ABSTRACT

DOLLAR, CINDY BROOKS. Gender-Power Disparity Over Time: Testing the Sex Ratio Thesis, 1970-2000. (Under the direction of Charles R. Tittle).

Sociologists have long-recognized the pervasiveness of sex and gender inequality, which isolates and subordinates women as a group relative to men as a group. Relying on sex ratios as an essential factor, while also acknowledging the historical male dominance of economic, political, and legal institutions, Guttentag and Secord (1983) develop a provocative theory that purports to explain the spatial and temporal variations in the relative status, behavior, and treatment of men and women. Despite its compelling hypotheses, the theory has received little attention, especially in studies of inequality. The present research provides a comprehensive investigation of Guttentag and Secord's sex ratio thesis. Using standardized U.S. Census data from 1970 to 2000 and employing cross-sectional and hybrid panel analysis, I examine overall and race-ethnic-specific sex ratio effects on several gendered outcomes, including rates of marriage and divorce, marital fertility, female-headed families, and gendered distribution of paid labor, at 3 levels of analysis – the neighborhood, county, and state. I also investigate the potential for sex ratio effects to be conditioned by the extent of female structural power, operationalized as relative labor force participation. Analyses reveals that sex ratio effects are varied depending on the outcome and ecological unit being investigated. Overall, findings suggest that rates of female marriage and familial structures are consistently related to sex ratios in the theoretically expected direction, while other theorized outcomes are only somewhat related. Based on my results, I offer directions for future research.

Gender-Power Disparity Over Time: Testing the Sex Ratio Thesis, 1970-2000

by
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DEDICATION

To Kevin...Always

BIOGRAPHY

Cindy Brooks Dollar was raised in Johnston County, North Carolina. She attended Johnston Community College for 2 years after graduating high school. In 1995, Cindy entered the Sociology Department at the University of North Carolina-Greensboro. She completed a Bachelor of Arts degree in Sociology (*magna cum laude*) in 1999, and began her graduate studies at UNCG that same year. In 2001, she earned a Master of Arts degree in Sociology with a concentration in Criminology. Upon graduation, Cindy began working at RTI International as a survey specialist and taught undergraduate courses in sociology and criminology at UNCG. She also worked with various attorneys for several years to promote an understanding of how social factors influence legal matters. In 2009, she entered North Carolina State University (NCSU) to continue her graduate studies. During her tenure at NCSU, she has been involved in numerous research projects and taught various undergraduate courses.

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TABLE OF CONTENTS

LIST OF TABLES ix

LIST OF FIGURES. xii

CHAPTER 1. INTRODUCTION. 1

1.1 Prologue. 1

1.2 Outline of Subsequent Chapter. 4

CHAPTER 2. THE SEX RATIO THESIS 5

2.1 The Development of the Sex Ratio Thesis 5

2.2 What is a Sex Ratio? 5

2.3 The Sex Ratio Thesis. 6

2.3.1 Dyadic Relations 8

2.3.2 Structural Power 9

2.4 Links between the Sex Ratio Thesis and Patriarchy 12

2.5 Theoretical Caveats 12

2.6 Conclusion 15

CHAPTER 3. EMPIRICAL RESEARCH ON SEX RATIOS 17

3.1 Investigations of the Sex Ratio Thesis 17

3.1.1 Sex Ratio Effects on Relationship Formation and Dissolution 17

3.1.2 Sex Ratio Effects on Subjective Appraisals 24

3.1.3 Sex Ratio Effects on Crime and Victimization. 26

3.1.4 Moderating Sex Ratio Effects through Labor and Socio-economic Conditions 28

CHAPTER 4. HYPOTHESES 30

4.1 Hypothesized Main Effects of Sex Ratios on Female Dyadic Outcomes ...30

4.2 Hypothesized Main Effects of Sex Ratios on Male-Specific Dyadic Outcomes 31

4.3 Hypothesized Main Effects of Sex Ratios on Structural Power 34

4.4 Hypothesized Conditional or Interaction Effects of Sex Ratios. 34

CHAPTER 5. DATA AND METHODS 37

5.1 Data 37

5.1.1 Limitations of Data. 41

5.2 Measures of Theoretical Constructs.....43

5.2.1 Independent Variable: Sex Ratios.....43

5.2.2 Dependent Variables: Dyadic Relations 48

5.2.3 Dependent Variable: Structural Power as Relative Female-to-Male Labor Force Participation 53

5.2.4 Structural Power as a Conditioning Effect of Sex Ratios on Dyadic Power 55

5.2.5 Additional Control Variables 56

5.3 Analytic Strategies 57

5.3.1 Linear Regression 57

5.3.2 Hybrid Panel Analysis. 58

CHAPTER 6. DESCRIPTIVE AND BIVARIATE ANALYSES AND RESULTS FROM CROSS-SECTIONAL ANALYSIS 62

6.1 Descriptives 62

6.2 Bivariate Associations 64

6.3 Cross-sectional, Tract-level Analysis 67

6.3.1 Overall Analyses, Direct Effects 67

6.3.2 Race-Ethnic-Specific Analysis, Direct Effects. 68

CHAPTER 7. RESULTS FROM HYBRID PANEL ANALYSIS 70

7.1 Direct Sex Ratio Effects on Gendered Outcomes 70

7.1.1a Tract-level Analysis 70

7.1.1b County-level Analysis 74

7.1.1c State-level Analysis 76

7.2 Chronically Low Sex Ratio Areas 77

7.3 Interaction Effects of Sex Ratio and Labor Force Participation 80

7.3a Significant Interaction Effects: Between-Unit Variation 81

7.3b Significant Interaction Effects: Within-Unit Variation.....84

CHAPTER 8. DISCUSSION AND CONCLUSIONS 86

8.1 Summary and Conclusions 86

8.2 Prospects for Future Research 91

REFERENCES 97

LIST OF TABLES

TABLE 4.1: Hypotheses. 119

TABLE 6.1 Descriptive Statistics for Tract-Level Data. 120

TABLE 6.2 Descriptive Statistics for County-Level Data. 122

TABLE 6.3 Descriptive Statistics for State-Level Data. 124

TABLE 6.4 Mean Change and Significance of Variables of Interest 126

TABLE 6.5 Bivariate Correlations of Tract-level Sex Ratios and Relevant Dependent Variables 127

TABLE 6.6 Hypothesized and Actual Cross-sectional Analysis Outcomes 128

TABLE 6.7 Tract-Level OLS Regression Predicting Female Marriage 129

TABLE 6.8 Tract-Level OLS Regression Predicting Marital Fertility 130

TABLE 6.9 Tract-Level OLS Regression Predicting Female Divorce 131

TABLE 6.10 Tract-Level OLS Regression Predicting Female-Headed Families 132

TABLE 6.11 Tract-Level OLS Regression Predicting Male Marriage 133

TABLE 6.12 Tract-Level OLS Regression Predicting Male Divorce 134

TABLE 6.13 Tract-Level OLS Regression Predicting Relative Labor Force Participation 135

TABLE 6.14 Tract-Level OLS Regression Predicting White Marital Fertility 136

TABLE 6.15 Tract-Level OLS Regression Predicting Black Marital Fertility 137

TABLE 6.16 Tract-Level OLS Regression Predicting Hispanic Marital Fertility 138

TABLE 6.17 Tract-Level OLS Regression Predicting White Female-Headed Families 139

TABLE 6.18 Tract-Level OLS Regression Predicting Black Female-Headed Families 140

TABLE 6.19 Tract-Level OLS Regression Predicting Hispanic Female-Headed Families 141

TABLE 6.20 Tract-Level OLS Regression Predicting White Relative Labor Force Participation 142

TABLE 6.21 Tract-Level OLS Regression Predicting Black Relative Labor Force Participation 143

TABLE 6.22 Tract-Level OLS Regression Predicting Hispanic Relative Labor Force Participation 144

TABLE 7.1 Hypothesized and Actual Outcomes for Hybrid Panel Analysis 145

TABLE 7.2 Tract Level Hybrid Models Predicting Gendered Outcomes 146

TABLE 7.3 Tract Level Hybrid Models Predicting Race-Ethnic Specific Gendered Outcomes 148

TABLE 7.4 Tract Level Hybrid Models Predicting Race-Employment Sex Ratio 150

TABLE 7.5 County Level Hybrid Models Predicting Gendered Outcomes 152

TABLE 7.6 County Level Hybrid Models Predicting Race-Ethnic-Specific Gendered Outcomes 154

TABLE 7.7 County Level Hybrid Models Predicting Race-and Gendered Outcomes using Race-Employment Sex Ratio 156

TABLE 7.8 State Level Hybrid Models Predicting Gendered Outcomes 158

TABLE 7.9 State Level Hybrid Models Predicting Race and Gendered Outcomes 160

TABLE 7.10 State Level Hybrid Models Predicting Race and Gendered Outcomes using Race-Employment Sex Ratio 162

TABLE 7.11 Descriptive Statistics of Sex Ratios and Dependent Variables, Subsamples 164

TABLE 7.12 Hybrid Panel Analysis: Between-Unit Long Term Sex Ratio Effects 166

TABLE 7.13 Tract-level Hybrid Models with Interaction of Sex Ratio and Labor Force Participation on Gendered Outcomes 167

TABLE 7.14 Hybrid Models with Interaction of Sex Ratio and Labor Force Participation on Gendered and Raced Outcomes 168

LIST OF FIGURES

FIGURE 7.1 Tract-level Sex Ratio Effects on Female Marriage by Relative Structural Power, 1980-2000 169

FIGURE 7.2 Tract-level Sex Ratio Effects on Male Marriage by Relative Structural Power, 1980-2000 170

FIGURE 7.3 Tract-level Sex Ratio Effects on White Marital Fertility by Relative Structural Power, 1980-2000 171

FIGURE 7.4 Tract-level Sex Ratio Effects on White Female-Headed Families by Relative Structural Power, 1980-2000 172

CHAPTER 1

INTRODUCTION

1.1 Prologue

Social scientists have long recognized power imbalances between women and men (e.g. Engels 1972 [1884]; Martineau 2003 [1838]) that historically relegate women as a group to a social position that is inferior to men as a group. In an effort to gain insight into gender disparities, scholars have largely focused on explicating the factors that cause and maintain gender inequality. For example, the (re)creation of gender hierarchies is explained by the devaluation of female labor and domestic work (Eisenstein 1979; Glenn 2002; Hartman 1976; Hochschild and Machung 1989), patterns of sex-stratified interactions (Goffman 1977; Schwalbe 2005; West and Zimmerman 1987) and gendered identity construction (Bartky 1990; Chodorow 1978). While greatly improving our understanding of gender relations, much of this work does not explicitly theorize about change.

In their sex ratio thesis, Guttentag and Secord (1983) develop a theory about how and why gendered outcomes occur. In doing so, they offer a unique framework that relies on sex ratios as a primary explanatory factor influencing the relative status and treatment of men and women. Although the idea that the sex composition of society greatly influences social outcomes is not new (e.g. Winston 1931), scholarship identifying sex ratios as a central element influencing gendered outcomes is rare.

Kanter (1977) and Chafetz's (1990) work provides two exceptions. Both scholars developed theoretical frameworks that recognize the sex ratio as a consequential factor in work and social life. Kanter (1977) describes the male-dominated work environment of

executive and managerial fields. She notes that the extreme numerical minority of women in high status jobs places them at a disadvantage. Because females' work interactions almost exclusively involve interactions with "opposite" sex colleagues and supervisors, women end up feeling isolated, are excluded from beneficial networks and passed up for upwardly mobile opportunities. In addition, because of their low numbers, women executives are highly visible in regards to negative attributes but are often overlooked in regards to their positive efforts and successes. Women's "token" status means that they often perceive enormous pressure to undermine stereotypes. Although her theory has gained widespread attention, it was not able to explain the benefits that men received in female-dominated working environments (e.g., Heikes 1991; Williams 1989, 1992, 1995), which pointed to an institutionalized gender hierarchy and patriarchal dividend (Connell 2005).

Chafetz (1990) recognizes this structural imbalance of gender power and the relevance of sex ratios to it. She argues that the organization of and activity in economic and family institutions are important factors in explaining the causes, maintenance and potential challenges to gender inequality. She further postulates that downward shifts in the sex ratios, which occur due to sex-selective migration and displacement, have the potential to diminish gender inequalities in that such demographic changes encourage women's opportunity to obtain greater access to higher-status economic positions. Although such low sex ratios may be temporary and largely unintentional, they nonetheless provide a catalyst towards equality of the sexes (Chafetz 1990).

Although both Kanter and Chafetz acknowledge that gendered outcomes are related to demographic trends, Guttentag and Secord's (1983) sex ratio thesis is unique in that it

proposes an explanation of gender relations that fundamentally postulates that the number of available age-appropriate, "opposite" sex partners have profound social consequences, including effects on marriage and divorce patterns, childbirth rates, childrearing conditions, sex-specific sex practices, relationship stability and sex-specific valuation, which shape males' and females' access to and accumulation of valuable resources. They ask: How do male-female relations change when the sex ratio is substantially imbalanced at ages when men and women most commonly partner?

Guttentag and Secord articulate their theory in a book that won the 1984 American Sociological Association's Award for Distinguished Contribution to Scholarship. Despite this recognition and its compelling hypotheses, the theory has received little attention in gender studies. To date, there has been no large-scale, systematic analysis of Guttentag and Secord's (1983) sex ratio thesis. Because it is important to explicate all potential mechanisms that may influence gender (in)equality, the lack of consideration and analysis of this theory is concerning.

The purpose of my dissertation is to examine Guttentag and Secord's (1983) sex ratio theory empirically. Using standardized U.S. Census data from 1970, 1980, 1990 and 2000, I examine sex ratios at the neighborhood (tract), county, state and region level to assess various social outcomes, including marriage and divorce rates, childrearing conditions and gender-linked occupational distribution.[1]

[1] Throughout this paper I rely on the term "tract" to denote the lowest level of aggregation in the dataset and analysis; however, due to the spatial standardization employed, this level of aggregation actually describes tracts or their analogs as defined in the 2000 U.S. Census. For more information, see the data description in Chapter 5.

1.2 Outline of Subsequent Chapters

This dissertation proceeds as follows: **Chapter Two** introduces how the sex ratio thesis was developed, defines how sex ratios are calculated and details the theoretical framework proposed by Guttentag and Secord (1983). In this chapter, I also argue that although the authors do not explicitly discuss patriarchy as a barrier to gaining equality between the sexes, the structural power component of the sex ratio thesis is consistent with the notion of patriarchy as commonly used by feminist scholars. Finally, I review the theoretical caveats of Guttentag and Secord's (1983) theory. **Chapter Three** reviews the literature on sex ratios and its influence on gendered positions and outcomes. **Chapter Four** presents my research hypotheses, which are drawn both from the theory and prior research. **Chapter Five** describes the data, variable construction and analytical strategies I use to assess my hypotheses. As a part of this chapter, I also discuss the weaknesses of the available data. I review the results of the cross-sectional analysis in **Chapters Six** and present the results of the hybrid panel analysis in **Chapter Seven**. **Chapter Eight** summarizes the findings of my panel analysis, details the contribution of the present research, and discusses areas of future research.

CHAPTER 2

THE SEX RATIO THESIS

2.1 The Development of the Sex Ratio Thesis

The sex ratio thesis was initially conceptualized by Marcia Guttentag, former Director of the Families and Stress Research Project at Harvard University. The theory developed out of her concern about the rising mental health illness of young women, including depression and attempted suicide. Guttentag wondered how the apparent decline in mental health of young women may be related to the current cultural imagery of women and male-female relationships, which overtly characterized women as disposable and sexual relationships as short-term -- what Guttentag characterized as "Love 'em and leave 'em" (Guttentag and Secord 1983: 10-11).

Guttentag passed away before her book was completed. Using her notes, documents and memories of conversations, Paul Secord, a faculty member in the Psychology Department at the University of Houston, completed the book. The sex ratio question Guttentag and Secord (1983) pose is: How are social relations influenced when sex ratios are substantially imbalanced at ages when men and women most commonly partner?[2]

2.2 What is a Sex Ratio?

Before detailing the theoretical framework proposed by Guttentag and Secord, it may be helpful to define and describe sex ratios. Sex ratios are calculated by determining the

[2] Throughout this paper, I often list male and masculine categories before female and feminine ones. I understand that doing so may suggest that I am prioritizing male/masculine-defined groups over female/feminine ones, but that is not my intention. Rather, I use this order because it is consistent with the way sex ratios are calculated in the demographic literature.

number of males for every 100 females. A sex ratio of 100 denotes a balanced sex ratio, meaning that there are an equal number of males and females in a given area. Numbers exceeding 100 indicate more men than women (high sex ratio), while numbers below 100 indicate more women than men (low sex ratio). For clarification, a sex ratio of 108 reveals that the specified area of interest has 108 men for every 100 women, while a sex ratio of 98 indicates 98 men for every 100 women.

Sex ratio imbalances can result from a variety of factors, including selective in-migration, selective exodus, death during childbirth, military activity, sex-selected infanticide or neglect and other types of sex-differentiated mortality. Although the reason for sex ratio imbalances is itself an important sociological question, Guttentag and Secord's (1983) primary interest lies in the consequences – rather than the cause – of unbalanced male-female populations.

While overall sex ratios may provide some information about the relative population size of males and females at any or all ages, the sex ratio thesis that is the subject of this research emphasizes the significant implications of imbalanced sex ratios of "suitable" partners at marriageable and child-bearing ages. This suggests that sex ratios must be calculated in a way that is relevant to general patterns of partnering and mate selection. I more fully discuss my calculations for sex ratios in Chapter 5.

2.3 The Sex Ratio Thesis

Guttentag and Secord (1983: 21) argue that the relative proportion of the population that is male or female is a significant factor in shaping male-female relationships and on

gender differentiated social statuses. In order to explicate this relationship, they combine a demographic perspective with elements of social exchange theory. The theorists acknowledge that the link between demography and social behavior is complex, and to this end, they hypothesize that a number of factors influence sex ratio's effects. The most important factors are the distribution of dyadic and structural power.[3] Thus, dyadic and structural power operate as mechanisms that link the sex ratio to gendered outcomes.

The sex ratio thesis posits male-female power relations as operating on two distinct, yet reflexive levels: dyadic and structural. Dyadic power refers to the relative male-female power in two-person relationships, while structural power is defined as the relative amount of control that males and females generally have over social, political and economic resources. Guttentag and Secord (1983:30) posit that the sex ratio directly influences whether males or females will have dyadic power such that the sex in "oversupply" will have less power and be more dependent on the sex in "undersupply." Structural power, although still variable, is more resistant to change because it is rooted in a complex history of gender inequality. This form of power is used to construct institutionalized social control measures and influences how dyadic power operates. For example, the sex group that has more structural power can create dominant values that function to restrict ways in which the numerical minority group can take advantage of its dyadic power.

[3] Guttentag and Secord's framework is just one perspective used in marriage market research. The marital search model (Becker 1981; Oppenheimer 1988), sometimes referred to as the demographic transition or demographic-opportunity model, is often employed to explain marriage market characteristics. There are some similarities between the imbalanced sex ratio and marital search perspectives. For example, both perspectives assume that marriages involve prospective partners seeking the best suitable match for marital partnership. However, Guttentag and Secord's (1983) perspective is distinct in that it applies a gendered lens to marriage market research by linking notions of power exchange and imbalance to the demographic dimensions of the marital search model. In short, the sex ratio thesis recognizes that structural power imbalances result in males and females having different experiences when marital partners are limited.

2.3.1 Dyadic Relations

Guttentag and Secord argue that imbalanced sex ratios influence dyadic power in interpersonal male-female relationships. The theorists assume that males and females are fundamentally distinct, yet complimentary categories. Relying on a social exchange framework, Guttentag and Secord (1983) argue that each individual enters relationships with differential degrees of power and (in)dependence, which is largely determined by whether or not that individual is a member of the numerical majority or numerical minority sex group or category. In short, the authors argue that dependency in a relationship is influenced by the number and quality of alternative relationships. Because dyadic power is fundamentally determined by the resources that each partner brings to the relationship, the party with more resources - whether material (i.e., financial) or psychological (i.e., satisfaction) - is expected to have greater dyadic power.[4] Thus, those who are less empowered will rely more heavily - or be more dependent - on the other and are, consequently, in a weaker position. The partner with fewer options or alternative relationships (i.e, heterosexual males in high sex ratio societies and heterosexual females in low sex ratio societies) will have less interpersonal power and be inclined to enter into or remain in relationships that are materially and psychologically costly.[5]

[4] Guttentag and Secord (1983) do not explicitly identify resources as symbolic; however, scholars recognize that the status and position associated with persons within relationships holds symbolic meaning (e.g., Connell 2005; Schwalbe et al. 2000). Thus, symbolic power likely also operates in dyadic relationships. For example, males have been shown to use aggressive behaviors, including harassment of women, as symbolic indicators of their masculinity (Uggen and Blackstone 2004).

[5] Although social exchange theory is often conceptualized as emphasizing rational and unemotional decision-making and transactional encounters. Theory and research appreciates the importance of emotive feelings involved in making decisions about transactions (Lawler and Thye 1999). Guttentag and Secord (1983) further note that that feelings of satisfaction and emotional assessments of feelings of satisfaction, love, commitment, and rejection, may occur without calculated intention.

In short, imbalanced sex ratios favor the sex group in undersupply because it influences the opportunity for them to modify expectations and enter other, potentially more satisfying, male-female dyads - both of which increase dyadic power and decrease dependency in existing relationships. Thus, the demographic-level sex ratio combines with dyadic exchange principles to posit that the relative numbers of males and females shape relationships such that the sex that is in "undersupply" is more independent and has more dyadic power than the sex in "oversupply."

To illustrate, let us assume that an area has a high sex ratio (i.e., males outnumber females, so males are in oversupply). In this area, females who are unsatisfied with their current relationship have more dyadic power and are in a better position to negotiate within their existing relationship or sever the relationship and form a new, more fulfilling relationship. In these circumstances men have less dyadic power and are more dependent on women. In low sex ratio areas, however, females outnumber males rendering males more dyadically powerful and in a better position to negotiate within an existing relationship or seeking an alternative opposite-sex partnership in hopes of finding a more satisfying association. In either case, the sex category that is the numerical minority has more dyadic power than the more populous sex category and is hypothesized to leave existing relationships more freely in search of other, more satisfying relationships.

2.3.2 Structural Power

According to Guttentag and Secord (1983) males and females in a similar dyadic power position experience similar consequences, but the actual outcomes may differ because

dyadic power is filtered through existing cultural patterns and conditions, especially institutionalized sex-specific norms. Structural conditions can influence between-sex relations and outcomes by influencing the extent and the why that dyadic power is exercised. Thus, in a high sex ratio area (a shortage of women) where men hold structural power, men can employ their power to control women's dyadic power by limiting the ways that dyadic power can be used. For example, men may establish a gender order that holds women accountable to sex-specific norms that stigmatize female promiscuity and adulate "traditional" notions of the homemaker wife and mother, which constrain, isolate and limit women's ability to seek and enter alternative relationships.

The sex ratio theorists use the notion of structural power to refer to control of social, political and economic resources. The sex category that holds structural power has the collective capacity to shape sex-specific expectations, customs, practices and the social value placed on each sex group (Guttentag and Secord 1983: 26). Although the authors note that men have historically dominated social, political and economic resources, they posit that consistent, substantial low sex ratios (sex ratios of 90 or lower for several years) could provide the impetus to shift structural power towards female control.

The sex category that holds structural power is important since that group has the ability to influence resource access, accumulation, and dependency as well as to shape moral values. At the time of their writing, Guttentag and Secord (1983) suggested that males had nearly exclusively held structural power among all societies. This explains why even in high sex ratio areas, where dyadic power is in women's favor, female dyadic control has been substantially limited by male structural control employed to define sex-specific norms. The

historical imbalance of structural power towards males explains why women have been subjected to male definitions of morality and social convention even in low sex ratio contexts. It also explains a value system that rewards behaviors associated with masculinity, including aggression, competition, and stoicism, which functions to support male dominance.

The sex ratio thesis, however, posits that male's historical structural dominance can be challenged if the sex ratio remains low for a substantial and consistent period of time (Guttentag and Secord 1983: 154, 174, 239). Under those conditions, the gender lacking dyadic power may form coalitions or become politically organized to confront their disempowered position. Thus, in areas where the sex ratio is noticeably low for a significant period of time, women are predicted to become unhappy with the actual and possible social exchanges available to them, and challenge male structural power through the formation of organizations to help correct their inferior social position – initially and largely through gaining economic independence. Such organization could incite change that moves toward equalization of historical structural disparity favoring males.

Guttentag and Secord (1983), in fact, argue that the 1960's feminist movement was sparked by steady shifts towards a low sex ratio. Still, the theorists argue that the impetus for women to collectively organize for independence results fundamentally from a realization that dyadic power is unbalanced, though it is further provoked by realizing men's possession of superior structural power (Guttentag and Secord 1983: 167). This argument supports contemporary contentions that the personal is political and the political is personal (i.e., Collins 2000; Connell 2005; Thistle 2006).

2.4 Links between the Sex Ratio Thesis and Patriarchy

Guttentag and Secord (1983) do not rely on the term "patriarchy" in their theory. However, their theory's invocation of structural power is akin to what feminist scholars understand as patriarchal relations. In fact, the sex ratio theorists acknowledge that (1) structural power has been overwhelmingly held by males and (2) structural power has a pronounced effect on sex-specific behaviors, expectations and identities. Both of these arguments are consistent with the concepts of patriarchy and patriarchal arrangements.

Patriarchy can be defined as a systemic social arrangement whereby institutional power is differentially concentrated in the hands of men. Although some feminists argue that patriarchy is an ahistorical concept (e.g., Lorber 1994), it is better understood as a historically and spatially dynamic factor that can be identified by the extent to which social organization is male-dominated and male-centered (Johnson 2004). For example, the relative magnitude of structural male dominance, or patriarchy, can be assessed by the proportion of males in positions of political and economic power. Thus, patriarchy is analogous to Guttentag and Secord's (1983) conception of structural power in that both are hypothesized to be a prevalent structuring component of our social life, but they can also be challenged, changed, and eradicated.

2.5 Theoretical Caveats

2.5.1 Dichotomous Sex and Gender Categories

Demographic perspectives assume that population composition is an important predictor of social outcomes, so populations are understood as being made up of distinct

classifications or categories of persons. Thus, Guttentag and Secord's (1983) reliance on the sex ratio as a factor explaining gender inequality assumes that a population is made up of discrete male and female groups. Although biological differences are undeniable, these differences are often exaggerated through interactions and preexisting accountability structures that shape gendered attitudes and behaviors – all of which serve to make hierarchical social arrangements seem natural and normal (Goffman 1977).

While sex is a fundamental sorting device across societies, sociologists have long understood these categories to be social constructions (Goffman 1977; Kessler and McKenna 1978; Valocchi 2005). Arranging sex into dualistic groups stems from heteronormative assumptions that hold sex and gender as congruent and views sex and gender categories as naturally dimorphic yet complementary (Butler 1990). In short, a heteronormative paradigm views sex, gender, and sexuality as ideologically fused such that persons who are born female and do femininity normativity are assumed to be heterosexual. Extant research has established that relying on heteronormativity is problematic because it does not fully appreciate actual lived experiences (e.g., Connell 2005; Halberstam 1998; Schilt 2010; Sedgwick 1990).

Although Guttentag and Secord (1983) do not view differences between males and females as inherent or biologically-driven, their theory does not problematize the binary categorizations of sex and gender (i.e., male-female; men-women; masculine-feminine). As Connell (2005) notes, essentialist definitions of sex and gender often rely on overly simplistic descriptions that choose a set of core features and designates them as either masculine or

feminine (e.g. aggression as masculine and passivity as feminine). Such classifications risk reifying gender differences by institutionalizing and legitimatizing sex-based differences.

Despite this theoretical limitation, there is ample evidence that our sexed bodies, as conceptualized by Guttentag and Secord, continue to have vast implications for our lives (e.g., Collins 2000, 2005; Connell 2005; Schilt 2010). Social perceptions of male and female bodies, in fact, denote the ways in which we "should" be treated (Connell 2005; Lorber and Moore 2007). To this end, gender studies must continue to investigate sexed and gendered outcomes so that we can more fully understand the consequences of prescribing sex and gender on the body.

2.5.2. Heterosexuality

Guttentag and Secord's (1983) theory assumes that relations between males and females are natural and conventional, and thus, their theory suffers from heteronormativity - the assumption that heterosexual relations are "the normative and natural form of sexual expression" (Elliott 2012: 18). The assumption of heterosexuality is common in scholarship, including germinal feminist works (e.g. Chodorow 1978; Goffman 1977; West and Zimmerman 1987), and many feminist scholars implicitly recognize that heterosexuality is a much more common relational arrangement than homosexuality, especially in the U.S. (Acker 2004). Still, some scholars contend that assumptions of heterosexuality should be questioned in order to acknowledge heterosexuality as a pervasive macro-structural institution (Bartky 1990; Collins 2000, 2005; Davis 1981; Ingraham 2005, 2008; Rich 1980). Defining heterosexuality as a political institution allows scholars to raise questions about

how heterosexuality shapes behaviors by encouraging heterosexual coupling and punishing homosexual coupling.

Since the sex ratio thesis takes heterosexual relations as normative, it overlooks how compulsory heterosexuality – the notion that sexuality is shaped through socialization largely to control female's choice in sexuality – is linked to male-female dyadic power struggles. Specifically, assumptions and obligations towards heterosexual desires and experiences may function to incite conflict between men and women. According to Rich (1980), the hierarchical arrangement of the sexes inferiorizes women to men and perpetuates male dominance by hindering women's ability to actualize a sexuality that does not include males. In the same way, institutionalized heterosexuality hinders males' ability to exclude women. Denying this freedom of sexuality harms all persons from obtaining their full human capacities as productive, emotive beings (e.g., Elliott 2010). Although Guttentag and Secord (1983) do not explicitly identify heterosexuality as an institutional arrangement, structural power is generally conceptualized as a socio-political tool that limits persons' ability to pursue non-normative desires and behaviors, and in this way could be extended to include the constraints produced by compulsory heterosexuality.

