

Essays on Gender Equity at the Intersection of  
Individual, Interactional, and Institutional Contexts

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## Abstract

Gender is an individual, interactional and institutional phenomenon produced through social and cultural processes in each society (Rubin, 1975; West & Zimmerman, 1987; Wharton, 2012). It is a complex concept often based on or constrained by anatomical characteristics and is continually constructed and reproduced through sets of social practices that work to create differences and organize relations of inequality (West & Zimmerman, 1987; Wharton, 2012). The essays that constitute this dissertation examine gender issues at the intersection of the three social levels and span domestic and international contexts. Individually and collectively the essays have implications for public policy and public management.

The first essay examines whether gender diversity in management teams leads to decision-making that improves resilience to disaster events. This study explores the influence of both biological sex and gender identity on individual and group decisions related to inventory investment, one economic resilience strategy. The influence of gendered personality characteristics on individual decision-making represents an individual-level approach. Results of Mann-Whitney u-tests of the differences in means, logistic, and multinomial regression analyses show no sex-category differences in willingness to invest in economic resilience but increased investment among those who report higher congruence with femininity traits, regardless of their biological sex.

Perceptions regarding the likelihood of disasters also show a strong positive relationship with investment decisions with females reporting higher event likelihoods.

The second essay tests interactional theories related to social roles and social identities to measure androcentric assimilation among managers in private sector U.S. businesses. Results of a full-factorial analysis of masculinity and femininity scores of managers and non-managers (students) and ordered logit regression show that female and male managers differ substantially on the femininity dimension of their personalities but do not differ in masculinity. Although female managers and female students do not differ in femininity, female students are much less likely to report congruence with stereotypically masculine traits of dominance, assertiveness, forcefulness and aggressiveness. These results provide new evidence of androcentric assimilation among managers as well as the lack of emphasis on more communal or expressive (feminine) personality attributes in managerial selection.

The third essay focuses on dowry solicitation and domestic violence in Bangladesh. Motivated by feminist theories of patriarchy, this essay is an institutional level analysis primarily concerned with the social structures that support the pervasiveness of gender crime. Logistic regression and Fisher's chi-square results show that both dowry solicitation and domestic violence rank in the top five most common crimes, including violent and non-violent crimes. Of the households that considered gender crimes the most serious they experienced, many households took no response action at all. Among the households that did take action, most eschewed both police and state judicial institutions. The need for public attention to promote gender equity and optimize outcomes in each of these three issue areas is elaborated in a concluding essay.

For Matt, Ainsley, Owyn, and Rhys

We did it.

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## Introduction

### Gender Definition and Framework

Gender is an individual, interactional and institutional phenomenon produced through social and cultural processes in each society (Rubin, 1975; West & Zimmerman, 1987; Wharton, 2012). It is a complex concept often based on or constrained by anatomical characteristics and is continually constructed and reproduced through sets of social practices that work to create differences and organize relations of inequality (West & Zimmerman, 1987; Wharton, 2012). Based on physical differences observed before or at birth, males and females are identified with the assumption that they will develop into individuals identifying as men and women adopting the appropriate signifying habits (Schrock & Schwalbe, 2009).

In her classic essay proposing a distinction between biological sex and gender, Gayle Rubin defines a process of transition, from female to girl to woman for example, as “the set of arrangements by which a society transforms biological sexuality into products of human activity” (1975, p 88). This process is understood to occur through socialization wherein individuals, usually as very young children, begin to develop their sense of self by internalizing expectations of girls and boys, men and women and demonstrating their understanding of gender norms (Schrock & Schwalbe, 2009; Wharton, 2012). The references to humanity, activity, and society in Rubin’s definition of gender suggest that

gender is constituted by something more than individual-level attributes. Sociological tradition offers a three-framework approach providing a holistic way of understanding gender acquisition/reproduction through individual, interactional and institutional perspectives (Wharton, 2012). The individual framework begins with the idea that although personality traits and behaviors associated with gender are individual in nature, they cannot be separated from external forces that work to produce gender (Wharton, 2012). The interactional framework, a contextual approach, is built on the two-sided socialization relationship between agent and target (Wharton, 2012) and insinuates that identities are socially created through interaction (Howard, 2000; West & Zimmerman, 1987). Here, individuals, groups, organizations, and institutions (agents) convey essential cultural information about gender to a target, typically an infant or child, who develops an identity based on that information (Wharton, 2012). Another contextual approach, the institutional framework, incorporates the reality that institutions, themselves, can be gendered as well as the idea that “many institutions cannot be understood without attention to the ways they embody and hence reinforce gender meanings” (Wharton, 2012, p 19). For example, it is difficult to conceive of the institutions of business, marriage or family without giving thought to the associated gender roles and relations (Acker, 1992; Wharton, 2012).

Frameworks incorporate multiple theoretical perspectives (Ostrom, Cox & Schlager, 2014). Each gender framework includes several, sometimes overlapping, theories of how gender is formed and reproduced. Theories of social learning and cognitive development are generally incorporated in the individual framework often used in gender studies (Wharton, 2012). According to social learning theory, male and female



children learn gender roles directly or through observation via positive and negative reinforcements from behaving gender-appropriately and gender-inappropriately (Wharton, 2012). Cognitive development theory suggests an “inside-out” perspective that children use gender as a tool for processing new information and ordering their social world (Bem, 1993; Wharton, 2012). Social cognition theory suggests this occurs because even before memory is engaged and inferences can be made, individuals undertake categorization of information about objects, others and situations (Howard, 2000). As children understand there are different expectations for males and females, they are motivated to adopt gender-typed masculine and feminine personality attributes that match their sex category (Wharton, 2012; Bem, 1993). These gender-typed attributes contribute to a self-schema (or sense of self) that informs traits, aspirations, preferences, and behavior (Howard, 2000). In these views, children socialize themselves, making it an individual approach despite receiving the gender-role cues from external sources.

The interactionist framework maintains focus on social relations, rather than individual attributes, as the foundation of gender production and incorporates theories of “doing gender,” status characteristics, and homophily (Wharton, 2012). Doing gender theory holds that members of male and female sex categories expend effort engaging in masculine and feminine behaviors in different social interactions to present themselves as men and women (West & Fenstermaker, 1995; Wharton, 2012). Gender expression, then, becomes an ongoing accomplishment, a performance that can dynamically adjust to different settings and people in particular social situations with the individual’s competence as a member of society based in part on compliance with normative gender attitudes (West & Fenstermaker, 1995; West & Zimmerman, 1987).

Like the individualist cognitive development theory, the status characteristics theory also views gender as a way of ordering or managing social life (Wharton, 2012). A trait that carries common meaning but varies across individuals, a status characteristic, communicates perceptions of value or competence (Wharton, 2012). This theory is particularly applicable to situations in which goals are achieved through individual or group performance, such as in the workplace (Wharton, 2012). Unconscious (and imprecise) assessments of an individual's contributions and competence are based on status characteristics cues (Wharton, 2012). Sex categories, along with race, ethnicity and other cues, are common status characteristics. People with higher social status tend to be favorably assessed whereas people with lower status (often the case for women and other minorities) are viewed less favorably (Wharton, 2012).

Homophily theory draws on the idea that people tend to seek out interactions with those who have the same beliefs, values and other similarities, perceiving as different "others" those individuals who do not share these characteristics (Wharton, 2012). Gender comes into play when individuals do not have access to someone's beliefs or values and uses visible qualities (sex category or gender) to infer them (West & Fenstermaker, 1995; Wharton, 2012). That sex categorization is a fundamental social process prompting the emergence of distinct genders is what unites these three interactionist theories (Wharton, 2012). Their key contribution is that gender inequality can be considered when more than the individual's own personality, traits, or attributes are being examined (Wharton, 2012).

Because individuals often engage in social interactions within organizations, firms, and other societal structures, an institutional lens is also useful (Wharton, 2012).

Identifying gendered organizations has been accomplished through analyses of inherent gendering, sex composition, and masculine discourses (Britton, 2000). The theory of inherent gendering holds that while organizations and institutions are often thought of as “genderless,” they are composed of “processes, practices, images and ideologies, and distributions of power in the various sectors of social life... [that] have been historically developed by men, currently dominated by men, and symbolically interpreted from the standpoint of men in leading positions...” (Acker 1992, p 567). As such, gender (and sometimes gender inequality) is unseen and often unperceived in the very structure of organizations and institutions in which we are continually embedded. Law, academic, and economic institutions are all given as examples (Acker, 1992). Individual workers or culture collectively may employ gender discourses to ideologically and symbolically conceive of work, practices, organizations, and institutions (Britton, 2000). Masculinity and skill are explicitly linked in many positions and professions like corporate management, sales, and law (Acker, 1992; Britton, 2000). In these situations the skills required for success, and often success itself, are prescribed by concepts of masculinity and those who do not identify with these attributes “are forced to make severely constrained choices between accommodation and resistance (Britton, 2000 p 427).

Some researchers have attempted to decompose societal-level institutional logics, such as patriarchy, into sub-sectors to determine how logics work through family/religion, profession, and state sectors (Zhao & Wry, 2016). While gender inequality exists in all societies, in different countries patriarchy is manifested with varying intensity through these possessing distinct sub-sectors is one way to explore

culturally-specific mechanisms that create or uphold gendered institutions and organizations in different places (Zhao & Wry, 2016).

Sometimes classified as the nominal approach, gendered institutions have also been identified by degree of male/female dominance, or sex composition (Britton, 2000). Simple counts, or other similar quantifications, based on biological sex can be problematic when they conflate sex and gender and/or divert attention from examinations of gender typing, the degree to which the work itself is considered masculinized or feminized (Britton, 2000). This also implies that simply changing the workplace sex composition will have an impact on the gendered nature of the work/institution and mitigate inequality (Britton, 2000). Another straightforward identification system is recognizing gendered organizations and institutions when disparate treatment (when men and women are treated uniquely by organizations, practices, procedures or policies) or disparate impact (organizations/practices/procedures/policies do not stipulate different treatments but nonetheless prompt different outcomes) are observed (England, 1998, see Wharton, 2012).

Gender operates as a complex system affecting our lives in significant ways (Wharton, 2012). While the three gender frameworks can be used to magnify particular elements and reduce others from view, the most interesting (and the most pragmatic) application of them is in their points of intersection (Wharton, 2012). Layering the frameworks and incorporating theories from other disciplines may produce valuable insight into how gender works in society.

## Research on Gender in Public Policy and Administration

Loden and Rosener (as cited by Riccucci, 2002) distinguish between the relatively fixed primary factors of a person's identity (i.e. race, age, sex category, ethnicity, ability, and sexual orientation) and more malleable secondary characteristics (i.e. education, class, marital status and religion). Both comprise diversity characteristics that influence individual and group attitudes, behaviors, and perceptions (Riccucci, 2002). The distinction between primary and secondary characteristics is wholly compatible with the sex and gender distinctions made by feminist scholars and described above. Although a person's sex can be altered with considerable effort, time, and financial expense, it is often thought of as a primary<sup>1</sup> characteristic (Riccucci, 2002). Gender involves context-related internalization and/or performance of socially determined norms of attitude, appearance, aspect, and behavior, making it a more flexible, secondary characteristic, at least at the individual-level, in many contexts.

Much of the scholarly research on gender issues in public affairs has been based on primary characteristics. For instance, the descriptive work that shows women and people of color continue to hold less prestigious, lower-paying federal government jobs is centered on race and sex (Riccucci, 2009). Biological sex has also been the actual operationalization in many studies purporting to study gender. These cover a wide range of substantive issues such as the role of unions in promoting women in city government (e.g. Riccucci, 1986), gender diversity in regulatory, distributive, and redistributive agencies (e.g. Choi, 2010), and the advancement of women into high level positions within state governments (Kelly et al., 1991). Very recently, Opstrup and Villadsen

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<sup>1</sup> The primary and secondary labels do not denote any privileged ordering of these identity components.

(2015) looked at “Gender Diversity in Top Management Teams” and the financial performance of municipal level governments. Although their research -from the title through the conclusions- was framed as a gender study, the authors used male/female variables as the central construct.

Representative bureaucracy studies have likewise examined the role of biological sex in various outcomes. Again, framed in terms of gender, police studies have shown that increased numbers of female officers may increase the frequency of domestic violence arrests (Andrews & Johnston Miller, 2013), as well as reports and arrests in sexual assault cases (Meier & Nicholson-Crotty, 2006). Client perceptions of law enforcement job performance, trustworthiness, and fairness are all impacted by symbolic gender representation (Ricucci, Van Ryzin & Lavena, 2014).

Others have incorporated socially constructed gender in their public affairs research and writing. With respect to organizational outcomes, women executives promote work environments friendlier to females when they are placed in an organization with an office dedicated to women’s issues (Dolan, 2000). In gendered policy areas, passive representation (members of an agency or organization reflect constituent demographics) has been known to lead to active representation (agents working in the interest of constituents with similar demographic characteristics) (Wilkins & Keiser, 2004). When female bureaucrats with discretion are working in a gendered issue area, such as child support enforcement, improved client outcomes are observed (Wilkins & Keiser, 2004).

According to Public Administration scholar, Camilla Stivers, bureaucratic management is comprised of many masculine images (2002). For instance, tropes of

father leaders have historically influenced public agencies, but cultural expectations of feminine behavior have conflicted with these images (Stivers, 2002). Images of virtue associated with public service motivation also include masculine concepts of guardianship, honor, heroism and citizenship. Numerous scholars suggest that prioritizing rationality and delegitimizing or eliminating emotionality in the work place contributes to the gendering of bureaucracies (Guy & Newman, 2004; Stivers 2002).

PA scholars have also argued that the administrative system relies on emotional labor, “soft” skills of caring, empathizing, smoothing troubled relationships that have been traditionally associated with women (Guy & Newman, 2004). Although these skills are crucial for the internal and external functioning of public organizations, they are undervalued, hidden behind a masculinized logic of effectiveness (Guy & Newman, 2004). These “natural” abilities of women are expected of women, women are held accountable for them more than men, but they are rarely included in job description requirements and go uncompensated (Guy & Newman, 2004). At the same time, increased compensation is attached to positions that require skills or abilities deemed natural for most men, such as jobs that require heavy lifting or other intensive manual labor (Guy & Newman, 2004).

Many public sector jobs require a high degree of emotional labor (Guy & Newman, 2004). For school teachers, social workers, and college professors, caring work and the attendant emotional labor is compulsory for women but optional for men (Guy & Newman, 2004). A comparison of job postings and salaries for a state fruit and vegetable inspector and a state family services counselor shows fewer job requirements for the counselor and roughly equal pay (Guy & Newman, 2004). This phenomenon occurs

because the emotional work involved with serving families and children (often in desperate circumstances) is naturalized and essentialized (Guy & Newman, 2004).

On the policy side of public affairs, Schneider and Ingram have described the divisive social constructions produced in policy-making systems (1997). During the policy design process, public policymakers and actors attach positive and negative associations to groups targeted to receive policy benefits or burdens. These associations are comprised of value-laden and affect-provoking images and symbols (Schneider, Ingram, & deLeon, 2014). Once established, these politically motivated social constructions drive policy discourse and ultimately influence the material distributions of public policies. The social constructions also impact the social reputations and patterns of participation of stigmatized or advantaged groups (Schneider, Ingram, & deLeon, 2014).

Four main categories of social constructions with varying connotation and political power have been proposed: Advantaged (high power, positive construction), Contender (high power, negative construction), Dependents (low power, positive construction), and Deviants (low power, negative construction) (Schneider, Ingram, & deLeon, 2007, 2014). Biological sex, a primary characteristic, has played a role in these social constructions. Mothers (generally) are positively construed as Dependents, while welfare mothers and feminists have been considered Deviants (Schneider & Ingram, 1997; Schneider, Ingram, & deLeon, 2007). Although they are differently constructed, mothers and feminists are both deemed low power groups (Schneider & Ingram, 1997; Schneider, Ingram, & deLeon, 2007). Beginning with the problem definition stage of



public policy making, such negative constructions are built on symbolic representations created through narrative stories, synecdoches,<sup>2</sup> and metaphors (Stone, 2002).

The sex, gender, and diversity research conducted in public affairs has produced important insights and conclusions. Still gender inequity persists with some indicators of the potential for reversal of the progresses made over the past few decades. For instance, the 45<sup>th</sup> President has been critiqued for choosing more white male cabinet leaders than any administration since the 40<sup>th</sup>'s (Lee, 2017). Motivation for gender research can be found everywhere and scholars have called for additional research on social equity (Ricucci, 2009). Recently, some have suggested that public affairs scholars should move beyond studies of gender confined to “gendered policy areas” and extend scholarly attention more broadly to gender effects related to individual interests, preferences, and attributes (Nielsen, 2015). The individual, interactional, institutional gender frameworks may be useful in accomplishing this as they can help organize the ways in which gender is an ever-relevant consideration in the content and effects of public policies, the institutions that craft and enforce them, and the management of employees in public sector organizations. This dissertation aims to build on the prior research in public affairs, just described, by including an expanded concept of gender which incorporates the socially constructed aspects of gender in the three arenas of social life.

At a macro, or societal level, primary and secondary characteristics may tend to align. In other words, the correlations between female/woman/feminine and male/man/masculine may be reasonably assumed. This correlation is often assumed in

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<sup>2</sup> A Synecdoche is a communication technique commonly used in political discourse in which a typical example is used to represent, and define, a larger problem (Stone, 2002).

gender and diversity studies that focus on male and female subjects or the attitudes/behaviors of men and women. My aim is not to critique or discount these types of studies. They have contributed crucial knowledge and insight about gender relations in public organizations and policies. Depending on the goals of the research, the context and the data collection possibilities, variables based on male/female biology may be appropriate for answering the research question or be a reasonable proxy for gender. Still, at all three levels, something may be lost when research relies exclusively on primary characteristics.

The same simplicity that can argue in favor of the use of biological sex variables in gender research can be a limitation. A dichotomous variable based on biology does not fully account for the social influences that create variations between females or between males. A female dummy variable also treats females as a homogenous group. Because M/F variables are individual characteristics, using sex traits for gender does not allow for the gendered nature of many interactions and institutions (West & Zimmerman, 1987). Knowing that institutions have historically been established by men, comprised of men, and interpreted by men (Acker, 1992), failure to examine the gendered components of institutions and interactions may stymie equality progress by ignoring the ways in which gender is implicitly present in institutions and interactions (West & Zimmerman, 1987). Failing to account for socially constructed gender may also result in narrow conclusions for policymaking. For instance, lack of attention to individual-level gender (i.e. secondary) characteristics in decision-making studies may lead to narrow findings about the social influences of decisions. The essays of this dissertation seek to augment existing

research on gender in public affairs by incorporating analysis of socially constructed gender as it pertains to individuals, interactions, and institutions.

#### Focus of the Current Dissertation

The three essays that constitute this dissertation represent the three frameworks for conceptualizing gender while spanning domestic and international contexts, examining gender preferences and attributes, and posing unique implications for public policy and public management. Research within the interdisciplinary field of public affairs involves questions that either focus on the products, people or institutions of public policy formulation and implementation or questions that influence them. Each essay is motivated by or tests a theory deriving from the feminist and psychology disciplines that can be considered institutionally, interactional, or individually focused.

The first essay addresses gender related to economic decision-making. Economics as a practice and scholarly field of study has been considered gendered (Acker 1992; Bateman, 2016; Britton, 2000). Bateman (2016) writes “Blinded by male experience, economics has been slow to recognize the crucial role of society to economic prosperity, preferring to model social outcomes as a consequence not cause of economic outcomes” (p 5). At the same time, economic research has a long history of defining gender dichotomously (male/female) and presuming a necessarily high correlation between socially constructed gender identities and binary sex categories. As Keiser et al. have argued, “By extracting “sex” from gender to distinguish female from male, scholars dispense with precisely what makes gender important to social science research –social meaning- and endow sexual difference with a constant and invariant quality that much feminist thinking about social identification and political action shows to be problematic”

(Keiser, Wilkins, Meier, & Holland, 2002, p 554). Interpretations of outcomes from decisions made by actors in public organizations may be very different if gender rather than sex is considered and the effects of socialization that work to encode gender in one's identity are included. What is more, when decisions are made collaboratively, the complexities of gender may be compounded as the identities of multiple individuals are at work.

The first essay examines both sex and gender related to economic resilience decision making to shed light on the lack of consensus as to whether males and females differ in their risk preferences (Atkinson, Baird, & Frye, 2003; Beckmann & Menkoff, 2008; Booth & Katic, 2013; Eckel & Grossman, 2008; Eckel & Grossman, 2002; Embrey & Fox, 1997; Sonfield, Lussier, Corman, & McKinney, 2001). The individual's gender identity is assessed through self-reported congruence with masculine and feminine personality traits as assessed on the modified Bem Sex Role Inventory (BSRI) (Bem, 1974; Barak & Stern, 1986). Group decision-making and the influence of recommendations from gendered advisors contribute an interactional element to the research. The context, economic resilience decision-making, is an aspect of the gendered economics institution which means this essay an example of gender research at the nexus of all three frameworks. However, the principal motivating theory is androgyny self-concept theory from feminist psychology that emphasizes the individual situated in culture.

The second essay focuses on gender and workplace interactions. At the heart of Rubin's (1975) sex vs. gender theory is the idea that a social process prompts males and females to align their behavior based on socially constructed notions of what is preferred

or appropriate for men and women, respectively. Masculinity has been defined as the set of practices undertaken by males in order to preserve the status and privileges associated with men being the dominant gender group (Schrock & Schwalbe, 2009). One consequence of Social Identity Theory is that “individuals tend to choose activities congruent with salient aspects of their identities” (Ashforth & Mael, 1989, p 25). Identifying with the gender group corresponding to one’s sex category would mean, on average, females tend to report increased congruence with femininity traits while males would align with masculine attributes. While domestic and international workforces have seen substantial sex diversification over the past four decades, it has long been suggested that masculine attributes have been prioritized for leadership and management in public and private sector organizations (Brenner, Tomkiewicz, & Schein, 1989; Stivers, 2002). When this is true, managers with personalities more aligned with femininity traits are either excluded from management roles or must refashion themselves to conform to a different set of privileged gender attributes (Brenner, Tomkiewics, & Schein, 1989; Stivers 2002).

Despite equality policies and increases in workplace diversity, a hegemonic tradition of masculinity in management may persist. Beyond this, the dyadic manager/employee relationship suggests a second relevant perspective, taking the employee’s point of view. Though a variety of processes may work consistently to socialize young males and females, the specific mechanisms and effects of those processes may differ across space and time. This suggests that gender is an adaptable concept and individuals who are members of different racial, national, ethnic or generational groups may experience different gender socialization cues. For example,

research has also shown changes in identification with masculinity and femininity across different birth cohorts (Barak & Stern, 1986; Twenge, 2011). Much has been made about the differences between Millennials (those born between 1980 and 1999) and other birth cohorts and the workplace changes that must be made to accommodate them (Widdicombe, 2016; Lyons & Kuron, 2013). To the extent that Millennials identify with masculinity and femininity personality attributes differently than other generations, adjustments to management values and practices may be required.

The second essay examines gender and management theory using a modified Bem's Sex Role Inventory (BSRI) (Bem, 1974, Stern, Barak, & Gould, 1987) to measure congruence with masculinity and femininity alternately considered personality traits and collective practices (Schrock & Schwalbe, 2009). Generational change has been a recent subject of interest with calls to examine changes in personality traits by bringing past analyses up to date (Twenge, 2011). This work answers this call by revisiting the MBSRI, a gender personality trait index originally developed in the 1970s and updated numerous times since (Bem, 1974; Fernandez & Coello, 2010; Hoffman & Borders, 2001; Stern, Barak & Gould, 1987). This research is a second example of gender research at the intersection of institutional, interactional and individual frameworks. An individual's gendered personality resides at the center of this work, but Bem's inventory aligns with a social status characteristics theory, locating it in the social interactionist framework. Still, manager/employee interactions occur within organizations and institutions. Although there are elements of each framework identifiable within this essay, the motivating theory, Social Identity Theory, is predominately interactional. This type of study may influence public sector management practices in diverse and dynamic

workforces and also reveal implications for citizen engagement and representative bureaucracy.

The third essay focuses on gender and institutions in Bangladeshi society. In private life, gender has been portrayed as the key link in the kinship exchange that sets up men as givers and receivers with women as the gift (Rubin, 1975). The most explicit manifestation of this exchange may be the prevalent and growing practice of dowry in South Asia. Dowry is a gift of cash or other valuables from a bride's family to a groom's family on the occasion of marriage (Nasrin, 2011). Disagreement about dowry payment is one of the most commonly reported causes of domestic violence throughout India, Bangladesh, and Pakistan (Heise et al., 1994; A. Khan & Hussain, 2008; Kimuna, Djamba, Ciciurkaite, & Cherukuri, 2012; Naved & Persson, 2010). These ways in which gender is relevant at personal, relational, and organizational levels mean that the third essay is an example of gender work at the intersection of all three frameworks. Individual status as a man or a woman forms the basis for conflicted or violent interactions related to dowry. Yet, the primary lens of this study is institutional, as the various gendered institutions of marriage, family roles, law and cultural practice (like dowry) that perpetuate violence against women in Bangladesh are based on a system of patriarchy which is a hegemonic means of structuring the various private and public institutions associated with life in Bangladesh<sup>3</sup>.

To assess the prevalence, perceived significance, and common responses to dowry solicitation and domestic violence in Bangladesh, nationally representative household

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<sup>3</sup> This circumstance is in no way unique to Bangladesh.

survey data are used. Prevalence is established by comparing reports of dowry and domestic violence to reports of experience of all other types of violent and non-violent crime. Analysis of responses related to types of crime considered most serious by household representatives is used to ascertain perceived significance. The single or multiple actions household members did or did not take provides insight into the common responses to these two gender-based crimes. Taken together, the results provide evidence of the effects of patriarchy enshrined in marriage, family, and legal institutions.

Though united on the theme of gender, these essays provide interdisciplinary theoretical perspectives to aid understanding of the various ways in which the complex, adaptable and socially determined gender concept is relevant to public policy and public management. This relevance and the associated policy and management implications will be elaborated together in a concluding chapter following the essays.



## Introduction References

- Acker, J. (1992). From sex roles to gendered institutions. *Contemporary Sociology*, 21(4), 565-569.
- Andrews, R. & Johnston Miller, K. (2013). Representative Bureaucracy, gender, and policing: The case of domestic violence arrests in England. *Public Administration Review*, 91(4), 998-1014.
- Ashforth, B.E., & Mael, F. (1989). Social identity theory and the organization. *The Academy of Management Review*, 14(1), 20-39.
- Atkinson, S. M., Baird, S. B., & Frye, M. B. (2003). Do female mutual fund managers manage differently? *The Journal of Financial Research*, 26(1), 1-18.
- Barak, B., & Stern, B. (1986). Sex-linked trait indexes among baby-boomers and pre-boomers: A research note. *Advances in Consumer Research*, 13, 204-209.
- Bateman, V. (2016). Women wanted: Victoria Bateman reports on Cambridge's attempts to encourage more women to study economics. *Cambridge Economics*, 9, 5.
- Beckmann, D., & Menkoff, L. (2008). Will women be women? Analyzing the gender difference among financial experts. *KYKLOS*, 61(3), 364-384.
- Bem, S.L. (1974). The measurement of psychological androgyny. *Journal of Consulting and Clinical Psychology*, 42(2), 155-162.
- Booth, A. L., & Katic, P. A. (2013). Cognitive skills, gender and risk preferences. *Economic Record*, 89(284), 19-30.
- Brenner, O.C., Tomkiewicz, J., & Schein, V.E. (1989). The relationship between sex role stereotypes and requisite management characteristics revisited. *The Academy of Management Journal*, 32(3), 662-669.
- Britton, D.M. (2000). The epistemology of the gendered organization. *Gender & Society*, 14, 418-434.

