–105.

Demantas, Ilana and Kristen Myers. 2015. "Masculinity Post the 2008 Recession: Using 'the Higher Power' to Understand New Roles at Home."

Diprete, Thomas A. and Claudia Buchmann. 2013. *The Rise of Women: The Growing Gender Gap in Education and What It Means for American Schools*. New York: Russell Sage Foundation.

Donnelly, Kristin et al. 2015. "Attitudes Toward Women's Work and Family Roles in the United States, 1976-2013." *Psychology of Women Quarterly*. Retrieved November 21, 2015 (http://pwq.sagepub.com/lookup/doi/10.1177/0361684315590774).

Dyer, W. Justin and Randal D. Day. 2015. "Investigating Family Shared Realities With Factor Mixture Modeling." *Journal of Marriage and Family* 77(1):191–208.

Dyer, W. Justin, Joseph Pleck, and Brent McBride. 2012. "Using Mixture Regression to Identify Varying Effects: A Demonstration With Paternal Incarceration." *Journal of Marriage and Family* 74(5):1129–48.

Eagly, Alice H. and Linda L. Carli. 2007. *Through the Labyrinth: The Truth About How Women Became Leaders*. Boston: Harvard Business School Press.

Eagly, Alice H. and Shelly Chaiken. 1993. *Psychology of Attitudes*. 1 edition. Fort Worth, TX: Wadsworth Publishing.

Elson, Diane. 2000. "Gender at the Macroeconomic Level." Pp. 77–97 in *Towards a Gendered Political Economy*, edited by J. Cook, J. Roberts, and G. Waylen. United Kingdom: Palgrave Macmillan. Retrieved February 13, 2016 (http://link.springer.com.proxy.cc.uic.edu/chapter/10.1057/9780230373150_5).

Ely, Robin J., Pamela Stone, and Colleen Ammerman. 2014. "Rethink What You 'Know' About High-Achieving Women." *Harvard Business Review* 92(12):101–9.

England, Paula. 2010. "The Gender Revolution: Uneven and Stalled." *Gender & Society* 24(2):149–66.

------. 2011. "Reassessing the Uneven Gender Revolution and Its Slowdown." *Gender & Society* 25(1):113–23.

------. 2016. "Sometimes the Social Becomes Personal Gender, Class, and Sexualities." *American Sociological Review* 81(1):4–28.

Erber, Maureen Wang, Sara D. Hodges, and Timonthy D. Wilson. 1995. "Attitude Strength, Attitude Stability, and the Effects of Analyzing Reasons." Pp. 433–54 in *Attitude Strength: Antecedents and Consequences*, edited by R. E. Petty and J. A. Krosnick. Hillsdale: Erlbaum.

Ferree, Myra Marx. 1974. "A Woman for President? Changing Responses: 1958-1972." *The Public Opinion Quarterly* 38(3):390–99.

------. 1990. "Beyond Separate Spheres: Feminism and Family Research." *Journal of Marriage and the Family* 52:866–84.

Fischer, Claude S. and Michael Hout. 2006. *Century of Difference: How America Changed in the Last One Hundred Years*. New York: Russell Sage Foundation.

Fiske, Susan T. 1993. "Controlling Other People: The Impact of Power on Stereotyping." *American Psychologist* 48(6):621–28.

Gerson, Kathleen. 1986. *Hard Choices: How Women Decide About Work, Career and Motherhood*. University of California Press.

------. 2010. *The Unfinished Revolution: Coming of Age in a New Era of Gender, Work, and Family*. Cambridge: Oxford University Press.

Glauber, Rebecca. 2007. "Marriage and the Motherhood Wage Penalty among African Americans, Hispanics, and Whites." *Journal of Marriage and Family* 69(4):951–61.

Glick, Peter and Susan T. Fiske. 1998. "Gender, Power Dynamics, and Social Interaction." Pp. 365–98 in *Revisioning Gender*. Thousand Oaks: Sage.

Goldscheider, Frances, Eva Bernhardt, and Trude Lappegård. 2015. "The Gender Revolution: A Framework for Understanding Changing Family and Demographic Behavior." *Population and Development Review* 41(2):207–39.

Gorman, Elizabeth H. 2005. "Gender Stereotypes, Same-Gender Preferences, and Organizational Variation in the Hiring of Women: Evidence from Law Firms." *American Sociological Review* 70(4):702–28.

Greenstein, Theodore N. 1996a. "Gender Ideology and Perceptions of the Fairness of the Division of Household Labor: Effects on Marital Quality." *Social Forces* 74(3):1029–42.