2.6 Conclusion

Guttentag and Secord's (1983) theory explains how gendered relations are maintained, reproduced, and changed using a complex, multi-level approach. The theorists argue that shifting low sex ratios can encourage changes in structural power towards women, and gender-parity is expected when females and males hold relatively balanced structural

power. Moreover, as structural associations become more equal, Guttentag and Secord anticipate impartial identities for males and females to develop, which could vastly change the ways that males and females relate to each other and allow male-female relations to be mutually supportive. Such changes are posited to result in our social world being quite different from anything that history has seen before. Unfortunately, a lack of empirical analysis means that their hypothesis has gone largely unexamined. My research assesses the viability of their predictions by investigating whether or not their claims are supported by empirical analyses.

CHAPTER 3

EMPIRICAL INVESTIGATIONS OF THE SEX RATIO THESIS

3.1 Investigations of the Sex Ratio Thesis

Empirical investigations of Guttentag and Secord's (1983) theory are relatively scarce, but the studies that have been conducted generally find strong support. Still, research is limited in scope. Most studies examine sex ratio effects on objective outcomes, including female marital transitions, stability, and childrearing conditions; however, some studies examine marital satisfaction, psychological wellbeing, and crime and victimization outcomes.

Nearly all of this research supposes that structural power is maintained in the hands of men, although a few investigations raise questions about the extent to which such presumptions should be made. For example, cross-national investigations indicate that sex ratio effects may be contingent on the level of economic independence held by women as a group. These findings support Guttentag and Secord's postulations and suggest that researchers need to examine effects beyond dyadic outcomes, especially since structural power can be used to influence how dyadic power is employed.

3.1.1 Sex Ratio Effects on Objective Relationship Formation and Dissolution

Forming intimate relationships with others is an important part of our life-course process and has historically signified entry into adulthood (Arnett 2004; Amato and Booth 1997; Banks 2011; Meier, Hull and Ortyl 2009). Investigations of marital formation have long-demonstrated that sex ratios play a significant role in marriage and divorce behaviors

(e.g. Goldman, Westoff, and Hammerslough 1984; Lichter, et al. 1992; Schoen 1983; Schoen and Kluegel 1988; South and Lloyd 1992, 1995; South, Trent and Shen 2001), and recent studies have also noted some sex ratio effects on cohabitation and dating practices (Guzzo 2006; Warner, et al 2011).

Extant research consistently concludes that sex ratios are a significant predictor of female status and relational outcomes. For example, the numerical supply of men is positively associated with female marriage (Fossett and Kiecolt 1993; Lichter et al. 1992; McLaughlin, Lichter and Johnson 1993; South and Lloyd 1992) and negatively related to divorce (Barber 2003; Trent and South 1989; also see Pedersen 1991). Using cross-national data from 111 countries, South (1988) finds similar marital and divorce patterns, but as predicted by Guttentag and Secord (1983), he also reveals that fertility rates significantly increase and women's average age at marriage, female labor force participation and female literacy rate significantly decrease in countries with high sex ratios (also see South and Trent 1988). Providing support for Guttentag and Secord's (1983) notion that women use their dyadic power in high sex ratio settings to form partnerships that benefit their access to material resources, Lichter, Anderson and Hayward (1995) find that women in high sex ratio societies are more likely than women in low sex ratio societies to actualize their preference (Buss 1989) and marry a higher status man.

Others find that teenage pregnancy (Barber 2000, 2001) and self-reported female sexual promiscuity (Schmitt 2005) are more common in low sex ratio areas. Barber (2004) investigates the sex ratio effects on single parenthood in Scotland, England and the United States using data that spans nearly 200 years. He finds that the nonmarital birth rate is

consistently and significantly associated with the availability of marriageable men such that nonmarital births increase as the number of single men decrease in each country, net of time period and economic prosperity.

Scholars have recently recognized that research on intimate partnering has almost exclusively focused on females. In an effort to overcome the lack of knowledge about male relationship formation and stability, researchers began examining sex ratio effects on male transitions to marriage. Albrecht and Albrecht (2001) find support for Guttentag and Secord's sex ratio thesis. Using 1990 Census data, they conclude that low sex ratio counties have lower marriage rates among men. Similarly, Lloyd and South (1996) find from their event history analysis that local marriage markets with a surfeit of women encourage young men's transition into marriage. Further, while women's economic independence hinders men's entry into marriage, male earnings and home ownership promote men into marital transitions (Lloyd and South 1996).

Research examining the sex ratio effects of male *and* female relational outcomes is scarce, but evidence suggests that though the sex ratio is a significant predictor of relationship formation and stability, the strength and direction of effects varies for males and females. For example, Warner et al. (2011) find that low sex ratios increase women's odds of cohabiting but decrease men's odds of cohabitating and increase the number of dating partners and cheating among men. This research suggests that sex ratio effects are not only influential in transitions into and out of marriage, but they also affect how individuals seek and assess non-marital relationships.

Despite vast support for Guttentag and Secord's theory, some research provides challenges to the theory's predictions. For example, Billy and Moore (1992) find a positive relationship between sex ratios and nonblack women's risk of nonmarital childbearing. Additionally, in their investigation of women's partnering behavior in China, Trent and South (2011) conclude minimal support for Guttentag and Secord's theory. Although they find that high sex ratios predict younger marital ages of females, they also find that high sex ratios increase women's likelihood of engaging in premarital and extramarital sexual relationships and having multiple sexual partners over the lifecourse. Assuming that China maintains a male-dominant structural power, their findings negate Guttentag and Secord's sex ratio thesis.

Some research further suggests that the quantity alone may not be enough to predict marriage and family trends. Instead, the "quality" of available mates is also an important consideration (Fossett and Kiecolt 1991, 1993; Lichter et al. 1992; Lloyd and South 1996; Spanier and Glick 1980; Teachman, Polonko, and Leigh 1987). The quantity over quality debate fundamentally centers on identifying unemployed or erratically employed men as economically marginalized and, thus, less attractive mates (Wilson 1987; Wilson and Neckerman 1986). Because cultural conceptions of men as breadwinners are pervasive and ideals about marriage heavily rely on notions of men providing financial support for the family (Cherlin 2000), marriage may seem less beneficial for women when the male prospects are economically unstable (McLanahan and Casper 1995).

Researchers conclude that male employment status, earnings, and education are strong predictors of marriage and divorce rates, marital timing, nonmarital fertility and

female-headed families (Bennett, Bloom and Craig 1989; Darity and Myers 1984; Fossett and Kiecolt 1991, 1993; Houseknecht and Spanier 1980; Lichter et al., 1992; Rosenfeld 2005; South and Lloyd 1992; Shoen and Cheng 2006). Lichter, LeClere, and McLaughlin (1991), in fact, conclude that male economic status is a stronger predictor than male availability in predicting female marriage patterns. Edin and Kefalas's (2005) study of poor single mothers further notes that although marriage remains a highly regarded and valued experience, many women do not marry fathers of children because they perceive that the fathers are not emotionally or financially stable enough for family life and fear that marriage will result in an unhappy or repressive commitment.

Although many individuals express clear preferences for partners who are employed and/or have a particular educational status (Oppenheimer 1997; South 1991), desirable partner characteristics vary by males and females. For example, women consistently rate socioeconomic status and earning capacity as important factors in determining the potential for romantic partnerships as compared to men (e.g., Buss 1989; Buss and Barnes 1986; Buss and Schmitt 1993; Sprecher 1989; Sprecher, Sullivan, and Hatfield 1994). Some men, however, report a preference for women with lower socioeconomic status, citing that higher status women are less likeable and less faithful (Greitemeyer 2007; also see Brown and Lewis 2004). Although self-reported relational preferences may not accurately represent actual behavior or real-life partnering choices and outcomes (Jennions and Petrie 1997; Stone, Shackelford and Buss 2007), research demonstrates that competent female leaders encounter significantly more negative, disapproving, and antagonistic behaviors than similarly-situated males (Butler and Geis 1990). Further, women who are successful in

male-gender typed tasks are often perceived and described as cold, hostile and unemotional (Heilman, et al. 2004; Wiley and Eskilson 1985) – in a word, unfeminine. These findings suggest the persistence of traditional gender ideologies that prize males and punish females for breaching "traditional" notions of the economically-dominant male and economically-dependent female.

3.1.1a Sex Ratios and Racial Differences in Partnering and Family Conditions

Guttentag and Secord (1983: 199) note that the low sex ratio of Black Americans has been more persistent and severe than any other racial-ethnic group (also see Bennett Bloom and Craig 1989).[6] As such, they argue that race-specific analyses could provide vital insights into the effects of consistently low sex ratios. Recognizing that the persistently low sex ratios among Blacks is likely due to extreme economic exploitation, educational limitations, and other forms of discrimination that Black Americans, especially Black men, endure, Guttentag and Secord oppose biological or cultural inferiority explanations about the social conditions experienced by Blacks. Similar to racial invariance hypotheses (Sampson and Bean 2006; Sampson and Wilson 1995), they argue that if Whites or other racial-ethnic populations experienced the same demographic and structural features as Blacks, social consequences would be the same.

A large majority of marital decline research focuses on Black females' inability to find "suitable" Black male partners, largely because of the disproportionate incarceration, high unemployment, and low educational attainment of Black men. The incarceration rates

[6] Following other scholars (Collins 2005; MacKinnon 1982), I capitalize racial classifications ("Black" and "White") to indicate that these terms are not simply colors, but represent groups of people that maintain an identifiable history in the U.S.

of young minority males have risen significantly since the mid-1970s (Western 2002; Pettit and Western 2004), and this has arguably depleted the pool of "marriageable" black men (Darity and Myers 1995; Western and Wildeman 2009). Collins (2005) argues that the extreme incarceration of young Black men segregates them from open social areas where relationships can form and remain intact. What is more, the lack of partnering coupled with the social and internalized denigrating stereotypes of Blacks results in extreme psychological distress for African Americans (Collins 2005).

Although male earnings in the labor force have been declining in the last few decades while female earnings have remained steady or slightly increased, unemployment and declining wages have been especially pronounced for Black males (Bennett, Bloom and Craig 1989). Ample evidence also supports the notion that Black men consistently have lower income, less stable employment, lower educational attainment, and are less likely to own a home than white men (e.g. Cancio, Evans and Maume 1996; Munnell et al 1996; Smith 2002; Tomaskovic-Devey, Thomas, and Johnson 2005). Further, while White women have recently gained educational parity with white men, Black females have consistently attained higher levels of education than Black men (Cohen and Nee 2000; McDaniel et al. 2011; Snyder and Dillow 2009).[7] Franklin (1997) examines the marital histories of 28 college graduates and finds that Black women commonly earn more than their husbands and are more than twice as likely to be divorced. Franklin attributes higher divorce rates among

[7] The recent scholarly and media attention about women outperforming men in school signifies "concern" about the status gains of women. This attention implies that men are expected to hold more status than women. Moreover, the attention seems to stem more from White women's recent educational gains. As mentioned above, Black women have long outnumbered Black men in educational attainment, but highly educated Black women have also been described using controlling images that accentuate their educational success as pathological and problematic to Black families and communities.

Blacks to educated Black women's higher earnings. This conclusion, of course, supposes "traditional" gender ideologies, which assume men's economic superiority over women.

Recent research indicates that marriages between individuals with similar levels of educational attainment are becoming more common (Shoen and Cheng 2006; also see Rosenfeld 2005). Thus, assuming that most individuals prefer educationally homogamous marriages, low levels of educational attainment among Black men may reduce their perceived marriageability and likewise limit Black women's marriage opportunities. Indeed, research suggests that Black women are less willing than White women to marry someone with lower earnings than themselves (Lichter, Anderson and Hayward 1995; South 1991).

Despite the arguments that quality is more important than quantity, relative socioeconomic differences across racial groups cannot fully explain racial differences in marital formation and dissolution. Lloyd and South's (1996) comparison of Black and White men's marital trends find that socioeconomic differences are not strong explanations of the racial gap in men's marriage rates. Similarly, Lichter et al. (1992) find that women's socio-economic independence explains only a small portion of racial differences in women's marriage transition. Although explaining racial gaps in relationship formation and stability are far from conclusive, extant research does point out the importance of examining sex ratios of the same race-ethnicity, as most marriages remain intra-racial.

3.1.2 Sex Ratio Effects on Subjective Appraisals

Guttentag and Secord's (1983) work also theorizes about subjective, social-psychological dimensions of relationship satisfaction and commitment by positing that sex

ratio effects on psychological outcomes are linked to alternative relational opportunities. Empirical studies support this argument by revealing that individuals' perceptions of marital alternatives are related to marital satisfaction (Udry 1983; White and Booth 1991), relationship commitment (Jemmott, Ashby and Lindenfeld 1989) and divorce (Udry 1983; White and Booth 1991).

Individuals' perceptions of available partners may be related to various psychological adaptations. For example, in a mixed methods study involving historical document analysis and experimental design, Durante et al. (2012) find when males are scarce, women seek out economic and social independence by aspiring to attain high-paying jobs and delaying childbirth (Durante et al. 2012: 121). This finding is consistent with Guttentag and Secord's (1983) arguments that females seek to amplify their structural power in low sex ratio contexts, and it confirms their findings about the growth of female entrepreneurs in Medieval Europe and about the U.S. feminist movement during the 1960s and 1970s – both of which occurred when sex ratios were low.

Focusing on rural China, Zhou et al. (2011) examines the effect of extremely high sex ratio contexts on men's psychosocial well-being. Their in-depth, semi-structured interviews with 45 unmarried men over 30 years of age showed that men blame their failure to find a partner on their own poverty, but also are resentful of the ease with which local poor women can "marry-up" or move into relationships with wealthy urbanites. Most of the men expressed that their singlehood brought significant disappointment and shame to themselves and their families. They described themselves as hopeless, sad, angry, and lonely. Although supportive of Guttentag and Secord's sex ratio-mental health thesis, these findings point to

the potential for sex ratios to have differential social consequences depending on the social group to which one belongs. High sex ratio effects may produce different psychological outcomes for higher status, urban men than they do for the rural men.

While the above described research shows strong support for Guttentag and Secord's theoretical framework, other studies challenge the theory. For instance, according to the theory, the relatively low sex ratio of Black Americans should explain the reported low levels of relationship quality and satisfaction among Black women and the low level of relationship commitment among Black men relative to White men (e.g. Guttentag and Secord 1983; Lawson and Thompson 1999). While there is some evidence that Blacks may report being less satisfied in their marriage than Whites (Broman 1993; South 1993; Trent and South 1992, 2003; Tucker and Mitchell-Kernan 1995), Trent and South (2003) find no evidence that racial gaps in marital satisfaction are due to variations in race-specific sex ratios. Rather, the authors find that although Black wives report lower levels of marital happiness, Black husbands report lower marital commitment, and Black wives and husbands report higher potentials for divorce as compared to their white counterparts, demographic and socio-economic predictors did not explain these outcomes.

3.1.3 Sex Ratio Effects on Crime and Victimization

Scholars have paid insufficient attention to relationships between the sex ratio and many other dimensions of social life; however, some studies investigate sex ratio effects on crime and victimization rates. These studies are far from conclusive about the sex ratio

effects on aggregate crime rates and criminal victimization of women, and indicate the continued need to elucidate how gender is perceived and treated in socio-legal contexts.

At the individual level, women's involvement in criminal offending and victimization is considerably lower than men's (Heimer 2000; Lauritsen, Heimer and Lynch 2009; Smith and Visher 1980; Steffensmeier and Cobb 1981). In fact, this gender gap in crime is one of the most consistent findings in criminological research. Guttentag and Secord's (1983) theory implies that this differential may be largely explained by the sex composition of the population as sex ratios may influence women's offending opportunities and system-based protection measures. Empirical analyses, however, produce inconsistencies in findings on relationships between sex ratios and violent crime with scholars reporting positive (D'Alessio and Stolzenberg 2010; Messner and Blau 1987), negative (O'Brien 1991), and null effects (Barber 2003; Campbell, Muncer, and Bibel 1998; Messner 1986). Although some research implies that this irregularity between sex ratios and crime rates may be due to intervening effects of family disruption (Messner and Sampson 1991) and a lack of parental investment (Barber 2001), such specifications are not definitive.

In extended examinations of the sex ratio-crime relationship, investigators have focused on predicting patterns of female protection and victimization. Guttentag and Secord posit that a numerical minority of women (i.e. a high sex ratio) encourages male valuation and respect for females. Many scholars interpret this postulation as suggesting that sex ratios should be negatively related to female criminal victimization and positively related to justice

system protections.[8] Using this interpretation, South and Messner (1987) investigate how sex composition relates to criminal justice treatment (protection) of women across approximately 60 countries. They find that countries with high sex ratios are slightly more likely to investigate and solve rape cases and have significantly lower rates of female arrests. Barber's (2000) study of 70 countries and O'Brien's (1991) intra-national analysis further conclude a negative relationship between sex ratio and reported incidents of rape.

While South and Messner (1987) find no relationship between cross-national sex ratios and female homicide victimization, Avakame's (1999) national study of lethal female violence finds that states with higher sex ratios have higher rates of female homicide victimization. Focusing specifically on intimate partner violence, D'Alessio and Stolzenberg (2010) conclude that U.S. cities with higher sex ratios experience more intimate partner lethal and nonlethal violence. Taken together, these findings suggest that men (at least those living in the U.S.) may use violence against women as a means of social control perhaps to ensure sexual fidelity of their female partners (Buss et al 1992; Buss 2000; Wilson and Daly 1998).

3.1.4 Moderating Sex Ratio Effects through Labor and Socio-economic Conditions

Much of the research I have reviewed concentrates on sex ratio's direct effects on gendered outcomes, but there is some indication that these relationships may be attenuated in certain socioeconomic contexts. In his analysis of 111 countries, South (1988) concludes

[8] I submit that this interpretation does not clearly delineate the potential for males to use overt and subtle coercion, violence, and aggression as a means to dominate women, which Guttentag and Secord (1983) note is often used when males hold disproportionate structural power.

that the effects of high sex ratios on maintaining “traditional” women's roles, statuses and positions, which are often preserved by men’s disproportionate structural power even in low sex ratio areas, are significantly weaker in countries where women's economic power (measured by paid labor force participation) is high. This finding indicates some support for Guttentag and Secord’s argument that female gains in structural power can provide women with access to valuable resources independent of marital formation, which can be used to alter historically inequitable structural power differentials.

CHAPTER 4

HYPOTHESES

Guttentag and Secord (1983) posit that the sex ratio of persons of marriageable and childbearing ages have significant effects on social outcomes, including behaviors related to marriage and family, economic and work activities. Guttentag and Secord's (1983) own research examined the direct effects of age- and race-specific sex ratios on marriage, divorce and marital fertility rates using national-level census data from 1960 and 1970. Their findings, which were based on data marking the beginning of substantial changes in gender relations, provided support for their theory. My research will further examine the empirical applicability of Guttentag and Secord's theory by analyzing additional time points (1970, 1980, 1990, 2000) and various levels of spatial aggregation (tract, county, and state). Below, I review the specific research hypotheses (also see Table 4.1).

4.1 Hypothesized Main Effects of Sex Ratios on Female Dyadic Outcomes

The sex ratio thesis implies that the sex ratio of persons of marriageable ages will influence dyadic relations between males and females, including aspects of relationship formation and preservation. Arguing that males as a group disproportionately hold structural power and use that structural power to "encourage" women to marry and mother, Guttentag and Secord (1983) predict that sex ratios will be positively associated with female marriage

and marital fertility and negatively related to divorce and single-parent households among females.[9]

H1: The sex ratio of the population of marriageable age and the proportion of females who are married are positively related.

H2: The sex ratio of the population of marriageable age and the proportion of childbirths among married couples are positively related.

H3: The sex ratio of the population of marriageable age and the proportion of females who are divorced are inversely related.

H4: The sex ratio of the population of marriageable age and the proportion of families that are headed by a single-mother are inversely related.

4.2 Hypothesized Main Effects of Sex Ratios on Male-Specific Dyadic Outcomes

The relationship between sex ratios and male relational outcomes is less explicit in Guttentag and Secord's (1983) theory, and the theorists note that that predicting patterns of male-specific outcomes is complicated – largely because of males' historic structural power dominance, which can be used to shape how dyadic or interpersonal power operates. The lack of theoretical clarity results in differing interpretations in predicting male marriage transitions. In recognizing the somewhat uncertain postulations related to male outcomes, I examine three competing hypotheses that could be formulated from Guttentag and Secord's (1983) framework.

[9] Hypotheses related to structural power are detailed in sections 4.3 and 4.4 below, but structural power imbalances tilted towards men as a group are important to dyadic relations because it results in females being more economically, legally and socially dependent on males.

First, the sex ratio thesis could be interpreted as predicting that sex ratio effects are positively related to male marriage rates and negatively related to male divorce rates. This interpretation assumes male control of structural power and posits the same directional effects of sex ratios for males and females. Specifically, males' are expected to use their disproportionate structural power to inform and institutionalize sex-specific norms that encourage their independence from females (and by contrast females' dependence on males). Still, Guttentag and Secord (1983) assume that persons are desirous of emotional and sexual companionship. Accordingly, male marriage entry and stability is hypothesized to increase in high sex ratio contexts because men are motivated by the shortage of women to commit to marriage as a way to obtain and maintain a relationship with an "opposite" sex partner. According to this interpretation, in low sex ratio contexts, however, men will be less likely to commit to marriage because their greater independence produces less incentive to marry and preserve marital relations. Thus, males may perceive the large number of unattached women as signifying such partnerships as unnecessary and may use their dyadic and structural power to avoid or postpone marriage (Guttentag and Secord 1983; also see Albrecht and Albrecht 2001 and Uecker and Regnerus 2010).[10]

H5a: The sex ratio of the population of marriageable age and

[10] This statement is not suggesting that uncommitted partnerships are more desirable than committed ones. Rather, it stems from Guttentag and Secord's (1983) grounding in exchange theory, which holds that relationship satisfaction depends on one's degree of power and dependency, which is heavily influenced by the opportunity of alternative relationships (see section 2.3 above for further detail). In fact, extant research indicates that the perception (Felmlee, Sprecher and Bassin 1990; Udry 1981) and actual (South and Lloyd 1995; South, Trent and Shen 2001) availability of alternative partners does influence martial and relationship dissolution. In addition, scholars have explained various aspects of inequality persistence by positing that the extent of oppression people endure depends on the perception of available options as well as the punishment and reward of exercising those options (Schwalbe 2007: 170).

the proportion of males who are married are positively related.

H6: The sex ratio of the population of marriageable age and the proportion of males who are divorced are inversely related.

An alternative interpretation of Guttentag and Secord's (1983) theory regarding male marriage formation is directly rooted in the notions of supply and demand (this alternative interpretation does not change the above hypothesis related to male divorce). Recognizing sex ratios as an indicator of partner availability, this interpretation hypothesizes an inverse association between sex ratios and male marriage. Specifically, the abundance of available female partners in low sex ratios areas result in males being able to achieve "opposite" sex partnerships because of the ample number of women. In high sex ratio areas, however, men will be less likely to marry because of limited partner availability.[11]

H5b: The sex ratio of the population of marriageable age and, the proportion of married males are negatively related.

The final interpretation posits a curvilinear relationship in predicting male marriage. Kiecolt and Fossett (1997), for instance, suggest that men have low marriage rates under two demographic conditions: in low sex ratio areas where women are available for non-marital sexual relationships *and* in high sex ratio areas where women are limited in availability. In this way, they posit that men's marriage rates are low when sex ratios are extremely low or high, but male marriage rates are heightened when sex ratios are relatively balanced (Fossett and Kiecolt 1993; Kiecolt and Fossett 1997; also see Albrecht and Albrecht 1999).

[11] This interpretation is consistent with the marital search model (Becker 1981; Oppenheimer 1988) and uses sex ratio as sole indicator of partner availability. In this way, it does not account for structurally-based gendered effects.

H5c: The sex ratio of the population of marriageable age and the proportion of males who are married are curvilinearly related.

4.3 Hypothesized Main Effects of Sex Ratios on Structural Power

Guttentag and Secord (1983) acknowledge that men have historically held the position of dominance and power, yet they posit this gendered distribution of structural power as variable by suggesting that women, as a group, can gain access to structural power in areas with a low sex ratio. Guttentag and Secord (1983) note that structural power is revealed in access to economic and political life, and they specifically posit that structural power is measurable through female's labor force participation because labor force participation allows for the growth in female economic independence. Hence, sex ratios are hypothesized to be inversely related to the relative proportions of females who participate in the labor market.

H7: The sex ratio of the population of marriageable age and female structural power are inversely related.

4.4 Hypothesized Conditional or Interaction Effects of Sex Ratios

Guttentag and Secord (1983) propose the dyadic effects of sex ratio imbalances, including marriage, divorce, and family structure, may be conditioned by the relative degree of male-female structural power. Some empirical research confirms that the interpersonal effects of high sex ratio contexts may be attenuated as women gain access to structural power (South 1988). These findings suggest that women use their structural power to offset any

constraints that have been historically associated with living in high sex ratio areas. Consequently, the effects of sex ratios are hypothesized to be weaker if the geographical area of interest has a relative balance of male-female structural power over time.[12]

H8: Structural power imbalances will condition the sex ratio effect on dyadic outcomes hypothesized above.

Hence,

H8a: The positive sex ratio-female marriage rate relationship will be weaker in areas where females have a relatively high amount of structural power.

H8b: The positive sex ratio-marital fertility rate relationship will be weaker in areas where females have a relatively high amount of structural power.

H8c: The negative sex ratio-female divorce rate relationship will be weaker in areas where females have a relatively high amount of structural power.

H8d: The negative sex ratio-single-mother households will be weaker in areas where females have a relatively high amount of structural power.

[12] It is theoretically plausible that extended low sex ratios can actually shift to the point of structural power being disproportionately tilted towards women; however, ample contemporary research indicates males' continued dominance in elite economic and political positions and supports that men as a group still hold status superiority over women as a group (Burns, Schlozman, and Verba 2001; Connell 2005; Coltrane 1994; Johnson 2004; Kimmel 1994; Ridgeway and Smith-Lovin 1999).

H8e: The sex ratio-male marriage rate relationship (depending on which hypothesis is supported) will be weaker in areas where females have a relatively high amount of structural power.

H8f: The negative sex ratio-male divorce rate relationship will be weaker in areas where females have a relatively high amount of structural power.

CHAPTER 5

DATA AND METHODS

5.1 Data

Data for the present research come from the Neighborhood Change Database (NCDB). The database contains information gathered by the U.S. Census Bureau over 4 decennial time points - 1970, 1980, 1990 and 2000 – at the census tract level. The NCDB contains an extensive amount of information, including about 4,000 variables (about 1,000 for each time point) on general population characteristics, age distribution, marriage and family structure, education, employment and labor, wages and income and poverty status. The data have been recalculated and normalized to correspond to the 2000 census tract boundaries. Such standardization allows for accurate comparisons over time and eliminates the need to control for changes in boundary definitions. In short, the NCBD allows researchers to investigate data from various census periods using 2000 boundaries - as though those boundaries were also in place in 1970, 1980 and 1990.

The basic unit of observation in the NCDB is the census tract or the census tract analog. A census tract is the U.S. Census Bureau's statistical equivalent of a large neighborhood. Tract-level analysis allows researchers to investigate the characteristics and influences of relatively proximate surroundings. Tracts generally contain between 2,500 and 8,000 inhabitants (with an average of about 4,000 people). These geographical boundaries are designated in order to capture similar populations and economic characteristics and housing conditions. Thus, census tracts are designed to be relatively homogenous.

Between each decennial census, tract boundaries may change. Boundaries are often redrawn in order to account for extensive neighborhood changes, including new housing developments and/or population changes, but most boundary changes are due to population density changes (i.e., large rates of out-migration or rapid population growth). Although tracts are designed to be relatively stable, boundary changes are not rare events. Tatian (2003) concludes the following percent change of census tracts: about 80 percent in 1970, 70 percent in 1980 and 49 percent of census tracts defined in 1990 were redefined in the 2000 decennial census.

The actual form of change varies, but there are generally three main types of tract changes. First, census tracts may be merged such that two or more existing tracts become a single, new tract. This form of change may come about if a significant proportion of residents leave an area due to re-zoning or land use transitions. Second, an existing tract can be split into multiple tracts. This tract division may occur when an area has had a significant population growth due to new housing construction or immigration. Finally, tracts may be reconfigured in ways that do not neatly combine or split preexisting census tracts. For example, a single tract may be separated into three, differently sized new tract boundaries. As stated previously, decisions about boundaries rely largely on maintaining social, economic and land use homogeneity.[13]

Remapping 1970, 1980 and 1990 data to 2000 tract boundaries was a multifaceted process conducted by GeoLytics, Inc., a private research firm, using proprietary data

[13] The methodology used to define census tracts has been widely critiqued, and these critiques are important to issues of spatial inequality (e.g. William 2006). In regards to the proposed research, however, the rationale of census tract boundary creation is important in that it reflects empirical findings on marriage and family formation following racial-ethnic and class homogeneity patterns.

compression and mapping technologies. Firm representatives admit that these procedures were complicated. Standardization procedures began by overlaying the 2000 census tract boundaries on the earlier year boundaries using geographic information system (GIS) software. This initial layering allowed methodologists to visually inspect changes in tract boundaries each year. If changes were apparent, the boundaries were remapped so that the boundaries were standardized.

The method of standardization varies depending on which type of change occurs. If the change involved two or more tracts being combined into a single tract, methodologists would add together the previous year's data to calculate the 2000 tract data. If the tract split into two or more tracts and the population did not divide evenly across tracts, the relative population change had to be assessed, weighted and spatially converted to match to the 2000 boundaries. The remapping weights and conversions were based on total population and were applied to all variables (weighted sums for population and housing unit counts and weighted averages for medians).

When remapping boundaries from 1990 to 2000 boundaries was necessary, block-level data were used to determine the appropriate population-weighted change. Standardization required the use of Census Tiger/Line®, which was able to identify streets in use during 1990. GeoLytics methodologists used street-level information about road placement to identify where the population likely lived (i.e., they assumed that the presence and condition of local streets and roads provided information about the population size and density).

Remapping 1970 and 1980 tracts to 2000 boundaries required additional techniques. As mentioned previously, not all rural areas in the U.S. were tracted in 1970 and 1980. In addition, GeoLytics methodologists could not construct reliable tract weights due to their inability to obtain reliable census block and block group data during these earlier years. For this reason, 1970 and 1980 boundaries were remapped to 1990 block data, which was then remapped to 2000 tract boundaries. According to GeoLytics methodologists, correspondence between the tract and block boundaries between 1980 and 1990 was deemed extremely well-matched, and association between 1970 and 1990 also produced good results in most cases (NCBD's Data Users' Guide, Appendix J 2003).