- Choi, S. (2010). Diversity in the U.S. Federal Government: Antecedents and correlates of diversity in Federal Agencies. *Review of Public Personnel Administration*, 30(3), 201-321.
- Dolan, J. The Senior Executive Service: Gender, attitudes, and representative bureaucracy. *Journal of Public Administration Research and Theory*, 10(3), 513-529.
- Eckel, C.C., & Grossman, P.J. (2002). Sex differences and statistical stereotyping in attitudes toward financial risk. *Evolution and Human Behavior*, 23, 281-295.
- Eckel, C. C., & Grossman, P. J. (2008). Forecasting risk attitudes: An experimental study using actual and forecast gamble choices. *Journal of Economic Behavior and Organization*, 68, 1-17.
- Embrey, L. L., & Fox, J. J. (1997). Gender differences in the investment decision making process. *Financial Counseling and Planning*, 8(2), 33-40.
- Guy, M.E., & Newman, M.A. (2004). Women's jobs, men's jobs: Sex segregation and emotional labor. *Public Administration Review*, 64(3), 289-298.
- Heise, L. L., Raikes, A., Watts, C. H., & Zwi, A. B. (1994). Violence against women: a neglected public health issue in less developed countries. *Social Science and Medicine*, 39(9), 1165-1179.
- Hoffman, R.M., & Borders, L.D. (2001). Twenty-five years after the Bem Sex-Role Inventory: A reassessment and new issues regarding classification variability. *Measurement and Evaluation in Counseling and Development*, 34, 39-55.
- Howard, J.A. (2000). Social psychology of identities. *Annual Review of Sociology*, 26, 367-393.
- Keiser, L.R., Wilkins, V.M., Meier, K.J., & Holland, C.A. (2002). Lipstick and logarithms: Gender, institutional context, and representative bureaucracy. *The American Political Science Review*, 96(3), 553-564.
- Kelly, R.M., Guy, M.E., Bayes, J., Duerst-Lahti, G., Duke, L.L., Hale, M.M., Johnson, C., Kavar, A., & Stanley, J.R. (1991). Public Managers in the states: A comparison of career advancement by sex. *Public Administration Review*, 51(5), 402-412).

- Khan, A., & Hussain, R. (2008). Violence against women in Pakistan: Perceptions and experiences of domestic violence. *Asian Studies Review*, 32(2), 239-253.
- Kimuna, S.R., Djamba, Y.K., Ciciurkaite, G., & Cherukuri, S. (2012). Domestic violence in India: Insights from the 2005-2006 National Family Health Survey. *Journal of Interpersonal Violence*, 28(4), 773-807.
- Lee, J.C. (2017, March 10). Trump's cabinet so far is more white and male than any first cabinet since Raegan's. *The New York Times*. Retrieved from [https://www.nytimes.com/interactive/2017/01/13/us/politics/trump-cabinet-women-minorities.html?\\_r=0](https://www.nytimes.com/interactive/2017/01/13/us/politics/trump-cabinet-women-minorities.html?_r=0).
- Lindberg, A. (2014). The historical roots of dowries in contemporary Kerala. *South Asia: Journal of South Asian Studies*, 37(1), 22-42.
- Lyons, Sean, & Kuron, Lisa. (2013). Generational differences in the workplace: A review of the evidence and directions for future research. *Journal of Organizational Behavior*, 35, S139-S157.
- Nasrin, S. (2011). Crime or custom? *Indian Journal of Gender Studies*, 18(1), 27-50.
- Naved, R. T., & Persson, L. (2010). Dowry and spousal physical violence against women in Bangladesh. *Journal of Family Issues*, 31(6), 830-856.
- Meier, K.J. & Nicholson-Crotty, J. (2006). Gender, representative bureaucracy, and law enforcement: The case of sexual assault. *Public Administration Review*, November/December, 850-860.
- Nielsen, V. L. (2015). Personal attributes and institutions: Gender and the behavior of public employees. Why gender matters to not only "Gendered Policy Areas". *Journal of Public Administration Research and Theory (JPART)*, 25, 1105-1029.
- Ostrom, E., Cox, M., & Schlager, E. (2014). An Assessment of the Institutional Analysis and Development Framework and Introduction of the Social-ecological Systems Framework. In P.A. Sabatier & C.M. Weible (Eds.), *Theories of the Policy Process* (3<sup>rd</sup> ed.) (pp 267 – 306). Boulder, CO: Westview Press.
- Riccucci, N.M. (1986). Female and minority employment in city government: The role of unions. *Policy Studies Journal*, 15(1), 3-15.
- Riccucci, N.M. (2002). *Managing Diversity in Public Sector Workforces*. Boulder, CO: Westview.

- Riccucci, N.M. (2009). The pursuit of social equity in the Federal Government: A road less traveled? *Public Administration Review*, May/June, 373-382.
- Riccucci, N.M. (2014). Representative bureaucracy in policing: Does it increase perceived legitimacy? *Journal of Public Administration Research & Theory*, 24, 537-551.
- Rubin, Gayle. (1975). The Traffic in Women: Notes on the 'Political Economy' of Sex. In R.R. Reiter (Ed.), *Toward and Anthropology of Women* (pp. 157-210). New York, NY: Monthly Review Press.
- Sonfield, M., Lussier, R., Corman, J., & McKinney, M. (2001). Gender comparisons in strategic decision-making: An empirical analysis of the entrepreneurial strategy matrix. *Journal of Small Business Management*, 39(2), 165-173.
- Schneider, A.L., & Ingram, H. (1997). *Policy Design for Democracy*. Lawrence, KA: University of Kansas Press.
- Schneider, A.L., Ingram, H., & deLeon, P. (2007). Social Construction and Policy Design. In P.A. Sabatier (Ed.), *Theories of the Policy Process* (2<sup>nd</sup> ed.) (pp 93-126). Boulder, CO: Westview Press.
- Schneider, A.L., Ingram, H., & deLeon, P. (2014). Democratic Policy Design: Social Constructions of Target Populations. In P.A. Sabatier & C.M. Weible (Eds.), *Theories of the Policy Process* (3<sup>rd</sup> ed.) (pp 105 – 149). Boulder, CO: Westview Press.
- Schrock, D., & Schwalbe, M., (2009). Men, Masculinity, and Manhood Acts. *Annual Review of Sociology*, 35, 277-295.
- Stern, B. B., Barak, B., & Gould, S. J. (1987). Sexual Identity Scale: A new self-assessment measure. *Sex Roles*, 27(9/10), 503-519.
- Stivers, C. (2002). *Gender Images in Public Administration: Legitimacy and the Administrative State* (2<sup>nd</sup> ed.). Thousand Oaks, CA: Sage Publications.
- Stone, D. (2002). *Policy Paradox: The Art of Political Decision Making*. New York, NY: W.W. Norton & Company.
- Twenge, J.M. (2011). The duality of individualism: Attitudes toward women, Generation Me, and the method of Cross-Temporal Meta-analysis. *Psychology of Women Quarterly*, 35(1), 193-196.

- West, C., & Fenstermaker, S. (1995). Doing Difference. *Gender & Society*, 9(1), 8-37.
- West, C., & Zimmerman, D.H. (1987). Doing Gender. *Gender & Society*, 1(2), 125-151.
- Wharton, A.S. (2012). *The Sociology of Gender: An Introduction to Theory and Research* (2<sup>nd</sup> ed.). West Sussex, U.K.: Wiley-Blackwell.
- Widdicombe, B. (2016, March 19). What Happens When Millennials Run the Workplace? *The New York Times* Retrieved from [http://www.nytimes.com/2016/03/20/fashion/millennials-mic-workplace.html?\\_r=0](http://www.nytimes.com/2016/03/20/fashion/millennials-mic-workplace.html?_r=0)
- Wilkins, V.M., & Keiser, L.R. (2010). Linking passive and active representation by gender: The case of child support agencies. *Journal of Public Administration Research and Theory*, 16, 87-102.
- Zhao, E.Y., & Wry, T. (2016). Not all inequality is equal: Decomposing the societal logic of patriarchy to understand microfinance lending to women. *Academy of Management Journal*. Published online ahead of print August 22, 2016 as doi: 10.5465/amj.2015.0476.

## Chapter 1 Gender and Middle Market Resilience: An Experimental Study<sup>4</sup>

### Abstract

This essay examines the influence of gender on risk perceptions and investment decisions to prepare for calamitous events. Gender is complex concept based on or constrained by anatomical characteristics and is continually constructed and reproduced through social processes that often create and perpetuate inequality. Most studies on the influence of gender on risk perceptions have considered binary categories; i.e., male vs female, to represent men and women and underemphasized the role of individual gender identities. To provide a better account of the relative influences of sex and gender on individuals' risk perceptions and investment decisions, this study uses data from a collaborative research project that employed a randomized controlled experiment to test inventory investment strategies across student and manager subject pools (Young, Greenbaum & Dormady, 2016). The analysis reveals that, although female subjects perceive a higher probability of a catastrophic event, male and female subjects do not make different investment decisions when faced with uncertainty about the likelihood of catastrophe. However, subjects who identify with culturally defined femininity attributes are more conservative in their investment decisions. These results have implications for research on gender and risk perceptions as well as for emerging work on economic

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resilience. The findings suggest that the lack of gender diversity, especially among people with decision-making responsibility, can influence organizations' disaster readiness.

### Introduction

For decades, social scientists have been preoccupied with identifying and explaining behavior differences between men and women, males and females, in a variety of contexts. Despite numerous such studies, the literature examining “gender” differences and risk has remained inconclusive. At the individual level, the findings regarding gender and risk aversion from research in economics, banking, and personal finance are mixed. Some studies have found that women tend to be more risk averse than men (Booth & Katic, 2013; Eckel & Grossman, 2008; Eckel & Grossman, 2002; Beckmann & Menkoff, 2008) while others find no significant effects (Atkinson, Baird, & Frye, 2003; Sonfield, Lussier, Corman, & McKinney, 2001; Embrey & Fox, 1997). This may be because risk is context dependent (Schubert, Brown, Gysler, & Brachinger, 1999) or because of the overly simplified approach that has been used to represent gender (Meier-Pesti & Penz, 2008). Most studies ignore the fact that gender is socially constructed and presume a high correlation between binary gender categories (i.e., male and female) and individuals' gender identities.

Keiser et al. have argued, “By extracting “sex” from gender to distinguish female from male, scholars dispense with precisely what makes gender important to social science research –social meaning- and endow sexual difference with a constant and invariant quality that much feminist thinking about social identification and political action shows to be problematic” (Keiser, Wilkins, Meier, & Holland, 2002, p 554). In fact, economics as a practice and scholarly field of study has been considered gendered

(Acker 1992; Bateman, 2016; Britton, 2000). Bateman (2016) writes “Blinded by male experience, economics has been slow to recognize the crucial role of society to economic prosperity, preferring to model social outcomes as a consequence not cause of economic outcomes” (p 5). Interpretations of outcomes from decisions made by actors in private and public organizations may be very different if gender, rather than sex category, is considered and the effects of socialization that work to encode gender in one’s identity are included. What is more, when decisions are made collaboratively, the complexities of gender may be compounded as the identities of multiple individuals are at work.

This essay examines how gender is related to individuals’ judgment about risks of a catastrophic event and the influence of such perceptions on investment decisions to prepare for the event. The question that I address is: Does increasing gender diversity among decision makers lead to decisions that may improve economic resilience of middle market firms? This question is important to the scholarly literature on economic resilience. It also has great societal importance as it informs businesses, social planners, and public agencies such as the Department of Homeland Security on improving business and community resilience to disasters. With increased occurrence of domestic terrorism attacks, deep and long-lasting recessions, frequent and severe natural disasters, and infrastructure disruptions such as blackouts and loss of clear municipal water, economic resilience has captured the attention of both academics and policy makers (Martin & Sunley, 2014). Adequate preparation/planning for unforeseen calamitous events is one of the most important factors that affect the ability of local economies to recover from disruptions caused by these unexpected events. Threat of economic disruption from various types of disasters requires investments to mitigate losses and improve recovery at



the same time competition requires cost efficiency. For middle-market firms making up the bulk of the U.S. economy, resilience investments can present a substantial tradeoff between production and resilience to an unforeseen disaster.

Controlled human-subjects experiment data from a larger collaborative research project is used to examine the role of gender in middle-market resilience decision-making. The experimental design focuses on investment in inventories, a resilience strategy, and allows evaluation of the influence of gender in such decision-making. Gender is operationalized both as social categories (i.e., males and females) as well as through self-reported congruence with masculine and feminine traits measured using the modified Bem's Sex Role Inventory (Barak & Stern, 1986; Bem, 1974; Stern, Barak, & Gould, 1987).

While competing hypotheses about male/female differences in willingness to direct resources to economic resilience are proposed, literature suggests investment decisions of female managers will differ from the general population. Moreover, I argue that culturally defined concepts of masculinity and femininity may be better predictors of resilience investment decisions than the binary male/female categories. In terms of aligning action and recommendation, findings in the decision-making literature lead to the hypothesis that female subjects will be more likely to change their investment decisions based on advice from others, particularly recommendations that contradict their initial investment decisions. Lastly, I expect subjects with higher self-reported congruence with masculinity traits to be less likely to change their minds.

The analysis shows mixed support for these hypotheses. Both male and female subjects overwhelmingly choose to invest in economic resilience (83.5% of males, 85.9%

of females) when faced with an unspecified, unknown threat of a catastrophic event. Female subjects are not more likely to invest initially. Female managers invest less frequently than male and female students but no differently than male managers. Individuals who identify with stereotypic feminine traits are more likely to invest in resilience but no such association is found for those who identify with masculinity traits. When no information about the event type or probability is given, female subjects perceive a higher event likelihood of catastrophic event. Because female and male managers do not differ in their event perceptions, this result is driven by differences between female and male students. Event likelihood perception is a positive and significant predictor of resilience investment decision-making. After receiving recommendations from appointed committees of advisors, male and female subjects do not differ in their propensity to switch investment decision, nor is femininity or masculinity related to switching.

#### Review of the Literature

According to the National Center for the Middle Market, middle market or mid-sized firms are those with annual revenues between \$10 million and \$1 billion. These businesses account for approximately one-third of the US private economy (in dollar terms), and their employment is vital for state and local economies (National Center for the Middle Market, 2016). Despite their prevalence and economic importance, these firms are particularly vulnerable to catastrophic events. Furthermore, relative to larger firms, middle market firms may lack the resources and expertise necessary to recover from or prepare for disaster. They may also be less likely to obtain pre- or post-disaster government assistance.

Prior to the mid-1990s, most middle market firms did not pay much attention to disaster planning. This, however, changed with an increase in the frequency of catastrophes (Pelland, 1996). Purchasing business interruption insurance, designing alternate methods of communication with key customers and suppliers, and rewriting contracts to include provisions for emergency space or equipment, were some actions that firms began pursuing. Each represents methods of passive (preventative) resilience (Pelland, 1996).

Among the middle market firms, fewer than ten percent are women-owned or woman-run. The lack of diversity may have important implications for community and regional economic resilience as the cultural effects of sex and gender concepts may influence individual and group economic decisions. Yet, few studies have examined how sex or gender diversity might affect decision-making regarding economic resilience. One study by Danes et al. (2009) found that female-owned firms that accepted federal disaster assistance achieved enhanced resiliency when compared to male-owned firms. The study also showed that female-owners maintained more firm resiliency via using social capital. Danes, et al. (2009) posited that relatively higher risk aversion and support-seeking tendencies, and deeper commitment to permanent employees by female owners explain the better outcomes.

While few studies have examined the role of gender in the assessment of risks and related business decisions, there is a sizable literature on sex category diversity and its implications on top-management decision-making in firms. Research has shown that boards with more women directors consistently obtain higher corporate governance scores and that firms with a lone female board member outperform firms with all-male

boards across many industry types (Zaichkowsy, 2014). Research also has shown that diverse undergraduate and MBA business teams, those composed of either an equal mix or at least one woman, consistently outperform all-male teams in sales, profit and strategizing tasks (Apesteguia, Azmat, & Iriberry, 2012; Hoogendoorn, Oosterbeek, & van Praag, 2013). Positive relationships between diversity and performance are not limited to the private sector. Higher financial performance of municipalities was found when top management teams were more gender diverse (Opstrup & Villadsen, 2014).

Some of the reasons for diversity-related performance improvements relate to information acquisition and discussion. Women board members contribute productively to strategic decision-making when differences in experiences and values prompt increased issue discussion among all board members (Nielsen & Huse, 2010; Nielsen & Huse, 2010). Though differences in values were found to enhance board decisions, this effect was diminished when women were considered unequal members (Nielsen & Huse, 2010). In other words, the benefits of diversity were not experienced when women were not perceived as equals. Surface-level diversity prompting expectations of information diversity that lead to improved decision-making is another explanation for improved firm performance (Dezsö & Ross, 2012). Real and symbolic representations related to diversity may improve a board's legitimacy and increase perceived trustworthiness among a firm's shareholders (Perrault, 2015). Decision quality can improve when input from team members is considered (See, Morrison, Rothman, & Soll, 2011).

While the risk-taking literature has only recently begun to incorporate non-dichotomous conceptualizations of gender, decision researchers have long recognized the influences of culturally defined gender (Kelly, Wildman, & Urey, 1982; Kirchmeyer,

1996; Klenke, 2003; Radecki & Jaccard, 1996). Perceived decision-making skills are improved when characteristics traditionally linked to masculinity are augmented by traits traditionally considered feminine (Radecki & Jaccard, 1996). When every group member possesses a balance of masculine and feminine attributes, also referred to as high androgyny, higher quality decisions are made (Kirchmeyer, 1996). Group decisions made in the presence of individuals representing masculine-typed, feminine-typed, androgynous and undifferentiated sex role categories show that active, instrumental decision-making behavior is associated with masculine-typed and androgynous orientations regardless of sex (Kelly, Wildman, & Urey, 1982). Still others conclude that gendered decision-making differences are related to power, organizational politics, conflict management, and trust rather than to biological sex (Klenke, 2003). Due to the differences in information use and processing, gender diverse teams may experience enhanced application of scarce risk information that improves economic resilience decision-making.

### Hypotheses

During the first two-thirds of the twentieth century, social and behavioral scientists overwhelmingly subscribed to the view that masculinity and femininity were bipolar elements of a single dimension and comprised core features of an individual's personality (Bem, 1994; Hoffman & Borders, 2001; Spence & Helmreich, 1978). In this way of thinking, feminine personality attributes precluded masculine attributes, and vice versa (Spence & Helmreich, 1978).

### *Sex, gender, and risk*

The question of whether men and women have different orientations towards risks has captured the attention of social scientists for a long time. Despite the dozens of studies conducted on this topic, the question remains open. Contradictory results span both descriptive and experimental studies and personal investment and finance contexts (Atkinson, Baird, & Frye, 2003; Sonfield, Lussier, Corman, & McKinney, 2001; Adams & Funk, 2012; Embrey & Fox, 1997; Estes & Hosseini, 1988; Eckel & Grossman, 2008; Eckel & Grossman, 2002; Schubert, Brown, Gysler, & Brachinger, 1999). Many studies find no difference in risk preferences between men and women (Atkinson, Baird, & Frye, 2003; Sonfield, Lussier, Corman, & McKinney, 2001; Embrey & Fox, 1997; Estes & Hosseini, 1988; Schubert, Brown, Gysler, & Brachinger, 1999). Studies also show that risk and performance of mutual funds do not differ for male and female fund managers (Atkinson, Baird, & Frye, 2003). Nor do male and female small business owners differ in their judgments about risks, innovation or venture strategies (Sonfield, Lussier, Corman, & McKinney, 2001). Moreover, when marital influences are isolated, by looking only at single investors, gender is not an overall predictor of risk in investment choice (Embrey & Fox, 1997). Even in cases where women readily labelled themselves as risk averse, analysis of their investment choices led to the conclusion that “there was no difference in investment patterns in financial assets attributable to gender”<sup>5</sup> (Embrey & Fox, 1997 p 38). Neither does self-reported decrease in investment confidence result in any substantive difference in the quality of decisions made by women versus men (Estes & Hosseini, 1988). Research shows that although women make equally sound investment

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<sup>5</sup> Although the word “gender” is used by these authors, their results refer to sex category differences.

decisions, “differential cultural influences, probably beginning in early childhood, lead women to be less confident in their investment decisions” (Estes & Hosseini, 1988, p. 586).

Contrary to the evidence accumulated from studies noted above, some research has shown that women, on average, tend to be more risk averse than men (c.f., Booth & Katic, 2013; Eckel & Grossman, 2002; Eckel & Grossman, 2008). In some studies, sex stereotypes regarding risk aversion were upheld when subjects correctly forecasted, based on the sex category of the other subjects, the risk-level of choices those other subjects selected (Eckel & Grossman, 2002; Eckel & Grossman, 2008). Fisher (2010) found that women with low risk tolerances are less likely to save regularly or to have saved during the past year. Another study indicated that, although some college age women relate increased willingness to take risks, they make fewer risky decisions in a hypothetical financial investment game (Booth & Katic, 2013).

Because the findings discussed above do not suggest a clear hypothesis regarding propensities of male and female subjects to invest in resilience, two competing hypotheses about the investment decisions of male and female subjects are proposed:

*H1a: Female subjects are more likely to invest in economic resilience than male subjects.*

*H1b: Female subjects are not more likely to invest in economic resilience than male subjects.*

Results initially indicating risk aversion disparities may erode or disappear altogether with further analysis, for example, when subgroups are examined, outcomes are scrutinized, or the context is taken into consideration. A thorough review of literature

in economics reveals that women, on average, tend to be more risk averse than men, but there is no such difference between men and women managers (Croson & Gneezy, 2009). In fact, women board directors have been shown to be more risk loving than male directors, a result at odds with the general population (Adams & Funk, 2012). Studies built on findings that expertise tends to moderate sex category differences in risk taking have produced divergent interpretations of results. The classic conclusion applied to observed differences in fund management is that women fund managers tend to be more risk averse than men, though women do not have differing tendencies toward loss aversion (Beckmann & Menkoff, 2008). Alternatively, male overconfidence (rather than risk aversion) has also been ascribed to the observed differences (Huang and Kisgen, 2013). While there are exceptions, much of the reviewed literature concludes no risk preference differences between male and female managers and business owners (Atkinson, Baird, & Frye, 2003; Croson & Kneezzy, 2009; Sonfield, Lussier, Corman, & McKinney, 2001). Additionally, results of a meta-analysis show female managers are not more risk averse than male managers and less risk averse than the general population (Croson & Gneezy, 2009). Therefore, the second hypothesis is,

*H2a: Female subjects in a management pool are equally likely as male subjects in a management pool to invest in economic resilience.*

*H2b: Female subjects in a management pool are less likely to invest in resilience than male and female subjects in a student pool.*

In most studies that have purported to address gender differences in risk preference or investment decision-making, gender is operationalized as a binary variable (i.e., male or female). An expanded operationalization of gender may render a different



result. To this end, Meier-Pesti and Penz (2008) explain observed differences in risk aversion between men and women based on identification with masculine or feminine attributes rather than a solely biological basis. This study assessed whether identification with socially constructed roles of masculinity and femininity had any bearing on risk-taking in actual investment decisions and related to hypothetical financial decisions (Meier-Pesti & Penz, 2008). They find that “the more people feel congruence with the male sex role stereotype, the more risk they are willing to take in financial decision-making regardless of their biological sex” (p. 188). A subsequent experiment conducted by the same authors also results in the same conclusions. Interestingly, being masculine in the study is associated with higher risk-taking, but being feminine has no association with the risk propensity of the subjects (for either risk aversion or risk neutrality). Applied to a business resilience context, this would mean no observed effect related to investing in inventories and traditionally feminine attributes. But most prior studies suggest femininity (rather than biological sex) as the reason behind male/female differences in risk-taking behavior. The third hypothesis follows these results and conclusions.

*H3a: Masculinity is negatively related to initial investment decisions.*

*H3b: Femininity is positively related to initial investment decisions.*

Differences related to information processing by men and women may further explain studies that found sex category-based differences in risk-taking (Byrne & Worthy, 2015). Survey data measuring risk preferences between male and female professional investors suggest that women are more sensitive to any ambiguity and uncertainty that accompanies investment decisions (Olsen & Cox, 2001). Yet, women

may actually make better quality decisions because they are known to be more expansive and thorough in acquiring and evaluating information related to a business decision (Graham, Stendardi, Myers, & Graham, 2002). Byrne and Worthy (2015), for example, note that female subjects tend to integrate all sources of information, drawing comprehensively from internal, external, objective, and subjective resources. Further, they note that, women are more likely to use external information to guide their decisions while men often base decisions on instincts or cues instead of multiple sources and combination of information. Comprehensive utilization of information also means incorporating subtle cues and incongruent information, which women do more often than men (Graham, Stendardi, Myers, & Graham, 2002). This suggests that enhancing gender diversity among decision makers may actually improve financial decision-making and performance in firms.

#### *Perceptions of disaster likelihood*

In addition to differences in overconfidence, male subjects in experimental research have consistently underestimated environmental health risks such as storms and floods, motor vehicle and commercial air travel accidents, and chemical pollution (Flynn, Slovic, & Mertz, 1994). If purely biological factors were responsible for these differences, the effects would be equally present in white and non-white subjects. White men, however, perceive markedly less risk than all other groups (white females, and non-white males and females) suggesting social influences (Flynn, Slovic, & Mertz, 1994). Based on these findings, the fourth hypothesis concerns risk perceptions and their subsequent influence on resilience investment decisions.

*H4a: The likelihood of a catastrophic event perceived by female subjects will be higher than that perceived by male subjects*

*H4b: The likelihood of a catastrophic event will be positively related with resilience investment decisions made by the subjects.*

#### *Decision switching behavior*

Just as male/female differences in information processing have been examined, some scholars have found differences in the types of advice that men and women value (Robson, Jack, & Freel, 2008; Scott & Irwin, 2009). Although some prior studies have produced no disparities in the take-up of external advice (Robson, Jack, & Freel, 2008), others have concluded sex-category differences in willingness to consider advice (See, Morrison, Rothman, & Soll, 2011). Experimental research designed to simulate everyday situations shows that advice increases the confidence levels of strong-performing women and improves their self-selection into competitive tasks (Brandts, Groenert, & Rott, 2015). Based on findings that females more comprehensively process information, are more likely to change behavior based on external information sources (Byrne & Worthy, 2015; Graham, Stendardi, Myers, & Graham, 2002) and are more likely to take advice (See, Morrison, Rothman, & Soll, 2011), the fifth hypotheses are,

*H5a: Female subjects are more likely to change their behavior after receiving investment advice from expert advisors.*

*H5b: Female subjects are more likely than male subjects to change their behavior after receiving advice that contradicts their initial investment decision.*

One of the personality attributes included in the BSRI Masculinity Trait Index is “willingness to take a stand” (Stern, Barak, & Gould, 1987). Taking a stand may be an indication of a decreased propensity to change investment decision after advice is given so that subjects with higher MTI scores are less likely to change their investment decision. No similar personality trait appears on the Femininity Trait Index to prompt a hypothesis about femininity and switching. Thus, the sixth and final hypothesis is,

*H6: A higher MTI score leads to decreased odds of switching behavior in either direction.*

## Data and Methods

### *Experiment description*

These data derive from a controlled human subjects experiment designed as part of a larger collaborative research project. After being randomly selected and randomly assigned to treatment groups, subjects were presented with a vignette informing them of their role as an advisor to the Chief Operating Officer of a mid-sized firm. Although the subjects were not presented with any information regarding the type of catastrophe or the likelihood, they received a table of information about the impact to the firm’s profits if a disaster were to occur. The subjects were presented with a decision to recommend the firm spends some of its resources investing in inventories, a type of resilience action for firms. Since there was a cost to invest in inventories, subjects were presented with a second table that showed the firm’s profits in the four situations in which a decision to invest was/was not made and if a disaster did/did not occur.