------. 1996b. "Husbands' Participation in Domestic Labor: Interactive Effects of Wives' and Husbands' Gender Ideologies." *Journal of Marriage and Family* 58(3):585–95.

Guppy, Neil and Nicole Luongo. 2015. "The Rise and Stall of Canada's Gender-Equity Revolution." *Canadian Review of Sociology/Revue Canadienne de Sociologie* 52(3):241–65.

Hays, Sharon. 1998. *The Cultural Contradictions of Motherhood*. New Haven: Yale University Press.

Helmreich, Robert L., Janet T. Spence, and Robert H. Gibson. 1982. "Sex-Role Attitudes: 1972-1980." *Personality and Social Psychology Bulletin* 8:656–63.

Hochschild, Arlie. 1989. *The Second Shift: Working Parents and the Revolution at Home*. New York: Penguin.

------. 2001. *The Time Bind: When Work Becomes Home and Home Becomes Work*. 1st edition. New York: Holt Paperbacks.

Hoxby, Caroline and Jonah Rockoff. 2004. *The Impact of Chaarter Schools on Student Achievement*. Retrieved (http://users.nber.org/~confer/2004/hiedf04/hoxby.pdf).

Huffman, Matt L. 2013. "Organizations, Managers, and Wage Inequality." *Sex Roles* 68(3-4):216–22.

------, Philip N. Cohen, and Jessica Pearlman. 2010. "Engendering Change: Organizational Dynamics and Workplace Gender Desegregation, 1975–2005." *Administrative Science Quarterly* 55(2):255–77.

Inglehart, Ronald and Pippa Norris. 2000. "The Developmental Theory of the Gender Gap: Women's and Men's Voting Behavior in Global Perspective." *International Political Science Review* 21(4):441–63.

------. 2003. *Rising Tide: Gender Equality and Cultural Change around the World*. Cambridge, UK; New York: Cambridge University Press.

Jacobs, Jerry A. and Kathleen Gerson. 2004. *The Time Divide: Work, Family, and Gender Inequality*. Cambridge, MA: Harvard University Press.

Jonas, Klaus, Philip Broemer, and Michael Diehl. 2000. "Attitudinal Ambivalence." *European Review of Social Psychology* 11(1):35–74.

Jonas, Klaus, Michael Diehl, and Philip Brömer. 1997. "Effects of Attitudinal Ambivalence on Information Processing and Attitude-Intention Consistency." *Journal of Experimental Social Psychology* 33(2):190–210.

Kanter, Rosabeth Moss. 1977. *Men and Women of the Corporation*. New York: Basic Books.

Kaplan, Kalman J. 1972. "On the Ambivalence-Indifference Problem in Attitude Theory and Measurement: A Suggested Modification of the Semantic Differential Technique." *Psychological Bulletin* 77(5):361–72.

Kornrich, Sabino, Julie Brines, and Katrina Leupp. 2013. "Egalitarianism, Housework, and Sexual Frequency in Marriage." *American Sociological Review* 78(1):26–50.

Lang, Molly Monahan and Barbara J. Risman. 2007. *A "Stalled" Revolution or a Still-Unfolding One*. Council on Contemporary Families. Retrieved (https://contemporaryfamilies.org/a-stalled-revolution-or-a-still-unfolding-one/).

Lavner, Justin A. and Thomas N. Bradbury. 2010. "Patterns of Change in Marital Satisfaction Over the Newlywed Years." *Journal of Marriage and Family* 72(5):1171–87.

Lewis, Helen. 2016. "Yes, There Is One Great Contribution Men Can Make to Feminism: Pick up a Mop." *The Guardian*, January 14. Retrieved February 11, 2016 (http://www.theguardian.com/commentisfree/2016/jan/14/men-feminism-washing-up-unpaid-labour).

Lipkus, Isaac M., Jeffrey D. Green, John R. Feaganes, and Constantine Sedikides. 2001. "The Relationship Between Attitudinal Ambivalence and Desire to Quit Smoking Among College Smokers1." *Journal of Applied Social Psychology* 31(1):113–33.

Lopata, Helena Znaniecka. 1993. "The Interweave of Public and Private: Women's Challenge to American Society." *Journal of Marriage and the Family* 55(1):176–90.

Mandara, Jelani. 2003. "The Typological Approach in Child and Family Psychology: A Review of Theory, Methods, and Research." *Clinical Child and Family Psychology Review* 6(2):129–46.

Marks, Jaime L., Chun Bun Lam, and Susan M. McHale. 2009. "Family Patterns of Gender Role Attitudes." *Sex Roles* 61(3-4):221–34.