The analysis examines sex ratio effects at 3 levels of analysis: tract, county, and state.[14] First, extant research suggests that marriage markets are largely local (Akers 1967; Goldman, Westoff and Hammerslough 1984; Hirschman and Matras 1971). The majority of marital unions involve people who live close to one another – generally in the same or a nearby area (Catton 1964). These findings suggest that researchers interested in sex ratio effects on relationship formation would benefit from measurements at a localized level since larger levels of aggregation may leave sex ratio effects undetectable (Fossett and Kiecolt 1991). Still, it is important to recognize that increased mobility and technology-based communication allow people to participate in social events, including work, shopping, eating and visiting with friends that arguably extend the scope of the marriage market. By examining various units of analysis over time, I am able to assess the extent to which sex ratio effects vary across multiple levels of aggregation.

[14] In 2000, the U.S. housed 65,443 census tracts, 3,141 counties, 50 states (and the District of Columbia) and 4 regions.

Second, although the NCDB contains tract-level data, the indicators can be aggregated up to various levels. Some levels of aggregations, however, may not match perfectly because of the ways geographic levels are constructed. Specifically, the NCDB does not accurately allow for aggregation to the block group, city/place or Metropolitan Area because those units are not available in each of the 4 census decades, significant changes in classification have occurred during these 4 decades, and/or because tracts cross these boundaries. Because county, state and regional-level aggregation can be accomplished with complete accuracy, I examine these units of analysis.

5.1.1 Limitations of Data

Despite the obvious advantages associated with the extensive information contained in the census and the benefits of having standardized tract-level data across various time points, census and NCDB data, like any data source, are not without limitations. First, I am limited to the tract-level data available in the U.S. Census files from 1970, 1980, 1990, and 2000 and the compiled information in the NCDB. Although the U.S. Census Bureau includes a vast amount of information about population, race and age demographics, household composition, and socio-economic and housing variables, it does not collect information on some variables known to be important indicators of gendered relations. For example, the census does not collect information about household labor even though research consistently shows significant differences in the amount of household labor performed by men and women (Hochschild and Machung 1989; Huber and Spitze 1983; Stone 2007), which may recreate traditional sex group hierarchies. In addition, homosexual partnerships

have traditionally gone unexamined in censuses, although the 2000 census does provide some cursory information regarding the proportion of homosexual households. Over and above these data collection limitations, it is also important to note that Federal Law (Title 44, U.S. Code) prohibits the census from providing individual-level data for 72 years to ensure the confidentiality of respondents. This means that the data used for the present project is only available in aggregated form.

In addition to the limited scope of the census, it is also important to separately consider information contained in the NCDB. Decisions about the census information compiled, presented and tabulated in the NCDB are determined by GeoLytics employees. The information contained in the NCDB is not as extensive as the data contained in the full census. Some aspects of neighborhood-level social life may be examined only in a cursory manner (i.e., labor practices) or ignored completely (i.e., voting and political behaviors). In addition, although the year-specific censuses do provide detailed cross-tabulations of subgroups (e.g., educational attainment and employment outcomes by sex and race-ethnic identification), this information is not available in NCDB.

Finally, the potential for undercounting in the census remains a concern in establishing the validity of conclusions made about the U.S. population. Discussions about the extent to which the census undercounts individuals, especially persons who are undocumented or have unstable residence are long-standing (Anderson 1988; Skerry 1992; West and Fein 1990). It is highly plausible that the census statistics do not represent all people living in the U.S. However, the U.S. Census Bureau has generally made efforts to locate non-participants. Responding to studies revealing the undercounting of poor,

immigrant, and residentially transient segments of the population, the Bureau began broadening its efforts to increase the scope and structure of the census in 1970. I do not adjust for undercounts because the existing data likely provides better population estimates than would estimates based on speculated adjustments, and previous work concludes that underreporting does not bias sex ratio effects on relational and formation and family structure (e.g., Fossett and Kiecolt 1991).

5.2 Measures of Theoretical Constructs

5.2.1 Independent Variable: Sex Ratios

Patterns of marriage and family formation follow certain trends, especially as related to age and race. Scholars have previously documented the extensive conceptual and methodological difficulty in developing measures of "suitable" partners (e.g. Fossett and Kiecolt 1991). However, in an effort to accurately assess what empirical evidence has previously identified as "appropriate" partnerships, I calculated and examined multiple measures of sex ratios, including age-specific, age-race-ethnic-specific and age-race-ethnic-male employment-specific subgroups. The age-specific sex ratio provides an overall sex ratio for persons generally considered marriageable ages. The age-race-ethnic-specific sex ratio adds race-specificity to the sex ratio calculation and is calculated by taking the number of males of a single race-ethnicity and particular age group and dividing it by the number of females of that same race-ethnicity group in the specified relevant age range. The age-race-ethnic-male employment-specific sex ratio restricts the male population to employed men.

5.2.1a Age-specific Sex Ratio

Guttentag and Secord's (1983:19) theory of sex ratio directs me to examine the sex ratio "at ages when men and women most commonly marry." Because my theoretical framework is focuses on the implication of sex ratios for marriage and family formation, children and the elderly will be excluded from the analysis.[15]

Persons overwhelmingly seek mates who are about the same age (Atkinson and Glass 1985; Vera, Berardo and Berardo 1985), and females commonly marry males who are approximately 2-3 years older. In order to take both of these issues into account, researchers compute sex ratios separately for relatively narrow age ranges and stagger male-female ages. As an example, Guttentag and Secord (1983) calculated the sex ratio by using men aged 22-27 and women aged 20-25 (see Akers 1967; Heer and Grossbard-Schechtman 1981 for similar approaches).

Using narrow age ranges, however, produces results that are too cautious in that it restricts or removes relevant competition that is important to marriage market research (Goldman, Westoff and Hammerslough1984; Schoen 1983). For this reason, researchers more often use broader age ranges in calculating sex ratios for marriageable persons as a way to allow for age variation in partnering and to recognize a broader marriage pool. Sex ratios have been calculated for persons 15-42 years of age (Guttentag and Secord 1983), 15-49 years of age (Scott 1988; South and Trent 1988) and 15 to 64 years of age (Barber 2000) in order to take into account most if not all potential competitors for partnerships. Others have

[15] Including children and the elderly has other important implications for predicting sex ratio effects as well. The sex ratio of young persons tends to be closer to 100 than older groups, while the sex ratio of elderly adults tends to much lower than other adult ages due to men's greater mortality rate (Fossett and Kiecolt 1991), so including these age groups could bias results.

argued that all men should be included in sex ratio calculations arguing that they do not have the same fertility limitations as women and generally gain financial and social success as they age. Such scholars calculate sex ratios using females of primary childbearing ages but including all men in the area regardless of age (e.g. D'Alessio and Stolzenberg 2010).

In their extensive investigation of sex ratio measures, Fossett and Kiecolt (1991) found that sex ratios calculated using broad age categories were preferable to those using narrow age ranges. South's (1991) research on desirable mate selection provides additional support for this argument. He finds that, compared to young adults, older individuals report being more willing to enter a relationship with persons of a wider age range. Thus, relying on narrow age groups could mask the formation of potential partnerships, especially among older persons.

In order to assess the degree to which age-specific sex ratios influence gendered outcomes, I calculate age-relevant sex ratios using broad age categories. Specifically, I examine the sex ratio for males and females ages 15 to 44 by dividing the number of males aged 15-44 by the number of females of the same age and multiplying by 100.[16],[17]

SexRatio15-44 = (Males aged 15-44 / Females aged 15-44) *100

[16] Since marital entry has been delayed in recent decades (Goldstein and Kenny 2001), I also calculated the sex ratio for ages 18 to 44 so as to exclude mid-teens from the sex ratio calculation. The models indicated that the sex ratio effects were nearly identical across these calculations; therefore, I only detail my analysis of the overall sex ratio effects of the population aged 15-44.

[17] I ran a supplemental analyses at the tract-level that used a log-transformed sex ratio variable since the variable is asymmetric in its natural metric (i.e., the sex ratio ranges from 0 to 100 when the population has more women than men and 100 to infinity when the population has more men than women). Although it is known that log transformation eliminates asymmetry and provides more consistent estimation effects on dependent variables, it did not substantively change the results.

5.2.1b Age-Relevant Sex Ratios by Race-Ethnicity

The post-1965 era has witnessed a decrease in explicit expressions of white superiority (Bobo and Kluegal 1997) and an increase in interracial friendship networks, interracial marriage (Lee and Edmonston 2005; Qian and Lichter 2011), and multiracial identifications (Farley 2001; Jacoby 2001; Weeks 2008). Despite increased racial-ethnic exogamy, the U.S. is still marked by continued endogamy in marriage formation. Wang (2012), for example, finds that only about 7 percent of current marriages involve partners of different races.

Prior studies have used race-specific sex ratios to examine relational outcomes (Fossett and Kiecolt 1991; Guttentag and Secord 1983; Harknett 2008; Lichter, LeClere and McLaughlin 1991). Calculating age-relevant sex ratio by racial-ethnic subgroups will arguably more accurately reflect sex ratio effects since most marriages remain intraracial, especially among whites and blacks (Passel, Wang and Taylor 2010; Qian and Lichter 2007; Wang 2012). Although Hispanics are more likely than other racial-ethnic groups to participate in inter-marriage and commonly marry non-Hispanic whites (Lichter 2012), most marriages remain intra-ethnic.

To assess the variation of sex ratio effects on marriage and family formation and economic outcomes across race-ethnicity empirically, I calculate sex ratios by race (Black and White) and ethnicity (Hispanic/Latino). [18] Unfortunately, the NCDB does not provide disaggregated racial-ethnic information for the marriageable age categories. Thus, I calculate

[18] Due to the variable construction in the NCDB, persons who reported being multi-racial in the 2000 census are excluded from this variable, but fewer than 2.5 percent of respondents reported being multiracial.

the race-ethnic-specific sex ratio using the age-group data that are available: persons who are 15-59.

WSexRatio15-44 = (White Males 15-59 / White Females 15-59) *100

BSexRatio15-44 = (Black Males 15-59 / Black Females 15-59) *100

HSexRatio15-44 = (Hispanic Males 15-59 / Hispanic Females 15-59) *100

5.2.1c Age-Relevant Sex Ratios by Race-Ethnicity and Male Employment

Research suggests that being unemployed hinders transitions to marriage and alters family conditions, especially for males (Lloyd and South 1996; Mare and Winship 1991; Oppenheimer, Kalmijn and Lew 1993; South 1991; Wilson 1987). The importance of employment status among men is based on two fundamental points. First, marriage research often finds that men's employment partially explains contemporary marriage patterns among Black and White women (Lichter et al 1991; South and Lloyd 1991). Second, attitudinal surveys suggest that women give preference to men who can provide economic security (England and Farkas 1986; also see South 1991). Given these findings, some researchers argue that unemployed males should be excluded from sex ratio calculations (e.g., Wilson 1987; Wilson and Neckerman 1986). Supporting these arguments, Fossett and Kiecolt (1991) conclude that removing unemployed black males from sex ratio calculations produces a sex ratio that decreases substantially enough to produce different gendered outcomes.

In order to assess how male (un)employment influences sex ratio effects, I compute a measure that excludes unemployed men from the sex ratio, thus taking into account age,

race-ethnicity and male labor force status.[19] Specifically, I subtract the number of unemployed males from the race-specific male population aged 15-59, then I divide that outcome by the number of females aged 15-59 and multiply this product by 100.

> WSexRatio15-59EmpMale = [(White Males15-59 – Unemployed White Males) / White Females 15-59] *100
>
> BSexRatio15-59EmpMale = [(Black Males15-59 – Unemployed Black Males) / Black Females 15-59] *100
>
> HSexRatio15-59EmpMale = [(Hispanic Males15-59 – Unemployed Hispanic Males) / Latina Females 15-59] *100

The unemployed male indicators are not available for 1970, so I am unable to construct a comparable measure in the 1970 decennial census. The Bureau of Labor Statistics indicates, however, that the male unemployment rate for men 20 years and older was just above 2 percent nationally and was much lower than the unemployment rate for similarly aged females (Howe 1990); therefore, I submit that sex ratios by male employment would not be significantly different than the race-specific sex ratios for other census years.

5.2.2 Dependent Variables: Dyadic Relations

Guttentag and Secord (1983) theorize that sex ratios influence the formation and continuity of male-female dyadic relations, including marriage, divorce, marital fertility and single-parent households.

[19] The indicators regarding male employment are defined by the number of unemployed or nonworking males who are 16 years of age or older, so the age range of males included in this indicator is slightly different than the 15-59 age range to calculate race-specific sex ratios.

5.2.2a Marriage Rate

Guttentag and Secord (1983) suggest that sex ratios are positively associated with female marriage rates, but the theory is ambiguous about its prediction of male marriage rates. The Census Bureau defines marriage as a formalized legal or common-law husband and wife who are at least 15 years of age or older and live in the same household.[20] Respondents, however, also indicate if their spouse is currently present or absent in the home. Thus, the Bureau divides married persons into two categories "married, spouse present" or "married, spouse absent." The "married, spouse absent" reflects situations where married persons are living apart because one party lives a considerable distance from home due to civilian employment, Armed Forces deployment or any other reason other than marital separation, which is defined as being separated due to marital discord.

I compute the marriage rate of females by (1) adding the number of married females with a spouse present to the number married with a spouse absent and (2) dividing the number of married females by the total number of females ages 15 and over and (3) multiplying the outcome by 100. The same computation will be applied to calculate the marriage rate of males -- summing spouse present and absent male marriages, dividing by the total number of males ages 15 and over, and multiplying by 100. Unfortunately, data on marriage rates for 1970 and race- and ethnic-specific measures are not available, so I am only able to assess overall marriage outcomes for 1980, 1990 and 2000. Support for the theory will be found if the marriage rates are lower in low sex ratio areas.

[20] Marriage is often used as the primary indicator of committed relationships, but the available data do not allow me to measure other committed love relationships, including those between lesbian, gay or otherwise "unmarried" partners.

Male Marriage Rate=[(Married males 15+ years old, spouse present + Married males 15+ years old, spouse absent) / Males 15+ years old] * 100

Female Marriage Rate = [(Married females 15+ years old, spouse present + Married females 15+ years old, spouse absent) / Females 15+ years old] * 100

5.2.2b Divorce Rate

The sex ratio thesis posits that sex ratios are inversely associated with male and female divorce rates. The Census Bureau defines divorce as the legal dissolution of marriage. Since Guttentag and Secord (1983) posit the same sex ratio effects for male and female divorce, it is likely that I do not need to calculate sex-specific divorce rates. Nonetheless, I do so since having this sex-specific divorce rate will allow me to assess potential differences between male and female outcomes. The rate of divorced males will be calculated by dividing the number divorced males by the total number of males aged 15 and over, and multiplying the outcome by 100. The rate of divorced females will be calculated by dividing the number divorced females by the total number of females ages 15 and over, and multiplying the outcome by 100. Unfortunately, data on divorce rates for 1970 and race- and ethnic-specific measures are not available, so I am only able to assess overall divorce outcomes for 1980, 1990 and 2000. Support for the theory will be suggested if divorce rates are higher in low sex ratio areas.

Male Divorce Rate = (Divorced males 15+ years old / Total number of males 15+ years old) * 100

Female Divorce Rate (Divorced females 15+ years old / Total number of females 15+ years old) * 100

5.2.2c Marital Fertility

Guttentag and Secord (1983) posit that sex ratios are positively related to marital fertility rates. I operationalize marital fertility as the proportion of married-couple families with children. I calculate this variable by dividing the number of married couple families with children by the sum total of the number of families with children, and multiplying by 100. Support for the theory will be provided if married households with children are lower in areas with a low sex ratio.

> Marital Fertility Rate = [Married-couple families with children / (Married-couple families with children + Female-headed families with children + Male-headed families with children)] * 100

The NCDB provides race-specific information on this indicator at all 4 time-points and ethnic-specific indicators in all time-points except 1970, so I separately model marital fertility by race-ethnicity. To calculate this more precise measure, I add together the number of race-ethnic-specific married couples with children, the number of race-ethnic-specific married couples without children, the number of race-ethnic-specific female-headed families with children, and the number of race-ethnic-specific male-headed families with children. This sum will be used as my denominator. I, then, divide the race-ethnic-specific married couple families with children by the sum total number of race-ethnic-specific families and multiply the outcome by 100.

> White Marital Fertility Rate = [White married-couple families with children / (White married-couple families with children + White female-headed families with children + White male-headed families with children)] * 100

> Black Marital Fertility Rate = [Black married-couple families with children / (Black married-couple families with children + Black female-headed families with children + Black male-headed families with children)] * 100

> Hispanic Marital Fertility Rate = [Hispanic married-couple families with children / (Hispanic married-couple families with children + Hispanic female-headed families with children + Hispanic male-headed families with children)] * 100

5.2.2d Female-Headed Families

Guttentag and Secord (1983) posit that sex ratios are inversely related to single-mother families. I operationalize single-mother families as the proportion of female-headed families with children. I calculate this variable by dividing the number of female-headed families with children by the sum total of the number of families with children, and multiplying by 100. Support for the theory will be suggested if single-mother families increase in low sex ratio societies.

> Female-Headed Family Rate = [Female-headed families with children / (Female-headed families with children + Male-headed families with children + Married-couple families with children)] * 100

As with the marital fertility rates, the NCDB provides race-specific information on this indicator at all 4 time points and ethnic-specific information in 1980, 1990, and 2000, so I examine differences by race and ethnicity. To calculate this measure, I add together the number of race/ethnic-specific female-headed families with and without children. This sum will be used as my denominator. I, then, divide the race/ethnic-specific single-female families with children by the total race-specific family.

> White Female-Headed Family Rate = [White female-headed families with children / (White married-couple families with children + White female-headed families with children + White male-headed families with children)] * 100

Black Female-Headed Family Rate = [Black female-headed families with children / (Black married-couple families with children + Black female-headed families with children + Black male-headed families with children)] * 100

Hispanic Female-Headed Family Rate = [Hispanic female-headed families with children / (Hispanic married-couple families with children + Hispanic female-headed families with children + Hispanic male-headed families with children)] * 100

5.2.3 Dependent Variable: Structural Power as Relative Female-to-Male Labor Force Participation

Guttentag and Secord (1983) suggest that structural power is measured by the ability of one sex group to use their collective economic, political and social positions to influence various life outcomes. Structural power is hypothesized to include many facets of social life, including economic and political status. Guttentag and Secord (1983:26) note, however, that economic power is especially important. Because women have been historically economically dependent on men, gains in this area of social life can both decrease this dependence, and given our current economic structure, can be used to augment political, legal, and cultural power.

Economic resources are a significant source of power in capitalist economies. Throughout much of U.S. history, women have been largely dependent on men for economic security. However, extant studies confirm that women – married and unmarried - are entering the work force in record numbers (Thistle 2006). This growth in labor force participation is expected to increase the economic structural power of women. Although labor force participation may not lead directly to economic power (Mason 1986), there is

reason to suspect that it is an essential part of attaining such power (Blumberg 1979; South 1988) as it allows women to gain some financial independence and use their economic position to resist "traditional" notions of a stay-at-home wife and mother (Becker 1981; Chafetz 1990; Guttentag and Secord 1983).

The NCDB contains data on labor force participation by sex in all 4 time points and labor force participation by sex and racial-ethnic groups in 1980, 1990 and 2000. Guttentag and Secord's (1983) theoretical conceptualization implies that structural power is dynamic and changeable, and other scholars have also argued that measures of male and female status are most relevant when it provides information about the relative status of males and females (e.g., Blumberg 1979; Chafetz 1984). For these reasons, I compute a measure of labor force participation that captures women's labor force participation relative to men's (overall and by racial-ethnic subgroup).[21]

I operationalize relative female-male labor force participation by dividing the relative proportion of females who are employed in the civilian labor force and armed forces by the relative proportion of males who are similarly employed, which provides a standardized ratio of female-to-male labor force participation whereby a score of 1 denotes an equal number of females and males working. Employment is defined as persons who are 16 and older and currently working in the paid labor market or actively enlisted in the armed forces.

[21] I understand that structural power involves more than labor market participation, but the NCDB does not contain information on political, legal or other forms of structural-cultural representation. In addition, the NCDB does not contain sex-specific income or educational attainment indicators. Guttentag and Secord (1983) specifically emphasize women's increased labor market participation as a crucial factor in assessing economic power and hypothesize that being involved in paid work lessens the structural power of men over women (Guttentag and Secord 1983:168). Since economic means are often used to obtain other sources of power in capitalist societies, the power measures in the proposed analysis are an important first step to studying sex ratio's effect on structural resource access and accumulation.

Female Structural Power = {[(Females 16+ years old in armed forces + Females 16+ years old employed) / Females 16+ years old] / [(Males 16+ years old in armed forces + Males 16+ years old employed) / Males 16+ years old]}

Race-specific measures of this indicator are obtained by (1) adding together the number of race-gender-specific and ethnic-gender-specific persons employed and serving in the armed forces and (2) dividing that sum by the total number of that subgroup population and (3) dividing the resulting subgroup scores by one another.

White Female Structural Power ={[(White females 16+ years old in armed forces + White females 16+ years old employed) / White females 16+ years old] / [(White males 16+ years old in armed forces + White males 16+ years old employed) / White males 16+ years old]}

Black Female Structural Power ={[(Black females 16+ years old in armed forces + Black females 16+ years old employed) / Black females 16+ years old] / [(Black males 16+ years old in armed forces + Black males 16+ years old employed) / Black males 16+ years old]}

Hispanic Female Structural Power ={[(Hispanic females 16+ years old in armed forces + Hispanic females 16+ years old employed) / Hispanic females 16+ years old] / [(Hispanic males 16+ years old in armed forces + Hispanic males 16+ years old employed) / Hispanic males 16+ years old]}

5.2.4 Structural Power as a Conditioning Effect of Sex Ratios on Dyadic Power

Guttentag and Secord (1983) note that the dyadic sex ratio effects (marriage, divorce, marital fertility and household structure) are contingent on structural power context. As mentioned previously, although the theorists argue that structural power has historically remained largely in men's favor, structural power is changeable and can become more balanced between the sexes or shift in women's favor. The result of these structural power shifts is that women may use their structural power gains to counteract constraints historically associated with living in high sex ratio areas.

Guttentag and Secord (1983: 174) theorize that more balanced structural power between the sexes is likely in areas where the sex ratios remain "sufficiently low" for "extended" periods of time. Empirical research conducted at the cross-national level has concluded that socioeconomic development – often associated with increased women's labor force participation (Pampel and Tanaka 1986; Youssef 1974) - weakens links between sex ratios and marital and familial outcomes, including marriage and divorce rates (South 1988; also see Jones 2007 for similar findings in Pacific Asia). I, thus, create a product term for sex ratios and male-female labor force participation. This interaction variable will be included in a panel regression model in order to assess if relative male-female labor participation conditions longitudinal sex ratio effects on female and male marriage and divorce, martial fertility rates, and single-mother households.

5.2.5 Additional Control Variables

Additional variables are included as controls in the present analysis. Marriage, family and economic patterns often differ by regions (Goldscheider and Waite 1986; Lichter et al 1991; 1992; Lichter et al 1995). To account for these potential effects in the present analysis, I create a series of dummy-scored regional measures, including Northeast, MidWest, West and South. South is included as the reference category.

The percent of the population that is foreign born is included for several reasons. First, extant research identifies some differences in foreign born populations' patterns of relational formation, stability, fertility, and family structure. Second, migration patterns, which directly relate to the proportion of the population that is foreign born, have been linked

to labor-related outcomes, including economic development, opportunities, and gendered distribution of labor. Patterns of migration often serve as a proxy for perceptions and/or actual socio-economic growth in the host community, and economic factors are often acknowledged as integral factors influencing rates of marriage, divorce, and family conditions. To account for these issues, I include a measure for the proportion of population who are *foreign born*.

Previous theoretical and empirical literature has argued that persons who live in group quarters should be excluded as a part of the marriage and labor pool because of their confinement to the group housing unit (i.e., their incapacitation interferes with the potential to participate in marriage, family and work structures) (see Collins 2005; Fossett and Kiecolt 1991). Unfortunately, NCDB does not identify the group quarters population by sex or other demographic characteristic, so accurate calculations of such a sex ratio is impossible. In an effort to recognize the effect that confined populations may have on gendered outcomes and total population effects, I also control for the *proportion of population living in group quarters* and *population size* (total population divided by 1000).

5.3 Analytic Strategies

5.3.1 Linear Regression

After examining the descriptive statistics and bivariate relationships between the independent and dependent variables, I analyze the tract-level data cross-sectionally using

linear regression modeling.[22] I employ ordinary least squares (OLS) regression using the "regress" command in Stata. OLS is a generalized linear modeling technique that produces multivariate estimates of a continuous outcome variable. This analytic technique will allow me to identify patterns and exceptions to the hypothesized sex ratio effects.

$$Y_i' = b_0 + b_1X_{i1} + b_2X_{i2} + b_3X_{i3\ldots}\ b_kX_{ik} + \varepsilon$$

Where Y_i' is the predicted value of the dependent variable for the *i* th observation, b_0 is the constant or intercept term, $X_{i1,}\, X_{i2,\ \ldots}\ b_kX_{ik}$ is the actual observed values of the independent variables for the *i* th observation, and $b_{1,}\, b_{2\ldots}$ represents the unstandardized regression coefficients or slopes. Due the large sample size, I request robust standard errors for the tract-level analysis.

5.3.2 Hybrid Panel Analysis

Guttentag and Secord's (1983) sex ratio thesis is concerned about how fluctuations in the sex ratio influence gendered outcomes across space as well as over time. To assess the data longitudinally, I employ hybrid panel modeling. Hybrid regression models were

[22] I considered the potential for spatial relevance in identifying associations between sex ratios and gendered outcomes. For this reason, I also conducted cross-sectional analyses using the Stata "vce (cluster) option," which corrects for intragroup correlation (i.e., correlation within the observations of each geographically specified group). Because most marriage unions and many workers form relationships locally, I first conducted a cluster analysis that specified a county identifier. In an effort to recognize, however, that many people may travel outside of their county for recreation and work activities and that state laws regarding marriage, divorce, policies on family assistance, and employment may be more salient than county boundaries, I also conducted a cluster analysis specifying a state identifier. Although cluster models provide more conservative estimates (due to more conservative standard error and t-statistics) than models not accounting for clustering, the models were substantively the same as the non-cluster models. For parsimony, I present and discuss the non-cluster analysis only.

developed to resolve issues common to fixed effects and random effects time series models – the two most commonly used approaches for panel analysis (Allison 2005).[23]

I elect to use hybrid panel analysis for various reasons. First, the NCDB contains repeated measures on the same units over time, which violates the assumption of independent errors required for random effect models.[24] In addition, the hybrid method allows me identify the parameters of observed time-invariant variables, which is not possible with fixed effect models, and since prior research has shown significant spatial and time-period differences in various gendered outcomes, estimating these effects is important. In short, hybrid modeling provides the benefits associated with fixed and random effects models (Allison 2005; Ousey and Wilcox 2007; Phillips 2006) and is well-suited for the present analysis because it allows me to estimate sex ratio effects on gendered outcomes by decomposing across-unit and within-unit variation and estimating their respective effects in a single model (Allison 2005; Ousey and Wilcox 2007; Phillips 2006).

The hybrid model takes the following form:

$$Yjt = \alpha + \beta Xj + \eta(xjt - Xj) + \nu j + \varepsilon jt$$

Where Yjt represents the dependent variable for unit *j* and year *t*, α indicates the intercept or constant, β represents the parameter estimate of between-unit mean differences, Xj, η signifies the effects of within-unit differences, xjt represents the predictor for region j at time t, νj, represents the unit-specific error term, and εjt signifies the model error term, which

[23] Fixed effect models estimate only within-unit or over time effects and leave between-unit effects as fixed. Random effects models estimate parameters by combining within- and across-unit effects and assume that variation across units are random (Allison 2005; Phillips 2006).

[24] Hybrid panel analysis allows correlation among observations within the same unit over time, but assumes spatial units are completely independent of one another (Phillips 2006).

controls for unique-unit-specific characteristics as it contains random variation within units over time.

Several steps must be taken to prepare the data for hybrid panel analysis. First, I convert the compiled NCDB into a long-form, unit-year data file by pooling relevant data over 4 decennial censuses. Next, I separate or decompose sex ratios and other time-varying predictors into 2 parts: between-unit and within-unit components (Ousey and Wilcox 2007; Phillips 2006). To do so, I sort the data by spatial unit and year. Then, I calculate the between-unit components by averaging each predictor, which produces a space-specific mean score and allows me to examine sex ratio effects across place. This between-location component is comparable to cross-sectional analysis and provides me with the ability to assess long-term or enduring sex ratio effects (Phillips 2006) because the estimates take into account the whole time period examined.

I also compute the within-unit or change components of each predictor by calculating a deviation score (i.e., subtracting the actual indicator score from the space-specific mean created above). This within-location component offers an assessment of the impermanent or transitory sex ratio effects of a particular unit of analysis over a specific time lag, which is general purpose of longitudinal studies (Phillips 2006). These estimates can be understood as indicating the effects of how variations in the sex ratio result in changes in gendered outcomes over the time period examined. The within-unit parameter estimates produced by hybrid panel analysis are identical to those produced in a classic fixed effect panel model (Zhou 2011).

Finally, using the "xtreg" command in Stata, the between- and within-unit components are added in random-intercept regression models (Allison 2005) to determine the extent to which they predict each of my gendered outcome indicators. As with my cross-sectional analysis, given the large sample, I use robust standard errors for the tract-level analysis.[25] In order to control for year effects, I include dummy variables for the years 1970, 1980 and 1990 with the year 2000 serving as my reference category.

[25] Even though the sample size is smaller at the county- and state-level, I also conducted an analysis that requested robust standard errors at these larger aggregations, but the substantive findings were the same.

CHAPTER 6

DESCRIPTIVE AND BIVARIATE ANALYSES AND RESULTS FROM CROSS-SECTIONAL ANALYSIS

In this chapter, I present descriptive statistics and bivariate correlations of the variables used in my analysis and follow by presenting results of a cross-sectional regression analysis of the tract-level data.