After viewing this table, subjects were asked to make a decision to recommend investing or not investing in inventories. Subjects then received advice from two advisors whose gender was represented with gendered (he/she) pronouns. The gender and advice of both advisors differed by treatment group but always agreed, so that unanimous advice was presented to the subject by gender homogeneously-gendered advisors. After receiving the advice the subjects were asked to make a final recommendation. Following that, the subjects waited for a few seconds to see if a randomly-occurring disaster event took place during that round. The subject's compensation was tied to the firm's profits which were determined by the investment decision and the occurrence of a disaster. Tying the subject's participation compensation to the firm's performance was meant to ensure the subjects gave their best effort through the experiment. Although the experiment was conducted over 10 rounds, only the decisions in the first round are examined in this study. For a full description of the experiment design, including the detailed information and payoff tables the subjects viewed, see Young, Greenbaum, and Dormady (2015) and Young, Greenbaum, and Dormady (2016).

The experiment was conducted in two stages, in late 2015 and early 2016. In the initial run, 368 undergraduate subjects participated. From this, the advice treatments, which are the focus of this paper, provided a total of 298 completed responses. The remaining 70 respondents were assigned to independent and alternative non-gender related treatments, and thus are not considered in this essay. The second run, carried out in January, 2016, included both students (286 subjects) and managers (312 subjects). Altogether, the data set is comprised of 1,155 subjects with 896 subjects in the gender/advice treatment portion of the study.

In addition to the random sampling and randomized assignment to treatments associated with the experiment design, the data collection effort utilized pre and post experiment surveys. The surveys were administered electronically in collaboration with a paid professional survey firm, RTI Research. The pre-survey asks subjects to reveal their biological sex which is used to assign to treatments. Transgender male subjects are treated as male subjects and transgender female subjects as female for the binary gender analysis<sup>6</sup>. In total, of the 896 completed surveys, 448 were completed by females and 448 were done by males. Subjects were assigned to different treatments and given a vignette describing their role providing an investment recommendation to the chief operating officer of a mid-sized firm. Subjects were presented with information about how an inventory investment would impact the firm's profits if a catastrophic event were to occur. Subjects were then asked to make an initial decision about whether or not to invest in inventories. The vignette did not include any information about the type of potential catastrophe or the probability. After making an initial decision, the subject was told an advisory group was assigned to help the subject decide. The subject received advice to "invest" or "not invest" and was asked to make a final decision. Comparison between the first and second decisions would reveal switching behavior based on group advice.

A lengthier post-experiment survey asked about the subjects' backgrounds and questions about their perceptions while making decisions during the experiment. Subjects were asked to reveal their perception of the likelihood of a catastrophic event as well as perceived relationships between the subject and the advisors. To create a measure of an individual's adoption of socially constructed, culturally determined concepts of gender,

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<sup>6</sup> The 1,155 subjects include one transgender male and two transgender females

the modified Bem Sex Role Inventory is used. In 1971, Sandra Lipsitz Bem began work to “locate masculinity and femininity in the discourse of the culture rather than in the personality of the individual” (1994, p 199). The resulting androgyny and gender schema theories refuted the idea that masculinity and femininity were internally located polar opposites (Bem, 1994). Instead, Bem asserted that masculinity and femininity were both freely adopted by individuals –from cultural discourses- to form their temperaments and behaviors (Bem, 1994). For the first time, a male or female individual was recognized as having the potential to simultaneously adopt and concurrently exhibit *both* masculine and feminine personality attributes (Bem, 1994). This theorizing was possible because the original Bem Sex Role Inventory (BSRI) asked all individuals, regardless of sex category (male/female), to self-report congruence with 20 attributes reflecting masculinity in this culture, and 20 attributes reflecting cultural femininity, along with 20 filler questions, using a 7-point scale. A link between biological sex and masculinity and femininity was maintained through Bem’s assertion that the inventory measured the degree to which individuals subscribed to the collective, culturally-derived attributes desirable for females and males (Hoffman & Borders, 2011). Though it was subjected some theoretical and methodological critiques, Bem’s work is credited with pivoting the discourse surrounding gendered personality formation and behavior (Fernandez & Coello, 2010; Hoffman & Borders, 2001). By deliberately highlighting the role of culture in an individual’s development of identity, or the self-concept, Bem provided a social explanation for individual personality formation and behavior (Hoffman & Borders, 2001). She also advanced masculinity and femininity as distinct but combinable attributes (Barak & Stern, 1986). The BSRI became the most widely used tool for gender research across a

broad range of academic research, such as social cognition, relational maintenance, moral reasoning, sexual identity, and even marketing and consumer behavior (Barak & Stern, 1986; Fernandez & Coello, 2010; Hoffman & Borders, 2001; Stafford, Dainton, & Haas, 2000). It is still used extensively (Fernandez & Coello, 2010; Johnson, et al., 2008), perhaps due to the number of studies that produced early evidence of scale validity and reliability (Yanico, 1985). Subsequent studies modified the indexes to 20 gender stereotyped traits (Barak & Stern, 1985; Stern, Barak, & Gould, 1986). The modified scale asks subjects to rate their congruence with 10 feminine sex role traits and 10 masculine traits according to a 7-point Likert scale. The twenty items associated with femininity and masculinity are listed in Appendix A. To obtain a score on each index for each experiment subject, the items are summed so that the minimum possible score is 10 and the maximum is 70 (Stern, Barak, & Gould, 1987). These index scores serve as the gender construct in this study augmenting the binary biological sex (male/female) measure collected through the pre-survey.

### *Methods*

The many binary, categorical, and ordered variables included in this study requires the use of nonparametric difference in means tests. Mann-Whitney u-tests are conducted in Stata 13. Models with binary dependent variables, such as inventory investment decision (1 = yes, 0 = no) are analyzed using logistic regression. Variables representing subjects' perceptions of the likelihood of a catastrophic event are analyzed using ordered logistic regression. Multinomial regression is used for models testing switching hypotheses in which switching away from investing = -1, switching toward investing = 1, and no change in decision = 0.



## Analysis and Results

### *Empirical strategy*

The six hypotheses are tested by examining differences in means and logistic regression analyses. First, I report descriptive statistics with counts and percentages of subjects who chose to invest in resilience. Then nonparametric Mann-Whitney differences in means tests were performed to examine the influence of gender on risk perceptions and resilience investment decisions. Finally, a series of logistic regression analyses including relevant control variables were conducted to further test the hypotheses. The results for hypotheses about subjects' initial investment decision (H1 through H4) are presented first. Thereafter, the results for the hypotheses about subjects' switching behavior (H4 and H5) are presented. Results related to switching direction (toward and away from investing in resilience) are presented before results related to advice type (confirmatory or contradictory).

### *Resilience investment decision-making*

The initial investment decision is first investigated independently from the final investment decision that followed the advisor input. Initially, subjects were only aware of the decision-making context and were not informed that they would be receiving advice from an appointed group. The initial investment decision identifies the resilience decisions of the subjects, independent from treatment parameters. For this decision, the subjects were not aware of the likelihood of the catastrophic event. This serves as a baseline decision.

The results indicate that subjects, regardless of sex, overwhelmingly opted to invest in resilience. Table 1.1 shows the count (and percentage) of males and females

who made an initial decision to invest in inventories. As can be seen in the “Total” column in the second row of the table, 84.7% of subjects initially invested in inventories.

<u>Inventory Investment</u>	<u>Male</u>	<u>Female</u>	<u>Total</u>
<i>No</i>	74 (16.52)	63 (14.06)	137 (15.29)
<i>Yes</i>	374 (83.48)	385 (85.94)	759 (84.71)
<b>Total</b>	448	448	896

*Note.* Percentages in parentheses.

Table 1.1 Resilience Investment Decision by Sex

No obvious gender difference appears for the first investment decision. On average almost 85% of subjects initially chose to invest in resilience. While females chose to invest in inventories at a slightly higher rate than males: 85.9 percent for females versus 83.5 for males (“Yes” row of Table 1.1), the differences were not statistically significant ( $p > .10$ ). The difference in means test shown in Table 1.2, row 1 confirms that these results are not significantly different from each other ( $p = .31$ ). The null finding provided initial support for Hypothesis 1b, which suggested no difference between female and male subjects with regards investing in economic resilience. Hypothesis 1a is not supported.

Row	Null Hypothesis	Mean (1)	Mean (2)	(1) - (2)	p-value
<b>Initial Investment Decision</b>					
1	Male subjects = Female subjects	83.48%	85.94%	-2.46%	.31
2	Male managers = Female managers	72.44%	73.08%	-0.01%	.90
3	Female managers = female students	73.07%	92.81%	-19.73%	.00***
4	Male managers = male students	72.44%	89.38%	-16.95%	.00***
5	MTI investors = MTI not investors	48.18	48.05	-0.12	.88
6	FTI investors = FTI not investors	51.98	49.52	2.46	.00***
<b>Perceived Likelihood</b>					
7	Male subjects = Female subjects	2.34	2.59	-0.26	.00***
8	Male manager = Female manager	2.08	2.19	-0.11	.39
9	Male students = Female students	2.48	2.81	-0.34	.00***
<b>Switching Behavior</b>					
10	Male subjects = Female subjects (no dir.)	14.06%	14.51%	-0.00%	.85
11	Male subjects = Female subjects (to inv.)	4.47%	3.04%	1.43%	.29
12	Male subjects = Female subjects (from inv.)	10.47%	12.16%	-1.69%	.43
<b>Confirmatory Advice &amp; Switching Behavior</b>					
13	From inv. (confirm.) = (contra.)	1.59%	21.41%	-19.82%	.00***
14	Toward inv. (confirm.) = (contra.)	0.46%	7.73%	-7.28%	.00***
15	Male subjects = Female subjects (contra)	19.91%	22.90%	-2.99%	.45
16	From inv. contra. advice: Manager = Student	17.09%	23.97%	-6.88%	.10*

Note. Dir. = direction. Inv. = investing. Confirm = confirmatory advice. Contra = contradictory advice.  
\*\*\* $p < .01$ , \*\* $p < .01$ , \* $p < .10$ .

Table 1.2 Mann-Whitney Test Results for Initial Investment and Perceived Likelihood

Hypothesis 2 concerns potential differences in the decisions made by student subjects and manager subjects. The results, as shown in Table 1.2, rows 2-4 indicate there were no differences in mean investment within subject pool groups. Male and female managers did not invest in resilience at different rates (row, 2;  $p = .90$ ), providing support for Hypothesis 2a. Male and female students did not invest at different rates either ( $p = .15$ , not shown). Interesting differences emerge between managers and students (rows 3 and 4). As hypothesized, female students invested in inventories almost 20% more often

than female managers ( $p = .00$ ). A similar gap was observed for males with male students investment decisions occurring about 17 percent more frequently than male managers ( $p = .00$ ). These results provide preliminary support for Hypothesis 2b and suggest role rather than sex differences in the resilient investment propensity.

Hypothesis 3 was based on an expanded gender construct, which proposed (1) masculinity would be negatively related to initial investment decisions, whereas femininity would be related positively. This hypothesis suggested MTI score would be lower for investors because masculinity is associated with increased risk-taking and, at the same time, a larger FTI for investors might be found if traditionally feminine traits are associated with less risk-taking. The results for the initial test of this hypothesis are shown in Table 1.5, rows 5-6. The mean MTI score for subjects who chose investment was 48.18, 0.12 points higher than the mean MTI score for subjects who decided not to invest, 48.05. This difference was not statistically significant ( $p = .88$ ). The 2.46 point difference in FTI score between investors and non-investors, shown in Table 1.2, however, was significant. The mean FTI score for subjects who initially chose resilience investment was 51.98 points compared to 49.52 points for non-investors ( $p = .00$ ). These results provided preliminary support for hypothesis 3b.

Hypothesis 4a suggested that female subjects would report a higher probability of a catastrophic event than their male counterparts. Hypothesis 4b suggested a positive association between the likelihood of a catastrophic event and resilience investment decisions. Over the ten rounds, there was no statistically significant difference in the

probability that male and female undergraduate subjects experienced a shock.<sup>7</sup> After the ten rounds, the subjects were asked in a post-experimental survey about their perception of the likelihood of the shock at the time of the first decision. With a programmed disaster rate of 25%, the actual likelihood range is 21-40%. Figure 1.1 presents perceived likelihood of the catastrophic events by sex category. For each of the three ranges beyond the actual likelihood range (21-40%), female subjects reported a higher perceived likelihood of catastrophic event. Male subjects perceived higher event likelihoods than females for both the lowest range (0-20%) and the range used by the experiment (21-40%). Comparisons of means shown in Table 1.2, rows 7-9 shed light on this distribution. On a scale from 1 to 5, where 1 represents the least probability and 5 represents the highest, females' mean perception was 2.59 and males was 2.34. This difference is statistically significant ( $p < .01$ ), providing support for Hypothesis 4a. However, this difference is not driven by females overall since the difference in perceived likelihood between male and female managers is not significant ( $p = .39$ ). The male/female perceptions of the probability of catastrophic event are driven by differences between male and female students ( $p < .01$ ). This implies that while Hypothesis 4a is supported, it isn't true that *all* females are more likely to perceive a higher probability of a disaster event, but less experienced (student) females do.

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<sup>7</sup> On average, males experienced 2.43 shocks over the 10 rounds compared to 2.54 for females. The difference is not statistically significant ( $p = 0.16$ ).

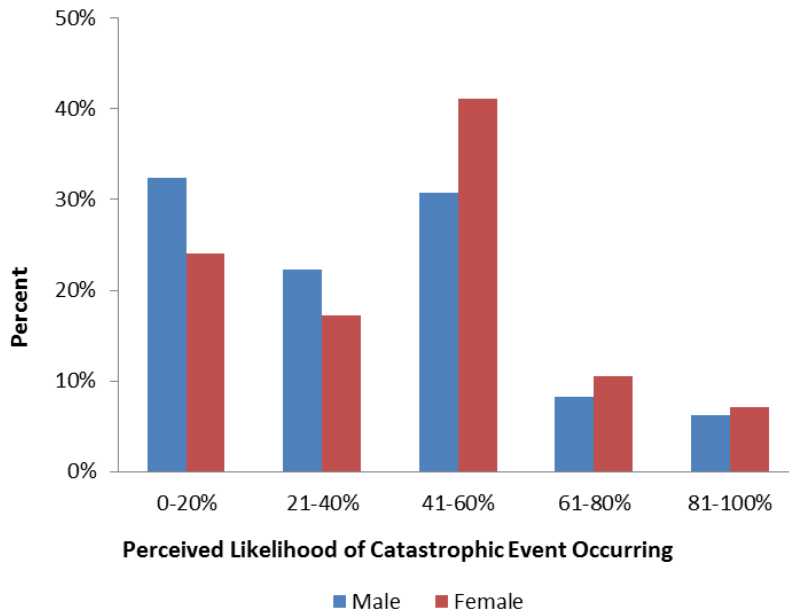


Figure 1.1 Perceived Likelihood of Catastrophic Event (by Sex)

Figure 1.2 adds the perceived likelihood by MTI and FTI for subjects with Masculinity and Femininity Scores above the mean. The Male and MTI responses track together, as do the Female and FTI responses. It is important to note, however, that the MTI and FTI bars include subjects of both sexes. Of the 435 individuals with an MTI Score greater than the mean, 199 (45.7%) of these were female subjects. Of the 450 individuals with an FTI Score above the mean, 199 (44.2%) were male subjects.

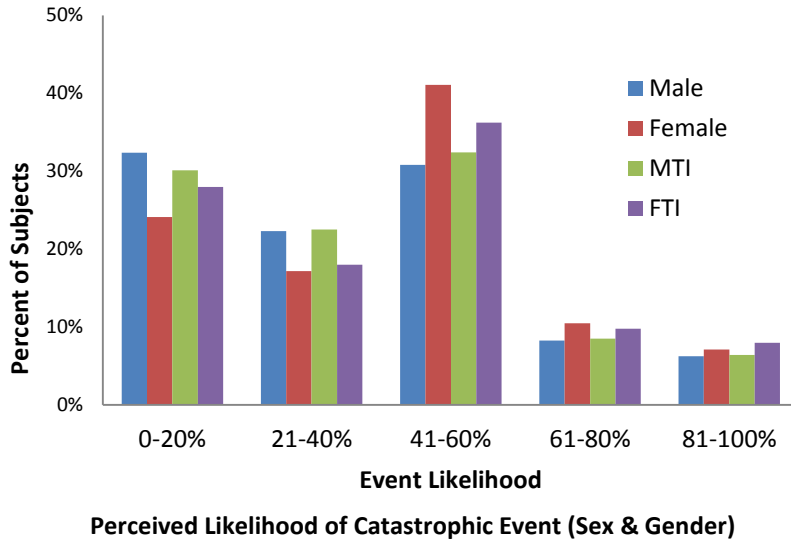


Figure 1.2 Perceived Likelihood of Catastrophic Event (by Sex and Gender)

To verify the initial results found for Hypotheses 1-4, separate logistic regression analyses were conducted. Table 1.3 reports the results of an ordered logistic regression model on the perceived likelihood of a catastrophic event and Table 1.4 reports results of binary logistic regression analysis on the initial investment decisions. As indicated in Table 1.3, there was no relationship between masculinity and perceived event likelihood of an event, but both female sex category and femininity were found positively connected with the perceived likelihood of an event when no information about the event type of frequency was provided. FTI, however, was associated weakly in both direct (1) and moderation (2) models ( $p < .10$ ). On average, female subjects were 1.52 times more likely than male subjects to report higher probability of a disaster ( $p < .01$ ). Managers are about half as likely as students to report higher probability of a disaster ( $p < .01$ ). Model 2, presented in the second column of Table 1.3, shows results of moderation analysis for

subject sex and type (student/manager). Female students were found more likely than male students to perceive higher disaster probabilities ( $p < .01$ ) but male managers and female managers both perceive lower probabilities than male students ( $p < .01$ ).

Predictors	(1)	(2)
MTI	1.00 (0.01)	1.00 (0.01)
FTI	1.01* (0.01)	1.01* (0.01)
Female	1.52*** (0.19)	
Manager	0.43*** (0.06)	
Female student		1.70*** (0.26)
Male manager		0.50*** (0.09)
Female manager		0.62*** (0.11)
Constant 1	0.70 (0.33)	0.76 (0.36)
Constant 2	1.72 (0.81)	1.87 (0.89)
Constant 3	10.61*** (5.07)	11.58*** (5.59)
Constant 4	28.76*** (14.05)	31.43*** (15.51)
Pseudo R <sup>2</sup>	0.02	0.02

Note. n=896. Odds ratios are reported instead of coefficients. Standard errors are in parentheses. Male students is the excluded reference category. \*\*\* $p < .01$ , \*\* $p < .01$ , \* $p < .10$ .

Table 1.3 Ordered Logistic Regression Results for Perceived Event Likelihood



	(1)	(2)
Female	1.00 (0.99)	
FTI	1.05*** (0.01)	1.03** (0.02)
MTI	1.00 (0.97)	1.01 (0.33)
Perceived Event Likelihood	1.54*** (0.00)	1.41*** (0.00)
Male manager		0.16*** (0.00)
Female student		1.33 (0.34)
Female manager		0.17*** (0.00)
Age		1.01* (0.08)
Married		0.85 (0.33)
Constant	0.56 (0.43)	0.56 (0.51)
McFadden's Psudeo-R <sup>2</sup>	0.04	0.10

*Note.* n = 896. Logistic regression models include the initial first round investment decision as the dependent variable (1 indicates investment in resilience). Male students are the excluded reference category. Odds ratios are reported instead of coefficients. P-values are in parentheses. \*\*\* p<0.01, \*\* p<0.05, \* p<0.10.

Table 1.4 Logistic Regression Analysis of the Initial Decision to Invest in Resilience (Inventories)

Table 1.4, as noted earlier, showed logistic regression analysis for initial investment decisions. The value of the dependent variable was one if the subject initially chose to invest in inventories and zero otherwise. The results indicated no male/female differences in the initial investment decisions, confirming the initial conclusion that female subjects were no more likely than males to invest in inventories. Managers, regardless of their gender, were found less likely to invest in resilience (Model 1, p<.01)

and female managers are less likely to invest in resilience than male students and female students (Model 2,  $p < .01$ ). The even (1.0) odds ratio on the masculinity trait index (MTI) indicates no difference in the odds of making the decision to invest based on congruence with stereotyped masculinity. The link between femininity and likelihood of investing in inventories once again was found to be very weak, though statistically significant (Odds ratio = 1.05,  $p < .01$ ; Model 1). With an odds ratio of 1.54, the perceived likelihood of a catastrophic event was the strongest predictor of resilience investment, when all sex category and gender predictors were considered together (Model 1;  $p < .01$ ). The regression results reported in Tables 1.3 and 1.4 confirm the initial results obtained from Mann-Whitney tests performed earlier to test Hypotheses 1-4.

#### *Subject switching behavior*

Hypotheses 5 and 6 were related to the influence of professional advice on male and female subjects' decisions to invest in resilience. Based on the extant literature and theory, Hypothesis 5a suggested that female subjects were more likely than male subjects to change their decision after receiving advice from an expert. Hypothesis 5b proposed female subjects were more likely than male subjects to change their decision when the expert advice contradicted their initial investment decisions. An initial decision not to invest in resilience inventories followed by a subsequent decision to invest, in this essay is referred to as "switching *toward* investing," and an initial decision to invest followed by a subsequent decision to not invest is referred to as "switching *away* from investing." To test Hypotheses 5a and 5b, Mann-Whitney differences in means tests were performed first, then a set of multinomial logistic regression models were estimated.

Table 1.5 indicates that 65 females and 63 males switched in one direction or another (either toward or away from investing) while most subjects (more than 85 percent of the 896 experimental subjects) maintained their initial position after the group advice was administered. The results of the Mann-Whitney tests performed to examine differences in means are shown in Table 1.6, rows 1-3 and indicate no gender related propensity to change behavior ( $p = 0.85$  for directionless switching). This suggests that male and female subjects do not respond differently to expert advice even when a switching direction is specified. As seen in row 2, the number of male and female subjects who changed their minds and ultimately decided to invest in inventories, switch toward investing, cannot be declared statistically dissimilar ( $p = 0.29$ ). Mean male and female switching from investing initially to not investing subsequently, switching away from investing (row 3), were not different either ( $p = 0.43$ ).

<u>Switching</u>	<u>Male</u>	<u>Female</u>	<u>Total</u>
Invest to Not Invest	45 (10.04)	53 (11.83)	98 (10.94)
Decision Maintained	385 (85.93)	383 (85.49)	768 (85.71)
Not invest to Invest	18 (4.02)	12 (2.68)	30 (3.35)
Total Switching	448	448	896

*Note.* Percentages in parentheses.

Table 1.5 Resilience Investment Switching (by Sex)

Row	Null Hypothesis	Mean (1)	Mean (2)	(1) - (2)	p-value
<b>Switching Behavior</b>					
1	Male subjects = Female subjects (no dir.)	14.06%	14.51%	-0.00%	.85
2	Male subjects = Female subjects (to inv.)	4.47%	3.04%	1.43%	.29
3	Male subjects = Female subjects (from inv.)	10.47%	12.16%	-1.69%	.43
<b>Confirmatory Advice &amp; Switching Behavior</b>					
4	From inv. (confirm.) = (contra.)	1.59%	21.41%	-19.82%	.00***
5	Toward inv. (confirm.) = (contra.)	0.46%	7.73%	-7.28%	.00***
6	Male subjects = Female subjects (contra)	19.91%	22.90%	-2.99%	.45
7	From inv. contra. advice: Manager = Student	17.09%	23.97%	-6.88%	.10*

*Note.* Dir. = direction. Inv. = investing. Confirm = confirmatory advice. Contra = contradictory advice.  
\*\*\* $p < .01$ , \*\* $p < .01$ , \* $p < .10$ .

Table 1.6 Mann-Whitney Test Results for Switching and Advice

Because the treatments were designed so that some subjects received advice to invest and others received advice not to invest, the effect of advice that agreed with, or confirmed, a subject's initial position and advice that contradicted the original decision can be tested. Table 1.7 gives the counts (and percentages) for the subjects who switched toward and away from investing after receiving advisory committee recommendations. Of the 759 subjects who originally chose to invest in inventories, 377 (84.2%) subjects received advice that effectively confirmed their decision. The remaining 382 subjects of the 759 who initially invested received advice that they should not invest in resilience inventories, advice that contradicted the initial decisions they made. While most of the recommendations to invest in resilience ended up being confirmatory for investors, only 14.7% of the "do not invest" recommendations were confirmatory for the small group that initially chose not to invest.

	<b>Advice</b>		<b>Total</b>
	<b>Invest</b>	<b>Do Not Invest</b>	
Confirmed initial decision	377 (84.15)	66 (14.73)	443 (49.44)
Contradicted initial decision	71 (15.85)	382 (85.27)	453 (50.56)
<b>Total</b>	<b>448</b>	<b>448</b>	<b>896</b>

*Note.* Percentages in parentheses.

Table 1.7 Confirmatory Advice

Regardless of switching direction, the confirmatory advice had a strong effect on preventing switching. Subjects were very unlikely to switch in either direction when the recommendation given by the appointed advisory committee agreed with the position the subject initially took. This is an intuitive result. Of the 382 subjects (Table 1.7, column 2) who received advice not to invest, advice that contradicted their initial decision to make the inventory investment, only 98 switched to not investing when making their final decision (Table 1.5, row 1). The contradictory advice, however, had a statistically significant influence on switching decisions. Table 1.6, rows 4-7 show that differences in means related to the effects of confirmatory and contradictory advice for both switching directions were significant at the 1% level for switching away from and toward investing in resilience.

The results for the preliminary test of Hypothesis 5b are reported in Table 1.6, row 6. The analysis indicated no difference between male and female subjects in light of contradicting investment recommendations ( $p = .45$ ). Row 7 of Table 1.6 shows contradictory advice did not affect students and managers differently by persuading more

students to switch away from investing ( $p = 0.10$ ). Of the 98 subjects who switched away from investing (see Table 1.5, row 1), 91 subjects received contradictory advice and 64 were student switchers (not shown). Taken together, these initial results did not provide any support for Hypotheses 5a and 5b.