Marsiglio, William and Kevin Roy. 2012. *Nurturing Dads: Social Initiatives for Contemporary Fatherhood*. New York: Russell Sage Foundation.

Mason, Karen Oppenheim, John L. Czajka, and Sara Arber. 1976. "Change in U.S. Women's Sex-Role Attitudes, 1964-1974." *American Sociological Review* 41(4):573–96.

Mason, Karen Oppenheim and Yu-Hsia Lu. 1988. "Attitudes toward Women's Familial Roles: Changes in the United States, 1977-1985." *Gender and Society* 2(1):39–57.

McBroom, William H. 1986. "Changes in Role Orientations of Women: A Study of Sex Role Traditionalism Over a Five-Year Period." *Journal of Family Issues* 7:149–59.

McCabe, Janice. 2005. "What's in a Label? The Relationship between Feminist Self-Identification and 'Feminist' Attitudes among U.S. Women and Men." *Gender and Society* 19(4):480–505.

McCall, Leslie. 2011. "Women and Men as Class and Race Actors Comment on England." *Gender & Society* 25(1):94–100.

McClintock, Elizabeth Aura. 2014. "Beauty and Status The Illusion of Exchange in Partner Selection?" *American Sociological Review* 79(4):575–604.

McGill, Brittany S. 2014. "Navigating New Norms of Involved Fatherhood Employment, Fathering Attitudes, and Father Involvement." *Journal of Family Issues* 35(8):1089–1106.

McHugh, Maureen C. and Irene Hanson Frieze. 1997. "The Measurement of Gender-Role Attitudes: A Review and Commentary." *Psychology of Women Quarterly* 21(1):1–16.

McLachlan, Geoffrey and Mixture Peel. 2000. *Finite Mixture Models*. New York: Wiley.

McPherson, J. Miller, Pamela A. Popielarz, and Sonja Drobnic. 1992. "Social Networks and Organizational Dynamics." *American Sociological Review* 57(2):153–70.

McPherson, Miller, Lynn Smith-Lovin, and James M. Cook. 2001. "Birds of a Feather: Homophily in Social Networks." *Annual Review of Sociology* 27(1):415–44.

Merton, Robert. 1976. *Sociological Ambivalence and Other Essays*. New York: Free Press.

Mikulincer, Mario, Phillip R. Shaver, Naama Bar-On, and Tsachi Ein-Dor. 2010. "The Pushes and Pulls of Close Relationships: Attachment Insecurities and Relational Ambivalence." *Journal of Personality and Social Psychology* 98(3):450–68.

Miller, Amanda Jayne and Sharon Sassler. 2012. "The Construction of Gender Among Working-Class Cohabiting Couples." *Qualitative Sociology* 35(4):427–46.

Miller, Joanne M. and David A. M. Peterson. 2004. "Theoretical and Empirical Implications of Attitude Strength." *The Journal of Politics* 66(3):847-67.

Mintz, Beth and Daniel H. Krymkowski. 2010. "The Intersection of Race/Ethnicity and Gender in Occupational Segregation: Changes over Time in the Contemporary United States." *International Journal of Sociology* 40(4):31–58.

Moen, Phyllis. 1994. "Women, Work and Family: A Sociological Perspective on Changing Roles." *Age and Structural Lag: The Mismatch between People's Lives and Opportunities in Work, Family, and Leisure* 151–70.

Moen, Phyllis et al. 2016. "Does a Flexibility/Support Organizational Initiative Improve High-Tech Employees' Well-Being? Evidence from the Work, Family, and Health Network." *American Sociological Review* 81(1):134–64.

Myers, Kristen and Ilana Demantas. 2014. "Being 'The Man' Without a Job: Providing Care Instead of 'Bread.'" Pp. 632–47 in *Families As They Really Are*, edited by B. J. Risman and V. Rutter. New York: W. W. Norton.

Okamoto, Dina and Paula England. 1999. "Is There a Supply Side to Occupational Sex Segregation?" *Sociological Perspectives* 42(4):557–82.

Pedulla, David S. and Sarah Thébaud. 2015. "Can We Finish the Revolution? Gender, Work-Family Ideals, and Institutional Constraint." *American Sociological Review* 80(1):116–39.

Petty, Richard E. 2006. "A Metacognitive Model of Attitudes." *Journal of Consumer Research* 33(1):22–24.

Priester, Joseph R. and Richard E. Petty. 1996. "The Gradual Threshold Model of Ambivalence: Relating the Positive and Negative Bases of Attitudes to Subjective Ambivalence." *Journal of Personality and Social Psychology* 71(3):431–49.