6.1 Descriptives

Tables 6.1, 6.2, and 6.3 present descriptive statistics for all study variables at the tract, county and state-level, respectively. I present the descriptive data cross-sectionally to aid in data comparisons by decennial census year. As shown in Table 6.1, the overall tract-level sex ratio of 15 to 44 year olds steadily increases over the four decennial census time points suggesting that there are, on average, more men than women at the tract level. This increasing sex ratio is generally consistent at the county- and state-level (see Tables 6.2 and 6.3).[26]

By further specifying race-ethnic-specific and race-ethnic-male employment specific measures, I am able to better identify the sex ratio of "suitable" partners. Because these race-ethnic-specific calculations contain males and females from a wider age range, these measures are not directly comparable to the overall sex ratio calculation. Nevertheless, these

[26] This steady increase and the relatively high average sex ratio over time is due to my age-specific sex ratio calculations. When including the entire population, the national-level sex ratio is low (i.e., falls below 100). Nonetheless, the sex ratio at birth and among the young population is relatively high. For example, in 2000, the sex ratio for the population aged 18 years and younger was 106, and this high sex ratio continues until the 30-34 age range when women begin to very slightly outnumber men.

group-specific sex ratios are comparable over time, and provide further insight into their differential consequences. As compared to whites, the data reveal higher sex ratios and more striking temporal mean differences among Black and Hispanic sex ratios at all levels of analysis. In fact, at the county- and state-level, the mean sex ratios among whites have been relatively consistent, but Black and Hispanic sex ratios have a mean range that often exceeds Whites by 10 to 20 points across decennial census periods. For illustration, Table 6.2 show that the county-level mean of Black sex ratios increased approximately 20 points between 1990 and 2000, as did the Hispanic sex ratio from 1980 to 1990. In contrast, sex ratios among Whites did not see these large, increasing shifts over time.

The descriptive statistics of each dependent variable of interest are consistent with some prior socio-historical research. For example, as pointed out by family historian, Stephanie Coontz (1997), my data show that marriage rates have fluctuated over these time points, marital fertility has decreased, and divorce rates and female-headed families have considerably increased. While these general trends are consistent across races, racial differences are apparent. Specifically, as compared to Whites, rates of marital fertility among Blacks and Hispanics have been markedly lower and rates of female-headed families have been notably higher.

Over time, the overall female-to-male labor force participation ratio moves closer to one suggesting that females increase their employment in the labor market, thus increasing their ability to attain structural power. Although the mean ratio never reaches full parity among White and Hispanic populations, the ratio exceeds 1 among Blacks in 1990 and 2000. This mean value indicates that the average area contains a relatively greater number of Black

women working in the labor force as compared to Black men. This finding supports extant findings that Black women have become more commonly employed than Black men since the 1980 deindustrialization transitions (e.g. Collins 2000; St. Jean and Fagan 1998; Wilson 1987). It is also interesting to note the extremely high gap between labor force participation among Hispanic females and males in 1990. As shown in each of the Descriptive Tables, Hispanic females were nearly 3 times less likely to work than Hispanic males at all levels of aggregation. This finding likely reflects the differential work patterns among Latino immigrants at this time point. As noted, by 2000, the relative gap in female-male labor force participation had considerably narrowed. This finding may reflect several factors, including an increase in labor force participation among Hispanic women following the Immigration Reform and Control Act, which granted millions of current U.S. residents legal status, changes in migration patterns whereby women in-migrate to the U.S. looking for work (Glenn 2002; Hochschild 2002), and/or work assimilation and financial constraints that require Hispanic women living in the U.S. to enter the paid labor force (Corcoran, Heflin, and Reyes 1999)

Scheffe tests comparing each independent and dependent variable across each year of analysis reveals statistically significant differences in all cases not including changes in relative labor force participation from 1990 to 2000 (see Table 6.4).

6.2 Bivariate Associations

Table 6.5 reports tract-level bivariate correlation coefficients for the various calculations of sex ratio and dependent variables by decennial census time point.

Relationships between the sex ratio and family structure are consistent with the theory. That is, rates of marital fertility are positively related to the sex ratio, and rates of female-headed families are negatively associated with sex ratios across all time points, and these relationships hold in overall and race-ethnic-specific calculations.

Bivariate associations indicate some changes in male and female relational formation and dissolution over time. Whereas the relationship between sex ratios and female marriage rates was not statistically significant in 1980, the association became and remained statistically significant and positive, as expected, in 1990. The data also reveal a changing pattern of statistically significant relations between sex ratios and female divorce rates. Although the association between sex ratios and female divorce was statistically significant and positive in 1980 and 1990, the relationship became negative in 2000, thus supporting the theory.

A shifting relationship is also revealed when examining the association between sex ratios and rates of male divorce. As expected, the direction was negative for 1980; however, sex ratios and male divorce rates were positively associated for years 1990 and 2000, although the relationship is not statistically insignificant in 2000.

In contrast to theoretical prediction, the sex ratio is positively related to female structural power, as measured by the relative female-male labor force participation, at all time points for overall and race-ethnic specific calculations. Thus, at the bivariate level, it appears that females are relatively more likely to be involved in labor force participation when sex ratios are high and relatively less likely to be involved with paid labor when sex ratios are low. The correlations also reveal, however, that the degree of association between

sex ratio and relative labor market participation vary by racial-ethnic groups. For example, the relationship between sex ratios and Hispanic female structural power is extremely weak, although it does increase markedly in 2000. In addition, the correlation scores suggest a notable increase in the strength of the relationship between sex ratios and female structural power among Whites from 1980 to 1990, and although Blacks experience a similar strengthening during this time, the increase is about half the size. These findings may reflect extant findings that Black women have historically worked outside the home (e.g. Ackers 2006; bell hooks 1981; Billingsley 1968; Collins 2000; Glenn 2002; Willie 1981). Interestingly, the strength of association continues to increase among Blacks in the year 2000, but it decreases among Whites suggesting that sex ratios become less associated with White female employment and more strongly associated among Blacks. Scholars have previously argued that links between sex ratios and rates of female employment vary among Whites and Blacks because of the lack of "suitable" Black male partners due to a relative lack of employed and educated Black men. Hence, the varying strength of the correlation scores may indicate some support for their argument, though further analysis is necessary before definitive claims are made.

On the whole, the bivariate analyses reveal some significant associations between the sex ratio and a number of outcomes. However, in order to assess these relationships while simultaneously considering other conceptual dimensions relevant to the sex ratio thesis, I employ multiple regression techniques. Below, I review the results of my cross-sectional analyses.

6.3 Cross-sectional, Tract-level Analysis

Table 6.6 displays cross-sectional multivariate analyses at the tract-level and provides a comparison of the hypotheses and the summary of tract-level cross-sectional multivariate analyses.[27]

6.3.1 Overall Sex Analyses, Direct Effects

The detailed results from the cross-sectional multivariate regression analyses for the direct effects of sex ratios of 15-44 year olds are presented in Tables 6.7 to 6.22. Tables 6.7 to 6.10 display the results predicting female and familial outcomes, which relate to hypotheses 1 through 4. The data are largely supportive of the theory across decennial census points. Table 6.7 indicates support for hypothesis 1 net other factors in the model. Female marriage is consistently and positively linked to sex ratios in all 3 time points where the data are available. Table 6.8 indicates support for hypothesis 2. Specifically, sex ratios are positively associated with marital fertility across all 4 time points net other factors in the model.

I find little support for Hypothesis 3, which posits that sex ratios are negatively related to female divorce. Referring to Table 6.9, although the association is negative for

[27] Some may argue that the NCDB contains full population data and, therefore, should not require statistical inferencing. However, a close inspection of the data and my discussions with a GeoLytics representative reveal that the untracted areas in 1970 and 1980 produce a substantial amount of missing data. Specifically, over 19,000 tracts in 1970 (29%) and nearly 14,000 tracts in 1980 (20%) were not populated with data even though persons were expected to be living in these tracts. Although all areas in the U.S. were tracted by 1990, census data likely excludes some portions of the population even though estimates of undercounting are small. In addition, the NCDB data contains data from the U.S. Census Bureau's Long Form Survey, which is not collected from all U.S. households. In an effort to avoid overstating support for the theory and to remain consistent with standard practice in the discipline, I rely on significance testing in assessing support for my hypotheses; however, I also discuss the magnitude of effects apart from significance testing to acknowledge the importance of effect size.

1980, it is not statistically significant. For 1990 and 2000, the relationship is statistically significant but positive, and the effect size is weak.

Table 6.10 presents the results from models predicting female-headed families. The findings offer support for hypothesis 4, which postulates a negative sex ratio-female headed family relationship. Across all 4 time points, the results reveal a consistent negative relationship net of other factors in the model.

Tables 6.11 and 6.12 present results of models predicting male-specific outcomes. Unlike female marriage, which was consistent and positively associated with sex ratios, the sex ratio-male marriage link is negative in 1980 but changes to a positive direction in 1990 and 2000, although it is not statistically significant in 1990 (see Table 6.11). As such, the findings reveal some support for hypotheses 5a and 5b (the results suggest no evidence of a curvilinear relationship) with the most recent years supporting hypothesis 5a.

The results from testing hypothesis 6 are shown in Table 6.12. The findings reveal no support for the theory's prediction of male divorce. Contrary to expectations, sex ratios and male divorce are positively associated across all 3 time points when other variables are held constant.

Table 6.13 presents the relationship between sex ratios and relative gaps in female-male labor force participation – a measure of female structural power. Contrary to hypothesis 7, the results indicate a positive and statistically significant relationship across all time periods, and as revealed by the unstandardized coefficients, sex ratio effect size appears to be relatively small in predicting relative labor force participation.

6.3.1 Race-Ethnic Specific Analysis, Direct Effects

Tables 6.14 to 6.22 detail the results of the race-specific analysis. Tables 6.14, 6.15, and 6.16 demonstrate the findings related to White, Black, and Hispanic rates of marital fertility rates, respectively. Like the overall results discussed above, the findings reveal consistent and positive relationships between race-ethnic-specific sex ratios and race-ethnic-specific marital fertility across all 4 time points.

Also similar to the overall results, Tables 6.17, 6.18, and 6.19 show that female-headed families as a proportion of all families among Whites, Blacks and Hispanics are negatively related to sex ratios as hypothesized. Analyses investigating the sex ratio effect size when sex ratio calculations include only employed males reveal similar results and are available upon request.

Outcomes of raced and gendered labor force participation are illustrated in Tables 6.20, 6.21, and 6.22. As shown, sex ratios are positively related to relative female-male labor force participation across all racial-ethnic groups. As indicated by the sex ratio coefficient, the effect size varies but remains relatively small among all groups.

CHAPTER 7

RESULTS FROM HYBRID PANEL ANALYSES

In order to assess the hypothesized relationships between sex ratios and gendered outcomes longitudinally, I assembled a place-period dataset and employed hybrid panel analysis, which allows me to more adequately examine sex ratio effects spatially and temporally. Table 7.1 shows a summary of the direct effects tract-level hybrid panel analyses, and Tables 7.2 through 7.10 present the detailed results of these analyses. Below, I discuss my findings for each level of analysis beginning with the smallest level of aggregation and moving to the largest.

7.1.1 Direct Sex Ratio Effects on Gendered Outcomes

7.1.1a Tract-level Analysis

Tables 7.2 through 7.4 present results from the tract-level analysis.[28] At the tract-level sex ratio effects are supportive of the theory for some - but not all - outcomes. As shown in Models 1, 2 and 4 of Table 7.2, hypotheses 1, 2, and 4 are supported. Sex ratios are positively related to rates of female marriage and marital fertility and negatively related to female-headed families across tracts and over time within the same tracts, net other time varying and time invariant factors in the model, and each of these relationships is statistically significant. Thus, sex ratio fluctuations are important predictors of between-unit variation

[28] Because of the large number of cases, I conducted supplemental analyses examining a 20 percent and 2 percent random sample of the full sample. The sex ratio effects in the random sample revealed nearly identical patterns of statistical significance and identical directional association of the population for the 20 percent random sample and overwhelming similar patterns for the 2 percent random sample.

and within-tract changes throughout the available time periods. The within-unit effects suggest that within-tract decreases in sex ratios during the time period examined result in a decrease in female marriage and marital fertility rates and an increase in the rate of female-headed families.

In contrast to the theory, sex ratios are statistically significant and positively related to female divorce (see Table 7.2, Model 3). Recall that the cross-sectional analysis also revealed a lack of support for the theory when examining sex ratio effects on female divorce separately across each time point. These finding seem to suggest, then, that the theory accurately predicts only some gendered outcomes. In fact, the female divorce models suggest that females living in high sex ratio contexts may dissolve relationships because of the ample opportunities to form new, potentially more satisfying relationships, whereas females living in low sex ratio contexts may remain in relationships because of the few alternatives available – a conclusion consistent with the marriage market approach, which does not take into account gendered patterns of structural power differences.

In models predicting male outcomes, the data reveal partial support for hypothesis 5a and 5b and no support for hypothesis 6. Specifically, as shown in Table 7.2, Model 5, sex ratios are statistically significant and positively related to male marriage when examining between-unit effects, yet the relationship is statistically significant and negative when assessing transitory sex ratio effects within tracts. In other words, although the results indicate that tracts with lower sex ratios consistently show lower male marriage rates, when examining change over time within the same tract, I find that decreasing sex ratios result in increasing male marriage rates. As discussed in earlier chapters, scholars have differing

interpretations about how sex ratios influence male marriage rates. My findings suggest that both linear interpretations, which relate to hypotheses 5a and 5b, may be empirically viable depending on whether one is interested in examining between-unit effects or temporal sex ratio effects within the same unit. In this way, the findings underscore the importance of hybrid panel modeling, which is able to identify important differences in how factors influence variation across spatial units and within units over time.

Antithetical to hypotheses 6 but similar to the results produced in models predicting female divorce rates (hypothesis 3), I find that sex ratios are statistically significant and positively related to male divorce rates (see Tables 7.2, Model 6). Consequently, variations in sex ratio differences across-tracts and over-time within the same tract are systematically and positively associated to changes in divorce rates.

As shown in Table 7.2, Model 7, hypothesis 7 is not supported. Although the sex ratio effect size on labor force participation is statistically significant, the relationship is positive, thus, findings contradicts the theory by indicating that (1) female structural power is greater in tracts with relatively high sex ratios and lower in areas with low sex ratios and (2) within-tract changes in sex ratios are statistically significantly and positively related to within-tract changes in female structural power from 1970 to 2000. Supplemental analyses investigating sex ratio effects on the proportion of females working without reference to men's working patterns also reveal a positive relationship, which also contradicts the theory (results not shown). I discuss and further examine the potential explanations for this unexpected finding in my concluding chapter.

Table 7.3 details the associations between race-ethnic-specific sex ratios and raced-gendered outcomes. Consistent with the theory and supporting the overall sex ratio effects discussed above, race-ethnic-specific sex ratios continue to be statistically significant and positively related to marital fertility and statistically significant and negatively related to female-headed families. As shown in Models 1-6 in Table 7.3, this relationship holds true between-tracts and within-tracts over time, suggesting that net of controls, sex ratios are strongly related to variations in familial structure across all races and ethnicities.

Models 7-9 in Table 7.3 report the estimates for racial-ethnic-specific labor force participation. By disaggregating the data in this way, I reveal some noteworthy differences in the sex ratio effects on the female structural power measure – some of which support the theoretical expectations. For example, as hypothesized, sex ratios are negative and statistically significant in predicting between- and within-unit differences in female structural power among Black and Hispanic populations, although the effect size is small. Thus, tracts with lower Black and Hispanic sex ratios consistently show higher than average female structural power among these racial-ethnic groups. In addition to these between-unit findings, the within-unit estimates suggest that decreases in sex ratios within the same tract over time (1980-2000) increase female structural power, at least among racial-ethnic minority populations. Among Whites, however, I find no support for the theory. In fact, the relationship is positive when examining across-tract and within-tract differences, although the association is not statistically significant. In short, these findings suggest that sex ratios differentially influence variations in female structural power by race-ethnicity.

Restricting sex ratio calculations by including only employed males does not appear to change the results substantively for models predicting family structure outcomes by race-ethnicity. A review of Table 7.4 reveals that the race-specific relationships between sex ratios and childrearing conditions identified in Table 7.3 remain.

7.1.1b County-level Analysis

In order to examine the effects of aggregation, the tract-level data are combined to the county and state levels. Results from the county-level analyses are presented in Tables 7.5 through 7.7. As with the tract-level analysis, I find substantial support for hypotheses 1, 2 and 4 when examining the data between- and within-county longitudinally. Models 1, 2, and 4 of Table 7.5 demonstrate that sex ratios are statistically significant predictors of rates of female marriage, marital fertility and female-headed families in the theoretically expected direction both across counties and within the same counties over time. Even sex ratios are calculated for race-ethnicity and male employment, I continue to find overwhelming support for hypothesis 2 and 4 (see Table 7.6 and Table 7.7, respectively).

As was true with the tract-level analysis, hypothesis 3 is not supported at the county-level. The between-unit and within-county sex ratio effects remain positive at this level of aggregation, although they are not statistically significant.

Model 5 in Table 7.5 illustrates that the sex ratio is positively and statistically significantly related to the proportion of males who are married when examining differences across counties; however, the relationship is negative when examining sex ratio effects temporally, but that relationship is not statistically significant. Recall that the tract-level

analysis also showed these directional relationships, but both effects were statistically significant.

As with the tract-level analysis, I find no theoretical support for hypothesis 6. Specifically, when the tract-level data are aggregated to county, sex ratios continue to be positively and statistically significantly related to between-unit and within-unit rates of male divorce (see Table 7.5, Model 6).

Also consistent with the tract-level findings and as illustrated in Model 7 of Table 7.5, sex ratios are statistically significantly and positively related to relative labor participation when models are not restricted by race-ethnicity. However, investigations of race-ethnic-specific models of relative labor participation produce some results that contrast with the tract-level findings (see Models 7 through 9, Table 7.6). First, none of the relationships are statistically significant across counties or within-counties over time. This finding is not entirely surprising because it is expected that lower levels of aggregation have greater within-unit homogeneity and offer a more precise statistical model, so coefficients at lower levels of aggregation more likely should be statistically significant. What is surprising, however, is another difference - the sign reversal of the sex ratio effect among Blacks in this county-level analysis. This finding suggests Simpson's paradox (1951) or a Simpson-Yule effect, which argues that aggregating smaller units into larger ones can result in opposing conclusions. In other words, the paradox exists when variable(s) X is causally associated with Y in one direction in a given population but is causally related in the opposite direction when aggregated. This sign reversal can occur in the presence of omitted variable bias. That is, aggregating data to large spatial boundaries may mask influential factors operating within a

neighborhood or similarly smaller ecological unit. In addition, because tracts vary in population size and composition, not accounting for these differences can distort information contained in the aggregated dataset since larger areas may be given more weight. Because Guttentag and Secord imply that sex ratios are influential in relatively proximate surroundings, census tracts are better-suited for examining sex ratio effects. Thus, the tract-level results seem to provide a clearer assessment of the causal relationship proposed by Guttentag and Secord. Other scholars have also concluded that sex ratio effects are best undertaken with localized units (e.g. Fossett and Kiecolt 1991).

7.1.1c State-level Analysis

Tables 7.8 through 7.10 show results from the state-level analysis. Table 7.8 summarizes the results of an overall sex ratio effect on gendered outcomes. The data reveal that at this level of aggregation, sex ratio effects are largely non-predictive but still influence gendered outcomes in the same direction as is shown in the tract- and county-level analysis. Sex ratios, however, continue to be statistically significant and operate in the theoretically expected direction in models predicting family structure outcomes, and this holds true when examining between-state differences and within-state variations over time.

Table 7.9 shows the results from state-level race-ethnic specific sex ratio analyses. As shown in Models 1-6 of this table, the relationships continue to operate in the theoretically predicted direction when investigating family structure outcomes, and associations remain statistically significant at this largest level of aggregation. These

findings generally hold even when sex ratios are restricted to include only employed males (see Table 7.7).

Models predicting relative labor market participation continue to show unexpected and confounding results. Like the tract- and county-level analyses, overall or total models show a positive relationship between sex ratios and relative labor market participation, but the relationship is no longer statistically significant at the state-level (Table 7.8, Model 7). Nonetheless, I see the same confounding results identified at the county-level when I disaggregate the models by race-ethnicity (see Models 7 through 9, Table 7.6). Black populations show a positive relationship between- and within-units, which contrasts with the tract-level findings but are in line with the county-level findings. As mentioned earlier, these outcomes demonstrate the Simpson's paradox.

7.2 Chronically Low Sex Ratio areas

Although the analysis thus far provides some indication of how within-unit changes in sex ratios influence within-unit gendered outcomes, I further investigate potential differences between those areas that have experienced a chronically low sex ratio as compared to those that have not. Guttentag and Secord propose that chronically low sex ratio areas are likely to have higher levels of female structural power (hypothesis 7). In order to investigate potential differences between tracts with chronically low sex ratios and those without chronically low sex ratios, I split the full sample into two subsamples – one consists of census tracts that have maintained a low sex ratio for all available time points and the

other contains tracts that have not. Following Guttentag and Secord's (1983: 174) postulations, I define a low sex ratio as 90 or lower.

Table 7.11 presents the descriptive statistics for the primary variables of interest for two subsamples. As shown, there are over 2,000 tracts that have maintained a consistently low sex ratio of 15-44 year olds from 1970 to 2000. Mean rates of female marriage, marital fertility, and male marriage are significantly lower and female divorce and female-headed families are significantly higher in areas maintaining a low sex ratio as compared to the full sample. The mean relative labor force participation ratio, the measure of female structural power, is also higher in tracts where women have long-outnumbered men as compared to the pooled mean of the non-chronically low areas, suggesting, as expected, that more women relative to men work in these low sex ratio areas.

When disaggregating these areas by race-ethnicity, which includes a wider age-range, I reveal that there are many more areas that have maintained low sex ratios among Blacks and Hispanics as compared to Whites. In other words, areas with a sex ratio skewed in favor of women are more numerous among racial-ethnic minority populations. Again, by comparing these subsamples, I find that the mean rates of marital fertility are lower in low sex ratio areas and mean rates of female-headed households are higher in such areas across all racial-ethnic groups.

Although, as expected, chronically low sex ratio areas are more commonly identified with more equalized labor market participation among Whites and Hispanics, this finding is not true among Blacks. Instead, the mean ratio of relative labor force participation among Blacks is nearer parity in areas that are *not* marked by chronically low sex ratios, although

the range of scores varies greatly in such areas. It is possible, however, that this finding may be reflecting another issue--that areas where black women have consistently outnumbered black men are more likely to have limited labor market opportunities as compared to other areas. Prior research has suggested that Black neighborhoods have been economically and socially isolated, leaving little to no work opportunities, which over time creates higher incidences of poverty and family disruption (Collins 2000; Massey and Denton 1993; Wilson 1987, 1996, 2009). Women of color are especially disadvantaged in these areas because they are often further segregated into no-wage or extremely low-paid jobs (Hartman 1976) and subjected to controlling images that deem their motherhood and un- or under-employment as pathological (Collins 2000; also see Brewer 1993; Hays 2003). These chronically low sex ratio areas, then, may have fewer women working relative to men because those areas may be marked with extreme joblessness in a context of pervasive sexism that holds men's labor market participation as superior to women's. In fact, some scholars suggest that Black women may feel a need to subordinate themselves to help black men retain feelings of manhood (Collins 2000; Davis 1998; Giddings 1992).[29]

Basic descriptive information can be informative in making general comparisons; however, I conduct further analyses to investigate whether chronically low sex ratios predict female structural power in the presence of controls. After creating a dummy-scored measure of chronic sex ratio context (1=chronically low), I enter the dummy variable as a predictor in

[29] Some may interpret this mean difference across neighborhoods as suggesting that areas with chronically low Black sex ratios may have higher rates of welfare assistance, which may reflect fewer females participating in the labor market relative to men, but such an interpretation does not negate the argument I make above. In fact, if chronically low Black sex ratios are marked by higher rates of welfare assistance, connections may still be related to macro-social issues, including unequal socio-economic opportunities. Thus, we should not ignore structural issues associated with women's disproportionate need for welfare.

the model. Table 7.12 illustrates the results of the long-term sex ratio effects on the between-tract analyses. Although the control variables are not shown in the table, the following control variables were included in the analysis: population size, proportion living in group quarters, proportion of population who is foreign born, and region. As shown, the results do not support Guttentag and Secord's postulation that chronically low sex ratios increase female structural power, as measured by relative labor market participation. Nonetheless, it is possible that female structural power conditions sex ratio effects on social outcomes. I examine this potential by creating and modeling interaction effects between sex ratios and relative labor force participation – the latter of which operationalizes female structural power - on the full sample.

7.3 Interaction Effects of Sex Ratio and Labor Force Participation

The sex ratio thesis proposed by Guttentag and Secord suggests that the effect of sex ratio on interpersonal relationships may depend on the extent of female structure power (hypotheses 8a-8f). In other words, the relationship between sex ratios and rates of marriage, divorce, and family structure may be contingent on the relative degree of female structural power. I investigate the presence of a conditional effect by computing a product term of sex ratios and relative labor force participation, which was entered into models predicting rates of marriage, divorce and family structure. Given concerns about data aggregation discussed earlier, I conduct this analysis only at the tract-level.

Tables 7.13 and 7.14 present the results from the tract-level analysis. As shown in these tables, the interaction term is often a statistically significant predictor in between-and

within-tract models predicting overall outcomes (Table 7.13), and is sometimes statistically significant in predicting race-ethnic-specific outcomes (Table 7.14). Specifically, the results indicate that the interaction term is statistically significant in predicting between- and within-tract variations in female marriage (Table 7.13, Model 1), between-tract variations in male marriage (Table 7.13, Model 3), between- and within-tract variations in White marital fertility and White female-headed families (Table 7.14, Model 1 and 4) and within-tract changes Black marital fertility and Black female-headed families. Furthermore, the variance explained in these models, which include the interaction term, is slightly greater than the direct effect models. Below I discuss these findings in more detail.

7.3a Significant Interaction Effects: Between-Unit Variation

Figures 7.1 to 7.4 provide a visual representation of the significant between-tract results (i.e., Table 7.13, Model 1 and 3; Table 7.14, Model 1 and 4). For the purposes of these figures, I operationalize low female structural power as those areas marked with lower than average relative labor force participation and high female structural power as areas with higher than average relative labor force participation ($\bar{x}$ = .82 and .77 for overall and White population, respectively).

Consistent with hypothesis 8a, Figure 7.1 reveals that the sex ratio is consistently and positively related to female marriage rates; however, there are notable differences across areas with varying female structural power. First, the rate of female marriage is markedly lower in tracts where females have relatively high levels of structural power as compared to those areas with relatively low female structural power. In tracts characterized as having low

female structural power (i.e., where female's participation in the labor force is relatively low compared to males'), female marriage rate ranges from approximately 82 to 91 percent, but in areas with a relatively high level of female structural power, female marriage rate range from about 21 to 26 percent. These findings reflect Thistle's (2006) argument that work and private lives are interconnected and could be suggesting that female gains in socio-economic independence through wage earning may result in females being less reliant on marriage as a socio-economic arrangement or that reduced opportunity to marry encourages female gains in economic independence. In addition to the percentage difference, Figure 7.1 shows that the relationship between sex ratios and female marriage is stronger in areas marked by relatively low female structural power, which is illustrated by the steeper slope. In other words, the regression line incline is steeper in tracts where females have a relatively low amount of structural power indicating that the sex ratio effect may be less influential in predicting female marriage as females gain access to structural power. This latter finding provides support for hypothesis 8a.

Figure 7.2 displays the results of sex ratio effects on male marriage by varying degrees of female structural power. The findings suggest that, as with females, the proportion of males who are married are notably lower in areas where females have attained a relatively high level of structural power. Rates of male marriage are, on average, about 17 percent in areas where males and females work at or relatively near parity, but in areas where males well-outnumber females participating in the labor market, the proportion of men who are married is, on average, around 95 percent. Thus, higher rates of male marriage are found in areas with low female structural power. In addition, the inclining regression slope

displayed in areas marked with relatively low female structural power indicates a positive relationship between sex ratios and male marriage rates. However, the declining regression slope revealed in areas marked with relatively high female structural power suggests that sex ratios and male marriage rates are negatively related in these areas. Moreover, the sex ratio effect appears to be stronger in areas marked with higher levels of female structural power, which is indicated by the slightly steeper regression line. As reviewed in Chapter 3, research on male transitions into marriage are sparse and contradicting, and my findings exemplify the need for future research to examine how gendered socio-economic independence may condition sex ratio effects on male marriage.

Figure 7.3 illustrates how sex ratio effects on rates of White marital fertility are contingent on the relative degree of female structural power. As a reminder, the theory proposes that the positive sex ratio-marital fertility relationship will be less prominent in areas where females have greater structural power because women will have the opportunity to forego motherhood, which is understood as a social arrangement that binds and isolates women to the home, thus limiting their ability to enter into alternative relationships. But the theorists further imply that the positive relationship could become negative if female structural power shifts greatly towards women's favor. My findings provide support for this postulation among Whites. The regression slope for areas characterized by relatively high female structural power shows a slight negative relationship. Revealing further support for hypothesis 8b among Whites, by comparing the pitch of the regression lines, it is apparent that the relationship is significantly weaker in areas where White females have relatively high amounts of structural power. In addition, White marital fertility is notably lower in

areas characterized as having relatively high levels of female structural power as compared to those areas with relatively low female structural power. Tracts with relatively high levels of female structural power among Whites have an average marital fertility rate of about 62 percent, but those with low female structural power have an average rate of about 90.

As indicated in Figure 7.4, I find support for hypothesis 8d. Specifically, as expected the results suggest that sex ratios are consistently and negatively related to female-headed families among Whites. Further, the magnitude of the association is stronger in areas marked with a relatively low degree of female structural power as shown by the comparatively steadier slope decline. In short, these findings imply that the gains in female structural power among Whites alter the negative sex ratio effect on female-headed families.