A series of multinomial logistic regression analyses were performed to confirm the initial results obtained from the Mann-Whitney tests. The results are presented in Table 1.8. Multinomial logistic regression analysis was used because the dependent variable had three discrete outcomes: 1) subject switching from initially not investing to investing in resilience following the group advice [toward], 2) subject maintaining the initial investment decision after receiving the group input [not switching], and 3) subject switching from initially investing to not investing [away]. In all of the multinomial regression models estimated, the reference category was maintaining (not switching). As shown in Models 1 and 2 in Table 1.8, gender had no influence on switching. The odds ratios for both the binary gender variable and FTI and MTI scores were not statistically significant. In summary, no empirical support was found for Hypotheses 5a, 5b, or Hypothesis 6 which predicted a negative connection between MTI scores and switching behavior (in either direction).

#### *Supplementary analysis and findings*

While not central to hypotheses tested in this study, the multinomial logistic regression analysis yielded some interesting findings about the influence of event likelihood on switching behavior. In general, one would expect the higher perceived likelihood of an event would lead to decreased odds of switching away from investing. In fact, this can be found in column 2 ( $p < .05$ ). However, a higher perceived probability of a

catastrophic event also leads to decreased odds of switching toward investing. While this result did not achieve statistical significance, the pattern was surprising. As expected, when advice was confirmatory, i.e., advice from the advisors matched whichever decision the subject selected when prompted for an initial decision, a subject was less likely to switch either toward or away from investing ( $p < .01$  in all models).

	(1) Toward (Not Inv to Inv)	(2) Away (Inv to Not Inv)	(3) Toward (Not Inv to Inv)	(4) Away (Inv to Not Inv)
Female	0.72 (0.418)	1.30 (0.272)		
FTI	0.99 (0.619)	1.00 (0.919)	1.00 (0.617)	1.00 (0.931)
MTI	0.99 (0.605)	0.99 (0.491)	1.00 (0.594)	0.99 (0.458)
Event Likelihood	0.88 (0.482)	0.78** (0.016)	0.89 (0.490)	0.78** (0.018)
Manager	2.08* (0.070)	0.68 (0.130)		
Confirmatory Advice	0.06*** (0.000)	0.06*** (0.000)	0.06*** (0.000)	0.06*** (0.000)
Female Student			0.63 (0.437)	1.07 (0.802)
Male Manager			1.85 (0.229)	0.50* (0.064)
Female Manager			1.54 (0.428)	0.95 (0.872)
Constant	0.28 (0.390)	0.75 (0.749)	0.30 (0.425)	0.86 (0.863)
McFadden's Pseudo- R <sup>2</sup>	0.161	0.161	0.162	0.162

*Note.* n = 896. Multinomial regression models include the post-advice investment decision as the dependent variable (1 indicates switching toward investing, -1 indicates switching away from investing). Male students are the excluded reference category. Odds ratios are reported instead of coefficients. P-values are in parentheses. \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.10$ .

Table 1.8 Regression Analysis of Switching Initial Resilience Investment Decision

The potential interaction of subject sex and type (student/manager) in predicting switching behavior was investigated by estimating two separate multinomial logistic regression models, results of which are reported in columns 3 and 4 of Table 1.8. The results for the effects of perceived likelihood of the event and confirmatory advice remained consistent in the two new regression models, but there was no support for any interactive relationship.

For this study, an additive index was used to measure subjects' masculinity and femininity attributes. The use of an additive index might have masked the influence of specific masculinity and femininity attributes. Results of the analysis of individual attributes, initial decisions, and switching are shown in Table 1.9. It is important to note that all of the femininity and masculinity attributes were included in the same model, although they are presented in two different columns in Table 1.9. The results indicated that subjects with higher sensitivity scores, regardless of their biological sex, were about 1.5 times more likely to choose resilience investment initially ( $p < .01$ ). Additionally, three masculine traits, competitive, take a stand, and leadership were associated with higher odds of investing in resilience ( $p < .05$  for competitive and  $p < .10$  for leadership and take a stand). Two masculinity traits, forceful and aggressive, were associated with lower odds for investing in resilience ( $p < .10$ ). With regards to switching behavior, only understanding, a stereotypic feminine attribute, was related to decreased odds of switching ( $p < .01$ ).



Femininity Attributes	I. Initial Decision	II. Switching	Masculinity Attributes	I. Initial Decision	II. Switching
Affectionate	0.94 (0.57)	1.00 (0.99)	Leadership	1.27* (0.08)	1.10 (0.51)
Loyal	0.90 (0.35)	0.90 (0.39)	Take a stand	1.22* (0.08)	0.89 (0.25)
Tender	0.87 (0.27)	1.19 (0.18)	Ambitious	1.05 (0.60)	1.02 (0.88)
Sensitive	1.57*** (0.01)	1.24 (0.17)	Competitive	1.24** (0.02)	0.95 (0.56)
Sympathetic	0.87 (0.35)	0.86 (0.33)	Dominant	1.05 (0.65)	0.89 (0.27)
Compassionate	1.01 (0.92)	1.11 (0.41)	Assertive	0.90 (0.33)	0.97 (0.77)
Eager to Soothe	1.10 (0.29)	0.98 (0.86)	Strong Personality	1.02 (0.86)	0.96 (0.73)
Understanding	0.94 (0.63)	0.79* (0.08)	Forceful	0.83* (0.07)	0.96 (0.66)
Gentle	0.84 (0.12)	0.99 (0.91)	Leader	0.82 (0.18)	1.13 (0.38)
Warm	1.22 (0.12)	0.86 (0.21)	Aggressive	0.84* (0.05)	1.11 (0.25)
Constant				1.24 (0.78)	0.65 (0.58)
Pseudo R-squared				0.07	0.02

Note. n=896. Logistic regression models include the initial investment decision (1 indicates investment in resilience) and switching (yes =1) as the dependent variables. Odds ratios are reported instead of coefficients. P-values are in parentheses. \*\*\* p<0.01, \*\* p<0.05, \* p<0.10.

Table 1.9 Regression Analysis of Each Femininity and Masculinity Trait on the Outcomes of Interest

## Discussion & Conclusion

### *Implications for research and practice.*

Many of the latest studies informing policy have established frameworks for evaluating vulnerability and hazard response (Gerber, 2007; Chang, McDaniels, Fox, Dhariwal, & Longstaff, 2014; Alderson, Brown, & Matthew, 2015; Kim & Marcouiller, 2015). Others have sought to quantify post-disaster losses, measure resilience costs, or

establish baselines for appraising resilience performance (Henry & Ramirez-Marquez, 2016; Vugrin, Warren, & Ehlen, 2011; Cimellaro, Reinhorn, & Bruneau, 2010; Park, Cho, & Rose, 2011). These studies have concentrated on community or regional resilience by examining organizations (e.g. hospitals), institutions (e.g. government policies), or infrastructure and systems (e.g. power and telecommunication networks, supply chains). Although they account for a large portion of U.S. economic activity and employment and are a critical component of the domestic economy, middle market firms remain understudied. Often these firms lack ample resources to prepare for or recover from natural or human-induced shocks. However, passive economic resilience strategies may be essential for both the firm's sustainability and the larger regional or national economic stability. This study focused on gender effects in a common economic resilience decision of mid-sized firms—the investment in inventories. The results address gaps in literature and contribute a number of important findings in the areas of gender and decision-making under risk of disaster conditions, resilience investment and middle market firms.

First, when gender diversity is conceptualized as diversity of culturally determined masculinity and femininity attributes, gender diversity may contribute to increased economic resilience. Under conditions of uncertainty about the likelihood of a disruptive disaster, both males and females in this study adopted a similar investment decision strategy. Contradicting much of the extant literature that shows females are more risk averse, this study found no male/female differences in willingness to invest in inventories. While biological sex produced no statistically significant differences in male and female resilience investment decision-making, this research found that the culturally

constructed concept of gender is a better predictor of investment decision than the simple male/female binary. Regardless of biological sex, subjects with higher Femininity Trait Index Scores are more likely to invest in inventories at the first opportunity but no relationship exists between masculinity and resilience investment. These findings both corroborate and contradict the work of Meier-Pesti & Penz (2008) who found masculinity, not femininity better predictors of risk-taking. Conducting this experiment across two separate subject pools, middle market managers and undergraduate university students, allows explicit testing of the assertion that female managers differ from the population in their preference for risk (Croson & Gneezy, 2009). There was no difference in resilience investment decision-making between male and female subjects in the manager pool, but female managers differed significantly from male and female students. This is an important contribution because no experimental analysis of resilience decision-making has incorporated subjects from these two disparate experience categories.

Perceptions of catastrophic event likelihood were the best predictors of resilience investment decisions. These results—specifically for decisions made prior to the introduction of group dynamics—suggest that subjects’ own inherent priors regarding the likelihood of a catastrophic event, and their perception of which resilience strategy minimizes the maximum potential losses, are driving these initial investment decision results. Moreover, there was a notable gender difference. While Flynn, Slovic and Mertz (1994) tested male perceptions of the risk associated with catastrophic event, this study examined perceptions of event probability when no information was given about the type of disaster or the possibility of occurrence. Not only did higher perception of event likelihood lead to increased resilience investment, but female subjects tended to perceive

higher chances of an event occurring. However, this result was driven partly by differences between female and male students.

These three findings, the relationship with femininity and investment in inventories, differences between students and managers and differences in perceptions of disaster likelihood suggest benefits arising from gender diversity of top decision makers. Individuals with higher congruence with femininity, regardless of their status as males or females, tend to be more likely to allocate firm resources toward inventory investment. So do individuals who perceive a higher probability of a disaster event. Middle market firms may benefit from improved disaster preparedness or recovery by including individuals with feminine personalities in the decision making process. Males and females who are selected into management tend to possess or adopt similar gendered (masculine) personalities (Young, 2017). As this study shows, women who are managers do not make decisions that differ substantially from those made by men who are managers. In the U.S., women still tend to report higher congruence with femininity (Essay 2, New Evidence of Androcentric Assimilation in U.S. Management Culture) which means increasing gender diversity of decision makers may lead to more firm-level investments in resilience. If males and females, newer employees and experienced managers hold different perceptions of the likelihood of disaster events and are differentially likely to direct resources toward preparedness, middle market firms and public organizations may benefit from efforts to improve top management and board diversity.

The subjects' final investment decisions following the introduction of controlled group treatments were also investigated in this study. Treatments were administered

through two advisory committee members and subjects were randomly assigned to receive advice to “invest” or “not invest.” Based on the individual decisions to initially invest in resilience inventories or not invest, some of this advice ended up being confirmatory (agreeing with the subject’s initial position) and some was contradictory (recommendations opposed to the subject’s original decision). This enabled an analysis of “switching” based on group investment advice dynamics, the confirmatory nature of the advice given, as well as sex and gender traits of the subject measured by the FTI and MTI. When given the opportunity to revisit and change their decision, a group of advisors telling decision makers that their decision is the correct one had an affirming effect. This affirming effect held for both males and females alike. No differences were found in overall switching (switching in either direction) between male and female subjects. Nor was there a statistically significant relationship with masculinity and femininity, the expanded gender constructs. The hypothesis regarding gender and contradictory advice, based on literature showing women tend to take advice more often and incorporate external and incongruent information (Graham, Stendardi, Myers, & Graham, 2002; Byrne & Worthy, 2015; See, Morrison, Rothman, & Soll, 2011) were also not upheld. These results imply that government efforts to increase firm investments in resilience through information diffusion will not be more or less effective depending on the gender composition of the decision makers.

#### *Study limitations*

Some limitations to this study should be noted. First, perceived event likelihood was measured at the end of a ten-round game in a post-experiment survey. Even though the question specifically referred to the perception at the time of the first decision, it is

not possible to ascertain whether individuals' investment decisions were based on a static inherent prior of shock likelihood formed at the beginning of the game. It is possible that a dynamically-formed value that updated as the subject proceeded through all rounds influenced this response. Additional research showing how the probability does or does not change after each round when a mixed-strategy catastrophic event probability is employed would shed more light on the relationship between event likelihood and resilience investment decision.

Second, the study's design did not allow determination of the effect of advice on the initial decision to invest or not invest. Because the recommendations were provided after the preliminary decisions were made, one could interpret the first decision as a baseline propensity to invest or not. However, it was not possible to assess the influence of the advice after a choice was made and, thus, how advice might have influenced the initial investment decision is unknown. Further research incorporating treatments with advice before and after initial decisions would help clarify this question and further illuminate the effects of advice.

Finally, the self-report aspect of the modified Bem Sex Role Inventory is a benefit in that it provides a subject's own assessment of the gendered components of their personalities. Still, it must be noted that an element of social desirability may be influencing subjects' responses. This bias, if it is present, is likely to be small given that this vignette experiment was conducted online, and not in person.

### *Conclusion*

Many of the latest studies informing policy have established frameworks for evaluating vulnerability and hazard response (Gerber, 2007; Chang, McDaniels, Fox,

Dhariwal, & Longstaff, 2014; Alderson, Brown, & Matthew, 2015; Kim & Marcouiller, 2015). Others have sought to quantify post-disaster losses, measure resilience costs, or establish baselines for appraising resilience performance (Henry & Ramirez-Marquez, 2016; Vugrin, Warren, & Ehlen, 2011; Cimellaro, Reinhorn, & Bruneau, 2010; Park, Cho, & Rose, 2011). These studies have concentrated on community or regional resilience by examining organizations (e.g. hospitals), institutions (e.g. government policies), or infrastructure and systems (e.g. power and telecommunication networks, supply chains). However, to date no study has examined individual-level resilience decision-making. Decisions that, collectively, constitute business and community resilience originate with an individual decision-maker. Consequently, this essay focuses explicitly on individual-level resilience decisions and their determinants. This randomized controlled human subjects experiment not only addresses this important issue, but contributes findings about gender diversity in group-decision-making related to firm resilience for middle market firms. As has been pointed out, "...the women's liberation movement forced the conclusion that sex roles and biological gender are not necessarily the same" (Barak & Stern, 1986, p 204). The inclusion of measures for both reveals systematic differences based on sex and culturally defined gender attributes for perceptions of the likelihood of catastrophic events and willingness to direct resources toward economic resilience. A further contribution is how these differences correspond to an individual's status as a student or manager. Middle market firms are likely to make substantial investment decisions, such as economic resilience investments, in a group context such as a board of advisors. Improving gender diversity among these decision makers may lead to improved preparedness if or when a disaster event occurs.

## Essay References

- Adams, R. B., & Funk, P. (2012). Beyond the Glass Ceiling: Does Gender Matter. *Management Science*, 58(2), 219-235.
- Alderson, D. L., Brown, G. G., & Matthew, C. W. (2015). Operational Models of Infrastructure Resilience. *Risk Analysis*, 35(4), 562-586.
- Apestequia, J., Azmat, G., & Iriberry, N. (2012). The impact of gender composition on team performance and decision making: Evidence from the field. *Management Science*, 58(1), 78-93.
- Atkinson, S. M., Baird, S. B., & Frye, M. B. (2003). Do female mutual fund managers manage differently? *The Journal of Financial Research*, 26(1), 1-18.
- Barak, B., & Stern, B. (1986). Sex-linked trait indexes among baby-boomers and pre-boomers: A research note. *Advances in Consumer Research*, 13, 204-209.
- Beckmann, D., & Menkoff, L. (2008). Will women be women? Analyzing the gender difference among financial experts. *KYKLOS*, 61(3), 364-384.
- Bem, S.L. (1974). The measurement of psychological androgyny. *Journal of Consulting and Clinical Psychology*, 42(2), 155-162.
- Bem, S.L. (1994). *The lenses of gender: Transforming the debate on sexual inequality*. New Haven, CT: Yale University Press.
- Booth, A. L., & Katic, P. A. (2013). Cognitive Skills, Gender and Risk Preferences. *Economic Record*, 89(284), 19-30.
- Brandts, J., Groenert, V., & Rott, C. (2015). The impact of advice on women's and men's selection into competition. *Management Science*, 61(5), 1018-1035.
- Byrne, K. A., & Worthy, D. A. (2015). Gender differences in reward sensitivity and information processing during decision-making. *Journal of Risk Uncertainty*, 50, 55-71.



- Carter, D. A., D'Souza, F., Simkins, B. J., & Simpson, W. G. (2010). The gender and ethnic diversity of U.S. boards and board committees and firm financial performance. *Corporate Governance: An International Review*, 18(5), 396-414.
- Chang, S. E., McDaniels, T., Fox, J., Dhariwal, R., & Longstaff, H. (2014). Toward Disaster-Resilient Cities: Characterizing Resilience of Infrastructure Systems with Expert Judgments. *Risk Analysis*, 34(3), 416-434.
- Cimellaro, G. P., Reinhorn, A. M., & Bruneau, M. (2010). Framework for analytical quantification of disaster resilience. *Engineering Structures*, 32, 3639-3649.
- Cronqvist, H., Makhija, A. K., & Yonker, S. E. (2012). Behavioral consistency in corporate finance: CEO personal and corporate leverage. *Journal of Financial Economics*, 103(1), 20-40.
- Crosby, R., & Gneezy, U. (2009). Gender Differences in Preferences. *Journal of Economic Literature*, 47(2), 448-474.
- Cutter, S., Barnes, L., Berry, M., Burton, C., Evans, E., Tate, E., & Webb, J. (2008). A place-based model for understanding community resilience to natural disasters. *Global Environmental Change*, 18(4), 598-606.
- Danes, S. M., Lee, J., Amarapurkar, S., Stafford, K., Haynes, G., & Brewton, K. E. (2009). Determinants of family business resilience after a natural disaster by gender of business owner. *Journal of Developmental Entrepreneurship*, 14(4), 333-354.
- Dezsö, C. L., & Ross, D. G. (2012). Does female representation in top management improve firm performance? A panel data investigation. *Strategic Management Journal*, 33(9), 1072-1089.
- Eckel, C. C., & Grossman, P. J. (2002). Sex differences and statistical stereotyping in attitudes toward financial risk. *Evolution and Human Behavior*, 23, 281-295.
- Eckel, C. C., & Grossman, P. J. (2008). Forecasting risk attitudes: An experimental study using actual and forecast gamble choices. *Journal of Economic Behavior and Organization*, 68, 1-17.
- Embrey, L. L., & Fox, J. J. (1997). Gender differences in the investment decision making process. *Financial Counseling and Planning*, 8(2), 33-40.

- Englander, A. (2015). Multidimensional ambiguity and individual willingness to take preventative action. Senior Thesis. Department of Economics, The Ohio State University.
- Estes, R., & Hosseini, J. (1988). The gender gap on wall street: An empirical analysis of confidence in investment decision making. *The Journal of Psychology*, 122(6), 577-590.
- Fernandez, J., & Coello, M.T. (2010). Do the BSRI and PAQ Really Measure Masculinity and Femininity. *The Spanish Journal of Psychology*, 13(2), 1000-1009.
- Fisher, P. J. (2010). Gender Differences in Personal Saving Behaviors. *Journal of Financial Counseling and Planning*, 21(1), 14-25.
- Flynn, J., Slovic, P., & Mertz, C. (1994). Gender, Race, and Perception of Environmental Health Risks. *Risk Analysis*, 14(6), 1101-1108.
- Gerber, B. J. (2007). Disaster management in the United States: Examining key political and policy changes. *Policy Studies Journal*, 35(2), 227-238.
- Graham, J., Stendardi, E. J., Myers, J. K., & Graham, M. J. (2002). Gender differences in investment strategies: An information processing perspective. *International Journal of Bank Marketing*, 20(1), 17-26.
- Henry, D., & Ramirez-Marquez, E. (2016). On the impacts of power outage during Hurricane Sandy - A resilience-based analysis. *Systems Engineering*, 19(1), 59-75.
- Hoffman, R.M., & Borders, L.D. (2001). Twenty-five years after the Bem Sex-Role Inventory: A reassessment and new issues regarding classification variability. Measurement and Evaluation in *Counseling and Development*, 34, 39-55.
- Hoogendoorn, S., Oosterbeek, H., & van Praag, M. (2013). The impact of gender diversity on the performance of business teams: Evidence from a field experiment. *Management Science*, 59(7), 1514-1528.
- Huang, J., & Kisgen, D. J. (2013). Gender and corporate finance: Are male executives overconfident relative to female executives? *Journal of Financial Economics*, 108, 822-839.

- Jensen, M. C., & Murphy, K. J. (1990). Performance pay and top management incentives. *Journal of Political Economy*, 98(2), 225-264.
- Kagel, J., & Roth, A. (. (1995). *The Handbook of Experimental Economics*. Princeton University Press.
- Kelly, J., Wildman, H. E., & Urey, J. R. (1982). Gender and sex role differences in group decision-making social interactions: A behavioral analysis. *Journal of Applied Social Psychology*, 12(2), 112-127.
- Kim, H., & Marcouiller, D. W. (2015). Considering disaster vulnerability and resiliency: The case of hurricane effects on tourism-based economies. *The Annals of Regional Science*, 54, 945-971.
- Kirchmeyer, C. (1996). Gender roles and decision-making in demographically diverse groups: A case for reviving androgyny. *Sex Roles*, 34(9), 649-663.
- Klenke, K. (2003). Gender influences in decision-making processes in top management teams. *Management Decision*, 41(10), 1024-1034.
- Martin, R., & Sunley, P. (2014). On the notion of regional economic resilience: Conceptualization and explanation. *Journal of Economic Geography*, 15, 1-42.
- Meier-Pesti, K., & Penz, E. (2008). Sex or gender? Expanding the sex-based view by introducing masculinity and femininity as predictors of financial risk taking. *Journal of Economic Psychology*, 29, 180-196.
- National Center for the Middle Market. (2016). Promoting Growth of the U.S. Middle Market. Accessed June 17, 2016 from [http://www.middlemarketcenter.org/Media/Documents/NCMM\\_InfoSheet\\_2016\\_Web.pdf](http://www.middlemarketcenter.org/Media/Documents/NCMM_InfoSheet_2016_Web.pdf).
- Nielsen, S., & Huse, M. (2010). The contribution of women on boards of directors: Going beyond the surface. *Corporate Governance: An International Review*, 18(2), 136-148.
- Nielsen, S., & Huse, M. (2010). Women directors' contribution to board decision-making and strategic involvement: The role of equality perception. *European Management Review*, 7, 16-29.

- Olsen, R. A., & Cox, C. M. (2001). The influence of gender on the perception and response to investment risk: The case of professional investors. *The Journal of Psychology and Financial Markets*, 2(1), 29-36.
- Opstrup, N., & Villadsen, A. R. (2014). The Right Mix? Gender diversity in top management teams and financial performance. *Public Administration Review*, 75(2), 291-201.
- Park, J., Cho, J., & Rose, A. (2011). Modeling a major source of economic resilience to disasters: Recapturing lost production. *Natural Hazards*, 58, 163-182.
- Pelland, D. (1996). Planning to survive; disaster management reaches mid-size firms. 43(9). Retrieved from <http://go.galegroup.com/ps/i.do?id=GALE%7CA18679719&v=2.1&u=colu44332&it=r&p=AONE&sw=w&asid=bc323519c3db0292ec0255ba5d4c86d2>
- Perrault, E. (2015). Why does board gender diversity matter and how do we get there? The role of shareholder activism in deinstitutionalizing old boys' networks. *Journal of Business Ethics*, 128, 149-165.
- Plott, C., & Smith, V. E. (2008). *Handbook of Experimental Economics Results* Volume 1. Amsterdam: North-Holland Press.
- Radecki, C. M., & Jaccard, J. (1996). Gender-role differences in decision-making orientations and decision-making skills. *Journal of Applied Social Psychology*, 26(1), 76-94.
- Robson, P. J., Jack, S. L., & Freel, M. S. (2008). Gender and the use of business advice: evidence from firms in the Scottish service sector. *Environment and Planning C: Government and Policy*, 26, 292-314.
- Rose, A. Z. (2004). Defining and measuring economic resilience to disasters. *Prevention and Management: An International Journal*, 13(4), 307-314.
- Rose, A. Z. (2007). Economic resilience to natural and man-made disasters: Multidisciplinary origins and contextual dimensions. *Environmental Hazards*, 7(4), 383-398.
- Rubin, G. (1975). "The Traffic in Women: Notes on the 'Political Economy' of Sex," in *Toward and Anthropology of Women*, Rayna R. Reiter, Ed. *Monthly Review Press*, New York, p 157-210.

- Schubert, R., Brown, M., Gysler, M., & Brachinger, H. W. (1999). Financial decision-making: Are women really more risk-averse? *American Economic Review*, 89(2), 381-385.
- Scott, J. M., & Irwin, D. (2009). Discouraged advisees? The influence of gender, ethnicity, and education in the use of advice and finance by UK SMEs. *Environment and Planning C: Government and Policy*, 27, 230-245.
- See, K. E., Morrison, E. W., Rothman, N. B., & Soll, J. B. (2011). The detrimental effects of power on confidence, advice taking, and accuracy. *Organizational Behavior and Human Decision Processes*, 116, 272-285.
- Sonfield, M., Lussier, R., Corman, J., & McKinney, M. (2001). Gender comparisons in strategic decision-making: An empirical analysis of the entrepreneurial strategy matrix. *Journal of Small Business Management*, 39(2), 165-173.
- Spence J.T., & Helmreich, R.L. (1978). *Masculinity & femininity: Their psychological dimensions, correlates, & antecedents*. Austin: University of Texas Press.
- Stafford, L., Dainton, M., & Haas, S. (2000). Measuring routing and strategic relational maintenance: Scale revisions, sex versus gender roles, and the prediction of relational characteristics. *Communication Monographs*, 67(3), 306-323.
- Stern, B. B., Barak, B., & Gould, S. J. (1987). Sexual Identity Scale: A new self-assessment measure. *Sex Roles*, 503-519.
- Vugrin, E. D., Warren, D. E., & Ehlen, M. A. (2011). A resilience assessment framework for infrastructure and economic systems: Quantitative and qualitative resilience analysis of petrochemical supply chain to a Hurricane. *Process Safety Progress*, 30(3), 280-290.
- West, C., & Zimmerman, D.H. (1987). Doing Gender. *Gender & Society*, 1(2), 125-151.
- Wharton, A.S. (2012). *The Sociology of Gender: An Introduction to Theory and Research* (2nd ed.). West Sussex, U.K.: Wiley-Blackwell.
- Yanico, B.J. (1985). BSRI scores: Stability over four years for college women. *Psychology of Women Quarterly*, 9, 277-283.
- Young, K.A. (2017). Essay 2. New Evidence of Androcentric Assimilation in U.S. Management Culture in Three Essays on the Importance of Public Intervention to

Improve Individual, Interactional, and Institutional Gender Equity and Outcomes. (Unpublished doctoral dissertation). The Ohio State University, Columbus, Ohio.

Young, K.A., Greenbaum, R.T., & Dormady, N.C. (2015). Gender in Middle Market Resilience Decision Making: Experimental Evidence, Association for Public Policy and Management 37th Annual Fall Research Conference, Miami, Florida, November 12-14, 2015.

Young, K.A., Greenbaum, R.T., & Dormady, N.C. (2016). Gender and Middle Market Resilience Decision Making: Experimental Evidence, Midwest Public Affairs Conference, Columbus, Ohio, June 2-5, 2016.

Zaichkowsy, J. (2014). Women in the board room: one can make a difference. *International Journal of Business Governance and Ethics*, 9(10), 91-113.