Reskin, Barbara. 2000. "The Proximate Causes of Employment Discrimination." *Contemporary Sociology* 29:319–28.

------ and Michelle L. Maroto. 2011. "What Trends? Whose Choices? Comment on England." *Gender & Society* 25(1):81–87.

Ridgeway, Cecilia L. 1997. "Interaction and the Conservation of Gender Inequality: Considering Employment." *American Sociological Review* 62(2):218.

------. 2011. *Framed by Gender: How Gender Inequality Persists in the Modern World: How Gender Inequality Persists in the Modern World*. New York: Oxford University Press.

------ and Shelley J. Correll. 2004a. "Motherhood as a Status Characteristic." *Journal of Social Issues* 60(4):683–700.

------ and Shelley J. Correll. 2004b. "Unpacking the Gender System: A Theoretical Perspective on Gender Beliefs and Social Relations." *Gender & Society* 18(4):510–31.

------ and Lynn Smith-Lovin. 1999. "The Gender System and Interaction." *Annual Review of Sociology* 25:191–216.

Risman, Barbara J. 1998. *Gender Vertigo: American Families in Transition*. New Haven, CT: Yale University Press.

------ 2004. "Gender As a Social Structure Theory Wrestling with Activism." *Gender & Society* 18(4):429–50.

------ and Georgiann Davis. 2013. "From Sex Roles to Gender Structure." *Current Sociology* 61(5-6):733–55.

------ and Danette Johnson-Sumerford. 1998. "Doing It Fairly: A Study of Postgender Marriages." *Journal of Marriage and the Family* 23–40.

Ryder, Norman B. 1965. "The Cohort as a Concept in the Study of Social Change." *American Sociological Review* 30(6):843–61.

Sassler, Sharon. 2014. *Brief: Is the Glass Half Empty, or Three- Quarters Full?* Council on Contemporary Families. Retrieved August 13, 2014 (https://contemporaryfamilies.org/wp-content/uploads/2014/07/2014_Symposium_Gender_Rebound.docx).

Schneider, Iris K. et al. 2013. "One Way and the Other The Bidirectional Relationship Between Ambivalence and Body Movement." *Psychological Science* 24(3):319–25.

Schwartz, Christine R. 2014. *Brief: It's Not Just Attitudes: Marriage Is Also Becoming More Egalitarian*. Council on Contemporary Families. Retrieved August 13, 2014 (https://contemporaryfamilies.org/wp-content/uploads/2014/07/2014_Symposium_Gender_Rebound.docx).

Schwartz, Christine R. and Hongyun Han. 2014. "The Reversal of the Gender Gap in Education and Trends in Marital Dissolution." *American Sociological Review* 79(4):605–29.

Sjöberg, Ola. 2010. "Ambivalent Attitudes, Contradictory Institutions Ambivalence in Gender-Role Attitudes in Comparative Perspective." *International Journal of Comparative Sociology* 51(1-2):33–57.

Smelser, Neil J. 1998. "The Rational and the Ambivalent in the Social Sciences: 1997 Presidential Address." *American Sociological Review* 63(1):1.

Sullivan, Oriel and Scott Coltrane. 2010. "Men's Changing Contribution to Housework and Childcare." Pp. 402–5 in *Families As They Really Are*, edited by B. J. Risman. New York: W. W. Norton.

Small, Mario Luis, David J. Harding, and Michèle Lamont. 2010. "Reconsidering Culture and Poverty." *Annals of the American Academy of Political and Social Science* 629(1):6–27.

Stainback, Kevin, Sibyl Kleiner, and Sheryl Skaggs. 2016. "Women in Power Undoing or Redoing the Gendered Organization?" *Gender & Society* 30(1):109–35.

Stainback, Kevin and Donald Tomaskovic-Devey. 2012. *Documenting Desegregation: Racial and Gender Segregation in Private Sector Employment since the Civil Rights Act*. New York: Russell Sage Foundation.

Stone, Pamela. 2007. *Opting Out?: Why Women Really Quit Careers and Head Home*. Berkeley: University of California Press.

Thompson, Megan M., Mark P. Zanna, and Dale W. Griffin. 1995. "Let's Not Be Indifferent About (Attitudinal) Ambivalence." Pp. 361–86 in *Attitude strength: Antecedents and Consequences*, edited by R. E. Petty and J. A. Krosnick. Mahwah, New Jersey: Lawrence Erlbaum Associates.

Thornton, Arland, Duane F. Alwin, and Donald Camburn. 1983. "Causes and Consequences of Sex-Role Attitudes and Attitude Change." *American Sociological Review* 48:211–27.