7.3b Significant Interaction Effects: Within-Unit Variation

The within-unit component of hybrid panel analysis allows researchers to identify temporal patterns in data by separately estimating change in an area over time. Some of the models I estimate also reveal that a statistically significant interaction term when assessing the data longitudinally or within the same tract over time. As shown in the within-unit components in Model 1 of Table 7.13, the interaction term is statistically significant, which suggests that the within-unit effect of sex ratio on patterns of change in female marriage rates over time differs depending on the relative degree of female structural power. The positive coefficient indicates that the change effect of sex ratios on change in female marriage rates intensifies as female structural power increases. In other words, I find that increases in

female structural power strengthen – rather than weaken – the sex ratio effect on rates of female marriage when examining longitudinal patterns of change.

Models 1, 2 and 5 in Table 7.14 show that within-unit changes in female structural power also conditions the effect of change in sex ratios on changes in White and Black marital fertility and Black female-headed families over time. The statistically significant interaction term is negative in models predicting change in marital fertility among White populations, suggesting support for the theory's prediction that the positive relationship between sex ratios and marital fertility is attenuated as females gain access to structural power. However, the interaction term is statistically significant and positive coefficient in models predicting change in marital fertility among Black populations and is negative in models estimating change in Black female-headed families over time. When examined in relation to the sex ratio main effects in these models, the results indicate, in contrast to the theory, that gains in female structural power among Black populations (1) strengthen the positive relationship among sex ratios and marital fertility and (2) strengthen the negative relationship between sex ratios and Black female-headed families. Thus, gains in female structural power among Blacks fortify the sex ratio change effect on changes in marital fertility and female-headed families among Black populations.

CHAPTER 8

DISCUSSION AND CONCLUSIONS

8.1 Summary and Conclusions

The data reveal partial support for Guttentag and Secord's (1983) sex ratio theory. The present panel analysis suggest three conclusions. First, sex ratios predict female marriage and family structure in the theoretically informed direction more consistently than any other outcome. Second, the sex ratio effects on female marriage and family structure are more salient at lower levels of aggregation, and third, female structural power sometimes moderates sex ratio effects, although the effect size is generally small.

Consistent with prior research (e.g. Lichter et al 1992; Lichter et al. 1991; Schoen 1983; South and Lloyd 1992), I find that sex ratios are significantly related to rates of female marriage at the tract- and county-level, and rates of family structure at the tract-, county-, and state- level. My analyses reveal that sex ratios are strong and consistent predictors of rates of female marriages and family structure outcomes. As theoretically expected, sex ratios are positively related to rates of female marriage and marital fertility and negatively related to rates of female-headed families. These findings remain predictive when examining race-ethnic specific models.

Other outcomes, however, do not offer such robust theoretical support. By employing hybrid panel analysis - an analytic technique that has not been previously used in this literature - I find that tract-level sex ratio effects vary depending on whether I am investigating how sex ratio fluctuations influence male marriage across place (between-units) or over time (within-units). Few studies have investigated sex ratio effects on male marriage

transition, and while some scholars find support for Guttentag and Secord's theory (e.g. Albrecht and Albrecth 2001; Lloyd and South 1996), others conclude no support (e.g. Stone, Shackelford and Buss 2007). My results offer some explanation for these conflicting results. Examining spatial variation, I find that sex ratios are positively related to male marriage, supporting Guttentag and Secord's hypothesis (hypothesis 5a). Yet sex ratio effects within the same tract over time are negatively related to male marriage rates, which indicate support for the marital search model perspective (hypothesis 5b). This finding reinforces the importance of specifying models that can distinguish between long-term and temporary effects (Phillips 2006) and implies that the relationship between sex ratios and male marriage may be quite complex. Given the dearth of research on patterns of male marriage and the ambiguity of the theoretical designs in this area, further scholarship, including theorization about the explanatory scope of sex ratios, is necessary to improve our understanding.

The relationship between sex ratio and rates of divorce for men and women are not supportive of the theory at any level of analysis. Instead of the expected negative relationship, the data reveal a significant and positive relationship between sex ratios and rates of male and female marital dissolution – a finding that supports the marital search model. Extant research notes similar findings, with scholars positing that this relationship may be due to the large number of individuals of the "opposite" sex as indicating partnership alternatives (e.g., South and Lloyd 1995; South, Trent and Shen 2001). However, given the relatively small sex ratio effect on divorce patterns, further investigations are warranted. One line of inquiry that should be pursued is how relative access to economic, legal, and political means may influence rates of relationship dissolution. Although I find no support for

Guttentag and Secord's sex ratio-divorce rate hypothesis, evidence suggests that divorce patterns may be related to a declining reliance of females on the political and economic arrangement of marriage (e.g., Banks 2011; Burns and Scott 1994; Ehrenreich 1995; Thistle 2006). Still, some scholars argue that the relationship may be transitory (e.g., Coontz 1997). My cross-sectional findings indicate that sex ratios are negatively related to rates of female divorce in 1980 – a time period immediately following vast gains in female socio-political engagement - but the relationship becomes positive in 1990 and 2000. These results offer some support for Coontz's suggestion of a transitory effect and suggest the need for future studies to investigate factors influencing longitudinal patterns of divorce.

Guttentag and Secord's theory posited a negative relationship between sex ratios and female structural power – the latter of which I operationalize as relative female-male labor market participation. When examining total or overall sex ratio effects, I find no support for the theory at any level of analysis. However, at least for the tract-level analysis, I find that examining overall outcomes masks some racial-ethnic differences.[30] That is, when I separate sex ratio effects and female structural power outcomes by race-ethnicity, the data reveal some support for the theoretical predictions among Black and Hispanic populations but not among Whites. Nonetheless, the effect size is small. In explaining this, two points are particularly salient. First, the data could be reflecting broad economic shifts that are not necessarily associated with the sex ratio. For example, a convergence of male and female rates of labor force participation rates could be reflecting a growing economic structure or some other macro-economic shift, including the decline of real wages, increase in

[30] Recall that I find evidence of the Simpson's paradox, denoting issues of omitted variable bias at the other levels of aggregation, so I do not further discuss those results here.

unemployment, and adoption of neoliberal policies, which effectively encouraged women's entry into the paid labor market. Appreciating and acknowledging this extensive socio-economic context is an important feature in understanding the stalled feminist revolution (e.g., England 2010), which has clear implications for gains in female structural power. Researchers point out that work behaviors, including "decisions" to enter the paid labor market and which jobs to occupy, are largely shaped by macro-structural forces and the persons that enforce them (e.g. see *Gender & Society* 2011 symposium). As such, gendered distributions of work are likely the result of various elements not limited to the sex ratio. Second, the lack of support could be due to the crude measure of female structural power. Although Guttentag and Secord (1983) identify paid employment as one of the primary dimensions of structural power, the theorists clearly conceptualize structural power as a complex phenomenon that should take into account multiple legal, political and economic factors. Unfortunately, the data limit my ability to create a more complete measure, but researchers should seek to construct a comprehensive measure of structural independence, including education, earnings and political representation in future analyses.

By examining multiple levels of analysis, I demonstrate that sex ratio effects on female and familial outcomes are more influential at the neighborhood or tract-level than at larger levels of aggregation. This finding is not entirely surprising as other researchers also note the potential for larger units of analysis to conceal some effects, especially when the factors producing such effects reflect community-level relations (e.g. Massey and Denton 1993; Parker, Stults, and Rice 2005). In short, data aggregated to large spatial units may not

be able to detect consequences occurring at localized units, and this may be especially true for sex ratio effects (see Fossett and Kiecolt 1991).

Finally, although the theory suggests that female structural power may minimize or negate the "traditional" gendered effects of sex ratios on interpersonal relations, my analyses finds only some support for such a conditional effect. Although patterns of female and male marriage formation appear to be consistently influenced by relative female structural power, there is no conditional effect on rates of female or male divorce. Moreover, the conditional effect on patterns of family structure differs among racial-ethnic populations. While conditional effects are consistently significant for White marital fertility and for White female-headed families, such an effect is apparent among Black populations only within the same tract over time, and there is no evidence of a conditional effect among Hispanic populations. It is plausible that the small effect sizes for marital outcomes and the inconsistencies among other outcomes is, again, due to the crude measure of female structural power used in the present analyses. Nonetheless, other scholars have found consistent and significant effects cross-nationally when employing a similar measure of labor market participation (e.g. South 1988). Thus, it is possible that the inconsistent and weak conditional effect may be due to particular conditions in the U.S. For example, research focusing on economic transitions in the U.S. point to women's increased employment, the creation of no-fault divorce laws, and a disappearance of well-paying, stable jobs as greatly altering familial life expectations and behaviors. While these changes are revealed in U.S. males' preferences for more egalitarian relationships (Thistle 2006; also see Bolzendahl and Myers 2004), gender ideologies are not consistent across countries (e.g., Treas & Widmer

2000; also see Narayan, et al. 2000a, 2000b). In short, my findings regarding the relatively weak support for Guttentag and Secord's hypothesis on female structural power as a contingency factor in male-female relations may be due to a combination of my rudimentary measure of female structural power and expectations about equalized gendered structural power in the U.S. (even if expectations reflect ideologies more so than actualities).

8.2 Prospects for Future Research

The research reported in this dissertation replicates and extends Guttentag and Secord's (1983) work. The findings should be of interest to scholars in several disciplinary areas, including demography, economics, political science and sociology. Sociological scholars studying inequality, work, family, and law should be especially cognizant. Although the present research provides us with some insight about sex ratio effects on rates of relational formation and dissolution and familial and work outcomes, additional research is needed. Below I suggest some particular issues in need of attention.

Although the present study provides a comprehensive and systematic quantiative examination of how sex ratios influence gendered outcomes across ecological units, individual-level, qualitative assessments of sex ratio effects may reveal additional insights, especially in relation to how sex ratios may influnce individual psychosocial wellbeing. Such studies could be especially informative among persons living in areas with highly skewed sex ratios. Some scholars have, in fact, linked lower levels of self-esteem, greater levels of depression, and other psychological vulnerabilities to sex ratios in China, finding some men experience and develop such psychological distress due to a lack of available

partners (Zhou, et al. 2011). To my knowledge, no such studies have been conducted in the U.S. even though many U.S. neighborhoods have experienced highly skewed sex ratios for several decades and persons living in the U.S. cite marriage and family formation as one of the most valued life experiences (e.g., Hays 2004; Sharpe and Ganong 2011; Thornton and Young-DeMarco 2001; also see Nelson 2006). We need data that critically examines the claim made by many scholars that marriage trends may be related to a lack of "suitable" partners. Arguments citing a lack of "marriageable" men are often invoked to explain the decrease in marriage among Black women and economically independent women of all race-ethnicities, but it is important to examine if and how this discourse is used outside of scholarship. In other words, do women use this discourse themselves and if so, (how) does the discourse preserve the institutions of gender and family? I submit that this discourse may have the (un)intended consequence of justifying and reproducing men's collective power over women, in general, and in marriage and the family in particular. Such discussions imply the desirability of a particular kind of man - one who is powerful, ambitious, and authoritative.

In addition, sex ratios in political and legal representation may greatly influence our social lives because everyday life reveals gender politics (Collins 2000; Connell 2005). Recent research on deliberative groups provides some evidence that females are discouraged from vocalizing their substantive interests in groups with few females, but more commonly voice their interests in female majority groups. These female majority groups also encourage men to consider and sometimes shift their positions such that they become more generous to disadvantaged groups, especially the poor (Goedert, Karpowtiz and Mendelberg 2013; Karpowitz, Mendelberg and Shaker 2012). Applying Guttentag and Secord's (1983)

theoretical framework to these findings implies that gender and other disparities may be reduced or eradicated as women attain positions of institutionalized, decision-making power that is on par with men. Since the percent of women holding political office has increased rather steadily in the last several years, an investigation on this matter is achievable.

Although Guttentag and Secord's (1983) theory does not explicitly theorize about crime and deviance, their theory has implications for this area of study. As mentioned earlier, few studies have investigated the sex ratio effects on rates of crime and female victimization, and the empirical status of the relationship is far from conclusive. My findings regarding the sex ratio effects on relational (romantic, parent, and work) status can help inform future studies. Prior studies suggesting a clear relationship between relational status and criminal offending at the ecological (Land, McCall and Cohen, 1990; Messner and Sampson 1991; Wilson 1987) and individual-level (Laub and Sampson 2003; Laub, Nagin and Sampson 1998; Sampson and Laub 1990, 1993) dovetail with my findings. In addition, the more substantial sex ratio effects found in smaller units of analysis suggests that examinations of sex ratios influence on crime and victimization should be conducted at relatively localized levels of spatial aggregation.

Finally, the present research has the potential to contribute to contemporary gender debates about how sexed bodies are gendered and gendered bodies are sexed. The U.S. Census Bureau (2013) defines sex as "a self-classification by gender, either male or female." Such conceptualizations naturalize the link between our sexed bodies and gendered expressions, which uphold gendering schemes. Gender, in contrast, concludes that that our sexed bodies are imbued with cultural significance and valued in ways that indicate how we

should be treated (Bartkey 1990; Butler 1990; Collins 2000, 2005; Connell 2005; Foucault 1978; Goffman 1977; Lorber 1993, 1994; Lorber and Moore 2007; Schilt 2010). Such gendering has extensive consequences for our life. Kane (2009) finds that to develop sex preferences for children, parents use gendering schemas that rely heavily on traditional notions of masculinity and femininity. This reliance encourage a self-fulfilling prophecy of gendered outcomes, including gender-based interactions between the parents and children. Elliott and Aseltine (2012) further examine these gendered ideals in parents of adolescent and teenage children. They find that in developing strategies about how to protect their children from hostile environments parents rely on cultural ideas about what bodies symbolize. Because parents understood the sexualization of the female body, they used parental strategies, such as monitoring clothing and limiting freedom of movement, to "protect" the sexual vulnerability of their teenage daughters -- strategies that reproduce gender inequality.

Research on sex ratios reinforces calls to bring bodies back into gender theory and research. Guttentag and Secord's (1983) sex ratio thesis takes seriously the notion that bodily differences produce differential meanings assigned to each sex group and those meanings, in turn, influence social relationships. Sex ratio effects, then, highlight gendered differences by emphasizing the result of prescribing gender on the sexed body. Given the link between sex and gender in our social practices and cultural imagery, calls to "undo gender" (Connell 2010; Deutsch 2007; Risman 2009) will be insufficient unless they also recognize the need to dismantle or "undo sex." Thus, eradicating these existing and polarizing classifications is necessary because they signify group differences that encourage

boundary heightening (Kanter 1977) through defining one's own group as being morally, socially or otherwise superior making maltreatment of out-group members and opportunity hoarding for one's in-group members more likely (Schwalbe et al 2000; Tilley 1998). To erase inequalities, then, we must emphasize similarities over differences and inclusion over exclusion; otherwise, the body will continue to be read as sexed and gendered and controlled in ways that serve socio-political functions (Fonow and Cook 2005).

I recognize that the argument set forth above may pose a contradiction for the present and future research. Examining *sex* ratio effects on *gendered* processes may appear to challenge arguments that we must dismantle existing gender and sex classifications to attain equity. The measure of the sex ratio itself is defined as the relative proportion of males and females in a given population. This dimorphic sex-based categorization is extensively tied to heteronormativity (Butler 1990; Dozier 2005; Goffman 1977; Ingraham 1994; Kessler and McKenna 1978) and may function to divide humans into types based on actual or perceived reproductive anatomy. While bodily differences are often apparent, the meanings attached to these differences are cultural.

This paradox is not new to sociologists, especially scholars of inequality. We understand that fairness emerges when hierarchical classifications are eradicated, but by studying group-based outcomes we may reify the very classifications that bind us to injustice. I propose that revealing and understanding inequality is a required step towards moving beyond it. Awareness of inequality as a problem for democracy and equal opportunity is necessary to resolve such problems. Thus, a tension emerges when we study group

differences that we may be reinforcing those group boundaries; however, this is a necessary risk of inequality scholarship.

We must remain diligent in our investigations of persistant sexed and gendered outcomes because they continue to have real consequences for lived experiences. We should, though, seek to understand diffential outcomes without conforming to them. The categories of "male," "female," "man," and "woman" should be questioned because troubling these categories may help its referents critique it - even if we use it. Further, we can seek to reject these categories by emphasizing an interest in how the meaning and consequences of these categories *change*. Socio-cultural progress, including shifts towards more balanced structural power, may help reveal the minor importance of biological differences, which could encourage more equity between males and females.

Nonetheless, it is important to question *how* structural power is acquired and maintained. Leadership continues to be largely associated with masculinity, although this association has diminished over time (Koenig, et al. 2011), so if women gain access to structural relations by conforming to characteristics associated with masculinity (e.g., individualism, risk-taking, competitiveness, aggressiveness), maleness may continue to dominate structural power relations. Acknowledging power relations in this way reminds us to look beyond the sex group or body in positions of power, and instead appreciate what power represents. Guttentag and Secord's theory emphasizes the sexed body as their primary indicator of competing power relations; however, true gender parity may require a transformation in how we define, attain, and maintain power.

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TABLE 4.1: Hypothesized Main Effects of the Sex Ratio on Relational Outcomes (Interaction Effects are expected to be in the same direction but weaker)

Outcome Variable	Main Effect
Female Marriage Rate	+
Male Marriage Rate	+, – or ∩ (depending on interpretation)
Marital Fertility rate	+
Single-Parent Household	-
Divorce rate	-
Gap in Male-Female Employment	+

TABLE 6.1: Descriptive Statistics for Tract-Level Data (N=65424)
Means, Standard Deviations [in Brackets], Ranges (in Parentheses)

Variable	1970	1980	1990	2000
Sex Ratio, 15-44	96.79 [33.08] (0, 986)	100.01 [29.80] (0, 1000)	101.93 [31.11] (0, 957)	102.99 [35.47] (0, 964)
White Sex Ratio 15-59	97.88 [36.07] (0, 966)	100.95 [34.04] (0, 1000)	103.00 [35.43] (0, 1000)	104.38 [38.41] (0, 997)
Black Sex Ratio 15-59	106.82 [87.80] (0, 1000)	111 [83.00] (0, 1000)	109.33 [93.80] (0, 1000)	111.29 [97.46] (0, 1000)
Hispanic Sex Ratio 15-59	--	114.50 [85.22] (0, 1000)	113.66 [101.82] (0, 1001)	121.39 [99.66] (0, 1000)
White Sex Ratio, employed males	--	96.66 [33.08] (3, 1000)	98.08 [33.30] (3, 940)	100.04 [36.22] (1, 997)
Black Sex Ratio, employed males	--	106.08 [81.02] (2, 1000)	107.55 [89.85] (.5, 1000)	109.74 [93.25] (.3, 1000)
Hispanic Sex Ratio, employed males	--	110.73 [82.09] (2, 1000)	110.50 [96.77] (1, 1000)	120.60 [95.16] (3, 1000)
Female Marriage Rate	--	53.94 [18.71] (0, 99)	55.93 [12.90] (0, 100)	53.93 [12.73] (0, 100)
Marital Fertility	87.12 [10.25] (0, 100)	79.71 [15.08] (0, 100)	76.31 [16.48] (0, 100)	70.97 [17.35] (0, 100)
White Marital Fertility	88.44 [9.61] (0, 100)	82.48 [13.48] (0, 100)	80.06 [14.56] (0, 100)	75.09 [16.00] (0, 100)
Black Marital Fertility	75.18 [25.40] (0, 100)	63.01 [29.43] (0, 100)	57.42 [32.81] (0, 100)	51.49 [33.23] (0, 100)
Hispanic Marital Fertility	--	78.94 [26.57] (0, 100)	75.23 [29.93] (0, 100)	70.81 [30.18] (0, 100)
Female Divorce Rate	--	6.70 [4.70] (0, 99)	9.30 [4.35] (0, 100)	10.83 [4.53] (0, 100)
Female Headed Families	8.66 [9.99] (0, 89)	15.15 [15.18] (0, 100)	22.16 [15.87] (0, 100)	24.43 [15.89] (0, 100)

TABLE 6.1 (continued)

Black Female Headed Families	21.84 [24.11] (0, 100)	32.54 [28.17] (0, 100)	36.46 [31.39] (0, 100)	40.06 [31.79] (0, 100)
Hispanic Female Headed Families	--	18.01 [25.06] (0, 100)	19.14 [27.30] (0, 100)	21.01 [27.07] (0, 100)
Male Marriage Rate	--	57.88 [19.32] (0, 98)	60.26 [12.57] (0, 100)	57.66 [12.38] (0, 100)
Male Divorce Rate	--	5.28 [4.26] (0, 97)	7.39 [3.90] (0, 100)	8.92 [4.18] (0, 100)
Female-Male Labor Force Participation	.55 [1.33] (0, 195)	.72 [3.88] (0, 625)	.83 [7.76] (0, 1862)	.88 [5.77] (0, 1353)
White Female-Male Labor Force Participation	--	.68 [1.63] (0, 269)	.76 [1.44] (0, 194)	.82 [2.10] (0, 418)
Black Relative Female-Male Labor Force Participation	--	.92 [3.04] (0, 345)	1.07 [9.89] (0, 1946)	1.16 [7.76] (0, 956)
Hispanic Female-Male Labor Force Participation	--	.69 [.53] (0, 28)	.38 [3.80] (0, 806)	.87 [7.05] (0, 1591)
Population Size (by 1000s)	2.26 [2.24] (0, 49)	2.76 [2.10] (0, 40)	3.80 [1.76] (0, 37)	4.30 [2.14] (0, 36)
Foreign Born	.04 [.06] (0, .88)	.06 [.06] (0, .86)	.07 [.11] (0, 1.0)	.10 [.13] (0, 1.0)
Group Quarters	.02 [.07] (0, 1)	.02 [.09] (0, 1)	.03 [.09] (0, 1)	.03 [.10] (0, 1)
Northeast	.20 [.40] (0, 1.0)	-	-	-
Midwest	.33 [.47] (0, 1.0)	-	-	-
West	.21 [.40] (0, 1.0)	-	-	-
South	.33 [47] (0, 1.0)	-	-	-

TABLE 6.2: Descriptive Statistics for County-Level Data (N=3141)
Means, Standard Deviations [in Brackets], Ranges (in Parentheses)

Variable	1970	1980	1990	2000
Sex Ratio, 15-44	105.40 [48.51] (59, 732)	104.78 [31.67] (79, 550)	106.93 [38.14] (81, 880)	109.94 [39.91] (73, 868)
White Sex Ratio 15-59	107.72 [56.65] (61, 695)	103.52 [21.02] (75, 443)	105.01 [28.55] (69, 726)	106.66 [25.82] 64, 773)
Black Sex Ratio 15-59	123.76 [80.65] (0, 857)	121.22 [65.65] (0, 897)	118.75 [93.69] (0, 935)	138.99 [125.19] (0, 1000)
Hispanic Sex Ratio 15-59	--	119.28 [99.31] (0, 1000)	149.13 [108.47] (0, 998)	144.27 [105.64] (2, 998)
White Sex Ratio, employed males	--	99.83 [21.11] (71, 440)	99.78 [28.73] (58, 772)	102.17 [25.77] (57, 772)
Black Sex Ratio, employed males	--	114.77 [65.24] (0, 897)	118.75 [93.12] (8, 968)	137.36 [119.12] (5, 1000)
Hispanic Sex Ratio, employed males	--	119.00 [74.40] (10, 875)	120.85 [95.73] (2, 1000)	99.83 [21.11] (71, 439)
Female Marriage Rate	--	31.59 [30.86] (0, 99)	60.99 [5.99] (28, 81)	58.91 [6.00] (25, 91)
Marital Fertility	88.72 [3.80] (70, 100)	83.67 [5.56] (55, 94)	80.74 [6.94] (41, 100)	74.63 [7.71] (36, 100)
White Marital Fertility	89.83 [3.10] (75, 100)	85.87 [4.63] (64, 100)	83.93 [4.900] (44, 100)	78.09 [5.58] (42, 100)
Black Marital Fertility	77.08 [13.36] (0, 100)	65.94 [16.43] (0, 100)	53.73 [26.29] (0, 100)	53.73 [24.29] (0, 100)
Hispanic Marital Fertility	--	79.56 [17.96] (0, 100)	76.03 [24.75] (0, 100)	72.09 [21.79] (0, 100)
Female Divorce Rate	--	3.94 [6.52] (0, 91)	7.52 [2.24] (.7, 71)	9.70 [2.28] (0, 21)
Female Headed Families	2.03 [443] (0, 28)	4.51 [7.64] (0, 42)	17.96 [7.44] (0, 54)	20.64 [7.54] (0, 59)
White Female Headed Families	8.18 [2.85] (0, 22)	11.87 [4.16] (0, 33)	12.41 [4.30] (0, 55)	15.53 [4.64] (0, 53)

TABLE 6.2 (continued)

Black Female Headed Families	19.75 [12.53] (0, 100)	29.45 [15.13] (0, 100)	32.13 [21.90] (0, 100)	36.35 [22.94] (0, 100)
Hispanic Female Headed Families	--	17.18 [16.64] (0, 100)	18.28 [22.86] (0, 100)	18.98 [18.62] (0, 100)
Male Marriage Rate	--	33.00 [32.77] (0, 97)	65.04 [5.67] (26, 82)	61.91 [5.49] (31, 84)
Male Divorce Rate	--	3.22 [5.63] (0, 81)	6.92 [1.99] (1, 38)	9.31 [2.06] (0, 23)
Relative Labor Force Participation	.54 [.20] (.2, 4.6)	.70 [.58] (.4, 13)	.77 [.90] (.4, 38)	.94 [4.8] (.4, 271)
White Relative Labor Force Participation	--	.67 [.31] (.4, 8)	.74 [.36] (.4, 15)	.82 [.71] (.3, 38)
Black Relative Labor Force Participation	--	.95 [1.59] (0, 36)	1.06 [2.54] (0, 76)	1.68 [8.74] (0, 201)
Hispanic Relative Labor Force Participation	--	.65 [1.01] (0, 28)	.12 [.48] (0,18)	.95 [.3.19] (0, 159)
Population Size (by 1000s)	47.12 [229] (0, 7015)	57.63 [238] (0, 7471)	79.17 [263] (.107, 8861)	89.58 [292] (.067, 9518)
Foreign Born	.01 [.01] (0, .21)	.01 [.03] (0, .34)	.02 [.04] (0, .43)	.03 [.05] (0, .49)
Group Quarters	.01 [.01] (0, .36)	.03 [.04] (0, 1)	.03 [.03] (0, .42)	.03 [.04] (0, .47)
Northeast	.07 [.25] (0, 1)	-	-	-
Midwest	.45 [.49] (0, 1)	-	-	-
West	.14 [.34] (0, 1)	-	-	-
South	.45 [.50] (0, 1)	-	-	-

TABLE 6.3: Descriptive Statistics for State-Level Data (N=51)
Means, Standard Deviations [in Brackets], Ranges (in Parentheses)

Variable	1970	1980	1990	2000
Sex Ratio, 15-44	106.55 [23.42] (91, 238)	106.05 [12.31] (97, 175)	108.55 [10.97] (98, 155)	109.62 [8.90] (98, 141)
White Sex Ratio 15-59	108.47 [25.54] (91, 227)	104.73 [7.52] (96, 136)	108.28 [10.37] (97, 144)	108.64 [8.61] (98, 139)
Black Sex Ratio 15-59	137.26 [73.03] (81, 532)	139.44 [56.39] (57, 450)	139.68 [31.30] (75, 231)	155.20 [37.00] (96, 253)
Hispanic Sex Ratio 15-59	--	121.54 [12.77] (95, 155)	121.46 [18.91] (81, 177)	137.80 [27.067] (103, 264)
White Sex Ratio, employed males	--	100.47 [7.48] (91, 130)	102.98 [10.62] (89, 138)	103.76 [8.24] (92, 134)
Black Sex Ratio, employed males	--	132.25 [54.59] (57, 437)	130.36 [29.97] (65, 212)	145 [35.92] (84, 234)
Hispanic Sex Ratio, employed males	--	113.46 [11.64] (90, 146)	114.16 [18.41] (78, 170)	130.41 [26.72] (97, 258)
Female Marriage Rate	--	60.87 [13.29] (27, 97)	56.91 [4.60] (32, 64)	54.53 [4.23] (31, 61)
Marital Fertility	87.43 [3.08] (69, 91)	80.61 [4.44] (54, 87)	76.97 [4.77] (51, 84)	71.23 [5.15] (46, 82)
White Marital Fertility	88.77 [2.51] (74, 91)	83.31 [2.56] (74, 91)	80.70 [2.75] (72, 86)	75.50 [2.55] (71, 81)
Black Marital Fertility	76.00 [6.40] (52, 95)	66.61 [9.81] (48, 100)	60.40 [8.03] (41, 86)	53.87 [8.24] (33, 84)
Hispanic Marital Fertility	--	78.52 [6.50] (52, 100)	75.11 [4.30] (57, 82)	69.80 [4.83] (57, 77)
Female Divorce Rate	--	7.58 [2.36] (3, 16)	9.20 [1.49] (5, 14)	10.93 [1.37] (7, 14)
Female Headed Families	7.04 [4.37] (0, 28)	12.94 [6.23] (2, 41)	21.24 [5.22] (13, 46)	23.80 [5.11] (15, 45)
White Female Headed Families	9.30 [2.36] (6, 22)	14.08 [1.95] (10, 18)	15.25 [2.19] (10, 21)	17.92 [2.14] (13, 23)

TABLE 6.3 (continued)

Black Female Headed Families	30.66 [7.33] (0, 47)	29.25 [9.44] (0, 45)	33.30 [8.29] (8, 52)	36.50 [9.31] (9, 57)
Hispanic Female Headed Families	--	18.46 [6.12] (0, 41)	19.26 [4.24] (12, 33)	21.31 [4.85] (14, 36)
Male Marriage Rate	--	63.51 [12.65] (29, 94)	60.88 [4.06] (38, 66)	57.86 [3.56] (37, 61)
Male Divorce Rate	--	5.76 [1.67] (2, 10)	7.59 [1.35] (5, 12)	9.34 [1.36] (6, 12)
Male-Female Labor Force Participation	.55 [.04] (.4, .7)	.71 [.08] (.5, 1)	.81 [.07] (.6, 1)	.87 [.13] (.7, 1.5)
White Male-Female Labor Force Participation	--	.70 [.08] (.5, 1)	.77 [.04] (.6, .9)	.83 [.05] (.7, 1.2)
Black Male-Female Labor Force Participation	--	.88 [.05] (.7, 1.5)	.99 [.28] (.5, 2.4)	1.07 [.21] (.4, .9)
Hispanic Male-Female Labor Force Participation	--	.70 [.09] (.4,.9)	.35 [.22] (.7, 1.5)	.85 [.10] (.6, 1.2)
Population Size	2,902 [3,900] (0, 1878)	3,549 [4,426] (115, 23191)	4,876 [5,439] (453, 29758)	5,517 [6,163] (493, 33869)
Foreign Born	.02 [.02] (0, .11)	.4 [.03] (0, .15)	.04 [.04] (0, .20)	.07 [.05] (0, .25)
Group Quarters	.02 [.01] (0, .06)	.03 [.01] (.01, .06)	.03 [.01] (.02, .07)	.03 [.01] (.02, .07)
Northeast	.18 [.38] (0, 1)	-	-	-
Midwest	.33 [.47] (0, 1)	-	-	-
West	.25 [.44] (0, 1)	-	-	-
South	.33 [47] (0, 1)	-	-	-

TABLE 6.4: Mean Change and Significance of Variables of Interest

	1970-1980	**1980-1990**	**1990-2000**
Sex Ratio, 15-44	3.22*	1.89*	1.05*
White Sex Ratio, 15-44	3.06*	2.05*	1.37*
Black Sex Ratio, 15-44	4.69*	-2.17*	1.95*
Hispanic Sex Ratio, 15-44	--	-.840*	7.72*
Female Marriage	--	1.99*	-2.00*
Marital Fertility	-7.40*	-3.40*	-5.33*
White Marital Fertility	-5.96*	-2.41*	-4.96*
Black Marital Fertility	-12.17*	-5.59*	-5.93*
Hispanic Marital Fertility	--	-3.70*	-4.41*
Female Divorce	--	2.38*	-2.60*
Female-Headed Families	6.48*	7.01*	2.26*
White Female-Headed Families	5.24*	.98*	2.57*
Black Female-Headed Families	10.70*	3.92*	3.60*
Hispanic Female-Headed Families	--	1.13*	1.86*
Male Marriage	--	2.30*	1.52*
Male Divorce	--	2.10*	1.53*
Relative Labor Force Participation	.174*	.109*	.049
Relative Labor Force Participation	--	.079*	.060*
Relative Labor Force Participation	--	.159*	.086*
Relative Labor Force Participation	--	-.301*	.489*

* p<=.05

TABLE 6.5: Bivariate Correlations of Tract-level Sex Ratios and Relevant Dependent Variables

	Female Marriage 1970	Marital Fertility 1970	Female Divorce 1970	Female Headed 1970	Male Marriage 1970	Male Divorce 1970	Relative Labor 1970
Sex Ratio 1970	--	.030*	--	-.035*	--	--	.198*
	1980	**1980**	**1980**	**1980**	**1980**	**1980**	**1980**
Sex Ratio 1980	.000	-.001	.024*	-.002	.006	-.016*	.174*
	1990	**1990**	**1990**	**1990**	**1990**	**1990**	**1990**
Sex Ratio 1990	.012*	-.066*	.017*	-.027*	.056*	.020*	.359*
	2000	**2000**	**2000**	**2000**	**2000**	**2000**	**2000**
Sex Ratio 2000	-.021*	.022*	-.021*	-.034*	-.010*	.001	.437*

	Marital Fertility	Female Headed Families	Male-Female Labor
White Sex Ratio 1970	.034*	-.048*	n/a
Black Sex Ratio 1970	.013	-.026*	n/a
White Sex Ratio 1980	.015*	-.024*	.159*
Black Sex Ratio 1980	.015*	-.015*	.163*
Hispanic Sex Ratio 1980	.142*	-.164*	.052*
White Sex Ratio 1990	.012*	-.016*	.216*
Black Sex Ratio 1990	.052*	-.056*	.191*
Hispanic Sex Ratio 1990	.080*	-.102*	.035*
White Sex Ratio 2000	.008*	-.023*	.205*
Black Sex Ratio 2000	.023*	-.031*	.229*
Hispanic Sex Ratio 2000	.027*	-.053*	.130*

*Correlation is significant at the 0.05 level (2-tailed).