## Chapter 2 New Evidence of Androcentric Assimilation in U.S. Management Culture<sup>8</sup>

### Abstract

This essay examines whether androcentric, or masculine, attributes and behaviors remain requisite characteristics for leadership or managerial roles in the workplace. Prioritization of masculine attributes has important individual- and institutional-level implications including limited career mobility, role conflict, resistance to leadership by women, and perpetuation of gender inequality in society. The study aims to provide some current evidence of androcentric assimilation among U.S. managers by comparing self-reported identification with stereotyped masculine and feminine personality attributes of 1,013 male and female managers and non-managers (students). Full-factorial comparison of means and ordered logit regression analysis shows that female and male managers differ substantially on the femininity dimension of their personalities but do not differ in masculinity. The results show that although female managers and female students do not differ in femininity, female students are much less likely to report congruence with stereotypically masculine traits of dominance, assertiveness, forcefulness and aggressiveness. These results provide convergent and discriminant evidence of androcentric assimilation among managers and the simultaneously lack of emphasis of more communal or expressive (feminine) personality attributes. This analysis of gendered

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personality traits between manager and student subject pools presents a novel contribution to the biosocial role and management literature.

## Introduction

The increased participation of women in the labor force has brought more women into leadership and management roles<sup>9</sup> in many areas of society over the past several decades (Eagly & Carli, 2007). Yet the representation of women in some industries and in the highest levels of public and private sector institutions continues to be low. Internationally, women hold about half of middle manager-level positions but less than 5% of executive positions (Bolton, 2015). There are no women filling senior management roles in nearly 40% of businesses in G7 countries (Medland, 2016).

Various models and theoretical perspectives have been proposed to explain the underrepresentation of women in certain industries and middle and upper-level managerial roles. Biosocial origin theory, for instance, contends that preindustrial and industrial societies achieved task efficiency by directing males into roles requiring superior size and strength (Eagly & Carli, 2007). Social efficiencies directed women to domestic roles associated with caring for children and the needs of the family (Eagly & Carli, 2007). Males and females subsequently establish personalities and patterns of behavior based on the roles they occupy (Eagly & Carli, 2007). Traits like dominance, competitiveness, and aggressiveness were valued for the production tasks historically assumed by males, so these traits came to be linked with men and masculinity. Not only did traits associated with nurturing come to be identified with women and femininity, but

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<sup>9</sup> Following Eagly & Carli (2007) and Powell (2011) this essay will use leadership and management interchangeably.



much less wealth and power were associated with the family role. This contributed to the establishment of a social and economic gender hierarchy (Eagly & Carli, 2007).

Over time, social and cultural attributes and behaviors have also been implicitly, and firmly, attached to certain roles. The manager role has remained linked with skills, abilities, and behaviors stereotypically, associated with men and masculinity (Brenner, Tomkiewicz, & Schein, 1989; Eagly & Carli, 2007; Latu, et al., 2011; Stivers, 2002). This androcentrism<sup>10</sup> in management culture has persisted even as technological changes have meant more flexibility in the acceptable social and cultural roles for men and women and domestic and international workforces have seen substantial sex diversification over the past four decades. The communal, expressive traits associated with femininity have not been similarly linked with leadership and management roles. Biosocial origin theory, then, predicts competing norms regarding the appropriate attributes, attitudes, and behavior for women who would be managers. Expectations of femininity associated with their sex category may compete with expectations of the masculinity associated with management and leadership (Eagly & Carli, 2007).

The numbers of women who have become managers suggests that these competing role expectations are not insurmountable. Social identity theory can help explain how so many women have reconciled the conflict produced by competing social norms through assimilation to the androcentric management culture. Social Identity Theory (SIT) holds that an individual's concept of self encompasses his or her personal identity and social identity (Ashforth & Mael, 1989). Social identity is determined, to

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<sup>10</sup> Androcentrism is the privileging or centering of masculine experience or perspective as a neutral standard or norm in a culture (Bem, 1994).

some degree, by the defining characteristics of the various groups or categories with which an individual associates and identifies (Hogg & Terry, 2001). Identifying with the gender group corresponding to one's sex category would mean, on average, females tend to report increased congruence with femininity traits while males would align with masculine attributes. At the same time, the androcentrism in management culture prioritizes different in-group traits for membership in leadership or management positions. This may mean that men and women with typically feminine traits are either excluded from management or must conform, or assimilate, to the androcentric attributes considered prototypical of managers (Brenner, Tomkiewics, & Schein, 1989; Stivers 2002). Though individual men and women who seek career advancement through management tracks may have to adopt or perform the prototypical masculine traits of that social group, these attributes are typically assumed of males and not of females (Eagly & Carli, 2007). This leads to a gender differentiated burden. To be considered or chosen for leadership or management women, even those whose personalities are naturally comprised of more masculine attributes, may have to demonstrate assimilation to the androcentric management culture. They may need to prove they possess the leadership competences that are automatically associated with men (Eagly & Carli, 2007).

If women who are managers tend to self-identify with stereotypically masculine traits like ambitiousness, dominance, assertiveness, forcefulness, and aggressiveness, it can serve as an indication of pressures faced by women to assimilate to androcentric management culture. If men who are managers do not identify with stereotypical feminine attributes, it can indicate androcentric management culture that excludes the communal or expressive personality attributes historically associated with women and

femininity. This would be evidence of unique pressure for women to reconcile competing social and cultural norms in order to demonstrate qualifications for leadership or management roles. Such empirical evidence could shed light on the circumstances that may be impacting the number of women in top leadership positions.

Automatic gender associations and stereotypes uphold the idea that masculine attributes are necessary for effective leadership and management (Eagly & Carli, 2007). This requires assimilation and has several potential negative implications for women beyond the differentiated burden already identified. First, they lead to overt discrimination when men are assumed more competent leaders and promoted more frequently than women and hired and promoted more frequently (Eagly & Carli, 2007; Powell, 2011). Second, they can create role conflict for women leaders when expectations of their gender and job roles are competing. These types of conflict create emotional strain and resolution must be achieved “if the individual is to be happy and the organization is to prosper” (Biddle, 1986, p 73). In addition to the emotional labor required to internally resolve role incongruence, role conflict can lead to unfair performance evaluations for women managers. Women leaders who effectively exhibit masculine (agentic) behavior may be rejected as unfeminine (Eagly & Carli, 2003). Third, emphasis on androcentric attributes that contain elements of dominance, aggressiveness, and assertiveness are individualistic strategies that inhibit more communal or expressive ways of relating or managing. Fourth, prioritizing of androcentric attributes and behaviors perpetuates broader gender inequality in the society.

This study aims to test biosocial role and social identity theories that predict competing roles for women who are managers by comparing 1,013 individuals in student

and manager subject pools. The theory and extant literature informing this study is reviewed next. A description of the data and methods follows. The empirical strategy is summarized and results are presented before the implications and limitations of the research are discussed and conclusions are drawn.

### Literature & Hypotheses

At the heart Gayle Rubin's (1975) classic sex vs. gender theory is the idea that social processes prompt males and females to align their personalities and behavior based on socially constructed notions of what is preferred or appropriate for men and women, respectively. Applied together, biosocial origin theory (Eagly & Carli, 2007; Wood & Eagly, 2002) and social identity theory (Tajfel & Turner, 1979) shed light on how particular attributes and conduct become associated with sex and gender, and why individuals are motivated to adopt these traits and behaviors. First, the literature on biosocial origin, social role, and social identity theories, and the associated hypotheses, are presented. Literature and hypotheses about masculinity and femininity in management and the connections to assimilation with androcentric culture follow.

#### *Biosocial origin, role, and social identity theories*

The origins of gendered personalities, adoption of traits/behaviors that become typical of male/men and female/women groups, have been explored by feminist psychologists and sociologists (Bem, 1994; Eagly & Carli, 2007; Wharton, 2012; Wood & Eagly, 2002). Biosocial origin theory seeks to explain how, based on a sexual division of labor, men and women developed different roles to efficiently organize tasks in a society (Eagly & Carli, 2007; Wood & Eagly, 2002). Central to this theory is the interaction between male and female physical attributes and the social contexts in which

men and women live (Wood & Eagly, 2002). The foundations of the roles men and women assume in most cultures today can be traced to preindustrial and industrial societies. Task efficiency directed men, with superior size, strength and no ability to bear children, toward roles that put them in control over financial resources that set them up to gain social power. Task efficiency directed women toward domestic roles associated with caring for children and the needs of the family (Eagly & Carli, 2007; Wood & Eagly, 2002). Biosocial role theory contends that males and females establish personalities and patterns of behavior based on the roles they occupy (Eagly & Carli, 2007; Eagly & Karau, 2002). These gender roles are consensual, stereotyped, and prescriptive beliefs about men and women and the psychological traits that help them perform the tasks typical of each sex (Eagly & Karau, 2002; Wood & Eagly, 2002). Agentic traits like dominance, competitiveness, and aggressiveness were valued for the production tasks historically assumed by males, so these traits came to be linked with maleness, masculinity, and men. Not only did communal traits associated with nurturing, such as gentleness, sensitivity, sympathy, come to be identified with femininity and women, but much less wealth and power were associated with the family role that contributed to the establishment of a social and economic gender hierarchy (Eagly & Carli, 2007). Thus, skills, values, motives, etc., associated with sex roles become gender stereotypic and encompassed in the gender role (Wood & Eagly, 2002). Gender stereotypes emerge from a gendered division of labor when traits typically related to certain roles and behaviors are associated with the behavior of a specific individual (Eagly & Karau, 2002; Hoyt, 2012). Stipulations about how men or women should be are gender rule prescriptions. In

contrast, stipulations about how men or women should not be are proscriptions (Rudman, Moss-Racusin, Phelan, & Nauts, 2012).

Socially-based, gendered personalities and behaviors are influenced by culture and time (Eagly & Carli, 2007). They can be altered with changes in the economy, technology, and social structure of a society so that “changes in the psychology of women and men follow from changes in their roles” (Eagly & Carli, 2007, p 35). Cross-temporal meta-analysis looking at assertiveness in women from 1931-1993 provides empirical support for this aspect of biosocial theory (Twenge, 2001). Across these six decades, change in women’s assertiveness has increased or decreased in conjunction with their changing social roles and status (such as during and after periods of war), leading Twenge (2001) to conclude, “Social change is thus internalized in the form of a personality trait” (p 133).

Because most societies still function with sex-based divisions of labor, psychological differences based on sex are also still present in most cultures (Eagly & Carli, 2007; Hoyt, 2012). However, technological advancements in industrialized societies have lowered some barriers to women’s wealth and power equality (Eagly & Carli, 2007). This has brought some flexibility in the personalities and behaviors adopted by males and females. Beginning in the 1970s, Sandra Bem began examining the cultural constructions of masculinity and femininity and became one of the first to propose an individual ability to simultaneously adopt masculine and feminine personality attributes (Barak & Stern, 1986; Bem, 1974; Bem 1994). This work explores the formation of gender stereotypes based on associations between sex and descriptive and prescriptive traits and behaviors (Eagly & Carli, 2007). After undertaking multiple studies to identify

personality traits considered culturally appropriate and stereotypical with respect to gender, Bem incorporated these into a new scale, referred as the Bem Sex Role Inventory (BSRI), measuring masculinity and femininity (Bem, 1974; Bem, 1994). An association between biological sex category (male/female) and masculinity/femininity was preserved through Bem's assertion that the inventory measured the degree to which individuals subscribed to the culturally-determined personality traits desirable for males and females (Hoffman & Borders, 2011). Individuals who were "sex-typed" were people whose self-reported personalities aligned closely with culturally derived stereotypes of gender appropriateness (Bem, 1994). These individuals possessed a high degree of gender enculturation and their "mode of processing information could serve as a window into the consciousness of the culture as a whole" (Bem, 1994, p 136).

Multi-dimensionality, or the possibility of combining gendered attributes, was retained in the BSRI through a self-report inventory that asked each individual to rate her/himself on culturally appropriate female (20 items), male attributes (20 items), and filler attributes (20 items) using a 7-point Likert scale (Barak & Stern, 1986; Bem, 1994). Over time, the BSRI became a common means of conducting gender research, employed in social cognition, reasoning, relationship, sexual identity, and consumer behavior research (Barak & Stern, 1986; Bem, 1994; Fernandez & Coello, 2010; Hoffman & Borders, 2001; Stafford, Dainton, & Haas, 2000). It is still used extensively (Fernandez & Coello, 2010) but has been updated to reflect the influence of social changes on the gendered personality attributes that remain culturally appropriate (Barak & Stern, 1986; Bem, 1994; Stern, Barak, & Gould, 1987). As Table 2.1 shows, the modified BSRI

contains 20 total items, 10 representing stereotypic masculine personality attributes and 10 representing feminine personality attributes (Stern, Barak, & Gould, 1987).

Feminine Attributes	Masculine Attributes
Affectionate	A strong personality
Compassionate	Act like a leader
Eager to soothe hurt feelings	Aggressive
Gentle	Ambitious
Loyal	Assertive
Sensitive to others' needs	Competitive
Sympathetic	Dominant
Tender	Forceful
Understanding	Have leadership abilities
Warm	Willing to take a stand

*Note.* Table information from Barak & Stern, 1986.

Table 2.1 Gendered personality attributes included in the modified Bem's Sex Role Inventory

The psychological attributes predicted by biosocial role theory are present in the modified BSRI. Culturally desirable feminine attributes; affection, gentleness, understanding, etc., revolve around nurturing and affection (Eagly & Carli, 2007). These communal attributes are prescriptive for women (Rudman, Moss-Racusin, Phelan, & Nauts, 2012). The agentic norms of masculine psychological behavior; aggression, forcefulness, etc., are more confrontational and combative (Rudman, et al., 2012). As previously noted, technological change has meant some malleability in the acceptable social roles for women. But stereotypes tend to be resistant to change and may not represent contemporary reality (Powell, 2011). On the whole, descriptive gender stereotypes, such



as those included in the BSRI, have remained extraordinarily stable across culture, time and context, such as in work and domestic settings (Heilman, 2012).

Recent research has examined prescriptive (should be) and proscriptive (should not be) traits for men and women (Rudman, et al., 2012). Leadership ability, aggressive, assertive, ambitious, and competitive traits were among the prescriptive traits for men (Rudman et al., 2012). These five traits are included in the BSRI masculinity trait index. Warm and sensitive to others traits were prescriptive for women (Rudman et al., 2012) and also appear in the femininity trait index. Traits that are prescriptive or tolerated for one gender may be considered intolerable for another. Aggressiveness is a stereotypical and prescriptive trait for men but a proscriptive trait for women (Rudman, et al., 2012). Dominance, while not proscriptive for men, is another proscriptive for women (Rudman, et al., 2012).

While biosocial role theory provides insight into how specific personality traits become gender typical, social identity theory (SIT) provides insight into the social processes guiding male and female adoption of prototypical group identities. SIT holds that an individual's concept of self encompasses his or her personal identity and social identity and it is determined, to some degree, by the defining characteristics of the various groups or categories with which an individual associates and identifies (Hogg & Terry, 2001). These groups may include many different types of associations such as gender, age cohort, race, nationality, religion, political affiliation, or work groups (Ashforth & Mael, 1989; Hogg & Terry, 2001). Through stereotypes and norms, social identities both describe and prescribe an individual's attitudes and behaviors and can be used for self-reflective evaluation (Hogg & Terry, 2001). While Bem contends that

individuals are free to adopt a mix of masculine and feminine personality attributes, one consequence of SIT is that “individuals tend to choose activities congruent with salient aspects of their identities” (Ashforth & Mael, 1989, p 25).

Although social and cultural changes have accompanied women’s widespread entry into paid work, traditional gender stereotypes have been unremitting (Eagly & Karau, 2002). Since sexual division of labor continues to play a highly influential role in modern social structures, biosocial role theory and SIT can be used to hypothesize a two factor model of gendered personality attributes and the continued adoption of personality attributes along sex category lines, in the aggregate.

*Hypothesis 1: Culturally gendered personality attributes still correspond with two latent factors, masculinity and femininity*

Identifying with the gender group corresponding to one’s biological sex assigned at birth would mean, on average, females tend to report increased congruence with femininity traits while males would align with masculine attributes. The second hypothesis is as follows:

*Hypothesis 2: Mean femininity factor scores will be higher for females and mean masculinity factor scores will be higher for males.*

#### *Femininity and management culture*

Comparative studies of leadership style have shown that female leaders tend to adopt and enact a transformational leadership style more often than men (Eagly & Carli, 2003; Eagly, Johannesen-Schmidt, & van Engen, 2003). The four component behaviors included in the transformational leadership style are idealized influence (i.e., being a role

model), individualized consideration (i.e., showing concerns for the needs and feelings of others), inspirational motivation (i.e., motivating people to pursue and achieve a worthwhile goal), and intellectual stimulation (i.e., challenging followers to be creative) (Bass, 1990). Although transformational leadership certainly does not rely on uniquely feminine traits or behavior, this leadership form has been characterized as more communal or expressive and thus more in line with feminine modes of interaction (Eagly, Johannesen-Schmidt, & van Engen, 2003; Powell, 2011). An individual's sex has been shown to be a significant predictor of communal<sup>11</sup> behavior with women adopting communal behavior more often (Eagly, Johannesen-Schmidt, & van Engen, 2003). Research has also shown transformational leadership is more effective than transactional or laissez-faire types, which are more commonly adopted by men (Eagly, Johannesen-Schmidt, & van Engen, 2003).

Mass-market books and scholarly papers published over the past several decades have brought a lot of attention to the transformational leadership style (Eagly, Johannesen-Schmidt, & van Engen, 2003). This may have worked to increase the value of feminine personality traits among managers. If so, if femininity traits are also emphasized for leadership, managers will exhibit higher femininity scores, regardless of sex category. Similar masculinity and femininity scores have been observed for male and female business school graduate students while undergraduate males and females differed (Powell & Butterfield, 1979). If, on the other hand, femininity traits are not highly valued for management and leadership selection and practice, male and female managers would

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<sup>11</sup> Examples of communal behavior include expressiveness, friendliness, unselfishness, and concern for others.

continue to differ in this gender dimension. The literature provides several reasons to expect this second circumstance. Sex-based, societal-level changes in masculinity and femininity have been noted, but most of the observed changes have related to the roles of women (Barak & Stern, 1986). Writing in 1987, Stern, Barak, and Gould note,

Women's roles have shifted... and they now feel sufficiently flexible to identify their interests and actions as neither masculine nor feminine. This duality might allow for functional success in the male world of work as well as in the female sphere of relationships. Men, however, do not appear to feel the same freedom to self-label as neither masculine/feminine. Males are apparently not as ready as females to leave the camp of firmly biological sexual identification, perhaps because women have embraced a masculine "place" in society far more enthusiastically and with greater success than men have accepted a feminine domestic sphere. (p 515).

This one-sided gender shift has been observed in later studies as well. A meta-analysis that examined BSRI scores for 63 undergraduate student samples collected between 1973 and 1994 showed marked changes in mean gendered personality attributes over time (Twenge, 1997). A steep, linear increase in masculinity is observed among the female undergraduates during the 30 year period with average scores changing from 4.57 to 5.16 on a 7-point scale (Twenge, 1997). No similar magnitude in changes was observed for femininity in males, but a slight increase in femininity among men was noted along with a linear increase in masculinity (Twenge, 1997). The undergraduate students in the 1990s samples would have grown up in a "unisex" era of the 1970s while the 1970s sample groups experienced a much more conservative and gendered social climate (Twenge, 1997). Supporting evidence beyond the changes in means comes from

classifications of individual scores. With the original (1970s-era) BSRI sample group, 20% of women were classified as having high masculinity scores (Twenge, 1997). Using the same scoring method on samples gathered in 1992 and 1994 showed half (50%) of the women had masculine or “near-masculine” personalities. Men were not equally influenced toward more expressivity and communal personality (aka feminine) attributes (Twenge, 1997).

Studies have shown benefits from transformational leadership and androgynous management personalities, but the studies cited above tell a compelling story of hesitation among men in adopting culturally desirable feminine attributes. This argues against the likelihood that feminine attributes are prioritized for management in the way that masculine attributes have been. The fourth hypothesis is as follows:

*Hypothesis 3: Managers and students within the same sex categories will not show differences in their average femininity factor scores*

#### *Masculinity and management culture*

At a fundamental level, masculine practices are often meant to convey a unique capacity for exerting control and maintaining “the illusion that men are more fit for certain kinds of jobs, especially those that involve the exercise of command” (Schrock & Schwalbe, 2009 p 287). While masculinity has been characterized as eliciting subordination, management and leadership have historically possessed implicit underpinnings of authority, power, and subordination. Since the early 1970s, the question of the role of gender related to management has been a recurring subject of interest. Over this 45 year period, numerous scholars have examined whether masculinity

characteristics are requisite traits for managers in the private and public sectors (Brenner, Tomkiewicz, & Schein, 1989; Deem, 1998; Powell & Butterfield, 1979; Stivers, 2002). Scholars have explained how, historically, the norms and understandings surrounding the attributes of “good” managers and leaders were masculinized concepts (Eagly & Carli, 2007; Stivers, 2002). For instance, expertise can be gendered through concepts of scientific objectivity or avoiding bias through distancing oneself from the “disorderly, feminine field of observation,” (p 43) as well as through the notions of autonomy and hierarchical authority (Stivers, 2002).

Gendered concepts of management exist in the public sector as well. Here, leadership has involved tropes of father leaders while cultural expectations of feminine behavior have conflicted with these images (Stivers, 2002). Images of virtue associated with public service motivation include masculine concepts of guardianship, honor, heroism and citizenship. Thus, by denying responsive femininity in favor of active masculinity, professional autonomy and management is gendered (Stivers, 2002). These circumstances work to both privilege some ways of approaching business and public sector relationships and also to marginalize women, people of color and others who do not conform to them (Stivers, 2002).

In 1979, Powell and Butterfield used the BSRI to research whether any deviation “from the sex typing of the managerial procession as masculine” (p 395) had accompanied the increase in demand for female managers. Their results showed that masculine, not androgynous,<sup>12</sup> terms were used to describe “good managers” by both

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<sup>12</sup> Individuals possessing a high degree of congruence with both masculinity and femininity traits are said to be androgynous (Bem, 1994).

women and men. They also claimed that the increasing numbers of females becoming managers were adapting themselves to masculine management standards rather than initiating change in the perceived managerial standards.

A decade later, Brenner et al. (1989) again noted strong persistence among male managers in perceiving masculine traits to be necessary for managers though female managers did not. Their conclusion was that changes in women's perceptions of women in general were responsible for this shift rather than any change in attitudes about what are considered ideal attributes for managers (Brenner et al., 1989). At the same time, they noted that the persistence of men's prioritization of masculine characteristics meant a challenge for women moving into management roles. Women have made gains during the 27 years since this study was published but still hold far fewer management positions than men (Bolton, 2015). Today, about half of middle management positions but only about 5% percent of executive management positions are held by women internationally (Bolton, 2015). Despite this progress, leader stereotypes have remained relatively unchanged (Powell, 2011). Female managers still face unique challenges in overcoming enduring negative perceptions about their leadership capabilities and effectiveness (Latu, et al., 2011; Scott & Brown, 2006). Recent studies have revealed a discrepancy between expressed and implicit associations of women leaders. While outwardly professing views that reflect gender equality, males continue to implicitly connect traits of successful managers with men and unsuccessful manager traits with women (Latu, et al, 2011). Both males and females are more likely to allocate work-related rewards to managers who are men (Latu, et al., 2011). Psychology research on immediate and automatic behavior encoding based on traits, such as gender, provides more evidence of enduring gender bias

(Scott & Brown, 2006). Subjects more readily associated agentic behaviors and prototypical leadership roles when a leader in a vignette was portrayed as male rather than female (Scott & Brown, 2006).

Social identity processes observed in organizational contexts can also help to explain the persistence of masculinity traits associated with traditional management (Ashforth & Mael, 1989; Hogg & Terry, 2001). Organizational socialization describes the process of symbolic interactions through which newcomers, initially unsure of their position and identity with respect to the organization, learn the organizational structures, norms and expectations (Ashforth & Mael, 1989). While women entered the workforce in increasing numbers, men continued to occupy leadership and management positions at all levels. As women pursued promotion into these roles, they sought to identify with a group for which the prevailing masculine norms had gone unchallenged. When masculinity is prioritized for management roles, congruence with the masculine traits that distinguishes managers would have been necessary for consideration, selection or inclusion into the ranks of management, regardless of the sex or gender of the candidate. This is manifest in prototypicality, a key element in the self-categorization theory that comprises a newer development of social identity theory (Hogg & Terry, 2001). Group prototypes, the cognitive representations of the fundamental stereotypical characteristics of social groups, are constructed from social interactions and influenced primarily by whichever outgroup is most salient for the given context (Hogg & Terry, 2001). Individuals who perceive themselves as members of a group, managers for instance, will base their attitudes and behaviors on relevant prototypes and evaluate themselves and others based on degree of conformity (Hogg & Terry, 2001). If traits such as



assertiveness, competitiveness, or decisiveness were prototypical of management groups while men dominated these roles, then women and men entering into management may have sought to align their personalities and behaviors with these traits as part of the group identification process and to be considered as part of the group by others.

Although it is just one factor influencing leadership, personality is an important component (Eagly & Carli, 2007). Scholars have downplayed the importance of dominance and aggression for leadership and management and argue other traits are more relevant (Eagly & Carli, 2007). Intelligence, extraversion, and morality are personal qualities regarded as more important for good leadership, and men and women have shown few or small differences in these areas (Eagly & Carli, 2007). Managers who take a transformational, as opposed to transactional or laissez-faire style, have been reported to be more effective (Eagly & Carli, 2003). Still, research shows participants associate tyranny and strength with male managers and sensitivity with female managers (Johnson, Murphy, Zewdie, Reichard, 2008). The dearth of women in the highest leadership positions and the double-bind facing the women who do advance to those heights mean there may still be a practical question as to whether this optimal combination of personality attributes is actually reflected in the prioritization of attributes that underpin management culture. If more masculine personality attributes persist as identifying qualifications then those who select into management (or are selected into those roles), would exhibit greater congruence with masculinity traits than those who are not managers, regardless of their biological sex. The third hypothesis is as follows:

*Hypothesis 4: Managers will have higher masculinity factor scores than non-managers (students)*

*Androcentric assimilation*

The persistence of androcentric management culture creates an assimilation imperative for women who seek leadership roles or management positions. As noted previously, SIT suggests that an “individual typically adopts those characteristics perceived as prototypical of the groups with which he or she identifies” (Ashforth & Mael, 1989, p 27). Female managers may identify with their gender group and organizational groups such as management groups. If, in general, females tend to identify with women as a social group and adopt prototypical feminine personality attributes and if masculine attributes are prioritized for management, then women who seek (or are sought for) management positions must either be predisposed to exhibiting masculinized management traits or develop them (Stivers, 2002; Brenner et al., 1989). In this situation, the social norms associated with feminine attributes might compete with the norms associated with androcentric managerial culture (Eagly & Carli, 2007) and could impose inconsistent demands on an individual (Ashforth & Mael, 1989, Eagly & Carli, 2007; Hogg & Terry, 2001). When these individual identities are at odds with social/professional group norms, incompatible expectations arise leading to role conflict in the workplace (Ashforth & Mael, 1989; Biddle, 1986).