Thornton, Arland and Deborah Freedman. 1979. "Changes in the Sex Role Attitudes of Women, 1962-1977: Evidence from a Panel Study." *American Sociological Review* 44:831–42.

Thornton, Arland and Linda Young-DeMarco. 2001. "Four Decades of Trends in Attitudes Toward Family Issues in the United States: The 1960s Through the 1990s." *Journal of Marriage and Family* 63(4):1009–37.

Thurstone, L. L. 1928. "Attitudes Can Be Measured." *American Journal of Sociology* 33(4):529–54.

------ 1931. "The Measurement of Social Attitudes." *Journal of Abnormal and Social Psychology* 26(3):249–69.

Tichenor, Veronica Jaris. 2005. *Earning More and Getting Less: Why Successful Wives Can't Buy Equality*. New Brunswick: Rutgers University Press.

Townsend, Nicholas. 2002. *Package Deal: Marriage, Work And Fatherhood In Men's Lives*. Philadelphia: Temple University Press.

Uecker, Jeremy E., Lisa D. Pearce, and Brita Andercheck. 2015. "The Four U's Latent Classes of Hookup Motivations among College Students." *Social Currents* 2(2):163–81.

Walby, Sylvia. 2011. *The Future of Feminism*. Malden: Polity.

Williams, Joan C. 2000. *Unbending Gender: Why Family and Work Conflict and What To Do About It*. Oxford University Press.

Wilson, Andrea E., Kim M. Shuey, and Glen H. Elder Jr. 2003. "Ambivalence in the Relationship of Adult Children to Aging Parents and In-Laws." *Journal of Marriage and Family* 65(4):1055–72.

Yavorsky, Jill E., Claire M. Kamp Dush, and Sarah J. Schoppe-Sullivan. 2015. "The Production of Inequality: The Gender Division of Labor Across the Transition to Parenthood." *Journal of Marriage and Family* 77(3):662–79.

Yu, Wei-hsin and Pei-lin Lee. 2013. "Decomposing Gender Beliefs: Cross-National Differences in Attitudes Toward Maternal Employment and Gender Equality at Home." *Sociological Inquiry* 83(4):591–621.

Zafar, Basit. 2013. "College Major Choice and the Gender Gap." *Journal of Human Resources* 48(3):545–95.

<div align="center">**VITAE**</div>

Education:
- University of Illinois at Chicago
  Ph.D. in Sociology, expected 2017 (started at University of Kansas in 2008 before transferring to UIC in 2010)
- Minnesota State University, Mankato
  M.A. in Sociology (2008)
- National University of Singapore
  B. Soc. Sci. 2nd Upper Honors (Summa cum laude equivalent (2005)

Employment History:
- Morningstar Inc, Associate Behavioral Researcher (May 2016 – present)

- University of Illinois at Chicago, Women in Science and Engineering System Transformation, Graduate Research Assistant (Aug 2015 – May 2016)

- University of Illinois at Chicago, Department of Sociology, Graduate Research/Teaching Assistant (Aug 2010 – May 2016)

- University of Kansas, Department of Sociology, Graduate Assistant (Aug 2008 - May 2010)

- Minnesota State University, Department of Sociology, Graduate Assistant (Aug 2006 - May 2008)

Publications:

Sin, Ray and Barbara J. Risman. 2016. "Same-Sex Marriage in the United States." In Constance L. Shehan (ed.) *The Encyclopedia of Family Studies*. New Jersey: Wiley.

Sin, Ray and Maria Krysan. 2015. "What is Racial Residential Integration? A Research Synthesis, 1950-2013." *Sociology of Race & Ethnicity* 1(4): 467-74.

Sin, Ray. 2015. "Does Sexual Fluidity Challenge Sexual Binaries?: The Case of Bisexual Immigrants, 1967-2012." *Sexualitie*s 18(4): 413-37.

Sin, Ray. 2009. "Emotionally Contentious Social Movements: A Tri-Variate Framework." *Social Thought and Research* 30: 87-116.

Technical Skills:
R, Stata, Mplus, SAS, SPSS, Atlas.Ti
Multivariate regressions, latent variable modeling (e.g. latent class analysis), confirmatory factor analysis, multilevel analysis, longitudinal analysis

Honors & Awards:
- Chicago Consular Corp Scholarship, University of Illinois at Chicago (2012-2013)
- Graduate School Supplemental Scholarship, University of Kansas (2008-2010)

Teaching Experience:

- Instructor: Sexualities (Social Perspectives); Capstone
- Teaching Assistant: Health & Medicine; Sexualities