TABLE 6.6: Hypothesized and Actual Cross-sectional Analysis Outcomes
(Support for theory in *Red Italics*)

		Actual Relationship			
	Hypothesis	**1970**	**1980**	**1990**	**2000**
Female Marriage	+	n/a	*+*	*+*	*+*
Marital Fertility	+	*+*	*+*	*+*	*+*
Female Divorce	-	n/a	N/S	+	+
Female-Headed Families	-	*-*	*-*	*-*	*-*
Male Marriage	Varying interpretations	n/a	*-*	+	*+*
Male Divorce	-	n/a	+	+	+
Relative Labor Force Participation	-	+	+	+	+
Race-Specific Outcomes					
White Marital Fertility	+	*+*	*+*	*+*	*+*
Black Marital Fertility	+	*+*	*+*	*+*	*+*
Hispanic Marital Fertility	+	n/a	*+*	*+*	*+*
White Female-Headed Families	-	*-*	*-*	*-*	*-*
Black Female-Headed Families	-	*-*	*-*	*-*	*-*
Hispanic Female-Headed Families	-	n/a	*-*	*-*	*-*
White Relative Labor	-	n/a	+	+	+
Black Relative Labor	-	n/a	+	+	+
Hispanic Relative Labor	-	n/a	+	+	+

TABLE 6.7: Tract-Level OLS Regression Predicting Female Marriage
Unstandardized regression coefficients, robust standard error [in brackets], t-statistic (in parenthesis)

	1980	1990	2000
Sex Ratio 15-44	.074* [.005] (12.86)	.097* [.004] (23.94)	.067* [.003] (21.56)
Population size	-.408* [.034] (-11.67)	.427* [.029] (14.49)	1.12* [.023] (48.04)
Group Quarters	-68.03* [1.07] (-63.35)	-70.09* [1.01] (-69.30)	-43.70* [1.20] (-36.15)
Foreign Born	-27.23* [.550] (-49.49)	-26.31* [.406] (-64.73)	-18.65* [.345] (-54.03)
Northeast	-.056 [.143] (-0.39)	-.714 [.136] (-5.23)	.041 [.143] (.29)
Midwest	2.95* [.143] (20.58)	1.28* [.122] (10.45)	.358* [.128] (2.79)
West	3.54 * [.154] (22.94)	3.40* [.141] (24.08)	2.42* [.144] (16.79)
Constant	53.75* [.595] (90.23)	47.15* [.426] (110.50)	44.55* [.335] (132.98)
R^2	.236	.221	.134
N	49,512	64,703	64,874

*p<.05

TABLE 6.8: Tract-Level OLS Regression Predicting Marital Fertility
Unstandardized regression coefficients, robust standard error [in brackets], t-statistic (in parentheses)

	1970	1980	1990	2000
Sex Ratio 15-44	.042* [.003] (10.86)	.086* [.007] (11.28)	.089* [.005] (15.10)	.083* [.004] (18.79)
Population size	-.946* [.02] (-32.74)	-.144 [.040] (-3.60)	.822* [.040] (20.09)	1.54* [.033] (46.40)
Group Quarters	-11.27* [1.17] (-9.57)	-24.28* [1.81] (-13.37)	-31.46* [1.82] (-17.24)	-35.17* [1.90] (-18.48)
Foreign Born	-15.82* [.782] (-20.15)	-18.92* [.711] (-26.59)	-17.16* [.560] (-30.61)	-10.44* [.471] (-22.13)
Northeast	.046 [.149] (.031)	.308 [.212] (1.45)	1.07 [.210] (5.12)	1.03* [.216] (4.79)
Midwest	-2.26* [.131] (-17.22)	.226 [.188] (1.21)	-.927 [.175] (-5.27)	-2.81* [.181] (-15.50)
West	-2.75* [.132] (-20.75)	.147 [.192] (0.76)	1.33 [.182] (7.33)	2.00* [.189] (10.58)
Constant	88.46* [.393] (224.54)	73.25* [.773] (94.67)	65.91* [.626] (105.24)	58.01 [.486] (119.23)
R^2	.064	.034	.038	.067
N	46,121	51,572	64,496	64,614

*p<.05

TABLE 6.9: Tract-Level OLS Regression Predicting Female Divorce
Unstandardized regression coefficients, robust standard error [in brackets], t-statistic (in parentheses)

	1980	1990	2000
Sex Ratio 15-44	-.00005	.002**	.006*
	[.011]	[.001]	[.001]
	(-0.04)	(1.80)	(5.56)
Population size	.090*	-.012	-.136*
	[.011]	[.010]	[.008]
	(7.75)	(-1.13)	(-15.21)
Group Quarters	-2.35*	-2.51*	-6.24*
	[.350]	[.394]	[.377]
	(-6.72)	(-6.38)	(-16.56)
Foreign Born	2.81*	. 111	-2.89*
	[.205]	[.162]	[.146]
	(13.70)	(.69)	(-19.69)
Northeast	-2.35*	-1.43*	-1.18*
	[.054]	[.047]	[.050]
	(-43.40)	(-30.27)	(-23.52)
Midwest	-.270*	.198*	.669*
	[.058]	[.044]	[.045]
	(-4.65)	(4.44)	(14.59)
West	1.24*	1.55*	1.11*
	[.064]	[.055]	[.057]
	(19.36)	(28.30)	(19.49)
Constant	7.41*	9.00*	10.95*
	[.142]	[.055]	[.129]
	(-51.92)	(55.47)	(84.37)
R^2	.084	.054	.054
N	49,673	64,703	64,874

*p<.05
**p<.10

TABLE 6.10: Tract-Level OLS Regression Predicting Female-Headed Families
Unstandardized regression coefficients, robust standard error [in brackets], t-statistic (in parentheses)

	1970	1980	1990	2000
Sex Ratio 15-44	-.039*	-.077*	-.083*	-.075*
	[.003]	[.006]	[.005]	[.003]
	(-11.11)	(-12.27)	(-15.59)	(-19.51)
Population size	-.979*	.2432*	-.681*	-1.28*
	[.028]	[.038]	[.039]	[.030]
	(-34.96)	(6.27)	(-17.43)	(-42.15)
Group Quarters	6.89*	13.36*	16.98*	18.44*
	[.981]	[1.45]	[1.53]	[1.61]
	(7.00)	(9.16)	(11.05)	(11.45)
Foreign Born	13.20*	15.49 *	16.17*	11.79*
	[.717]	[.665]	[.503]	[.425]
	(18.40)	(23.29)	(32.11)	(27.71)
Northeast	-.043	-.082	-.448*	-.301
	[.144]	[.208]	[.199]	[.196]
	(-.30)	(-.09)	(-2.24)	(-1.53)
Midwest	2.34*	.215	2.08*	3.49*
	[.127]	[.185]	[.171]	[.167]
	(-18.41)	(1.16)	(12.19)	(20.89)
West	2.40*	-1.09*	-2.23*	-2.47*
	[.127]	[.184]	[.170]	[.168]
	(18.79)	(-5.90)	(-13.16)	(-14.75)
Constant	10.78*	24.86*	31.70*	35.63*
	[.361]	[.656]	[.576]	[.435]
	(29.87)	(37.87)	(55.00)	(81.84)
R^2	.066	.030	.039	.068
N	46,214	51,750	64,703	64,874

*p<.05
**<.10

TABLE 6.11: Tract-Level OLS Regression Predicting Male Marriage
Unstandardized regression coefficients, robust standard error [in brackets], t-statistic (in parentheses)

	1980	1990	2000
Sex Ratio 15-44	-.015* [.003] (-4.22)	.002 [.002] (.83)	.014* [.002] (4.79)
Population size	-.219* [.027] (-7.87)	.449* [.026] (16.79)	1.09* [.024] (45.34)
Group Quarters	- 65.87* [.855] (-76.96)	-65.00* [.819] (-79.35)	-35.76* [1.13] (-31.40)
Foreign Born	-21.91* [.544] (-40.26)	-27.92* [.407] (-68.60)	-21.26* [.345] (-61.49)
Northeast	.599* [.134] (4.47)	.052 [.130] (.40)	1.29* [.140] (9.73)
Midwest	3.02* [.131] (23.04)	1.69* [.115] (14.61)	1.28* [.123] (10.41)
West	1.39* [.141] (9.82)	1.37* [.132] (10.36)	1.48* [.140] (10.56)
Constant	66.36* [.393] (168.75)	61.33* [.281] (218.16)	53.66* [.323] (165.88)
R^2	.283	.259	.130
N	49,504	64,696	64,868

*p<.05

TABLE 6.12: Tract-Level OLS Regression Predicting Male Divorce
Unstandardized regression coefficients, robust standard error [in brackets], t-statistic (in parentheses)

	1980	1990	2000
Sex Ratio 15-44	.018* [.001] (10.86)	.018* [.001] (13.26)	.011* [.0009] (11.27)
Population size	-.092* [.011] (-8.42)	-.200* [.010] (-20.08)	-.270* [.008] (-33.57)
Group Quarters	-.618 [.400] (-1.54)	-1.01* [.409] (-2.47)	-4.83* [.332] (-14.52)
Foreign Born	.927* [.187] (4.94)	-3.20* [.143] (-22.38)	-6.25* [.119] (-52.50)
Northeast	-1.88* [.050] (-37.41)	-1.45* [.042] (-33.92)	-1.46* [.045] (-32.39)
Midwest	-.264* [.054] (-4.87)	.165* [.038] (4.26)	.524* [.040] (12.85)
West	.686* [.059] (11.61)	1.03* [.047] (21.70)	.652* [.050] (12.97)
Constant	4.47* [.173] (25.83)	6.56* [.147] (44.51)	9.69* [.110] (87.88)
R^2	.073	.085	.112
N	49,696	64,696	64,868

* p<.05

TABLE 6.13: Tract-Level OLS Regression Predicting Relative Labor Force Participation
Unstandardized regression coefficients, robust standard error [in brackets], t-statistic (in parentheses)

	1970	1980	1990	2000
Sex Ratio 15-44	.0005**	.0008*	.001*	.002*
	[.0003]	[.0002]	[.0001]	[.0002]
	(1.70)	(3.26)	(8.57)	(8.59)
Population size	.005*	-.0002	.0003	-.001*
	[.0009]	[.001]	[.0006]	[.0005]
	(5.28)	(-.20)	(.45)	(-1.94)
Group Quarters	-.806*	.775*	.505*	.516
	[.159]	[.161]	[.037]	[.038]
	(5.05)	(4.80)	(13.47)	(13.56)
Foreign Born	.302*	.035*	-.121*	-.189*
	[.012]	[.013]	[.007]	[.007]
	(23.50)	(2.55)	(-16.97)	(-24.83)
Northeast	-.008*	-.018*	.001	-.001*
	[.003]	[.002]	[.002]	[.002]
	(-2.53)	(-7.44)	(.74)	(-.37)
Midwest	.011*	-.008*	-.021*	-.034*
	[.002]	[.003]	[.001]	[.002]
	(5.32)	(2.30)	(-11.21)	(-15.38)
West	-.013*	-.010*	-.012*	-.024*
	[.002]	[.002]	[.002]	[.002]
	(6.49)	(-4.45)	(-5.65)	(-10.80)
Constant	.434*	.584*	.607*	.606*
	[.028]	[.025]	[.019]	[.027]
	(15.07)	(22.73)	(31.16)	(22.02)
R^2	.105	.067	.175	.240
N	46,203	51,724	64,649	64,806

* p<.05

TABLE 6.14: Tract-Level OLS Regression Predicting White Marital Fertility
Unstandardized regression coefficients, robust standard error [in brackets], t-statistic (in parentheses)

	1970	1980	1990	2000
White Sex Ratio	.025*	.017*	.026*	.013*
	[.003]	[.005]	[.005]	[.005]
	(7.94)	(3.20)	(4.83)	(2.62)
Population size	-.802*	-.173**	.356*	.983*
	[.027]	[.037]	[.036]	[.031]
	(-28.80)	(-4.61)	(9.77)	(31.36)
Group Quarters	-6.33*	-10.06*	-15.34*	-16.82*
	[1.13]	[1.49]	[1.59]	[1.70]
	(-5.61)	(-6.75)	(-9.60)	(-9.84)
Foreign Born	-23.75*	-24.53*	-20.78*	-13.76*
	[.868]	[.721]	[.633]	[.538]
	(-27.36)	(-34.02)	(-32.79)	(-25.54)
Northeast	.568	-.462*	.259	-.305
	[.152]	[.202]	[.193]	[.206]
	(3.72)	(-2.28)	(1.34)	(-1.48)
Midwest	-1.31*	1.42*	1.60*	-.135
	[.135]	[.163]	[.148]	[.165]
	(-9.65)	(8.68)	(10.82)	(-.82)
West	-3.17*	-1.70*	-.423	.030
	[.136]	[.179]	[.168]	[.184]
	(-23.21)	(-9.48)	(-2.51)	(.16)
Constant	91.02*	83.42*	77.38*	71.28*
	[.328]	[.584]	[.566]	[.561]
	(277.04)	(142.67)	(136.50)	(126.88)
R^2	.076	.050	.035	.029
N	41,639	46,658	62,971	62,970

*p<.05
** p<.10

TABLE 6.15: Tract-Level OLS Regression Predicting Black Marital Fertility
Unstandardized regression coefficients, robust standard error [in brackets], t-statistic (in parentheses)

	1970	1980	1990	2000
Black Sex Ratio	.068*	.085*	.083*	.075*
	[.003]	[.003]	[.002]	[.002]
	(19.20)	(22.67)	(29.57)	(29.20)
Population size	-.753*	-.384*	1.18*	1.96*
	[.084]	[.095]	[.085]	[.067]
	(-8.87)	(-4.04)	(13.94)	(29.90)
Group Quarters	-15.00*	-29.51*	-40.72*	-42.34*
	[2.94]	[3.34]	[3.00]	[2.64]
	(-5.09)	(-8.83)	(-13.55)	(-16.04)
Foreign Born	-27.07*	-26.03*	-18.34*	-12.97*
	[3.44]	[2.21]	[1.51]	[1.30]
	(-7.87)	(-11.75)	(-12.00)	(-9.94)
Northeast	-.642	1.75	5.39*	5.60*
	[.644]	[.623]	[.570]	[.534]
	(-1.00)	(2.81)	(9.46)	(10.49)
Midwest	-1.27*	7.84*	5.26*	3.55*
	[.552]	[.497]	[.434]	[.409]
	(-2.32)	(15.77)	(12.11)	(8.67)
West	.574	5.67*	7.31*	6.50*
	[.671]	[.622]	[.586]	[.574]
	(0.86)	(9.11)	(12.48)	(11.32)
Constant	72.98*	52.75*	40.44*	32.16*
	[.704]	[.679]	[.570]	[.501]
	(103.61)	(77.62)	(70.94)	(64.14)
R^2	.052	.065	.058	.066
N	19,168	25,047	40,603	42,974

*p<.05

TABLE 6.16: Tract-Level OLS Regression Predicting Hispanic Marital Fertility
Unstandardized regression coefficients, robust standard error [in brackets], t-statistic (in parentheses)

	1980	1990	2000
Hispanic Sex Ratio	.056*	.052*	.037*
	[.002]	[.001]	[.001]
	(20.93)	(27.11)	(19.16)
Population size	-.144**	.451*	1.02*
	[.082]	[.075]	[.057]
	(-1.75)	(5.99)	(17.81)
Group Quarters	-21.19*	-20.18*	-30.83*
	[3.24]	[2.68]	[2.69]
	(-6.53)	(-7.51)	(-11.45)
Foreign Born	-7.58*	-6.92*	-.606
	[1.12]	[.907]	[.784]
	(-6.73)	(-7.63)	(-.77)
Northeast	-4.48*	-4.31*	-5.59*
	[.600]	[.536]	[.413]
	(-7.48)	(-8.05)	(-11.36)
Midwest	3.45*	4.15*	2.31*
	[.556]	[.459]	[.413]
	(6.20)	(9.05)	(5.62)
West	3.18*	2.21*	2.53*
	[.510]	[.440]	[.406]
	(6.23)	(5.02)	(6.25)
Constant	72.25*	66.17*	61.48*
	[.700]	[.575]	[.525]
	(103.11)	(114.99)	(116.90)
R^2	.048	.041	.033
N	27,468	41,852	48,443

*p<.05
**p<.10

TABLE 6.17: Tract-Level OLS Regression Predicting White Female-Headed Families
Unstandardized regression coefficients, robust standard error [in brackets], t-statistic (in parentheses)

	1970	1980	1990	2000
White Sex Ratio	-.028*	-.030*	-.043*	-.034*
	[.003]	[.005]	[.005]	[.005]
	(-9.21)	(-5.64)	(-7.98)	(-6.83)
Population size	.768*	.188*	-.287*	-.759*
	[.025]	[.034]	[.033]	[.027]
	(29.65)	(5.43)	(-8.48)	(-27.25)
Group Quarters	6.17*	9.30*	16.65*	18.71*
	[1.05]	[1.30]	[1.54]	[1.61]
	(5.84)	(7.16)	(10.79)	(11.58)
Foreign Born	22.02*	21.67*	16.08*	12.21*
	[.808]	[.668]	[.570]	[.487]
	(27.24)	(32.42)	(28.17)	(25.04)
Northeast	-.566*	.699*	.070	1.11*
	[.143]	[.191]	[.180]	[.186]
	(-3.95)	(3.65)	(.39)	(6.01)
Midwest	.933*	-1.49*	-1.67*	.197
	[.128]	[.151]	[.137]	[.146]
	(7.29)	(-9.88)	(-12.16)	(1.35)
West	2.81*	.802	-.632	-.785
	[.128]	[.164]	[.151]	[.158]
	(21.97)	(4.89)	(-4.17)	(-4.96)
Constant	7.72*	15.55*	20.54*	23.53*
	[.315]	[.565]	[.562]	[.534]
	(24.64)	(27.53)	(36.53)	(44.01)
R^2	.079	.047	.030	.031
N	41,639	46,658	62,971	62,970

*p<.05

TABLE 6.18: Tract-Level OLS Regression Predicting Black Female-Headed Families
Unstandardized regression coefficients, robust standard error [in brackets], t-statistic (in parentheses)

	1970	1980	1990	2000
Black Sex Ratio	-.074*	-.100*	-.094*	-.096*
	[.003]	[.003]	[.002]	[.002]
	(-21.85)	(-27.17)	(-34.02)	(-39.52)
Population size	.710*	.294*	-1.10*	-1.89*
	[.080]	[.089]	[.081]	[.062]
	(8.87)	(3.27)	(-13.62)	(-30.33)
Group Quarters	17.33*	32.90*	40.34*	42.06*
	[2.87]	[3.28]	[2.94]	[2.68]
	(6.03)	(10.10)	(13.69)	(15.69)
Foreign Born	27.56*	21.24*	14.70*	11.00*
	[3.28]	[2.10]	[1.48]	[1.24]
	(8.40)	(10.10)	(9.91)	(8.86)
Northeast	.290	-1.58	-5.30*	-5.45*
	[.608]	[.599]	[.548]	[.508]
	(.48)	(-2.64)	(-9.66)	(-10.71)
Midwest	.459	-7.33*	-5.11*	-3.11*
	[.520]	[.478]	[.418]	[.392]
	(.88)	(-15.34)	(-12.23)	(-7.94)
West	-.386	-6.23*	-8.14*	-7.18*
	[.632]	[.592]	[.556]	[.538]
	(-.61)	(-10.52)	(-14.63)	(-1.34)
Constant	25.08*	44.97*	54.97*	62.02*
	[.664]	[.651]	[.554]	[.488]
	(37.77)	(69.02)	(99.09)	(126.88)
R^2	.065	.084	.076	.098
N	19,168	25,047	40,603	42,974

* p<.05

TABLE 6.19: Tract-Level OLS Regression Predicting Hispanic Female-Headed Families
Unstandardized regression coefficients, robust standard error [in brackets], t-statistic (in parentheses)

	1980	1990	2000
Hispanic Sex Ratio	-.063*	-.061*	-.059*
	[.002]	[.001]	[.001]
	(-25.01)	(-34.42)	(-35.27)
Population size	. 125**	-.368*	-.920
	[.077]	[.069]	[.051]
	(1.61)	(-5.32)	(-17.99)
Group Quarters	19.96*	22.46*	33.69*
	[3.03]	[2.50]	[2.54]
	(6.58)	(8.98)	(13.24)
Foreign Born	5.92	1.95*	-.591
	[1.05]	[.833]	[.711]
	(5.60)	(2.35)	(-.83)
Northeast	4.75*	4.28*	6.57*
	[.568]	[.499]	[.447]
	(8.36)	(8.58)	(14.71)
Midwest	-3.18*	-4.01*	-1.39**
	[.524]	[.422]	[.366]
	(-6.07)	(-9.50)	(-3.82)
West	-3.80*	-3.59*	-2.70*
	[.479]	[.403]	[.357]
	(-7.93)	(-8.92)	(-7.56)
Constant	25.77*	29.89*	32.39*
	[.663]	[.543]	[.783]
	(38.82)	(55.05)	(66.96)
R^2	.063	.059	.064
N	27,468	41,852	48,443

*p<.05
**p<.10

TABLE 6.20: Tract-Level OLS Regression Predicting White Relative Labor Force Participation

Unstandardized regression coefficients, robust standard error [in brackets], t-statistic (in parentheses)

	1980	1990	2000
White Sex Ratio	.0007* [.0002] (2.82)	.0008* [.0001] (4.95)	.002* [.001] (2.36)
Population size	.001 [.001] (.93)	.001* [.0006] (1.94)	.002* [.0006] (3.90)
Group Quarters	.582* [.064] (8.97)	.554* [.033] (16.52)	.622 [.105] (5.92)
Foreign Born	.006 [.011] (.52)	-.115* [.008] (-13.34)	-.191* [.025] (-7.47)
Northeast	-.027* [.005] (-5.44)	-.002 [.002] (-1.16)	.001 [.005] (.29)
Midwest	-.025* [.004] (-5.18)	-.031* [.002] (-14.30)	-.052* [.002] (-18.70)
West	-.010 [.004] (-2.34)	.004** [.002] (1.83)	-.0005* [.010] (-.05)
Constant	.585* [.028] (20.62)	.667* [.016] (40.70)	.520* [.125] (4.14)
R^2	.054	.098	.053
N	41,897	63,673	63,740

*p<.05

TABLE 6.21: Tract-Level OLS Regression Predicting Black Relative Labor Force Participation

Unstandardized regression coefficients, robust standard error [in brackets], t-statistic (in parentheses)

	1980	1990	2000
Black Sex Ratio	.0009* [.00001] (7.54)	.001* [.0001] (11.94)	.001* [.0001] (11.54)
Population size	-.006 [.002] (-2.75)	.001 [.001] (.72)	.003* [.001] (2.03)
Group Quarters	.817* [.154] (5.29)	.931* [.087] (10.71)	1.09* [.082] (13.33)
Foreign Born	.047 [.038] (1.23)	.027 [.030] (.89)	.059* [.026] (2.27)
Northeast	.017 [.012] (1.39)	.028 [. 013] (2.11)	.002 [.013] (.21)
Midwest	-.020* [.008] (-2.37)	.030 [.008] (3.52)	.015** [.009] (1.58)
West	-.033* [.011] (-2.87)	-.025 [.012] (-2.05)	-.073* [.012] (-5.81)
Constant	.763* [.016] (47.68)	.726* [.015] (47.68)	.743* [.020] (36.78)
R^2	.045	.050	.067
N	25,298	43,503	47, 084

*p<.05

*p<.10

TABLE 6.22: Tract-Level OLS Regression Predicting Hispanic Relative Labor Force Participation

Unstandardized regression coefficients, robust standard error [in brackets], t-statistic (in parentheses)

	1980	1990	2000
Hispanic Sex Ratio	.0001* [.00006] (3.01)	.001* [.0002] (4.34)	.0008* [.00009] (8.54)
Population size	.004* [.001] (2.85)	-.006 [.010] (-.62)	.007* [.001] (5.21)
Group Quarters	.655* [.070] (9.26)	1.12** [.637] (1.76)	1.07* [.089] (12.08)
Foreign Born	-.073 [.019] (-3.71)	.463* [.050] (9.12)	-.229* [.014] (-15.41)
Northeast	-.044* [.011] (-3.99)	.009 [.012] (.78)	.037* [.011] (3.25)
Midwest	-.048* [.009] (-4.98)	.005 [.056] (.10)	-.105* [.009] (10.91)
West	-.019 [.009] (-2.16)	.021** [.012] (1.71)	-.010* [.008] (-1.24)
Constant	.677* [.012] (53.06)	.182* [.059] (3.06)	.709* [.016] (44.00)
R^2	.015	.002	.039
N	30,482	49,534	52,970

*p<.05

TABLE 7.1: Hypothesized and Actual Outcomes for Hybrid Panel Analysis (Support for theory in *Red Italics*)

Dependant Variable	**Hypothesized Direction**	**Actual Relationship**
Female Marriage	+	+
Marital Fertility	+	+
Female Divorce	-	+
Female-Headed Families	-	-
Male Marriage	Varying interpretations	+ -
Male Divorce	-	+
Relative Labor Force Participation	-	+
Race-Specific Outcomes		
White Marital Fertility	+	+
Black Marital Fertility	+	+
Hispanic Marital Fertility	+	+
White Female-Headed Families	-	-
Black Female-Headed Families	-	-
Hispanic Female-Headed Families	-	-
White Relative Labor Force Participation	-	+
Black Relative Labor Force Participation	-	-
Hispanic Relative Labor Force Participation	-	-

TABLE 7.2: Tract Level Hybrid Models Predicting Gendered Outcomes

Unstandardized regression coefficients, robust standard error [in brackets], z-statistic (in parentheses)