While SIT views role conflict as an inherent circumstance of social participation, it does not recognize an on-going need to resolve role conflicts (Ashforth & Mael, 1989). “Only when individuals are forced to simultaneously don different hats does their facility

for cognitively managing conflict break down” (Ashforth & Mael, 1989, p 31). In Western societies, women are particularly prone to role conflict due to the incongruence between traditional gender and professional roles (Biddle, 1986). Those who conform to a hegemonic ideal of masculinity are the most likely to obtain advantages in positions and occupations that privilege male superiority (Acker, 1992; Eagly & Carlie, 2007; Schrock & Schwalbe, 2009). This implies an incentive for women to resolve role conflict through assimilation to androcentric management culture in order to be selected into a sought after leadership or management role. What is more, gender is an involuntary and immediate cognitive shortcut for classifying information and is a stronger foundation for categorization than race, age or other characteristics (Eagly & Carli, 2007). Therefore, women in management may be forced into reconciling this role conflict more often than with other types of social group-related role conflicts. This implies something more than an incentive to assimilate with androcentric management culture, it implies an assimilation imperative for would-be women leaders.

Beyond the instigation of internal role conflict, androcentric assimilation presents other challenges for women managers. Some of these challenges are relational problems caused by perceived role incongruence, or the clash of norms of gendered behavior and expectations of managerial behavior (Eagly & Carli, 2007; Eagly & Karau, 2002). Women may be assumed to lack leadership competence or be thought unfit for management because they do not possess the agentic traits necessary for management. This is an example of misalignment between descriptive gender stereotypes (how men/women are) assumptions about requisite management traits (Heilman, 2012). Women managers are then held to a higher standard, needing to prove their abilities, but

can also be rejected for displaying the direct, assertive, dominant, or otherwise agentic qualities that are associated with men and leadership (Eagly & Carli, 2003, 2007; Rudman, et al., 2012). A double-bind occurs when, “highly communal female leaders may be criticized for not being agentic enough. But female leaders who are highly agentic may be criticized for lacking communion” (Eagly & Carli, 2007, p 102). This social role incongruence requires women to balance their assimilation to androcentric management culture with the retention of some performance of the feminine or communal roles expected of them as females. The penalties, or backlash, against women who display counter-stereotypical behavior reinforce a power and control double-standard that preserves male dominance (Rudman, et al., 2012). While women are sometimes penalized for exhibiting dominance and are considered less likable when they lack warmth, men are not similarly impacted.

In short, no comparable balancing act has been required of men in professional contexts (Eagly & Carli, 2007). Some have found that gender-inconsistent behavior is acceptable as long as it is accompanied by gender-consistent behavior (Johnson, et al., 2008). For example, strength is an acceptable trait of female leaders as long as strength is accompanied by sensitivity (Johnson, et al., 2008). Failure to satisfactorily balance competing roles may mean discrimination in hiring during the management selection process (Eagly & Carli, 2007; Powell, 2011; Rudman, et al., 2012). Men particularly perceive women leaders as competing for position and authority and are especially resistant to female’s exerting influence. Since a large majority of promotion and pay decisions are still made by men, the double-bind may mean unfavorable performance evaluations for women who engage in direct or assertive behavior or their being passed

over for promotion (Eagly & Carli, 2007; Eagly & Karau, 2002; Heilman, 2012). Women performing similarly to men often receive lower ratings on their evaluations (Powell, 2011). Strong male managers are evaluated more positively than strong and/or sensitive female leaders (Johnson, et al., 2008). Female leaders avoid backlash when they eschew leadership duties, such as taking charge and giving directions, seen as a privilege of male leaders (Rudman, et al., 2012). Women leaders have also been evaluated more unfavorably than men in traditionally male dominated organizational context such as business and when autocratic and non-participative management styles are employed (Eagly, Makhijani, & Klonsky, 1992).

Plenty of women overcome these challenges and assume leadership and management positions. In fact, an increase in the numbers of women in leadership roles, including into the highest levels of corporate and government leadership, has been cited as evidence of the elimination of both cement wall and glass ceiling barriers (Eagly & Carli, 2007). Yet the underrepresentation of women leaders in some industry sectors and at executive levels has prompted Eagly & Carli to craft a new image, the labyrinth, that realistically represents contemporary “challenges confronting women as they travel, often on indirect paths, sometimes through alien territory, on their way to leadership” (2007, p1). Impediments facing would-be women leaders include outdated notions of males as naturally possessing leadership traits, family responsibilities, organizational policies and practices (Eagly & Carli, 2007). The women who make it through the labyrinth may develop a strong professional association with their management group.

Professional/organizational identity has been shown to supersede other group identities in value (Hogg & Terry, 2001). When a new identity is valued to a higher

degree, an individual may unlearn traits and behaviors that characterize the prior identity (Ashforth and Mael, 1989). Two elements are understood to determine the salience of a particular identity; the internally-driven subjective importance of the identity and the situational relevance influenced by external norms (Ashforth & Johnson, 2001). If management group identities are valued more than gender group identities then assimilation would occur. Women would become more like men in terms of stereotypic masculine attributes. Differences in masculinity between females who are managers and females who are students would reflect assimilation with androcentric management culture and the resolution of role conflict in favor of the management group. As such, the fourth and fifth hypotheses are as follows:

*Hypothesis 5: Females who are managers will have higher masculinity factor scores than females who are not managers (students).*

*Hypothesis 6: Females and males who are managers will not have different masculinity factor scores.*

#### Data and Methods

The data used in this study come from a larger collaborative experimental research project (Young, Greenbaum, & Dormady, 2016; Young, Greenbaum, & Dormady, 2015). These data were derived from pre- and post-experiment surveys that asked subjects' their biological sex, about their backgrounds and questions about their perceptions while making decisions during the experiment. Subjects from undergraduate and manager subject pools were surveyed during October 2015 and January 2016. In addition to providing biological sex, race, ethnicity, and other individual information,

subjects were asked to complete a disguised self-assessment based on Bem's Sex-Role Inventory (BSRI), a dominant gender research instrument since its development in the 1970s by Sandra Bem (Hoffman & Borders, 2001). The Modified Bem's Sex Role Inventory (Stern, Barak, & Gould, 1987) is a series of 20-items comprising a society's cultural definitions of maleness and femaleness (Hoffman & Borders, 2001). The scale asks subjects to rate their congruence with 10 feminine sex role traits and 10 masculine traits according to a 7-point Likert scale. The 20 items associated with femininity and masculinity are listed by gender in Table 2.1, but were alphabetized in the survey to avoid priming. The items are aggregated to obtain a score on each index for each subject, the femininity trait index score (FTI) and the masculinity trait index score (MTI). The minimum possible score is 10 and the maximum is 70 (Stern, Barak, & Gould, 1987).

The original data set included 1,155 experimental subjects but because the modified BSRI was developed for a U.S. cultural context, only subjects who reported growing up in the United States were included in this study. The final data set included 1,013 subjects. Descriptive statistics are presented in Table 2.2. There are 491 female subjects and 522 males. Managers account for 40.57% of the subjects (411 in total).

<b>Variable</b>	<b>Obs</b>	<b>Mean</b>	<b>Std. Dev.</b>	<b>Min</b>	<b>Max</b>
Female	491	48.47%	0.50	0	1
Manager	411	40.57%	0.49	0	1
Age	1013	33.90	17.36	18	81
Student Age	602	21.21	2.79	18	55
Manager Age	411	52.48	12.25	24	81
Married (Y/N)	373	36.82%	0.48	0	1
White/Caucasian	869	85.78%	0.35	0	1
Asian	20	8.98%	0.29	0	1
Hispanic	38	5.73%	0.27	0	2
Black/African American	48	4.74%	0.21	0	1
Native American	17	1.68%	0.13	0	1
Pacific Islander	5	0.49%	0.07	0	1
Other	21	2.07%	0.14	0	1

*Note.* n = 1,013.

Table 2.2 Descriptive Statistics - Individual Characteristics

### *Analytical strategy*

To test Hypotheses 1 and 2, principal factor analysis is performed for the 20 modified BSRI items. Then, differences in means tests and logistic and ordered logit regression analyses are performed to examine the hypotheses about femininity (H3), masculinity (H4), and androcentric assimilation (H5 and H6) in management culture while controlling for other covariates. To further test the masculinity, femininity, and assimilation hypotheses, predicted factor scores that account for the influence of control variables estimated after seemingly unrelated regression analysis are compared. Finally supplemental analysis on the modified BSRI attributes is conducted to examine which personality traits, specifically, drove the observed results. These findings are presented last.



Principal factor analysis with the number of latent factors not specified and no rotation method is conducted in Stata 13. The latent root criterion that recommends retained factors should account for the variance of at least one variable will be used so that only the factors with eigenvalues (latent roots) greater than 1 are considered (Hair, et al., 2006). Consistent with the approach used in the extant literature, Varimax (orthogonal) factor rotation is done to enable direct comparison between historical and current results. The literature predicts the masculinity and femininity latent factors are uncorrelated but hypotheses will be tested using Promax (oblique) factor rotation that does not prohibit correlation between the factors. The Cronbach's Reliability (alpha) Test that provides an indication of reliability for scales that include Likert responses on numerous items will be reported (StataCorp, 2013).

Differences in means derived from saved factor scores are tested using t-tests in a full factorial structure that compares all combinations of students, managers, males, and females. Because the full factorial structure incorporates multiple pairwise comparisons, the Tukey honestly significant difference (HSD) method is used to reduce the Type I error inflation that can occur with multiple tests (Hair, Black, Babin, Anderson, & Tatham, 2006). Among the options for post hoc multiple comparison methods, HSD is considered conservative (Hair et al., 2006). When applied to a limited number of comparisons with large effect sizes, this method accurately identifies group differences (Hair et al., 2006).

Seemingly unrelated regression (SUR) provides results to examine the influence of individual characteristics on the masculinity and femininity scores. This analysis method is comparable to multivariate multivariable analysis in which the influences of a

number of predictor and control variables are of simultaneous interest for two or more dependent variables. Finally, pairwise comparisons of differences in means of predicted factor scores are conducted to confirm prior results while controlling for known covariates of gendered personality attributes. The Bonferroni method is used to reduce the threat of Type I error. Lastly, to further examine within- and between-group differences, each of the ten masculinity items from the modified BSRI scale serve as a dependent variable and are analyzed with ordered logistic regression in direct and moderated effects models. Stata 13 is used for each of these analyses.

Signifying masculine practices are known to vary not only based on generation, but also on race, ethnicity, and class (Schrock & Schwalbe, 2009). When they are not the focus of the research directly, each of these may comprise important controls for gender studies. For instance, increased resistance to authority reported by black women may be related to an interaction style that is more direct (Eagly & Carli, 2007). Proscriptions related to dominance have been shown to differ for black men and women (Rudman, et al., 2012). In recent years, much has been discussed about the uniqueness of the generational group known as Millennials (born between 1980 and 1999) and the actions necessary to foster collaboration and the productive professional cohabitation of an intergenerational workforce. Control variable representing race, ethnicity, and birth cohort will be used in each analysis.

## Analysis & Results

### *Descriptive statistics*

Table 2.3 provides descriptive statistics for each item on the modified BSRI scale (Bem, 1974; Barak & Stern, 1986). The first ten items listed correspond to the femininity

scale. The highest mean score was 6.03 on a 7 point Likert scale for the Loyalty item.

The lowest was 3.81 for Forceful. Overall mean factor scores for the two latent variables, femininity and masculinity are shown as well.

<b>Variable</b>	<b>Mean</b>	<b>Std. Dev.</b>	<b>Min</b>	<b>Max</b>
Femininity	0.00	1.05	-2.98	2.07
Loyal	6.03	0.99	2	7
Understanding	5.49	1.07	1	7
Sensitive to others' needs	5.37	1.17	1	7
Compassionate	5.35	1.260	2	7
Sympathetic	5.27	1.23	1	7
Warm	4.97	1.24	1	7
Affectionate	4.93	1.30	1	7
Eager to soothe hurt feelings	4.81	1.45	1	7
Gentle	4.65	1.18	1	7
Tender	4.52	1.35	1	7
Masculinity	0.05	1.05	-3.08	2.52
Have leadership abilities	5.53	1.14	1	7
Willing to take a stand	5.51	1.14	2	7
Competitive	5.29	1.34	1	7
Ambitious	5.28	1.23	1	7
Act like a leader	5.18	1.20	1	7
A strong personality	5.13	1.28	1	7
Assertive	4.72	1.30	1	7
Dominant	4.37	1.37	1	7
Aggressive	3.81	1.43	1	7
Forceful	3.52	1.33	1	7

Note. n = 1,013.

Table 2.3 Descriptive Statistics - Modified BSRI Personality Attributes

Correlations between the items on the Modified BSRI can be seen in Table 2.3.

Sympathetic & Sensitive (both part of the femininity index) have a correlation of 0.81.

Act Like a Leader and Willing to Take a Stand (both part of the masculinity index) have a correlation of 0.74. These correlations will not prove problematic, however, because none of the analyses require these variables to be included in the same models.

Control variables for race and nationality are taken from subjects' post-survey responses. Age is highly correlated with student status (0.885, not shown). To avoid multicollinearity, birth cohort control variables are used in all analyses. The birth years used to define ranges for categorizing individuals into generations vary widely from study to study, but this research adopts a four-generation typology outlined in Table 2.5 (Balda, 2011; Lyons & Kuron, 2013; Strauss & Howe, 1991). According to this system, Millennials have birth years between 1980 and 1999 (inclusive), while those in the Generation X cohort were born between 1965 and 1979 (Balda, 2011; Strauss & Howe, 1991). The range of birth years for Baby Boomers is 1946-1964 (Balda, 2011; Strauss & Howe, 1991). The Silent Generation birth years span precisely two decades, from 1925-1945 (Balda, 2011; Strauss & Howe, 1991). Comparisons of models including birth cohort controls (i.e., age) variables produced results that were not substantially different.

	Affection.	Loyal	Tender	Sensitive	Sympathetic	Compassion	Soothe	Understanding	Gentle	Warm	Leadership	Take a stand	Ambitious	Competitive	Dominant	Assertive	Strong Person	Forceful	Leader (act)	Aggressive
Affectionate	1.00																			
Loyal	.27	1.00																		
Tender	.62	.26	1.00																	
Sensitive to needs	.52	.45	.64	1.00																
Sympathetic	.51	.38	.68	.82	1.00															
Compassionate	.63	.34	.63	.63	.68	1.00														
Soothe feelings	.50	.21	.57	.59	.63	.58	1.00													
Understanding	.44	.45	.55	.63	.61	.58	.45	1.00												
Gentle	.52	.26	.64	.54	.54	.53	.49	.48	1.00											
Warm	.61	.32	.71	.60	.59	.60	.51	.60	.56	1.00										
Leadership abilities	.23	.38	.12	.21	.13	.17	.10	.31	.12	.20	1.00									
Take a stand	.15	.38	.10	.15	.11	.14	.02	.25	.06	.18	.50	1.00								
Ambitious	.16	.25	.08	.13	.09	.15	.09	.17	.10	.12	.45	.32	1.00							
Competitive	.05	.22	-.04	-.01	-.03	.06	.02	.07	.01	-.03	.32	.27	.40	1.00						
Dominant	.02	.14	-.07	-.08	-.12	-.06	-.04	-.05	-.11	-.08	.40	.40	.31	.48	1.00					
Assertive	.08	.20	-.02	.01	-.04	.04	-.05	.04	-.07	.03	.44	.48	.38	.32	.59	1.00				
Strong personality	.15	.24	.01	.01	-.04	.01	-.02	.06	-.06	.05	.47	.46	.30	.31	.51	.50	1.00			
Forceful	-.05	.01	-.09	-.13	-.16	-.14	-.13	-.14	-.15	-.10	.22	.31	.13	.22	.55	.50	.41	1.00		
Act like a leader	.21	.31	.05	.11	.02	.10	.04	.16	.01	.11	.73	.49	.41	.34	.50	.53	.65	.33	1.00	
Aggressive	.00	.07	-.05	-.10	-.16	-.11	-.10	-.10	-.14	-.09	.23	.33	.21	.30	.56	.49	.46	.61	.36	1.00

Table 2.4 Correlation Matrix for Modified BSRI Items

Common Name	Birth year range <sup>a</sup>	Obs	Mean	Std. dev.	Min	Max
Millennial	1980-1999	654	64.56%	.48	0	1
Generation X	1965-1979	124	12.24%	.33	0	1
Baby Boom	1946-1964	213	21.03%	.41	0	1
Silent Generation	1925-1945	22	2.17%	.15	0	1

Note. n = 1,013.

<sup>a</sup> Category ranges based on information from Balda, 2011; Lyons & Kuron, 2013; Strauss & Howe, 1991.

Table 2.5 Birth cohort categorization and descriptive statistics

### *Social role and social identity analysis results*

The modified BSRI (Bem, 1974, Barak & Stern, 1986) is an established scale but several decades have passed since the traits were identified as representing norms of masculinity and femininity. Principal factor analysis is performed to assess the validity of the Modified BSRI scales. Spence and Helmreich argue that although feminine and masculine attributes are not polar opposites of a single dimension, they “are separate and essentially orthogonal dimensions” (1978, p 3). However, using orthogonal rotation in the factor analysis enforces this assumption, regardless of whether the latent variables are actually independent. An oblique factor rotation would find an orthogonal relationship if it is true (if there is factor independence) but does not explicitly impose the independence restriction. Therefore, Promax (oblique) rotation method is used, which does not prohibit correlation between the factors.

The results of principal factor analysis with number of factors unspecified, no rotation method used produced the eigenvalues are shown in Table 2.6. Two factors account for a cumulative proportion of 93.8% of the variation in these data. The scree

plot in Figure 2.1 shows not only that there are only two factors with eigenvalues greater than 1 (5.76 and 4.32, respectively) but that there is a large discontinuity between the eigenvalues representing the second and third factors. The latent root criterion that factors with eigenvalues greater than 1 should be retained (Hair, et al., 2006) suggests that the items representing masculinity and femininity attributes do still load onto two factors, providing preliminary support for Hypothesis 1.

Factor	Eigenvalue	Difference	Proportion	Cumulative
Factor 1	5.78	1.46	53.67%	53.67%
Factor 2	4.32	3.55	40.08%	93.75%
Factor 3	.77	.38	7.14%	100.89%

Note. n = 1,013.

Table 2.6 Exploratory Eigenvalues

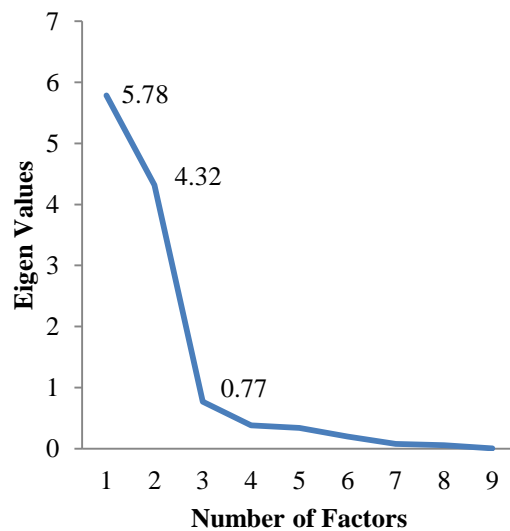


Figure 2.1 Scree Plot of Exploratory Eigenvalues

Table 2.7 compares the factor analysis results for these data to results of Stern, Barak, & Gould (1987). In the 1987 study, a convenience sample of 698 females provided responses on for the modified Bem's Sex Role Inventory. The factor analysis results of that study are compared against the results of the current research in Table 2.7. The internal reliability coefficient (Cronbach's alpha) for the 20-item scale reported by Stern et al. (1987) was .88. The factor loadings (with a promax rotation) on the items for the Femininity Trait Index in the current study range from .43 to .85 and loadings on the items for the Masculinity Trait Index range from .49 to .78. The Cronbach's alpha for the 20-item scale in the current study is .85. These results are very similar to the results reported in the Stern et al. (1987) study. Taken together, these results suggest that despite its age, this scale is still a relevant tool for assessing socially determined gender differences. This is confirmatory support for Hypothesis 1.



Variable	1987 Females <sup>a</sup> (Varimax rotation)		2016 Females (Varimax rotation)		2016 Females & Males (Promax rotation)	
	Fem.	Masc.	Fem.	Masc.	Fem.	Masc.
Affectionate	<b>.59</b>	.21	<b>.66</b>	.08	<b>.69</b>	.10
Loyal	<b>.60</b>	.13	<b>.43</b>	.36	<b>.43</b>	.32
Tender	<b>.72</b>	.20	<b>.80</b>	-.03	<b>.81</b>	-.05
Sensitive to needs	<b>.62</b>	.23	<b>.83</b>	.03	<b>.84</b>	-.01
Sympathetic	<b>.70</b>	.06	<b>.85</b>	-.03	<b>.85</b>	-.09
Compassionate	<b>.76</b>	.16	<b>.78</b>	.02	<b>.79</b>	.00
Eager soothe	<b>.60</b>	.06	<b>.65</b>	-.09	<b>.69</b>	-.07
Understanding	<b>.69</b>	.18	<b>.75</b>	.12	<b>.73</b>	.07
Gentle	<b>.72</b>	.04	<b>.70</b>	-.09	<b>.70</b>	-.09
Warm	<b>.72</b>	.16	<b>.81</b>	.01	<b>.78</b>	.01
Leadership abilities	.09	<b>.74</b>	.25	<b>.69</b>	.21	<b>.67</b>
Willing take stand	.24	<b>.59</b>	.20	<b>.63</b>	.14	<b>.62</b>
Ambitious	.21	<b>.55</b>	.22	<b>.42</b>	.14	<b>.49</b>
Competitive	-.05	<b>.58</b>	.01	<b>.46</b>	-.02	<b>.50</b>
Dominant	-.18	<b>.62</b>	-.15	<b>.74</b>	-.16	<b>.75</b>
Assertive	.14	<b>.69</b>	-.05	<b>.73</b>	-.06	<b>.73</b>
Strong personality	.26	<b>.69</b>	-.05	<b>.73</b>	-.03	<b>.72</b>
Forceful	.00	<b>.69</b>	-.21	<b>.54</b>	-.23	<b>.59</b>
Act like a leader	.02	<b>.72</b>	.06	<b>.81</b>	.08	<b>.78</b>
Aggressive	-.08	<b>.71</b>	-.19	<b>.57</b>	-.20	<b>.63</b>
Observations	698		491		1,013	
Cronbach's $\alpha$	.88		.85		.85	

Note. <sup>a</sup>Results reproduced from Stern, B. B., Barak, B., & Gould, S. J. (1987). Sexual Identity Scale: A new self-assessment measure. *Sex Roles*, 27(9/10), 503-519. Fem. = Femininity, Masc. = Masculinity.

Table 2.7 Rotated Factor Analysis Results

To assess whether the two indices were correlated with one another, I calculated factor scores using the Bartlett's method. The correlation between the factors is .09 indicating that the two indices are not highly correlated. However, orthogonal rotation methods, such as Varimax and Quartimax, specify independence, zero correlation. An

oblique factor rotation method, such as Promax, will find an orthogonal relationship if it is true (if there is factor independence) without explicitly imposing this restriction. Thus, Promax is a better rotation method in this case. These scores are also used in the rest of the analyses.

Hypothesis 2 suggested that the average femininity factor score would be higher for females and the average masculinity factor score would be higher for males. Figure 2.2 plots the average femininity factor scores by both sex and job status. A clear pattern is apparent with positive average femininity factor scores for females, regardless of job status, and negative femininity scores for all males. These differences were tested in a full factorial structure, comparing all combinations of sex, gender, and job status, and are presented in Table 2.8. The top portion of the table shows the results for all of the femininity factor score comparisons. The male vs. female differences are statistically significant overall (row 1,  $p < .01$ ). Femininity scores are also different for female students and male students (row 3,  $p < .00$ ) but not different for female students and female managers (row 4,  $p = .76$ ).

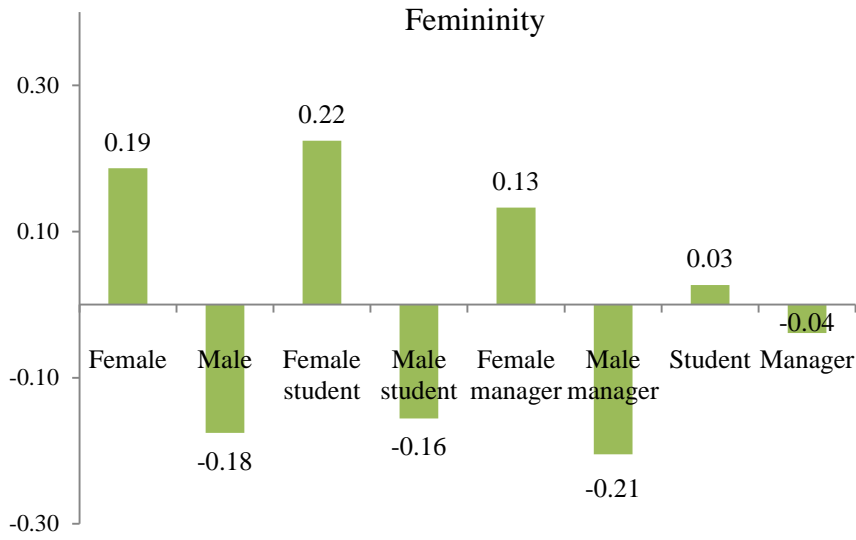


Figure 2.2 Femininity Factor Scores by Sex and Job Status

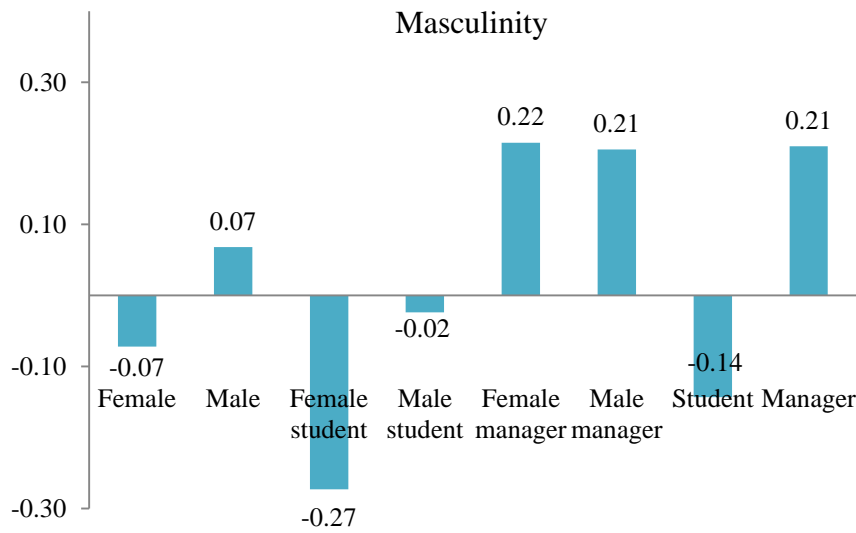


Figure 2.3 Masculinity Factor Scores by Sex and Job Status

Figure 2.3 plots the average masculinity factor score and the pairwise comparisons of average masculinity factor scores are shown in the bottom half of Table 2.8. For masculinity, the overall between-gender differences are also statistically significant (row 9,  $p < .05$ ). Masculinity scores differ for male and female student subjects, too (row 11,  $p < .05$ ). These results provide initial support for Hypothesis 2.