	Model 1 Female Marriage 1980-2000	Model 2 Marital Fertility 1970-2000	Model 3 Female Divorce 1980-2000	Model 4 Female-Headed Families 1970-2000	Model 5 Male Marriage 1980-2000	Model 6 Male Divorce 1980-2000	Model 7 Labor Force Participation 1970-2000
Between-Tract							
Sex Ratio 15-44	.093* [.004] (22.68)	.086* [.004] (19.43)	.003* [.001] (3.15)	-.082* [.003] (20.78)	.017* [.002] (5.82)	.019* [.001] (16.04)	.001* [.0002] (7.52)
Population size	.278* [.026] (10.52)	-.00002 [.033] (-.84)	.044* [.009] (4.88)	.205* [.031] (6.57)	-.317* [.024] (-13.12)	-.184* [.007] (-23.33)	.002 [.0006] (3.34)
Group Quarters	-64.16* [1.02] (-62.54)	-30.42* [1.55] (-19.63)	-3.61* [.333] (-10.83)	19.26* [1.38] (13.86)	-59.12* [.917] (-64.44)	-2.63* [.299] (-8.78)	.596* [.046] (12.80)
Foreign Born	-27.57* [.393] (-70.00)	-18.50* [.538] (-34.18)	.706* [.140] (5.02)	18.08* [.494] (36.55)	-27.19* [.391] (-69.42)	-2.90* [.188] (-24.45)	-.016 [.007] (-2.24)
Within-Tract							
Sex Ratio 15-44	.035* [.002] (13.70)	.030* [.002] (11.26)	.002** [.001] (1.78)	-.034* [.002] (-13.78)	-.026* [.002] (-8.95)	.003* [.001] (2.45)	.001* [.0003] (3.61)
Population size	.0001* [.021] (8.26)	.001* [.00002] (51.14)	-.057* [.009] (-6.05)	-.0009* [.0001] (-47.01)	-.478 [.022] (-20.84	-.172* [.008] (-19.87)	.003* [.004] (6.30)
Group Quarters	-26.72* [.152] (-17.58)	-13.36* [1.36] (-9.76)	-3.16* [.605] (-5.23)	8.05* [1.28] (6.29)	-17.26* [1.57] (-10.97)	-1.66* [.709] (-2.35)	.624* [.091] (6.82)
Foreign Born	7.13* [.519] (13.75)	14.43* [.510] (28.28)	-11.62* [.300] (-38.72)	-12.74* [.487] (-26.15)	-.694 [.540] (1.28)	-11.59* [.260] (-44.43)	-.349* [.018] (-18.54)

TABLE 7.2 (continued)

Time Invariant							
Northeast	-.417* [.128] (3.24)	.619* [.172] (3.59)	-1.55* [.041] (-37.66)	-.226 [.162] (-1.39)	.564* [.121] (4.66)	-1.52* [.036] (-42.15)	-.004* [.001] (-2.62)
Midwest	1.42* [.116] (12.29)	-1.42* [.143] (-9.91)	.209* [.039] (5.37)	2.27* [.137] (16.51)	1.95* [.107] (18.27)	.159* [.033] (4.77)	-.020* [.001] (-12.53)
West	3.30* [.131] (25.15)	.725* [.145] (5.00)	1.24* [.047] (26.17)	-1.312* [.134] (-9.79)	1.56* [.122] (12.80)	.748* [.040] (18.38)	-.021* [.001] (-13.00)
Year 1970	--	20.04 [.080] (241.40)	--	-15.99* [.076] (-209.66)	--	--	-.306 * [.001] (-190.23)
Year 1980	5.88* [.045] (129.12)	11.33* [.062] (180.43)	-4.15* [.026] (-159.68)	-7.89* [.057] (-137.13)	6.08* [.050] (121.39)	-3.90* [.024] (-156.21)	-.155 * [.001] (-90.20)
Year 1990	2.30* [.031] (73.03)	6.32* [.044] (141.72)	-1.88* [.017] (-107.66)	-3.09* [.040] (-75.67)	2.80* (.035) [80.87]	-1.95* [.017] (-113.57)	-.061* [.001] (-58.70)
Constant	45.80* [.432] (105.88)	62.78* [.480] (130.71)	10.66* [.118] (90.29)	31.56* [.434] (72.68)	57.11 [.318] (179.55)	8.43* [.126] (66.80)	.632* [.025] (24.82)
R^2 (between-tract)	.191	.025	.046	.029	.222	.111	.225
R^2 (within-tract)	.239	.450	.290	.385	.240	.262	.322
R^2 (overall)	.198	.160	.138	.129	.223	.173	.277
N	179,089	226,803	179,250	227,541	179,068	179,260	227,382

*p<.05
**<.10

TABLE 7.3: Tract-level Hybrid Models Predicting Race-Ethnic Specific Gendered Outcomes

Unstandardized regression coefficients, robust standard error [in brackets], z-statistic (in parentheses)

	Model 1 White Marital Fertility 1970-2000	Model 2 Black Marital Fertility 1970-2000	Model 3 Hispanic Marital Fertility 1980-2000	Model 4 White Female-Headed Families 1970-2000	Model 5 Black Female-Headed Families 1970-2000	Model 6 Hispanic Female-Headed Families 1980-2000	Model 7 White Labor Force 1980-2000	Model 8 Black Labor Force 1980-2000	Model 9 Hispanic Labor Force 1980-2000
Between-Tract									
Race-specific sex ratio	.011* [.004] (2.73)	.080* [.002] (35.10)	.044* [.001] (24.00)	-.024* [.003] (-6.46)	-.095* [.002] (-43.22)	-.059* [.001] (-36.67)	.00003 [.0001] (.31)	-.0005* [.00007] (-6.98)	-.001* [.0001] (-8.21)
Population size	-.059* [.029] (-2.02)	.338* [.065] (5.19)	.637* [.055] (11.46)	.136* [.026] (5.19)	-.364* [.061] (-5.94)	-.569* [.050] (-11.25)	-.009* [.0009] (-10.37)	.0007 .002 (.38)	-.033* [.007] (-4.39)
Group Quarters	-12.24* [1.18] (-10.28)	-35.71* [2.12] (-16.80)	-25.43* [2.06] (-12.32)	13.05* [1.10] (11.85)	36.33* [2.07] (17.47)	27.56* [1.92] (14.29)	-.375* [.078] (4.77)	-.225* .056 (-4.01)	-1.24* [.124] (-9.97)
Foreign Born	-21.89* [.513] (-42.60)	-23.42* [1.32] (-17.71)	-6.35* [.714] (-8.90)	19.31* [.463] (41.68)	20.67* [1.26] (16.29)	3.75* [.660] (5.68)	.269* [.016] (16.17)	-.001 .029 (-.05)	-.169** [.091] (-1.86)
Within-Tract									
Race-specific sex ratio	.033* [.003] (99.86)	.064* [.001] (33.35)	.048* [.001] (29.69)	-.049* [.003] (-14.50)	-.079* [.001] (-42.64)	-.061* [.001] (-40.97)	.0003 [.0002] (1.31)	-.0005* .0001 (-4.94)	-.002* [.0001] (-25.06)
Population size	.719* [.025] (28.53)	1.56* [.059] (26.36)	.454* [.076] (5.95)	-.554* [.023] (-23.90)	-1.45* [.055] (-26.19)	-.346* [.068] (-5.05)	.00008 [.001] (.07)	.008* .004 (2.03)	.065* [.015] (4.38)
Group Quarters	-12.20* [1.37] (-8.91)	-27.32* [2.66] (-10.24)	-18.11* [3.43] (-5.28)	13.51* (1.29) (10.44)	31.39* [2.64] (11.86)	17.95* [3.19] (5.62)	-.673* [.090] (-7.42)	.014 .282 (.05)	-.501** [.303] (-1.65)
Foreign Born	4.92* [.611] (8.05)	5.14* [1.58] (3.24)	17.34* [1.52] (11.26)	-7.87* [.564] (-13.94)	-7.56* [1.51] (-4.98)	-18.14* [1.39] (-13.04)	.509* [.035] (14.28)	.155* .062 (2.47)	1.28* [.416] (3.07)

TABLE 7.3 (continued)

Time Invariant									
Northeast	.057 [.149] (.39)	4.52* [.392] (11.52)	-4.15* [.368] (11.26)	.272* [.137] (1.99)	-4.41* [.374] (-11.78)	4.71* [.339] (13.91)	.039* [.003] (10.30)	.016 [.010] (1.49)	-.129* [.025] (-5.11)
Midwest	.772* [.116] (6.66)	3.54* [.308] (11.50)	2.93* [.308] (9.52)	-.810* [.105] (-7.69)	-3.42* [.294] (11.62)	-2.44* [.280] (-8.73)	.078* [.003] (24.43)	.015** [.008] (1.88)	.602* [.033] (17.94)
West	-.482* [.128] (-3.74)	6.45* [.397] (16.22)	3.00* [.296] (10.14)	-.238* [.114] (-2.09)	-6.95* [.374] (-18.60)	-3.63* [.267] (-13.60)	.002 [.003] (.86)	.034* [.009] (3.60)	.193* [.026] (7.44)
Year 1970	16.16* [.098] (163.82)	28.93* [.255] (113.16)	--	-11.62* [.091] (-126.95)	-23.94* [.243] (-98.14)	--	--	--	--
Year 1980	9.21* [.082] (111.23)	15.28* [.224] (68.18)	10.34* [.264] (39.08)	-5.37* [.076] (-70.46)	-11.52* [.215] (-53.53)	-5.40* [.245] (-22.04)	.299* [.003] (78.14)	.205* [.007] (27.38)	.438* [.031] (14.08)
Year 1990	74.59* [.063] (87.40)	6.89* [.191] (35.99)	4.75* [.201] (23.63)	-3.15* [.058] (-54.23)	-4.76* [.182] (-26.12)	-2.30* [.182] (-12.66)	.096* [.002] (36.50)	.081* [.006] (12.23)	2.57* [.052] (48.67)
Constant	74.59* [.426] (174.79)	38.38* [.446] (85.89)	61.66* [.443] (138.95)	20.25* [.396] (51.03)	55.59* [.432] (128.67)	32.10* [.411] (78.05)	1.27* [.012] (98.50)	1.17* [.013] (85.18)	1.35* [.037] (36.66)
R^2 (between-tract)	.019	.065	.034	.017	.084	.060	.037	.010	.047
R^2 (within-tract)	.268	.186	.055	.119	.164	.051	.102	.013	.106
R^2 (overall)	.134	.120	.048	.090	.122	.063	.070	.010	.075
N	214,238	127,792	117,763	214,238	127,792	117,763	168,997	113, 668	110,767

*p<.05
**<.10

TABLE 7.4: Tract-level Hybrid Models Predicting Race and Gendered Outcomes using Race-Employment Sex Ratio
Unstandardized regression coefficients, robust standard error [in brackets], z-statistic (in parentheses)

	Model 1 White Marital Fertility 1980-2000	Model 2 Black Marital Fertility 1980-2000	Model 3 Hispanic Marital Fertility 1980-2000	Model 4 White Female-Headed Families 1980-2000	Model 5 Black Female-Headed Families 1980-2000	Model 6 Hispanic Female-Headed Families 1980-2000
Between-Tract						
Race specific sex ratio	.017* [.004] (3.72)	.082* [.002] (33.78)	.030* [.001] (17.46)	-.029* [.004] (-6.90)	-.095* [.002] (-40.16)	-.043* [.001] (29.68)
Population size	.368* [.029] (12.36)	.951* [.065] (14.49)	.421* [.053] (7.81)	-.242* [.026] (-9.09)	-.927* [.061] (-15.01)	-.332* [.048] (-6.91)
Group Quarters	-14.71* [1.25] (-11.53)	-41.04* [2.25] (-18.20)	-23.42* [2.01] (-11.60)	14.88* [1.14] (12.98)	40.30* [2.20] (18.28)	25.00* [1.86] (13.43)
Foreign Born	-21.02* [.498] (-42.15)	-22.97* [1.21] (-18.98)	-11.54* [.694] (-16.61)	17.98* [.449] (39.98)	19.58* [1.15] (16.99)	9.23 [.633] (14.58)
Within-Tract						
Race-specific sex ratio	.037* [.004] (8.31)	.058* [.002] (25.21)	.039* [.001] (23.52)	-.055* [.004] (-12.39)	-.075* [.002] (-34.38)	-.050* [.001] (-34.36)
Population size	.546* [.029] (18.40)	.930* [.079] (11.71)	.402* [.074] (5.39)	-.347* [.026] (-13.01)	-.851* [.073] (-11.54)	-.290* [.066] (-4.39)
Group Quarters	-12.85* [1.80] (-7.13)	-22.07* [3.46] (-6.37)	-16.86* [3.42] (-4.93)	14.12* [1.70] (8.27)	27.25* [3.46] (7.86)	16.34* [3.15] (5.18)
Foreign Born	9.44* [.867] (10.89)	10.28* [2.03] (5.06)	15.72* [1.49] (10.55)	-10.78* [.791] (-13.62)	-9.10* [1.93] (-4.70)	-16.28* [1.34] (-12.09)

TABLE 7.4 (continued)

Time Invariant						
Northeast	-.093 [.164] (-.57)	4.96* [.419] (11.83)	-5.01 [.359] (-13.95)	.585* [.150] (3.90)	-4.74* [.397] (-11.95)	5.74* [.324] (17.71)
Midwest	1.02* [.125] (8.11)	3.72* [.324] (11.49)	2.32* [.296] (7.84)	-1.00* [.112] (-8.93)	-3.27* [.307] (-10.65)	-1.72* [.260] (-6.60)
West	-.247** [.142] (-1.74)	6.89* [.424] (16.23)	2.32* [.287] (4.47)	-.583* [.124] (-4.68)	-7.57* [.395] (-19.17)	-1.73* [.253] (-6.85)
Year 1980	9.24* [.089] (103.21)	14.78* [.236] (62.58)	10.09* [.259] (38.87)	-5.27* [.081] (-64.40)	-10.70* [.226] (-47.28)	-5.07* [.237] (-21.36)
Year 1990	5.50* [.064] (86.23)	6.93* [.194] (35.60)	5.14* [.195] (26.28)	-3.18* [.059] (-53.62)	-4.66* [.184] (-25.25)	-2.70* [.174] (-15.51)
Constant	73.07* [.454] (160.69)	37.84* [.455] (83.14)	66.83* [.421] (158.64)	21.47* [.428] (50.10)	55.44* [.439] (126.23)	26.26* [.376] (69.77)
R^2 (between-tract)	.029	.051	.023	.032	.072	.041
R^2 (within-tract)	.155	.096	.050	.071	.083	.052
R^2 (overall)	.077	.077	.042	.049	.089	.052
N	172,352	106,883	115,390	72,352	106,883	115,390

*p<.05
**<.10

TABLE 7.5: County-level Hybrid Models Predicting Gendered Outcomes

Unstandardized regression coefficients, standard error [in brackets], z-statistic (in parentheses)

	Model 1 Female Marriage 1980-2000	Model 2 Marital Fertility 1970-2000	Model 3 Female Divorce 1980-2000	Model 4 Female-Headed Families 1970-2000	Model 5 Male Marriage 1980-2000	Model 6 Male Divorce 1980-2000	Model 7 Labor Force Participation 1970-2000
Between-County							
Sex Ratio 15-44	.178* [.007] (22.79)	.113* [.009] (11.95)	.016 [.003] (1.48)	-.123* [.009] (-13.27)	.069* [.007] (9.31)	.018* [.002] (6.99)	.001* [.00009] (12.28)
Population size	.356* [.086] (4.13)	-.667* [.123] (-5.41)	.615* [.033] (18.22)	.889* [.120] (7.37)	-.305* [.082] (-3.70)	-.158* [.030] (-5.26)	.008* [.001] (6.92)
Group Quarters	-97.91* [3.45] (-28.34)	-68.76* [5.66] (-12.13)	-4.56* [1.35] (3.38)	67.69* [5.55] (12.19)	-82.81* [3.29] (-25.16)	-2.71* [1.19] (-2.27)	.860* [.054] (15.92)
Foreign Born	-16.85* [2.84] (-5.93)	-6.76* [4.36] (-1.55)	5.23* [1.11] (4.71)	11.05* [4.26] (2.59)	-16.03* [2.71] (-5.91)	-5.92* [.988] (-5.99)	-.056 [.041] (-1.37)
Within-County							
Sex Ratio 15-44	.031* [.004] (7.54)	.008* [.004] (1.97)	.002 [.001] (1.61)	-.011* [.003] (-2.97)	-.003 [.004] (-.66)	.004* [.001] (2.50)	.001* [.00006] (16.09)
Population size	1.08* [.076] (14.24)	.756* [.065] (11.57)	-.152* [.029] (5.13)	-.217* [.061] (-3.54)	-1.44* [.082] (-17.45)	-.031 [.032] (-0.98)	.003* [.0009] (3.31)
Group Quarters	-28.71* [2.17] (-13.20)	-10.71* [2.18] (-4.90)	-1.80* [.846] (-2.14)	3.81** [2.03] (1.87)	-23.03* [2.44] (-9.40)	-2.06* [.985] (-2.10)	.397* [.035] (11.23)
Foreign Born	6.45* [2.73] (2.36)	19.86* [2.33] (8.51)	-15.41* [1.06] (-14.48)	-16.34* [2.18] (-7.47)	-10.22* [3.04] (-3.35)	-19.73* [1.21] (-16.21)	-.612* [.036] (-16.79)

TABLE 7.5 (continued)

Time Invariant							
Northeast	-2.48* [.369] (-6.70)	2.14* [.469] (4.58)	-.142 [.144] (-.98)	-1.79* [.460] (-3.90)	1.94* [.352] (5.53)	-.058 [.128] (-.46)	-.005 [.004] (-1.35)
Midwest	1.42* [.198] (7.16)	-4.38* [.249] (-17.60)	.536* [.077] (6.90)	5.99* [.244] (24.57)	.284 [.189] (1.50)	.552* [.069] (8.00)	-.027* [.002] (-11.32)
West	.579* [.284] (2.04)	3.17* [.357] (8.88)	1.95* [.111] (17.62)	-2.29* [.350] (-6.56)	1.68* [.271] (6.22)	1.96* [.098] (19.89)	-.014* [.003] (-4.13)
Year 1970	--	--	--	-14.42* [.164] (-87.94)	--	--	-.327* [.002] (-115.98)
Year 1980	5.25* [.135] (38.66)	18.82* [.175] (107.30)	4.56* [.052] (86.22)	-7.99* [.125] (-63.69)	5.88* [.152] (38.57)	-4.63* [.061] (-75.57)	-.182* [.002] (-83.96)
Year 1990	2.39* [.076] (31.37)	12.15* [.134] (90.43)	-2.30* [.029] (-77.79)	-3.00* [.071] (-41.70)	3.48* [.085] (40.78)	-2.63* [.034] (-76.62)	-.082* [.001] (-65.75)
Constant	44.07* [.855] (51.53)	6.63* [.076] (86.12)	8.94* [.334] (26.72)	27.29* [1.02] (26.51)	57.33* [.817] (70.11)	6.81* [.298] (22.86)	.676* [.010] (66.57)
R^2 (between-tract)	.268	.144	.060	.247	.217	.177	.443
R^2 (within-tract)	.396	.819	.222	.738	.437	.732	.837
R^2 (overall)	.290	.388	.135	.348	.281	.438	.659
N	7200	7827	7182	7829	7200	7200	7829

*p<.05
**<.10

TABLE 7.6: County-level Hybrid Models Predicting Race-Ethnic-Specific and Gendered Outcomes

Unstandardized regression coefficients, standard error [in brackets], z-statistic (in parentheses)

	Model 1 White Marital Fertility 1970-2000	Model 2 Black Marital Fertility 1970-2000	Model 3 Hispanic Marital Fertility 1980-2000	Model 4 White Female-Headed Families 1970-2000	Model 5 Black Female-Headed Families 1970-2000	Model 6 Hispanic Female-Headed Families 1980-2000	Model 7 White Labor Market 1980-2000	Model 8 Black Labor Market 1980-2000	Model 9 Hispanic Labor Market 1980-2000
Between-County									
Race-specific sex ratio	.107* [.007] (13.50)	.028* [.007] (3.92)	.038* [.006] (6.17)	-.115* [.006] (-17.47)	-.037* [.006] (-5.63)	-.052* [.005] (-9.63)	-.00005 [.0002] (.25)	.0001 [.0003] (.35)	-.011 [.019] (-.59)
Population size	-.908* [.082] (-11.05)	1.18* [.483] (2.44)	.366 [.348] (1.05)	.843* [.068] (12.28)	-.721 [.450] (-1.60)	-.244 [.304] (-.80)	-.014* [.002] (-7.28)	.025 [.019] (1.36)	-2.66* [1.02] (-2.59)
Group Quarters	-40.51* [3.70] (-10.93)	-9.52 [17.84] (-.53)	-13.21 [10.98] (-1.20)	42.22* [3.09] (13.63)	19.63 [16.62] (1.18)	16.59 [9.59] (1.73)	-1.30* [.074] (-17.44)	-1.52* [.536] (2.85)	146.77* [30.21] (4.86)
Foreign Born	-20.03* [2.94] (-6.81)	-1.31 [16.08] (-.08)	-19.48 [10.99] (-1.77)	21.34* [2.45] (8.68)	7.57 [14.98] (.51)	9.74 [9.57] (1.02)	-.004 [.066] (.06)	-.560 [.520] (-1.08)	34.80 [27.02] (1.29)
Within-County									
Race-specific sex ratio	.023* [.005] (4.35)	.027* [.005] (4.72)	.048* [.004] (9.82)	-.027* [.004] (-6.02)	-.029* [.005] (-5.47)	-.053* [.004] (-11.88)	-.0008 [.0002] (1.45)	-.0007 [.0004] (-1.64)	-.020 [.021] (-.96)
Population size	.394* [.063] (6.25)	1.09* [.388] (2.81)	.041 [.493] (.08)	-.307* [.052] (-5.80)	-.966* [.363] (-2.66)	-.274 [.440] (-.62)	.013* [.002] (4.98)	.053** [.028] (1.84)	5.48* [1.66] (3.30)
Group Quarters	-6.60* [2.23] (-3.00)	-33.84* [16.53] (-2.05)	32.47* [15.48] (2.10)	5.95* [1.87] (3.18)	35.48* [15.50] (2.29)	-13.60 [14.08] (-.97)	-.562* [.090] (-6.25)	-.533 [1.29] (-.41)	-557.04* [60.12] (-9.26)
Foreign Born	15.05* [2.34] (6.43)	22.33 [14.24] (1.57)	57.89* [19.32] (3.00)	-12.17* [1.96] (-6.19)	-21.43 [13.36] (-1.60)	-43.45* [17.45] (-2.49)	1.17* [.106] (11.00)	1.89 [1.32] (1.43)	144.12* [65.38] (2.20)

TABLE 7.6 (continued)

Time Invariant									
Northeast	1.87* [.314] (5.96)	2.33 [1.70] (1.37)	-2.87* [1.40] (-2.04)	1.26* [.262] (4.83)	-1.62 [1.59] (-1.02)	3.14* [1.22] (2.57)	.001 [.008] (.23)	-.114 [.066] (1.71)	1.36 [3.66] (.37)
Midwest	.086 [.168] (.51)	5.37* [1.01] (5.28)	.997 [.803] (1.24)	-.036 [.140] (-.26)	-6.94* [.948] (-7.32)	-.540 [.701] (-.77)	.096* [.004] (20.78)	-.119* [.041] (2.86)	3.61 [2.29] (1.58)
West	-2.71* [.244] (-11.11)	3.08** [1.61] (1.91)	1.48 [1.12] (1.32)	-1.73* [.204] (-8.52)	-4.20* [1.50] (-2.79)	-2.44* [.985] (-2.48)	.013* [.006] (1.97)	-.102 [.066] (1.54)	-2.89 [3.27] (-.88)
Year 1970	15.99* [.186] (85.95)	26.18* [1.10] (23.80)	--	-11.27* [.156] (-72.17)	-20.27* [1.03] (-19.64)	--		--	
Year 1980	10.64* [.138] (77.02)	14.03* [.848] (16.54)	9.23* [1.05] (8.71)	-6.32* [.116] (-54.47)	-9.39* [.796] (-11.81)	-3.35* [.961] (3.49)	.368* [.005] (66.17)	.424* [.071] (5.93)	10.85* [3.95] (2.75)
Year 1990	6.19* [.078] (78.54)	8.23* [.534] (15.40)	5.67* [.601] (9.43)	-3.41* [.066] (-51.59)	-5.25* [.501] (-10.48)	-2.11* [.545] (-3.88)	.145* [.003] (47.26)	.157* [.042] (3.66)	25.61* [3.32] (7.71)
Constant	69.90* [.847] (82.52)	47.83* [1.84] (25.98)	64.15* [1.44] (44.29)	24.65* [.707] (34.84)	41.21* [1.71] (23.98)	27.43* [1.27] (21.51)	1.28* [.022] (58.10)	1.12* [.088] (12.70)	-2.37 [4.20] (-.56)
R^2 (between-tract)	.135	.049	.032	.156	.051	.051	.0283	.007	.019
R^2 (within-tract)	.775	.207	.049	.662	.145	.038	.622	.014	.046
R^2 (overall)	.464	.122	.041	.358	.102	.045	.445	.012	.039
N	7,753	5,922	6,420	7,753	5,922	6,420	7,170	5,478	4,639

*p<.05
**<.10

TABLE 7.7: County-level Hybrid Models Predicting Race and Gendered Outcomes using Race-Employment Sex Ratio
Unstandardized regression coefficients, standard error [in brackets], z-statistic (in parentheses)

	Model 1 White Marital Fertility 1980-2000	Model 2 Black Marital Fertility 1980-2000	Model 3 Hispanic Marital Fertility 1980-2000	Model 4 White Female-Headed Families 1980-2000	Model 5 Black Female-Headed Families 1980-2000	Model 6 Hispanic Female-Headed Families 1980-2000
Between-County						
Race specific sex ratio	.143* [.007] (18.16)	.019* [.006] (2.99)	.022* [.005] (3.78)	-.143* [.006] (-21.62)	-.030* [.006] (-5.04)	-.034* [.005] (-6.69)
Population size	.760* [.073] (10.33)	1.00* [.437] (2.31)	.388 [.343] (1.13)	-.720* [.061] (-11.68)	-.673 [.402] (-1.67)	-.215 [.296] (-.73)
Group Quarters	-39.13* [2.75] (-14.23)	-17.21 [12.58] (-1.37)	-12.32 [10.71] (-1.15)	38.35* [2.30] (16.63)	25.54* [11.58] (2.20)	15.59 [9.24] (1.69)
Foreign Born	-21.81* [2.45] (-8.90)	-5.02 [12.99] (-.39)	-18.15 [10.86] (-1.67)	22.12* [2.05] (10.76)	9.32 [11.95] (.78)	10.54 [9.34] (1.13)
Within-County						
Race-specific sex ratio	.019* [.006] (3.27)	.007 [.005] (1.31)	.027* [.004] (5.97)	-.027* [.005] (-5.38)	-.007 [.005] (-1.38)	-.031* [.004] (-7.59)
Population size	.343* [.078] (4.37)	.522 [.482] (1.08)	.155 [.482] (.32)	-.246* [.066] (-3.73)	-.408 [.450] (-.91)	-.028 [.425] (-.07)
Group Quarters	-4.05 [2.36] (-1.72)	-25.49 [17.79] (-1.43)	-30.17* [15.12] (-1.99)	4.22* [1.98] (2.12)	27.20 [16.68] (1.63)	18.51 [13.58] (1.36)
Foreign Born	21.77* [2.93] (7.42)	27.56 [18.50] (1.49)	58.22* [18.68] (3.12)	-15.81* [2.46] (-6.42)	-21.43 [17.35] (-1.24)	-43.08* [16.67] (-2.58)

TABLE 7.7 (continued)

Time Invariant						
Northeast	-1.86* [.317] (-5.88)	2.55 [1.64] (-1.56)	-3.55* [1.38] (-2.56)	1.31* [.266] (4.93)	-1.66 [1.51] (-1.10)	3.87* [1.19] (3.25)
Midwest	.219 [.170] (1.29)	5.68* [1.00] (-5.64)	1.20 [.793] (1.52)	-.058 [.142] (-.41)	-7.11* [.928] (-7.67)	-.812 [.684] (-1.19)
West	-2.52* [.245] (-10.29)	3.61* [1.60] (2.26)	1.46 [1.10] (1.32)	-1.48* [.205] (-7.23)	-4.71* [1.47] (-3.20)	-2.57* [.954] (-2.69)
Year 1980	10.63* [.147] (72.21)	13.43* [.922] (14.57)	9.41* [1.02] (9.16)	-6.24* [.123] (-50.43)	-8.72* [.865] (-10.08)	-3.67* [.921] (-3.99)
Year 1990	6.27* [.083] (75.48)	7.95* [.572] (13.88)	5.56* [.581] (9.57)	-3.46* [.069] (-49.60)	-4.98* [.537] (-9.27)	-2.11* [.520] (-4.06)
Constant	67.37* [.802] (83.96)	50.69* [1.96] (25.79)	5.56* [.581] (9.57)	26.29* [.672] (39.08)	38.98* [1.81] (21.47)	25.27* [1.28] (19.60)
R^2 (between-tract)	.172	.035	.022	.214	.064	.030
R^2 (within-tract)	.729	.125	.042	.546	.064	.018
R^2 (overall)	.410	.074	.032	.307	.075	.027
N	7,200	5,292	6,04	7,200	5,292	6,304

*p<.05
**<.10

TABLE 7.8: State-level Hybrid Models Predicting Gendered Outcomes

Unstandardized regression coefficients, standard error [in brackets], z-statistic (in parentheses)

	Model 1 Female Marriage 1980-2000	Model 2 Marital Fertility 1970-2000	Model 3 Female Divorce 1980-2000	Model 4 Female-Headed Families 1970-2000	Model 5 Male Marriage 1980-2000	Model 6 Male Divorce 1980-2000	Model 7 Labor Force Participation 1970-2000
Between-State							
Sex Ratio 15-44	.071 [.093] (.77)	.535* [.215] (2.49)	.004 [.028] (.15)	-.536* [.191] (-2.80)	.038 [.087] (.45)	.00008 [.022] (0.00)	.003 [.004] (.67)
Population size	.00009 [.001] (.05)	-.180 [1.16] (-.16)	.001 [.609] (0.00)	2.24* [1.03] (2.17)	-2.35 [1.84] (-1.28)	-.266 [.485] (-.55)	.017 [.025] (.68)
Group Quarters	-452.34* [103.92] (-4.35)	-381. 09* [61.50] (-6.20)	-43.99 [32.13] (-1.37)	369.03* [54.78] (6.74)	-448.71* [97.23] (-4.61)	-29.99 [25.59] (-1.17)	3.32* [1.34] (2.47)
Foreign Born	-24.25 [22.81] (-1.06)	-19.71 [16.83] (-1.17)	3.65 [7.05] (.52)	29.83 [15.00] (1.99)	-27.76 [21.34] (-1.30)	-2.24 [5.61] (-.40)	-.134 [.368] (-.36)
Within-State							
Sex Ratio 15-44	.091 [.076] (1.19)	.326* [.082] (3.93)	.018 [.011] (1.59)	-.535* [.091] (-5.84)	-.085 [.072] (-1.18)	.008 [.006] (1.24)	.0003 [.004] (.08)
Population size	.003* [.001] (2.00)	.367 [.246] (1.49)	-.454* [.227] (-2.00)	-2.37* [.273] (-8.68)	-3.55* [1.46] (-2.43)	-.633* [.134] (-4.71)	.001 [.012] (.16)
Group Quarters	-613.38* [161.05] (-3.81)	-23.47 [27.50] (-.85)	-35.80 [23.71] (-1.51)	15.71 [30.40] (.52)	-535.57* [152.54] (-3.51)	-12.22 [14.02] (-.87)	.258 [1.34] (.19)
Foreign Born	21.92 [52.96] (.41)	10.42 [8.47] (1.23)	-15.46* [7.79] (-1.98)	-49.13 [9.37] (-5.24)	-31.41 [50.16] (-.63)	-27.87* [4.61] (-6.04)	.099 [.416] (.24)