Table 2.9 shows the seemingly unrelated regression results for the analysis that examines these differences while including important controls. Again, the seemingly unrelated regression is comparable to a multivariate multivariable analysis that simultaneously incorporates multiple independent variables in the analysis of more than one dependent variable. Models (1) and (2) include direct effects only while Models (3) and (4) incorporate moderated relationships. Considering race, ethnicity, birth cohort, and marital status, females have higher femininity scores (Model 1,  $p < .01$ ) and lower masculinity scores (Model 2,  $p < .05$ ) than males. This result provides confirmatory support for Hypothesis 2.

Row	Null Hypothesis	Mean (1)	Mean (2)	(1) - (2)	Tukey t-score	p-value
<b>Femininity</b>						
1	Female subjects = Male subjects	.19	-.18	.36	5.66 <sup>a</sup>	.00***
2	Student subjects = Manager subjects	.03	-.04	.07	-1.00 <sup>a</sup>	.32
3	Female students = Male students	.22	-.16	.38	4.58	.00***
4	Female managers = Female students	.13	.22	-.09	-.98	.76
5	Female managers = Male students	.13	-.16	.29	3.14	.01***
6	Female managers = Male managers	.13	-.21	.34	3.36	.00***
7	Female students = Male managers	.22	-.21	.43	4.65	.00***
8	Male managers = Male students	-.21	-.16	-.05	-.54	.95
<b>Masculinity</b>						
9	Female subjects = Male subjects	-.07	.07	-.14	-2.12 <sup>a</sup>	.03**
10	Student subjects = Manager subjects	-.14	.21	-.35	5.32 <sup>a</sup>	.00***
11	Female students = Male students	-.27	-.02	-.25	-2.95	.02**
12	Female managers = Female students	.22	-.27	.49	5.14	.00***
13	Female managers = Male students	.22	-.02	.24	2.56	.05*
14	Female managers = Male managers	.22	.21	.01	.09	1.00
15	Female students = Male managers	-.27	.21	-.48	-5.09	.00***
16	Male managers = Male students	.21	-.02	.23	2.48	.06*

Note. n = 1,013.

<sup>a</sup>t-scores for these single comparisons do not use the Tukey HSD procedure.

\*\*\* $p < .01$ , \*\* $p < .01$ , \* $p < .10$ .

Table 2.8 Full Factorial Pairwise Comparisons Using Tukey's Honestly Significant Difference Method

VARIABLES	(1) Feminine	(2) Masculine	(3) Feminine	(4) Masculine
<b>Predictors</b>				
Female	.37***	-.14**		
	-.06	-.07		
Student	.11	-.33**		
	-.14	-.14		
Female student			.12	-.46***
			-.15	-.15
Male student			-.25*	-.20
			-.15	-.15
Male manager			-.36***	-.03
			-.10	-.10
<b>Controls</b>				
Generation X	-.01	-.02	-.01	-.01
	-.16	-.16	-.16	-.16
Baby Boom	.02	-.07	.01	-.04
	-.15	-.15	-.15	-.15
Silent Generation	.33	.13	.33	.19
	-.25	-.26	-.26	-.26
Married	-.08	-.12*	-.08	-.13**
	-.06	-.06	-.06	-.06
African American	.33**	.45***	.33**	.46***
	-.15	-.16	-.15	-.16
Asian	.19*	-.07	.19*	-.06
	-.11	-.12	-.11	-.12
Hispanic	-.05	.00	-.05	-.01
	-.12	-.13	-.12	-.13
Native American	-.58**	-.34	-.58**	-.30
	-.25	-.26	-.25	-.26
Pacific Islander	-.12	.39	-.12	.42
	-.46	-.47	-.46	-.47
Another ethnic group	.02	-.03	.02	-.01
	-.23	-.24	-.23	-.24
Constant	-.14	.47***	.22	.42**
	-.17	-.17	-.17	-.17
R-squared	.05	.05	.05	.05

Note. n = 1,013. Standard errors are in parentheses. Female manager, Millennial birth cohort, and White/Caucasian race are the excluded reference categories.

\*\*\* $p < .01$ , \*\* $p < .01$ , \* $p < .10$ .

Table 2.9 Masculinity & Femininity Seemingly Unrelated Regression Results

### *Femininity, masculinity, and management culture.*

Based on literature showing resistance to adoption of feminine attributes among males, the third hypothesis predicted that femininity traits are not prioritized in management culture. Results presented in Figure 2.2 and in Table 2.8 provide support for this hypothesis. The difference between the positive and negative student and manager factor scores (row 2) are not statistically significant. This is driven by the femininity scores of the female managers that do not differ from female students (row 4,  $p = .76$ ) but are much higher than male managers (row 6,  $p < .00$ ). The comparison between male managers and male students is relevant here. If femininity were privileged in management culture, male managers may be expected to identify with femininity traits more than male students. Row 8 shows this difference is not statistically significant ( $p = .95$ ). Altogether, there is preliminary support for Hypothesis 3.

As seen in Model (1) in Table 2.9, students and managers do not differ in femininity (coefficient = 0.11). However, female managers and male managers are not similar in the femininity dimension of their personalities (Model 3,  $p < .01$ ). This further corroborates Hypothesis 3.

Hypothesis 4 suggested that managers would report higher congruence with masculinity than students. Row 10 in Table 2.8 offers support by showing that students and managers overall do differ in this dimension ( $p < .01$ ). This is confirmed by the statistically significant negative coefficient on students (compared to managers) in Model (2) of Table 2.9. Interestingly, the difference between female managers' masculinity and that of male students is statistically significant in the pairwise comparisons but does not

remain significant when birth cohort, race, ethnicity, and other controls are included (Model 4, coefficient is -.20).

*Assimilation to androcentric management culture.*

Hypotheses 5 and 6 predicted divergent masculinity scores between female students and female managers and convergent scores between female managers and male managers. Row 12 of Table 2.8 shows the masculinity difference between female students and female managers is the largest difference of all of the 16 comparisons ( $p < .00$ ). This result is highlighted by the fact that these groups showed no statistically significant difference in the femininity dimension. This support for Hypothesis 5 is confirmed in Model (4) of Table 2.9. Controlling for a variety of factors, the average the difference between female managers and students (coefficient = -0.46) is the only statistically significant result of the moderation analysis.

Turning to hypothesis 6, the first evidence of support is found visually, in Figure 2.3. The positive-negative pattern visible in Figure 2.2 is interrupted in Figure 2.3 when the masculinity factor scores for both female managers and managers are positive and rather large. This difference (0.01, row 14) is the smallest difference of any of the comparisons and the only difference that was not statistically significant, indicating similarity in the reported masculinity of females and males who are managers. Confirming the increased masculinity of female managers, Model (4) in Table 2.9 shows the coefficient on the male student and male manager predictors is not different than female managers, the reference category.

To analyze these moderating effects, Figures 2.4 and 2.5 plot the predicted femininity and masculinity (respectively) factor scores. The parallel lines in Figure 2.4



are what would be expected if gender stereotypes were the only social expectations influencing the femininity and masculinity of the research subjects. In this case, males and females differ, and there are no moderating effects of job role expectations. The test of the marginal effects is not significant ( $p = .91$ , not shown). The diverging lines visible in Figure 2.5 represent competing social role expectations consistent with androcentric assimilation among females. The student line exhibits the expected slope, but the manager line is nearly horizontal, indicating no difference in the linear predictions. The test of the marginal effects in this case is statistically significant ( $p = .02$ ). To be thorough, pairwise comparisons on the predicted factor scores generated while controlling for covariates are shown in Table 2.10.

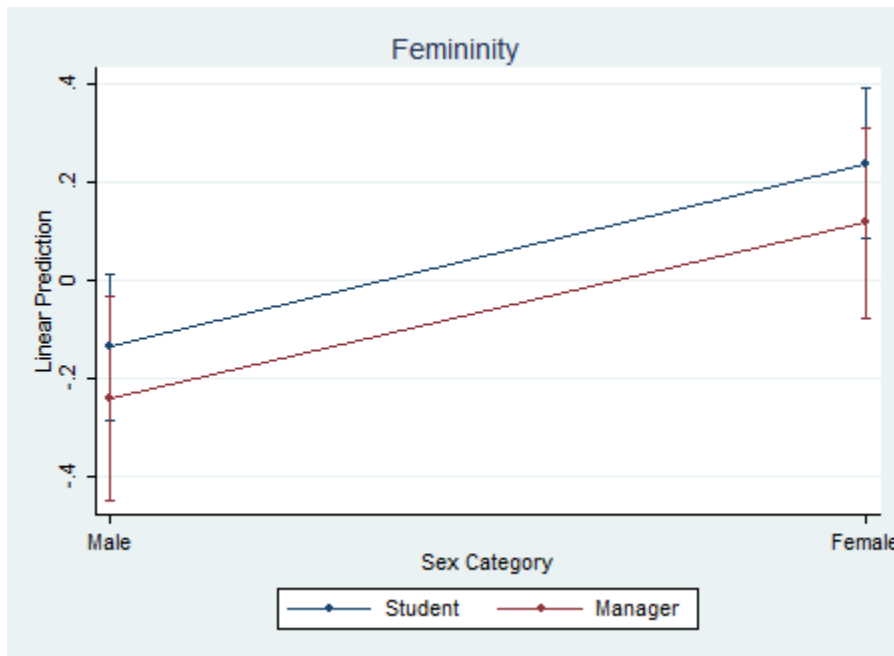


Figure 2.4 Moderating Effects of Sex Category & Job Status on Femininity

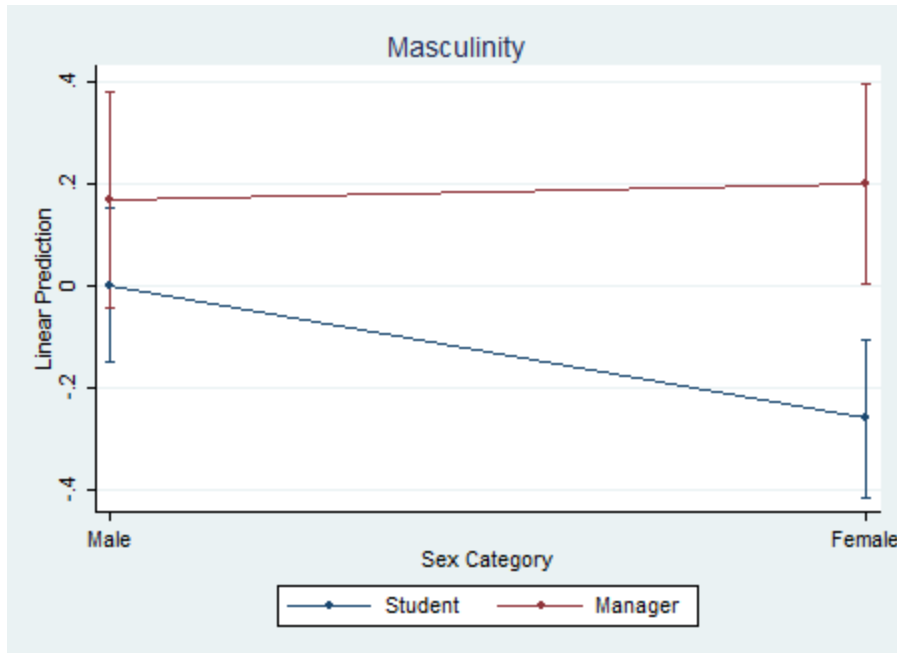


Figure 2.5 Moderating Effects of Sex Category & Job Status on Masculinity

	Contrast	Delta-method Std. Err.	z	P> z	Bonferroni 95% Conf. Interval	
<b>Femininity</b>						
Female student v. Male student	0.37	0.08	4.48	0.00***	0.15	0.59
Female manager v. Female student	-0.12	0.15	-0.80	1.00	-0.52	0.28
Female manager v. Male student	0.25	0.15	1.69	0.54	-0.14	0.64
Female manager v. Male manager	0.36	0.10	3.52	0.00***	0.09	0.63
Female student v. Male manager	0.48	0.16	3.01	0.02**	0.06	0.90
Male manager v. Male student	-0.11	0.16	-0.67	1.00	-0.52	0.31
<b>Masculinity</b>						
Female student v. Male student	-0.26	0.08	-3.11	0.01***	-0.49	-0.04
Female manager v. Female student	0.46	0.15	3.02	0.02**	0.06	0.87
Female manager v. Male student	0.20	0.15	1.32	1.00	-0.20	0.60
Female manager v. Male manager	0.03	0.10	0.32	1.00	-0.24	0.31
Female student v. Male manager	-0.43	0.16	-2.66	0.05**	-0.85	-0.00
Male manager v. Male student	0.17	0.16	1.04	1.00	-0.26	0.59

Note. n = 1,013.

\*\*\* $p < .01$ , \*\* $p < .01$ , \* $p < .10$ .

Table 2.10 Predicted Factor Scores by Sex Category and Job Status

### *Supplementary analysis and findings*

Finally, I conducted ordered logistic regression analysis with each of the modified BSRI masculinity trait index attributes as the dependent variable in order to examine what drives the masculinity differences between female managers and female students. The results are presented in Table 2.11. Female managers and female students showed statistically significant differences in willingness to take a stand ( $p < .10$ ), dominance ( $p < .05$ ), assertiveness ( $p < .01$ ), forcefulness ( $p < .01$ ), act like a leader ( $p < .10$ ), and aggressiveness ( $p < .01$ ). In each case, female students were about half, or less, likely than female managers to claim congruence with these stereotypically masculine attributes. Female students reported ambitiousness (not significant) and competitiveness more often

than female managers ( $p < .05$ ). Male students were likewise about half as likely to claim assertiveness, forcefulness, and aggressiveness as female managers as seen in Models (6), (8), and (10). Despite nearly identical mean masculinity scores, female managers and male managers were noticeably different on several attributes. Male managers were more competitive (Model 4,  $p < .01$ ), forceful (Model 8,  $p < .05$ ), and aggressive (Model 10,  $p < .01$ ) than female managers but less likely to claim to have leadership abilities (Model 1,  $p < .05$ ). Discussion of these results and their implications is next.

VARIABLES	(1) Have leadership abilities	(2) Willing to take a stand	(3) Ambitious	(4) Competitive	(5) Dominant	(6) Assertive	(7) Strong Personality	(8) Forceful	(9) Act like a leader	(10) Aggressive
Female student	.89 -0.24	.63* (0.17)	1.15 -.30	1.68** (.45)	.49** (.14)	.31*** (.08)	.71 -.20	.21*** (.06)	.60* (.16)	.32*** (.08)
Male student	.90 -.24	.82 (0.22)	1.08 -.28	3.93*** (1.04)	.81 (.22)	.49*** (.13)	.89 -.24	.47*** (.13)	.67 (.17)	.57** (.15)
Male manager	.63** (.12)	.87 (0.16)	.90 -.16	1.75*** (.32)	1.04 (.19)	.89 (.16)	.79 -.14	1.56** (.28)	.76 (.14)	1.66*** (.29)
Generation X	.98 (.28)	1.43 (.40)	.69 -.19	1.12 (.31)	1.04 (.30)	1.03 (.29)	1.23 -.35	.97 (.28)	.99 (.27)	.85 (.23)
Baby Boom	1.15 (.31)	1.48 (.40)	.48*** (.12)	.76 (.20)	.83 (.22)	.95 (.25)	1.05 -.28	1.02 (.28)	1.07 (.28)	.86 (.22)
Silent Generation	1.17 (.53)	2.64** (1.19)	.86 (.40)	.97 (.45)	1.06 (.49)	2.50* (1.20)	1.81 -.83	1.66 (.76)	.87 (.40)	1.00 (.46)
Married	.85 (.10)	.93 (.11)	.93 (.10)	.80** (.09)	.88 (.10)	.93 (.10)	.90 -.10	.83* (.09)	.91 (.11)	.82* (.09)
African American	1.76** (.49)	1.42 (.38)	2.03** (.56)	1.23 (.34)	2.33*** (.63)	2.47*** (.69)	2.03** (.58)	1.49 (.40)	1.68* (.46)	3.01*** (.82)
Asian	.62** (.12)	.84 (.17)	.93 (.18)	.98 (.19)	1.21 (.24)	1.10 (.22)	.75 (.15)	1.22 (.25)	.66** (.13)	1.45* (.28)
Hispanic	.87 (.20)	.98 (.21)	.93 (.21)	1.08 (.24)	1.18 (.25)	.90 (.20)	1.30 (.29)	1.47* (.33)	.79 (.18)	1.13 (.24)
Native American	.40** (.18)	1.25 (.58)	.78 (.34)	.82 (.35)	.88 (.36)	1.03 (.45)	.44* (.22)	.95 (.41)	.35** (.15)	.84 (.34)
Pacific Islander	7.38** (6.82)	1.12 (.90)	2.32 (2.11)	2.13 (1.89)	1.26 (.94)	3.24 (2.45)	2.77 -2.85	.52 (.39)	2.52 (2.28)	.72 (.60)
Pseudo R <sup>2</sup>	.01	.01	.02	.03	.01	.03	.01	.06	.01	.03

Note. n=1,013. Odds ratios are presented. Standard errors are in parentheses. The coefficients on the Another Ethnic Group control variable were not statistically significant and are not shown. \*\*\* $p < .01$ , \*\* $p < .01$ , \* $p < .10$ .

Table 2.11 Ordered Logistic Regression Results for modified BSRI Masculinity Attributes

## Discussion and Conclusion

The results provide support for each of this study's hypotheses. To summarize the study's findings, the stereotypically gendered personality attributes included on the modified BSRI still represent two latent factors, masculinity and femininity, and comparisons to past studies show they retain the validity necessary for the current analysis. The results suggest that masculine personality attributes are still prioritized for management roles, at least in the study's subject pool, though feminine attributes are not. Male managers do not appear to assimilate with traditionally feminine attributes, but female managers in the U.S. still engage in measurable assimilation with the androcentric management culture. Females still report higher congruence with femininity traits, and males report higher congruence with masculinity. Managers, regardless of sex, have higher masculinity factor scores but no similar result is observed for femininity. Females who are managers do not differ in the femininity dimension from females who are students, but they do differ substantially in terms of masculinity. Male managers also report higher masculinity congruence than male students, but when age, race, and ethnicity controls are included, these differences are not statistically significant.

Taken together, these results provide evidence of the persistence of androcentric management culture. The convergent and divergent results are exactly what is expected if masculine personality attributes, long suspected of being requisite for leadership roles, continue to be prioritized while feminine traits are not. Whereas only between group (male v. female) differences existed for femininity, between and within (female managers v. female students) group differences occur for masculinity. Though female students and managers are alike in the feminine aspect of their personalities, their masculinity

dimension differs greatly. The size of the difference between female managers and females students on the masculinity dimension is particularly striking given no difference between them exists for femininity. Female managers and male managers differ significantly in femininity but not masculinity. These results suggest that despite the increased participation in the labor force and the number of women assuming management positions, the pressure for female managers to conform to masculinized management culture persist in middle market firms in the U.S. Female managers are less stereotypically feminine, on average, than female students and male managers are the least feminine of all groups. Based on these results, one could argue that, communal behavior, consistent with traditionally feminine behavior, emphasized by transformational leadership has not succeeded in replacing the masculine attributes that have long been valued for management roles.

There may be a gap between what is considered traits for good managers and the traits that appear to remain requisite for movement into leadership and management roles. Command-and-control style of leadership may be replaced with more collaborative strategies (Eagly & Carli, 2007) with aggressiveness and dominance no longer considered ideal leadership attributes. However, the frequency with which these are found in managers of both sexes, and not among students, suggests these attributes are still differentially valued. The differences in aggressiveness, forcefulness, assertiveness, and competitiveness between female managers and both female and male students, indicates that these traits possess some enduring value in the selection of managers.

The observed persistence of androcentric management culture has a number of implications for women in leadership roles and may help explain some of the

correlational and experimental evidence of enduring disparity in wage and promotion opportunities of women. First, androcentric management culture may contribute to gender-based bias or discrimination in hiring, evaluation, and promotion (Eagly & Carli, 2007; Hoyt, 2012; Powell, 2011; Rudman, et al., 2012). Second, it may prompt role conflict for women (Biddle, 1986). Third, it may lead to resistance to management by women (Eagly & Carli, 2007).

Numerous experimental and field studies employing many diverse research designs find evidence that workplace sex discrimination remains a common reality (Heilman & Eagly, 2008). Women with equal qualifications tend to “wait longer than men to be promoted to supervisors or managers and wait longer between promotions within managerial levels” (Eagly & Carli, 2007, p 72). Those who conform to a hegemonic ideal of masculinity are the most likely to obtain advantages in positions and occupations that privilege male superiority (Acker, 1992; Schrock & Schwalbe, 2009). Qualities associated with leading or managing are more readily ascribed to men regardless of their actual skills or abilities (Eagly & Carli, 2007). Whereas men may be assumed to possess competence in the masculinities valued for leadership, women may face an unequal burden of proving their ability to lead or have hard work account for their successes instead of their competence or ability (Eagly & Carli, 2007). Prioritizing personality attributes that are frequently ascribed to masculinity may lead to qualified, competent women being passed over, or to aspiring women managers choosing between conforming to normative masculine behavior and being sidelined (Powell, 2011; Stivers, 2002). Experimental results show conservative political ideology has been shown to result in anti-female bias in evaluating female job candidates when women’s traditional



gender roles are conspicuous (Hoyt, 2012). Strong male managers are evaluated more positively than strong and/or sensitive female leaders (Johnson, et al., 2008). Other studies have found that gender is more salient for female workers when an organization is in crisis (Hogue & Lord, 2007). Known as the glass cliff effect, women are sometimes specifically selected to lead organizations that are in crisis (Haslam & Ryan, 2008). Though some believe these provide good opportunities for women to lead, declining organizational performance means increased stress, risk, and likelihood of failure (Haslam & Ryan, 2008).

Role conflict and challenges superseding group identification are also particular challenges for women when masculine attributes are privileged for management. The competing expectations of women leaders may instigate this conflict and prompt the need to resolve it much more frequently for women than for men. In most societies, visible demographic identifiers are attached to gender and may lead to assumptions about personality attributes which are a component of identity less easily assessed (Eagly & Carli, 2007). Habitual associations of femininity and masculinity accompany involuntary and immediate categorization and males/men tend to be more readily connected to the traits most people associate with leadership (Eagly & Carli, 2007). Since cognitive categorization is automatic, the accompanying gender associations are equally applicable to work settings in which typically masculine and feminine roles or attributes may not be as relevant (Eagly & Carli, 2007). In certain situations, when organizations are in crisis, gender salience is increased (Ellemers, Rink, Derks, Ryan, 2012). Regardless of their own gender identification, women in these situations are more likely to be regarded as feminine (Ellemers, et al., 2012).

A third implication of persistent androcentric management culture is resistance to female leaders. While women are sometimes penalized for exhibiting dominance and are considered less likable when they lack warmth, men are not similarly impacted (Eagly & Carli, 2007). Johnson et al. sum up this central problem for women leaders, "...by being a woman, the female leader has already violated one leadership prototype, because she is presumably low in masculinity. So, regardless of her behavior she is already at a disadvantage compared to her male counterpart" (2008, p 46). Prejudice against women who are leaders may present difficulties in effectiveness as masculine manager stereotypes create constraints on female leader behavior (Powell, 2011). Gary Powell (2011), a foremost scholar on this subject, notes that although it is much less explicit today, women still face hostility against their leadership that impedes their effectiveness.

Related to the topic of resistance, some research has shown employees resisting masculinized management practices. For instance, workspace colonization has been observed with the goal of enacting feminized approaches to work that overtly challenge authorities that privileged masculinist approaches (Lewis, 2008).

Finally, androcentric management culture and the attendant role incongruity for women perpetuate gender hierarchy and inequality in the broader culture. Privileging male perspective and expectations for conformity support the idea that females and those that do not identify with masculine gender rules are abnormal, inferior, others. As Rudman et al. remark, "By exhibiting masculine competencies, agentic women undermine the presumed differences between the genders, and discredit the system in which men have more access to power and resources for ostensibly legitimate reasons" (2012, p 166). Androcentric management cultures are the reason roles become

incongruent for agentic women. Eradicating androcentrism in management eliminates this dilemma and all of the negative outcomes just described. The social rules that reinforce male hegemony would be compromised (Rudman, et al., 2012).

Articles in mainstream media and academic journals alike have discussed the implications of the divergent work ethic, leadership traits, communication habits and collaboration patterns of Millennials and those born in other times (Widdicombe, 2016; Lyons & Kuron, 2013). The distinctive qualities and values that characterize a birth group have been attributed to differentiated socialization experiences (Lyons, 2013). Thus, building on a long-standing social perspective, Lyons defines generation as “a group of individuals born within the same historical and socio-cultural context, who experience the same formative experiences and develop unifying commonalities as a result” (2013, pS140). In their meta-analysis of generational research, Lyons and Kuron (2013) conclude that there is considerable evidence that successive generations have developed distinct personalities. Related to the workforce, these personalities are manifest in the pursuit, by younger generations, of careers with social influence and opportunities to express their extroversion and conscientiousness (Lyons and Kuron, 2013). The immediate implication of generationally distinct personalities for workforce management is that different birth cohorts possess different work values that influence leadership, teamwork, job satisfaction, and turnover (Lyons & Kuron, 2013). In addition to lower job satisfaction and more career mobility, some consensus exists that younger generations are more interested in leaders who foster an environment that promotes individual achievement rather than organizational success and execute this view as leaders themselves (Lyons & Kuron, 2013). Formerly understood to remain consistent

over time, comparison of managerial value orientations (MVOs) between the late 1980s and early 2010s reveal large shifts in Personal-Competence MVO and differences over time in the subsequent ranking of the other three MVOs (Weber, 2015).

The changing cultural and economic environment over time can influence the identity formation of individuals at different life stages (Stewart & Healy, 1989). As has been previously discussed, there is substantial evidence that females in the U.S. have been considerably more inclined to adopt stereotypically masculine attributes while males have not likewise changed their femininity attributes (Twenge, 1997). In the U.S., Pre-Boomers and Baby Boomers experienced a much stricter division of gender roles in both public and private life. The rapid gender diversification of the workplace that began in the 1970s and 1980s and the associated gender role reverberations that stretched from workplaces into homes may have had differing impacts on the birth group known as Millennials and on their predecessors. Generational differences have been shown to be a legitimate and influential form of workplace diversity (Lyons & Kuron, 2013). This generational malleability of gender adds an interesting time component to the idea that gender is constructed socially and culturally and suggests that generational controls may be important in the analysis of masculinity and femininity in the workplace. Though these data did not permit a direct inspection of birth cohort differences in masculinity and femininity, if future research shows that Millennials differ from other birth cohorts in gender identity, as they do in many other work related aspects, persistence of androcentric management praxis may have implications for both sexes.

In addition to cultural changes over time, international variations in gender and management are relevant to this study. Geert Hofstede has claimed that, “Management as

the word is presently used is an American invention” (1993, p 1). By emphasizing the roles of markets, focusing on individuals, and concentrating on managers instead of workers, American management theories tend to differ from other global contexts, reflecting the cultural differences between countries (Hofstede, 1993). Though somewhat problematic, empirical research studying the effects of national culture on management practices and strategies have shown differences in individual- and organizational-level outcomes (Gerhart, 2008).