TABLE 7.8 (continued)

Time Invariant							
Northeast	-1.63 2.40 (-.68)	2.54 1.42 (1.78)	-.514 .742 (-.69)	-3.33* 1.27 (-2.63)	1.31 2.24 (.59)	-.501 .591 (-.85)	-.012 .031 (-.39)
Midwest	.491 1.98 (.25)	-2.68* 1.09 (-2.46)	.705 .613 (1.15)	2.63* .971 (2.71)	.549 1.85 (.30)	.453 .489 (.93)	-.011 .023 (-.49)
West	.730 2.19 (.33)	2.79* 1.39 (2.00)	1.21 .679 (1.79)	-2.01 1.24 (-1.62)	1.88 2.05 (.92)	1.34* .541 (2.48)	-.004 .030 (-.16)
Year 1970	--	19.38* .885 (21.90)	--	-17.17* .979 (-17.54)	--	--	-.315* .043 (-7.24)
Year 1980	5.77 3.41 (1.69)	11.15* .599 (18.60)	-3.27* .502 (-6.52)	-9.86* .663 (-14.86)	8.30* 3.23 (2.57)	-3.46* .297 (-11.65)	-.154* .029 (-5.25)
Year 1990	2.27 1.86 (1.22)	6.52* .375 (17.36)	-1.92* .274 (-7.01)	-3.19* .416 (-7.68)	3.24* 1.76 (1.84)	-2.08* .162 (-12.84)	-.068* .018 (-3.73)
Constant	62.81* 11.50 (5.46)	27.06 [22.87] (1.18)	11.14* 3.53 (3.16)	59.58* 20.38 (2.92)	59.99* 10.77 (5.57)	10.90* 2.80 (3.88)	.410 .501 (.82)
R^2 (between-tract)	.453	.638	.260	.780	.441	.352	.273
R^2 (within-tract)	.330	.955	.760	.957	.315	.912	.783
R^2 (overall)	.385	.852	.516	.900	.372	.679	.692
N	153	202	153	202	153	153	202

*p<.05
**<.10

TABLE 7.9: State-level Hybrid Models Predicting Race and Gendered Outcomes using Race-Specific Sex Ratio
Unstandardized regression coefficients, standard error [in brackets], z-statistic (in parentheses)

	Model 1 White Marital Fertility 1970-2000	Model 2 Black Marital Fertility 1970-2000	Model 3 Hispanic Marital Fertility 1980-2000	Model 4 White Female-Headed Families 1970-2000	Model 5 Black Female-Headed Families 1970-2000	Model 6 Hispanic Female-Headed Families 1980-2000	Model 7 White Labor Force 1980-2000	Model 8 Black Labor Force 1980-2000	Model 9 Hispanic Labor Force 1980-2000
Between-State									
Race-specific sex ratio	.055 [.077] (.71)	.220* [.036] (5.97)	.011 [.043] (.26)	-.114* [.058] (-1.96)	-.231* [.037] (-6.19)	.003 [.036] (.10)	.003* [.001] (3.27)	.001* [.0008] (2.35)	.0004 [.001] (.35)
Population size	-.158 [.696] (.23)	3.29* [1.47] (2.23)	2.32 [1.40] (1.66)	.460 [.531] (.87)	-4.16* [1.49] (-2.78)	-2.61* [1.18] (-2.20)	-.00001 [.00001] (-.62)	.098** [.052] (1.88)	-.053 [.037] (-1.42)
Group Quarters	-156.43* [50.99] (-3.07)	-140.51 [80.73] (-1.74)	-397.79* [68.81] (-5.78)	137.51* [38.81] (3.54)	121.02 [82.06] (1.47)	352.21* [58.20] (6.05)	-.294 [1.05] (-.28)	-2.25 [2.89] (-.78)	-4.19* [1.82] (-2.30)
Foreign Born	-19.99** [10.75] (-1.86)	-9.57 [21.57] (-.44)	-2.02 [15.32] (-.13)	16.36* [8.18] (2.00)	9.07 [21.92] (.41)	2.27 [12.96] (.18)	.183 [.190] (.96)	.592 [.623] (.95)	-.392 [.405] (-.97)
Within-State									
Race-specific sex ratio	.100 [.042] (.18)	.029 [.028] (1.02)	.011 [.020] (.58)	-.175* [.042] (-4.10)	-.063* [.026] (-2.41)	-.0004 [.019] (-.02)	.003* [.0009] (3.79)	.0002 [.0005] (.39)	-.00006 [.0007] (-.08)
Population size	.022 [.228] (.10)	.968 [.873] (1.11)	.390 [.900] (.43)	.113 [.204] (.56)	-.897 [.801] (-1.12)	-.340 [.854] (-.40)	.00001 [.00001] (1.23)	-.071 [.041] (-1.71)	.064** [.034] (1.88)
Group Quarters	-20.13 [25.21] (-.80)	-165.65 [98.84] (-1.68)	-188.89* [97.47] (-1.94)	16.16 [22.49] (.72)	5.40 [90.87] (.06)	189.90* [92.43] (2.05)	-.350 [1.17] (-.30)	8.86* [4.41] (2.01)	-.853 [3.68] (-.23)
Foreign Born	3.62 [7.79] (.47)	44.24 [29.87] (1.48)	30.20 [31.53] (.96)	6.48 [6.95] (.93)	-33.96 [27.41] (-1.24)	-5.05 [29.91] (-.17)	.016 [.385] (.04)	-1.06 [1.47] (-.72)	.291 [1.19] (.24)

TABLE 7.9 (continued)

Time Invariant									
Northeast	.351 [.943] (.37)	4.10* [1.84] (2.23)	-1.44 [1.61] (-.89)	.183 [.718] (.25)	-4.24* [1.87] (-2.27)	2.24 [1.36] (1.65)	.019 [.021] (.89)	-.046 [.069] (-.67)	-.074 [.042] (-1.75)
Midwest	.273 [.706] (.39)	3.57* [1.63] (2.19)	1.94 [1.31] (1.48)	-.004 [.538] (-.01)	-3.35* [1.65] (-2.02)	-1.71 [1.11] (-1.55)	.035* [.016] (2.17)	.008 [.066] (.13)	.056 [.034] (1.63)
West	-2.01* [.898] (-2.24)	3.28 [1.81] (1.81)	1.06 [1.45] (.73)	-1.34* [.683] (-1.97)	-4.37* [1.83] (-2.38)	-.230 [1.23] (-.19)	.009 [.019] (.48)	-.159* [.059] (-2.66)	.035 [.038] (.93)
Year 1970	14.39* [.809] (17.78)	29.03* [2.94] (9.87)	--	-10.12* [.722] (-14.01)	-20.31* [2.70] (-7.52)	--	--	--	--
Year 1980	8.30* [.565] (14.70)	16.44* [2.10] (7.83)	9.61* [1.99] (4.82)	-4.73* [.504] (-9.39)	-9.69* [1.92] (-5.03)	-3.21 [1.89] (-1.70)	.143* [.024] (5.75)	-.305* [.093] (-3.26)	.274* [.075] (3.64)
Year 1990	5.44* [.345] (15.75)	8.23* [1.31] (6.25)	5.84* [1.14] (5.09)	-3.10* [.308] (-10.05)	-4.51* [1.21] (-3.73)	-2.25* [1.08] (-2.07)	.065* [.013] (4.82)	-.121* [.051] (-2.36)	.536* [.043] (12.37)
Constant	75.44* 7.74 (9.74)	35.12* [7.01] (5.01)	89.93* [6.14] (14.63)	24.36* [5.89] (4.13)	53.54* [7.06] (7.58)	2.23 [5.21] (.43)	.508* [.102] (4.97)	.581* [.263] (2.21)	.556* [.164 (3.38)
R^2 (between-tract)	.510	.732	.537	.556	.752	.625	.360	.380	.308
R^2 (within-tract)	.941	.765	.588	.895	.681	.183	.690	.275	.760
R^2 (overall)	.860	.713	.564	.812	.717	.455	.588	.321	.702
N	199	198	153	199	198	153	153	153	153

*p<.05

**<.10

TABLE 7.10: State-level Hybrid Models Predicting Race and Gendered Outcomes using Race-Employment Sex Ratio
Unstandardized regression coefficients, standard error [in brackets], z-statistic (in parentheses)

	Model 1 White Marital Fertility 1980-2000	Model 2 Black Marital Fertility 1980-2000	Model 3 Hispanic Marital Fertility 1980-2000	Model 4 White Female-Headed Families 1980-2000	Model 5 Black Female-Headed Families 1980-2000	Model 6 Hispanic Female-Headed Families 1980-2000
Between-State						
Race specific sex ratio	.003* [.001] (3.26)	.001* [.0008] (2.35)	.0004 [.001] (.35)	-.033 [.053] (-.63)	-.057 [.040] (-1.41)	-.006 [.043] (-.15)
Population size	-.010 [.016] (-.61)	.098** [.052] (1.88)	.053 [.037] (1.42)	-.587 [.832] (-.71)	-5.33* [2.50] (-2.13)	-2.55** [1.37] (-1.86)
Group Quarters	-.294 [1.05] (-.28)	-2.25 [2.89] (-.78)	-4.19* [1.82] (-2.30)	109.06* [51.94] (2.10)	56.74 [138.61] (.41)	398.49* [67.28] (5.92)
Foreign Born	-.183 [.191] (-.96)	-.592 [.623] (.95)	-.392 [.405] (-.97)	22.95* [9.42] (2.43)	20.19 [29.90] (.68)	3.59 [14.86] (.24)
Within-State						
Race-specific sex ratio	.003* [.0009] (3.79)	.0002 [.0005] (.39)	.00006 [.0007] (.08)	-.004 [.022] (-.19)	-.014 [.012] (-1.10)	-.006 [.021] (-.29)
Population size	.013 [.011] (1.23)	.071 [.041] (1.71)	.064** [.034] (1.88)	-.365 [.278] (-1.31)	-2.29* [.973] (-2.36)	-.428 [.912] (-.47)
Group Quarters	-.350 [1.17] (-.30)	-8.86* [4.41] (-2.01)	-.853 [3.68] (-.23)	41.34 [29.49] (1.40)	20.87 [102.59] (.20)	181.00** [98.24] (1.84)
Foreign Born	.016 [.384] (.04)	1.06 [1.47] (.72)	.291 [1.19] (.24)	-22.07* [9.69] (-2.28)	-70.13* [34.39] (-2.04)	-31.67 [32.07] (-.99)

TABLE 7.10 (continued)

Time Invariant						
Northeast	-.019* [.021] (-.88)	.046 [.069] (.67)	-.074 [.042] (-1.75)	.264 [1.07] (.24)	-6.92* [3.29] (-2.10)	1.29 [1.57] (.82)
Midwest	.035* [.016] (2.16)	.008 [.066] (.13)	.056 [.034] (1.63)	-.210 [.823] (-.26)	-2.75 [3.11] (-.88)	-1.89 [1.29] (-1.46)
West	-.009 [.019] (-.48)	.159* [.059] (2.66)	.035 [.038] (.93)	-1.65 [.970] (-1.70)	-10.30* [2.87] (-3.59)	-1.09 [1.42] (-.77)
Year 1980	.143* [.024] (5.76)	.305* [.093] (3.26)	.274* [.075] (3.64)	-7.73* [.627] (-12.34)	-10.92* [2.17] (-5.02)	-9.65* [2.02] (-4.77)
Year 1990	.065* [.013] (4.83)	.121* [.051] (2.36)	.536* [.043] (12.37)	-5.45* [.340] (-15.99)	-6.77* [1.19] (-5.68)	-5.93* [1.17] (-5.07)
Constant	.508* [.102] (4.95)	.581* [.263] (2.21)	.556* [.164] (3.38)	78.72* [4.87] (16.15)	62.58* [12.34] (5.07)	88.40* [5.91] (14.95)
R^2 (between-tract)	.360	.380	.301	.412	.465	.587
R^2 (within-tract)	.690	.274	.756	.918	.714	.536
R^2 (overall)	.587	.321	.702	.750	.561	.564
N	153	153	153	153	153	153

*p<.05
**p<.10

TABLE 7.11: Descriptive Statistics of Sex Ratios and Dependent Variables, Subsamples Means, Standard Deviations [in Brackets], Ranges (in Parentheses)

Variables		*Chronically Low Sex Ratio Areas*	*Non-Chronically Low Sex Ratio Areas*
Sex Ratio, 15-44		76.30 [11.36] (0, 90)	101.67 [32.79] (0, 1000)
Female Marriage		38.20 [11.66] (0, 81.43)	55.20 [14.57] (0, 100)
Marital Fertility		52.45 [24.80] (0, 100)	78.70 [15.18] (0, 100)
Female Divorce		10.61 [4.47] (0, 93.36)	9.12 [4.77] (0, 100)
Female-Headed Families		45.35 [23.58] (0, 100)	16.70 [14.53] (0, 100)
Male Marriage		46.81 [13.33] (0, 100)	59.06 [14.72] (0, 100)
Male Divorce		7.85 [4.31] (0, 62.79)	7.29 [4.36] (0, 100)
Relative Labor Force Participation		.76 [.118] (.32, 1.62)	.71 [1.05] (.11, 144)
N		2,046	63,375
Variables		*Chronically Low Sex Ratio Areas*	*Non-Chronically Low Sex Ratio Areas*
White Sex Ratio, 15-59		75.81 [16.73] (0, 90)	102.40 [35.24] (0, 1000)
White Marital Fertility		72.87 [21.56] (0, 100)	81.19 [13.81] (0, 1000)
White Female Headed Families		23.67 [20.70] (0, 100)	14.79 [12.00] (0, 100)
White Relative Labor Force Participation		.76 [.14] (.16, 2)	.75 [1.05] (0, 180)
N		817	63,445

TABLE 7.11 (continued)

Variables		*Chronically Low Sex Ratio Areas*	*Non-Chronically Low Sex Ratio Areas*
Black Sex Ratio, 15-59		72.45 [14.39] (0, 90)	113.80 [95.78] (0, 1000)
Black Marital Fertility		46.36 [23.15] (0, 100)	60.54 [32.80] (0, 1000)
Black Female Headed Families		48.90 [22.39] (0, 100)	33.20 [30.89] (0, 100)
Black Male-Female Labor Force Participation		.91 [.18] (.1, 4)	.97 [1.27] (0, 92)
N		3,364	47, 517
Variables		*Chronically Low Sex Ratio Areas*	*Non-Chronically Low Sex Ratio Areas*
Hispanic Sex Ratio, 15-59		61.23 [25.15] (0, 90)	120.44 [99.37] (0, 1001)
Hispanic Marital Fertility		66.54 [31.02] (0, 100)	74.91 [29.21] (0, 100)
Hispanic Female Headed Families		29.30 [29.77] (0, 100)	19.00 [26.37] (0, 100)
Hispanic Male-Female Labor Force Participation		.79 [5.62] (0, 269)	.68 [.66] (0, 60)
N		2,834	54,515

TABLE 7.12: Hybrid Panel Analysis: Between-Unit Long Term Sex Ratio Effects
Unstandardized regression coefficients, robust standard errors [in brackets], z-statistic (in parentheses)

Dependent Variable	**Chronically Low Sex Ratio Area**
Female Structural Power (Relative Labor Force Participation)	-.104 [.058] (-1.78)
White Female Structural Power (White Relative Labor Force Participation)	-.158* [.034] (-4.56)
Black Female Structural Power (Black Relative Labor Force Participation)	-.132* [.037] (-3.48)
Hispanic Female Structural Power (Hispanic Relative Labor Force Participation)	.159 [.108] (1.47)

TABLE 7.13: Tract-level Hybrid Models with Interaction of Sex Ratio and Labor Force Participation on Gendered Outcomes
Unstandardized regression coefficients, robust standard error [in brackets], z-statistic (in parentheses)

	Model 1 Female Marriage	Model 2 Female Divorce	Model 3 Male Marriage	Model 4 Male Divorce
Between-Tract				
Sex ratio*Labor Force Participation	-.005* [.001] (-3.43)	-.002 [.001] (-1.75)	-.010* [.004] (-2.12)	-.001 [.001] (-1.54)
Sex ratio, 15-44	.115* [.006] (17.60)	.003* [.001] (2.04)	.002 [.007] (.34)	.002* [.002] (10.00)
Labor Force Participation	-3.19* [1.40] (-2.28)	1.99* [.524] (3.81)	-4.52* [1.79] (-2.52)	1.49* [.520] (2.88)
Within-Tract				
Sex ratio*Labor Force Participation	.004* [.002] (1.78)	.001 [.001] (.93)	.002 [.001] (1.17)	-.0006 [.0004] (-1.28)
Sex ratio	.030* [.004] (7.08)	.002 [.001] (1.59)	-.028* [.002] (-9.22)	.002* [.001] (2.22)
Labor Force Participation	-3.02 [1.41] (-2.13)	1.34* [.391] (3.43)	-1.54* [.585] (-2.64)	.760** [.245] (3.09)
Constant	46.72* [1.18] (39.46)	9.11* [.450] (20.24)	61.44* [1.68] (36.43)	7.20* [.475] (15.14)
R^2 (between-tract)	.210	.067	.240	.126
R^2 (within-tract)	.246	.298	.246	.266
R^2 (overall)	.251	.156	.234	.184
N	179,089	179,250	179,068	179,260

*p>.05
** p>.10

TABLE 7.14: Hybrid Models with Interaction of Sex Ratio and Labor Force Participation on Gendered and Raced Outcomes
Unstandardized regression coefficients, robust standard error [in brackets], z-statistic (in parentheses)

	Model 1 White Marital Fertility	Model 2 Black Marital Fertility	Model 3 Hispanic Marital Fertility	Model 4 White Female-Headed Families	Model 5 Black Female-Headed Families	Model 6 Hispanic Female-Headed Families
Between-Tract						
Race-specific sex ratio*Labor force participation	-.021* [.003] (-5.38)	-.004 [.003] (1.23)	.003 [.002] (1.13)	.018* [.003] (5.10)	.0007 [.003] (.25)	-.0004 [.002] (-.17)
Race-specific sex ratio	.031* [.008] (3.92)	.073* [.004] (15.04)	.029* [.004] (6.97)	-.044* [.007] (-5.96)	-.096* [.004] (-29.79)	-.047* [.003] (-12.98)
Labor Force Participation	-5.48 [1.36] (-4.01)	-2.56* [.293] (-8.73)	-1.99* [.211] (-9.00)	5.17* [1.35] (3.83)	3.15* [.325] (9.71)	2.13* [.210] (10.14)
Within-Tract						
Race-specific sex ratio*Labor force participation	-.009* [.003] (-2.71)	.030* [.007] (4.18)	-.0007 [.007] (-.10)	.006** [.004] (1.58)	-.031* [.007] (-4.55)	.005 [.007] (.79)
Race-specific sex ratio	.035* [.004] (7.30)	.060* [.002] (25.88)	.042* [.001] (26.10)	-.053* [.004] (-11.34)	-.079* [.002] (-35.85)	-.054* [.001] (-37.61)
Labor Force Participation	-5.39 [1.43] (-3.75)	-2.54* [.304] (-8.36)	-1.98* [.230] (-8.62)	5.09* [1.40] (3.63)	3.09* [.338] (9.15)	2.07* [.219] (9.48)
Constant	79.12* [1.01] (78.05)	41.27* [.525] (78.58)	67.75* [.460] (147.22)	16.13* [1.00] (16.01)	51.92* [.523] (99.25)	25.64* [.415] (61.79)
R2 (between-tract)	.036	.053	.027	.038	.078	.051
R2 (within-tract)	.156	.189	.054	.072	.183	.046
R2 (overall)	.079	.101	.045	.052	.094	.058

* p>.05 ** p>.10

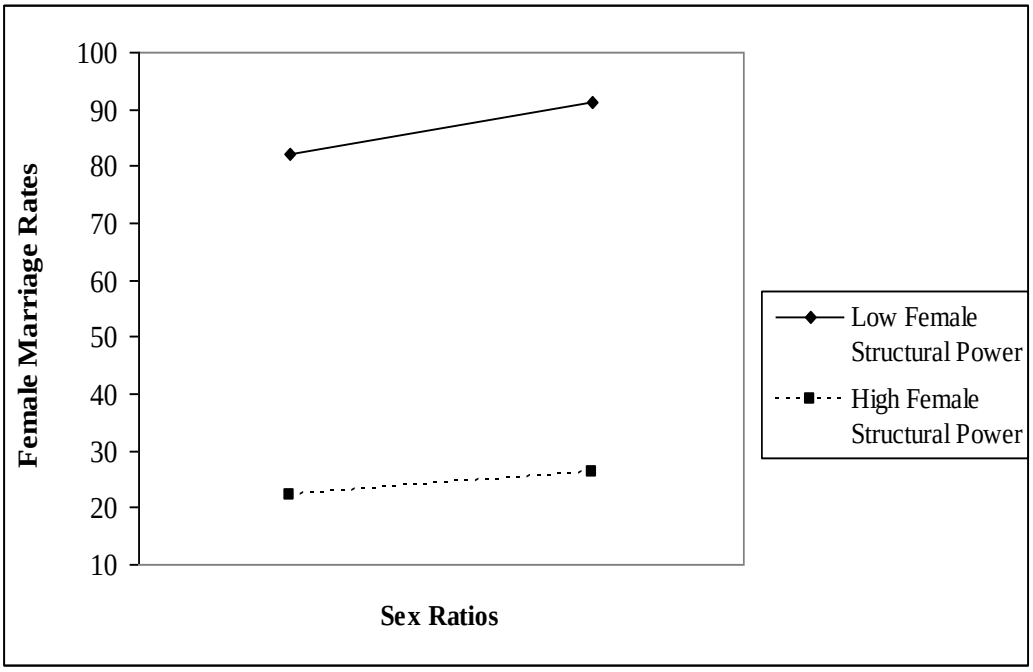

FIGURE 7.1: Tract-Level Sex Ratio Effects on Female Marriage by Relative Structural Power, 1980-2000

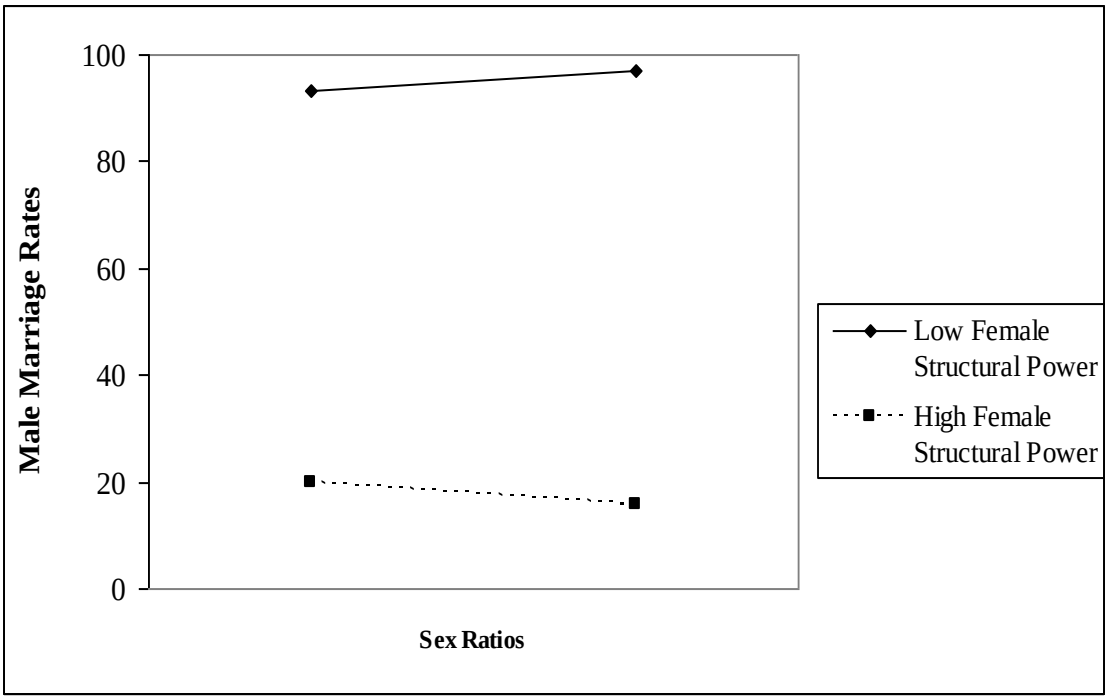

Figure 7.2: Tract-Level Sex Ratio Effects on Male Marriage by Relative Structural Power, 1980-2000

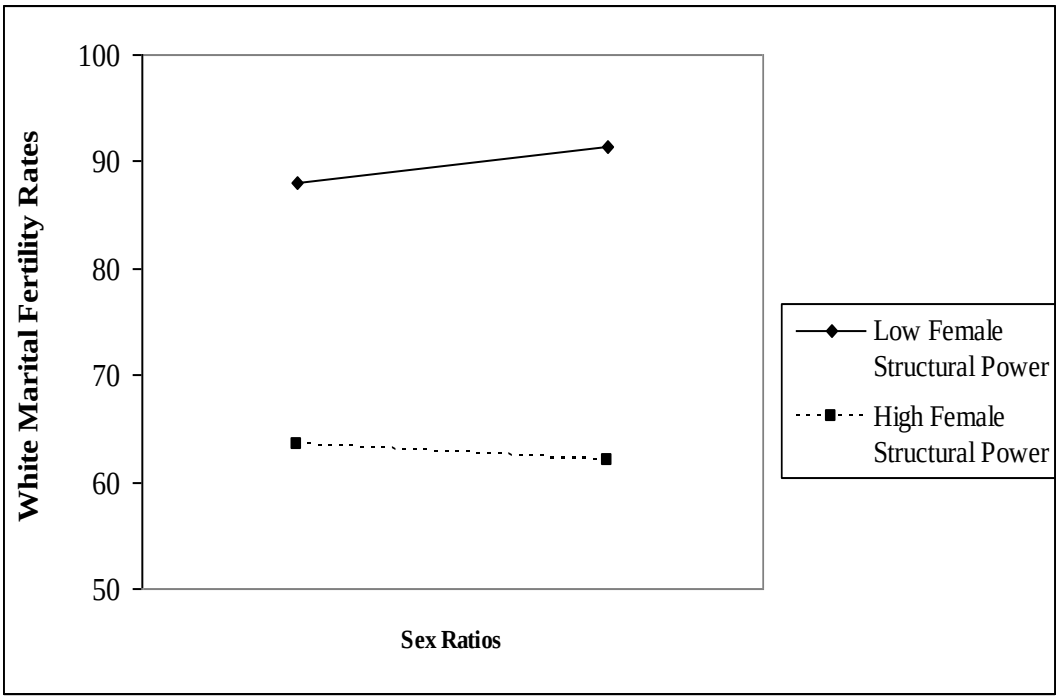

Figure 7.3: Tract-Level Sex Ratio Effects on White Marital Fertility by Relative Structural Power, 1980-2000

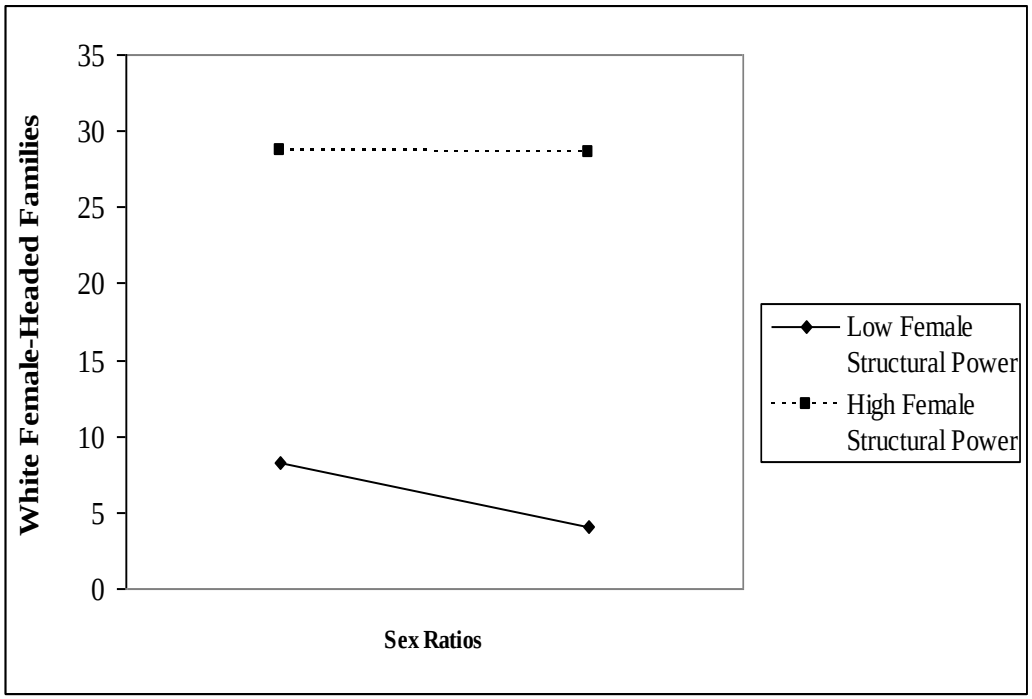

Figure 7.4: Tract-Level Sex Ratio Effects on Rates of White Female-Headed Families by Relative Structural Power, 1980-2000