Gender is one component in a complex social system which implies that general solutions to androcentric management bias may not be universally appropriate and efforts at more than one level may be required (Hogue & Lord, 2007). Some practical measures have been suggested, such as top-level managers initiating fairness improvements in the organizational culture or encouraging loose couplings to improve the inclusivity of norms (Hogue & Lord, 2007). Other actions recommended to equalize perceptions of leadership abilities are confronting sex-based prejudice against leaders, changing the evaluation standards for leaders to include group cohesiveness and subordinate development, publicizing individual qualifications for leadership positions, and working to enhance the leadership competencies of all individuals (Powell, 2011).

#### *Study limitations*

A few limitations of this study should be noted. First, the cross-sectional data from the student and manager subject pools allow counterfactual testing to draw strong conclusions. However causality cannot be determined so differences in masculinity among female managers and female students, etc., must be interpreted as indicators of androcentric management culture, rather than direct causes.

Second, the data for this study do not include measures about why female managers exhibit so many masculine attributes. It may be that they adopted these traits early in life, which helped them become managers, or it could be that assimilation was a conscious strategy adopted to meet professional goals. Either way, the conclusions about social role incongruity and role conflict, while supported, should be regarded as tentative until further research is done. Surveys could be used to ask females who become managers about their awareness of their own, or others', androcentric assimilations. A panel study across multiple industry sectors would also be an excellent way to build on the findings in this study. Tracking individuals from when they enter the workforce through promotion into management roles would help shed light on this unanswered question.

Third, social desirability may influence subjects' self-reported congruence with the individual masculinity and femininity trait index items. The threat of biased responses is minimized in this study, as subjects participated in an online experiment, rather than providing the responses in person to a human researcher.

#### *Future research*

Future research on androcentric assimilation should be conducted on three themes. These are public vs. private sector or industry differences, factors that mitigate androcentric culture in particular institutional settings, and the effects of role incongruity on men and women who feel pressure to assimilate with androcentric management culture. If masculinity is prioritized in private sector firms more than public sector organizations, or in particular industry types, observed differences in culture may be used to find mitigating solutions to this form of workplace inequality. The effectiveness of

information interventions or training programs should also be further researched. Finally, qualitative studies examining the degree to which young men feel pressure to assimilate with androcentric management culture should also be assessed. To date, the role incongruence studies have, rightly, focused on implications for women, but role incongruity has the potential to affect all genders (Rudman, et al., 2012). Anyone who is perceived as gender atypical may experience similar workplace discrimination, role conflict, and resistance to their leadership. While the data used in this study did not allow birth cohort comparisons, some generational differences in the adoption of masculinity and femininity attributes have been observed (Twenge, 1997, 2001). If social change prompts millennial men and women to adopt stereotypical gendered personality attributes differently than previous generations, there may be important consequences cultural consequences for management culture.

### *Conclusion*

Androcentric management culture creates the role incongruity that prompts assimilation among women managers. This study, focused on measuring androcentric assimilation in U.S. management culture, found that masculine personality attributes are still prioritized for management roles, though feminine attributes are not. Male managers do not adopt traditionally feminine attributes, but female managers in the U.S. still engage in measurable assimilation with the androcentric management culture. Evidence for this is found in the diverging masculinity factor scores of female managers and female students and almost no difference in masculinity between females and males who are managers.

## Essay References

- Acker, J. (1992). From sex roles to gendered institutions. *Contemporary Sociology*, 21(5), 565-569.
- Ashforth, B.E., & Johnson, S.A. (2001). Which hat to wear? The relative salience of multiple identities in organizational contexts. In M.A. Hogg & D.J. Terry (Eds.), *Social identity processes in organizational contexts* (pp. 31-48). Philadelphia, Pennsylvania: Psychology Press.
- Ashforth, B.E., & Mael, F. (1989). Social identity theory and the organization. *The Academy of Management Review* 14(1), 20-39.
- Barak, B., & Stern, B. (1986). Sex-linked trait indexes among baby-boomers and pre-boomers: A research note. *Advances in Consumer Research*, 13, 204-209.
- Bass, B.M. (1990). From transactional to transformational leadership: Learning to share the vision. *Organizational Dynamics* 18(3), 19-31.
- Bem, S.L. (1974). The measurement of psychological androgyny. *Journal of Consulting and Clinical Psychology*, 42(2), 155-162.
- Bem, S.L. (1994). *The lenses of gender: Transforming the debate on sexual inequality*. New Haven: Yale University Press.
- Biddle, B.J. (1986). Recent development in role theory. *Annual Review of Sociology*, 12, 67-92.
- Bolton, S.C. (2015, March 11). Why are there so many female managers but so few CEOs. *The Washington Post*. Retrieved from [https://www.washingtonpost.com/posteverything/wp/2015/03/11/why-there-are-so-many-female-managers-but-so-few-ceos/?utm\\_term=.6e0aa621b1a0](https://www.washingtonpost.com/posteverything/wp/2015/03/11/why-there-are-so-many-female-managers-but-so-few-ceos/?utm_term=.6e0aa621b1a0)
- Brenner, O.C., Tomkiewicz, J., & Schein, V.E. (1989). The relationship between sex role stereotypes and requisite management characteristics revisited. *The Academy of Management Journal*, 32(3), 662-669.



- Deem, R. (1998). 'New managerialism' and higher education: The management of performances and cultures in universities in the United Kingdom. *International Studies in Sociology of Education*, 8(1), 47-70.
- Eagly, A.H., & Carli, L.L. (2003). The female leadership advantage: An evaluation of the evidence. *The Leadership Quarterly*, 14, 807-834.
- Eagly, A.H., & Carli, L.L. (2007). *Through the labyrinth: The truth about how women become leaders*. Boston, Massachusetts: Harvard Business School Press.
- Eagly, A.H., Johannesen-Schmidt, M.C., & van Engen, M.L. (2003). Transformational, transactional, and laissez-faire leadership styles: A meta-analysis comparing women and men. *Psychological Bulletin*, 129(4), 569-591.
- Eagly, A.H., & Karau, S.J. (2002). Role congruity theory of prejudice toward female leaders. *Psychological Review*, 109(3), 573-598.
- Eagly, A.H., Makhijani, M.G., & Klonsky, B.G. (1992). Gender and the evaluation of leaders: A meta-analysis. *Psychological Bulletin*, 111(1), 3-22.
- Ellemers, N., Rink, F., Derks, B., & Ryan, M.K. (2012). Women in high places: When and why promoting women into top positions can harm them individually or as a group (and how to prevent this). *Research in Organizational Behavior*, 32, 163-187.
- Gerhart, B. (2008). Cross cultural management research: Assumptions, evidence, and suggested directions. *International Journal of Cross Cultural Management*, 8(3), 259-274.
- Hair, J.F., Black, W.C., Babin, B.J., Anderson, R.E., & Tatham, R.L. (2006). *Multivariate Data Analysis* (6<sup>th</sup> Ed.). Upper Saddle River, New Jersey: Pearson Prentice Hall.
- Haslam, S.A., & Ryan, M.K. (2008). The road to the glass cliff: Differences in the perceived suitability of men and women for leadership positions in succeeding and failing organizations. *The Leadership Quarterly*, 19, 530-546.
- Heilman, M.E. (2012). Gender stereotypes and workplace bias. *Research in Organizational Behavior*, 32, 113-135.
- Heilman, M.E., & Eagly, A.H. (2008). Gender stereotypes are alive, well, and busy producing workplace discrimination. *Industrial and Organizational Psychology*, 1, 393-309.

- Hoffman, R.M., & Borders, L.D. (2001). Twenty-five years after the Bem Sex-Role Inventory: A reassessment and new issues regarding classification variability. *Measurement and Evaluation in Counseling and Development, 34*, 39-55.
- Hofstede, G. (1993). Cultural constraints in management theories. *Academy of Management Executive 7*(1), 81-94.
- Hogg, M.A., & Terry, D.J. (2001). *Social identity processes in organizational contexts*. Philadelphia, Pennsylvania: Psychology Press.
- Hogue, M., & Lord, R.G. (2007). A multilevel, complexity theory approach to understanding gender bias in leadership. *The Leadership Quarterly, 18*, 370-390.
- Hoyt, C.L. (2012). Gender bias in employment contexts: A closer examination of the role incongruity principle. *Journal of Experimental Social Psychology, 48*, 86-96.
- Johnson, S.K., Murphy, S.E., Zewdie, S., & Reichard, R.J. (2008). The strong, sensitive type: Effects of gender stereotypes and leadership prototypes on the evaluation of male and female leaders. *Organizational Behavior and Human Decision Processes, 106*, 39-60.
- Latu, I.M., Stewart, T.L., Myers, A.C., Lisco, C.G., Estes, S.B., & Donahue, D.K. (2011). What we “say” and what we “think” about female managers: Explicit versus implicit associations of women with success. *Psychology of Women Quarterly, 25*(2), 252-266.
- Lewis, P. (2008). Emotion work and emotion space: Using a spatial perspective to explore the challenging of masculine emotion management practices. *British Journal of Management, 19*, S130-S140.
- Lyons, Sean, & Kuron, Lisa. (2013). Generational differences in the workplace: A review of the evidence and directions for future research. *Journal of Organizational Behavior, 35*, S139-S157.
- Powell, G.N. (2011). The gender and leadership wars. *Organizational Dynamics, 40*, 1-9.
- Powell, G.N., & Butterfield, D.A. (1979). The “good manager” Masculine or androgynous? *Academy of Management Journal, 22*(2), 395-403.
- Pratt, M. (2001). Social identity dynamics in modern organizations: An organizational psychology/organizational behavior perspective. In M.A. Hogg & D.J. Terry

(Eds.), *Social identity processes in organizational contexts* (pp. 13-30). Philadelphia, Pennsylvania: Psychology Press.

Rubin, G. (1975). The Traffic in Women: Notes on the 'Political Economy' of Sex. In R.R. Reiter (Ed.), *Toward an Anthropology of Women* (pp. 157-210). Monthly Review Press, New York.

Rudman, L.A., Moss-Racusin, C.A., Phelan, J.E., & Nauts, S. (2012). Status incongruity and backlash effects: Defending the gender hierarchy motivates prejudice against female leaders. *Journal of Experimental Social Psychology*, 48, 165-179.

Scott, K.A., & Brown, D.J. (2006). Female first, leader second? Gender bias in the encoding of leadership behavior. *Organizational Behavior and Human Decision Processes*, 101, 230-242.

StataCorp (2013). *Stata 13 Base Reference Manual*. College Station, TX: Stata Press.

Stern, B. B., Barak, B., & Gould, S. J. (1987). Sexual Identity Scale: A new self-assessment measure. *Sex Roles*, 27(9/10), 503-519.

Stewart, A.J., & Healy, J.M. (1989). Linking individual development and social changes. *American Psychologist*, 44(1), 30-42.

Stivers, C. 2002. *Gender Images in Public Administration: Legitimacy and the Administrative State*, Second Edition. Thousand Oaks, California: Sage Publications.

Twenge, J.M. (1997). Changes in masculine and feminine traits over time: A meta-analysis. *Sex Roles*, 36(5/6), 305-325.

Twenge, J.M. (2001). Changes in women's assertiveness in response to status and roles: A cross-temporal meta-analysis, 1931-1993. *Journal of Personality and Social Psychology* 81(1), 133-145.

Young, K.A., Greenbaum, R.T., & Dormady, N.C. (2015). Gender in Middle Market Resilience Decision Making: Experimental Evidence, Association for Public Policy and Management 37<sup>th</sup> Annual Fall Research Conference, Miami, Florida, November 12-14, 2015.

Young, K.A., Greenbaum, R.T., & Dormady, N.C. (2016). Gender and Middle Market Resilience Decision Making: Experimental Evidence, Midwest Public Affairs Conference, Columbus, Ohio, June 2-5, 2016.

- Weber, J. (2015). Identifying and Assessing Managerial Value Orientations: A Cross-Generational Replication Study of Key Organizational Decision-Makers' Values. *Journal of Business Ethics*, 132, 493-504.
- Widdicombe, B. (2016, March 19). What Happens When Millennials Run the Workplace? *The New York Times* Retrieved from [http://www.nytimes.com/2016/03/20/fashion/millennials-mic-workplace.html?\\_r=0](http://www.nytimes.com/2016/03/20/fashion/millennials-mic-workplace.html?_r=0).
- Wood, W., & Eagly, A.H. (2002). A cross-cultural analysis of the behavior of women and men: Implications for the origins of sex differences. *Psychological Bulletin*, 128(5), 699-727.

### Chapter 3 An Assessment of the Prevalence, Perceived Significance and Response to Dowry Solicitation and Domestic Violence in Bangladesh

#### Abstract

This essay focuses on the prevalence of two pervasive gender-related crimes in Bangladesh, dowry solicitation and domestic violence. Victim perceptions of how these two crimes rank in significance compared to other types of crime experienced are assessed along with the actions victim households took in response. This research builds on prior qualitative studies by making use of nation-wide household survey data, collected by the World Bank, to examine dowry and domestic violence in the context of all legal conflicts experienced by households in every administrative region of the country. The analyses show that both dowry solicitation and domestic violence rank in the top five most common crimes, including violent and non-violent crimes. Women report more experiences of dowry solicitation and domestic violence with urban females most frequently disclosing both. Among the households that experienced multiple types of violent and nonviolent crimes, 55.9% of dowry and 70.8% of domestic violence victims reported another crime ranked higher in significance. Of the households that considered these two crimes the most serious they experienced, 56.1% of dowry and 32.5% of domestic violence households took no action at all in response. Among the households that took action, most eschewed both police and state judicial institutions. Choosing to act alone or with the help of family members was the most frequent response. The findings illustrate the need for governance reforms in Bangladesh and may inform state and non-state improvement initiatives.

## Introduction

Recently, a number of shocking attacks on women in India have drawn international attention to the prevalence and brutality of gender-related crimes (Bagri & Varma, 2013; Dhar, 2014; Kumar & Timmons, 2013). The United Nations Entity for Gender Equality and the Empowerment of Women (2014) calls violence against women a “pandemic in diverse forms.” The World Bank and the World Health Organization reports reveal pervasive gender-related violence with worldwide victims accounting for as many victims as cancer and traffic accidents combined (Venis & Horton, 2002). Women in South Asia regularly experience violent crimes, consumer and family disputes, and abuse by employers and law enforcement officials (Freedom House, 2014a, 2014b; Mogford, 2011; Watts & Zimmerman, 2002; Zaman, 1999). Accurate statistics about gender-related crime are largely unattainable due to a number of institutional and cultural factors (The World Bank, 2011a; Watts & Zimmerman, 2002). However, it is commonly understood that the most pervasive form of violence against women in South Asia is domestic violence, i.e. violence perpetrated by a member of the household, most often an intimate partner (Heise, Raikes, Watts, & Zwi, 1994; Khan & Hussain, 2008; Naved & Persson, 2010; Panchanadeswaran & Koverola, 2005; Watts & Zimmerman, 2002; World Health Organization, 2012). While patriarchal social structure, economic dependence of women on men, and institutional discrimination (i.e., discriminatory laws/policies) all contribute to the prevalence of domestic violence in the region, disagreement about dowry payment is one of the most common causes throughout India, Bangladesh and Pakistan (Heise et al., 1994; Khan & Hussain, 2008; Kimuna et al., 2012; Naved & Persson, 2010).

Dowry is a gift of cash or other valuables from a bride's family to a groom's family on the occasion of marriage (Nasrin, 2011). Verbal and physical abuse of young wives occurs in an attempt to extort unpaid or additional dowry payments from her family (Panchanadeswaran & Koverola, 2005). A study by Naved and Persson (2010) in Bangladesh found that dowry solicitation was connected positively with the extent, frequency and severity of physical abuse among women regardless of the status of dowry payment. Besides instigating physical violence, dowry may also be a contributing factor in the systematic neglect and abbreviated education of girls in Bangladesh (Bates, Schuler, Islam, & Islam, 2004; Chowdhury, 2010; Latha & Narendra, 1998; Shenk, 2007). Although taking or giving dowry has been illegal in Bangladesh since 1980, today as many as 80% of Bangladeshi marriages may involve dowry agreements (Anderson, 2007; Chowdhury, 2010; Nasrin, 2011; Naved & Persson, 2010).

This research contributes to the literature on gender crimes in South Asia in several ways. First, the frequency of household dowry and domestic violence compared to other types of crime experienced by Bangladeshis is demonstrated. Second, by measuring individual perceptions of seriousness relative to other crimes, how household representatives rank the significance of dowry and domestic violence is shown. Third, the lack of confidence that victims of these two types of crime have in state institutions in Bangladesh is quantified. While a number of studies have examined the issue of dowry and/or domestic violence in Bangladesh, most focused on only a particular region of the country, a specific segment of the population or undertook dowry crime and domestic violence separately. Koenig et al. (2003), for example, identified determinants of domestic violence but the study was limited to two rural sites. Naved et al. (2006)

explored help-seeking behavior of domestic violence victims in rural and urban sites, but this only focused on the eastern part of Bangladesh. More recently, Naved and Persson (2010) examined the influence of dowry demand as a predictor of domestic violence, but this only examined one rural site and one megacity. To date there has not been a nationwide study considering prevalence and response of these gender crimes in the context of all experiences of crime. This study makes use of data collected in rural and urban areas throughout all administrative divisions of Bangladesh. In addition to the scholarly contributions, this work has practical implications. Specifically, the results could inform institutions crafting policies or initiatives that improve governance and alleviate violence against women in states with cultural similarities in terms of religion, freedom, and corruption.

The structure of the essay beyond this introductory section is as follows. First, the literature on domestic violence and dowry practices in South Asia are reviewed. These provide context on the gender environment in Bangladesh. Second, the dataset and statistical methods are explained. Finally, the results and their consequences for governance improvement are discussed before summarizing conclusions.

### Background

Heise et al. (1994, p. 1165) formally defined violence against women, or gender-related violence, as “any act of verbal or physical force, coercion or life-threatening deprivation, directed at an individual woman or girl that causes physical or psychological harm, humiliation or arbitrary deprivation of liberty and that perpetuates female subordination.” Such acts may range from verbal abuse (e.g., coercion, insult and humiliation) to physical abuse and deprivation (e.g., differential availability of food and



medical care, beating, burning, throwing acid or even murder). These acts are perpetrated by not only intimate partners but also family members and strangers (Watts & Zimmerman, 2002). The problem has been framed variously as a human rights, equality, public health, or development issue unconstrained by geographic, cultural and socio-economic lines (Anderson, 2007; Garcia-Moreno, Jansen, Ellsberg, Heise, & Watts, 2006; Heise et al., 1994; Koenig et al., 2003; Naved et al., 2006; Venis & Horton, 2002; Watts & Zimmerman, 2002).

Across cultures, studies have found that violence against women is closely tied to gender hierarchy (patriarchy) and perpetuated through socioeconomic inequality, cultures of violence legitimization and discriminatory legal systems (Heise et al., 1994; Kimuna et al., 2012; Mogford, 2011; Naved et al., 2006). Throughout South Asia, women are typically consigned to a lesser social, economic and legal status, irrespective of socioeconomic class or religious affiliation (Dil, 1985; Kimuna et al., 2012; Madhani et al., 2015; Murshid & Murshid, 2015). Violence is often perceived as a male prerogative for enforcing obedience (Mogford, 2011). Economic dependence on men is reinforced through cultural and religious views of subordination, patrilineal inheritance, patrilocal residence and exclusion from the public sphere (Dil, 1985; Hashemi, Schuler, & Riley, 1996; Madhani et al., 2015; Zaman, 1999). The legal circumstances that independently and collectively enable the oppression of women consist of legitimate laws that are discriminatory in nature (e.g., family and inheritance laws in South Asia), detrimental selective application of laws by legal authorities (e.g., police and courts) and naivety of any protective laws and personal rights women do possess (Hasan, 1994).

While domestic violence may involve the abuse of children or elders living in a household, in some countries the term is used synonymously with intimate partner violence (World Health Organization, 2012). In developing countries, violence carried out by intimate partners or family members is the most pervasive form of violence perpetrated against women (Heise et al., 1994; Watts & Zimmerman, 2002). Research in South Asia has found up to 80% of married women experience domestic violence at some point in their lives (Garcia-Moreno et al., 2006; Kimuna et al., 2012; Panchanadeswaran & Koverola, 2005; Schuler et al., 2013). The cultural, legal and economic environments of the region influence the structural and institutional elements that permit domestic violence and prevent women from taking action to stop it (Heise et al., 1994; Khan & Hussain, 2008; Kimuna et al., 2012; Madhani et al., 2015). In many South Asian communities, domestic violence is generally considered a private matter and often socially tolerated as routine (Dalal, Lee, & Gifford, 2012; Mirchandani, 2006; Murshid & Murshid, 2015). Though many countries have passed laws to protect women from domestic violence, no serious attempts to enforce the laws are made when the community tacitly or openly consents to the practice (Eswaran & Malhotra, 2011). Police and local leaders often refuse to intervene entirely or blame the victim seeking help (Panchanadeswaran & Koverola, 2005; Taher & Jamaluddin, 2015). As a result, most victims do not report the incidents or take any sort of action (Madhani et al., 2015; Naved et al., 2006; Panchanadeswaran & Koverola, 2005; Schuler, Bates, & Islam, 2008; Taher & Jamaluddin, 2015).

The identity of a woman in South Asia is intimately tied to her roles as wife and mother, which make escaping the abuse difficult (Jeyaseelan et al., 2015; Kabeer,

Mahmud & Tasneem, 2011; Sen, 1999; Weitzman, 2014). Economic dependence of women on men may also thwart private attempts to resist or retreat (Sen, 1999; Taher & Jamaluddin, 2015). Studies have found that improvements to a woman's employment, mobility, or decision-making status correspond with higher rates of abuse, attributed to male need to affirm dominance and control (Eswaran & Malhotra, 2011; Kimuna et al., 2012; Mogford, 2011; Sen, 1999; Weitzman, 2014). This phenomenon, known as gender deviance neutralization, suggests that economic empowerment may concurrently disrupt gender norms so that a woman's likelihood of being a victim of violence may actually increase (Eswaran & Malhotra, 2011; Weitzman, 2014). Moreover, such violence may discourage some women from taking employment outside the home (Weitzman, 2014) further upholding the cycle of dependence and male dominance. On the other hand, increased education of both men and women beyond the primary level corresponds with a decrease in the prevalence of domestic violence (Eswaran & Malhotra, 2011; Kimuna et al., 2012; Murshid, 2015; Sen, 1999).

#### *Connection between dowry and domestic violence in South Asia*

Research has found a strong connection between dowry and domestic violence in South Asia (Jeyaseelan et al., 2015; Khan & Hussain, 2008). As noted previously, dowry refers to “cash, goods, valuable items or property that the bride's family gives to the groom's family...before, during or after the marriage” (Nasrin, 2011, p. 27). The direction of exchange is from the bride's relations to the groom's, differentiating dowry from *mehr* or “bride price,” which flows from the groom's relations to the family of the bride (Anderson, 2007; Kabeer, Mahmud & Tasneem, 2011; Lindberg, 2014; Nasrin, 2011). Both practices are ancient customs, but Hindus have traditionally practiced dowry

while bride price had been an Islamic practice (Ambrus et al., 2010, Sheel, 1999). Across South Asia, dowry has wholly replaced *mehr* (Khan, 2005; Sheel, 1999). One explanation for the increase in dowry practice among the region's non-Hindus points to colonial codification of Hindu laws (Sheel, 1999). According to this perspective, the Sanskrit interpreters employed by the British to catalogue Hindu traditions largely promoted gift-giving in the *Brahma* form of marriage and *Brahma* marriage subsequently became legitimized as the standard in Hindu and British law (Sheel, 1999). As this occurred, dowry expanded to other groups that had been observing *mehr* or previously did not practice gift giving with marriage (Sheel, 1999). Others cite the adoption of colonial preoccupation with material goods as a key reason for the expansion of dowry over time (Lindberg, 2014). Today, dowry is pervasive in India and Pakistan and has been rising in Bangladesh (Ambrus et al., 2010; Anderson, 2007; Sheel, 1999).

The literature describes different purposes of dowry. In some parts of South Asia, families consider it a daughter's pre-mortem inheritance right comparable to the right of the brothers to inherit upon the passing of the parents (Shenk, 2007). In certain situations, most notably in Southern India, this "bequest" form of dowry (wherein the bride receives the payment) may have an empowering effect when some or all of the dowry property remains under the bride's control as a personal resource after marriage (Roulet, 1996). In contrast, the "price" form of dowry is more likely to be cash-only and paid to the groom (Arunachalam & Logan, 2016). Acting as an incentive for men to marry, price dowry works to bring the marriage "market" into equilibrium (Arunachalam & Logan, 2016). Another theory, the "compensation" premise, holds that dowry may be given in consideration of the financial encumbrance assumed by the groom and his family when

they take a dependent female into their household (Lindberg, 2014; Nasrin, 2011). Dowry may serve to communicate social status or prestige (Nasrin, 2011; Roulet, 1996; Sheel, 1999). Many parents pay dowry to ensure that their daughter is treated well by her husband and his family (Jayaseelan et al., 2015; Taher & Jamaluddin, 2015). Other proposed purposes are contradictory. Dowry may be used by a bride's family to arrange a marriage with a groom from a higher social class (Lindberg, 2014; Sheel, 1999). Alternately, it may act as a barrier to entry, promoting marriage among members of the same socioeconomic status by preventing inter-class mobility via marriage (Sheel, 1999).

Over time, the types of dowry demanded and paid have changed (Lindberg, 2014). Small plots of land were originally given as dowry in matrilineal Hindu families. Cash and other goods became more common in the 1970s while the groom or the groom's family became the main recipient (Lindberg, 2014). Among South Asian Christians, cash payments were once the norm but "more recently automobiles, houses or expensive consumer goods" have been common (Lindberg, 2014, p 33). Qualitative research reveals other trends such as exorbitant dowry demands, dowry demands continuing well after the marriage takes place and unemployed or uneducated grooms demanding large dowries (Lindberg, 2014).

Non-payment of dowry is a key cause of domestic violence in South Asia (Panchanadeswaran & Koverola, 2005). Physical violence is also used as a tool to extract additional dowry from the bride's family (Mogford, 2011). In Pakistan, as many as 40% of domestic violence cases are caused by disputes related to the payments of dowry (Panchanadeswaran & Koverola, 2005). In India, 43.1% of survey respondents who were victims of dowry also were physically beaten (Jayaseelan et al., 2015). Beyond the

connection to domestic violence, a number of other regrettable repercussions have been noted. For instance, families may take on debt or sacrifice food and education for daughters to save for the dowry of those daughters (Chowdhury, 2010; Latha & Narendra, 1998).

### *Bangladesh as a case study*

To examine characteristics of those who disclose experience of dowry and domestic violence, this research focuses on Bangladesh a case study. Bangladesh is an important study location for several reasons. Bangladesh is one of several developing countries in Asia with similar degrees of administrative and democratic development coupled with a majority Muslim population. Table 3.1 shows Bangladesh's Asian company on two well-known democracy measurements and the percent of the population that is Muslim (Central Intelligence Agency, 2014; Freedom House, 2014b; The Economist Intelligence Unit, 2013). The Economist Intelligence Unit Democracy Index 2012 ranks Bangladesh 84 out of 167 countries, locating it precisely in the median position (The Economist Intelligence Unit, 2013). Freedom House assigns a "Partly Free" designation to Bangladesh, again in the middle of the scale (Freedom House, 2014a). Indonesia, Turkey and Malaysia have similar Freedom Scores and are proximate on the EIU Democracy rankings. Acknowledging the complexity inherent in comparing contexts in different countries, the third column is presented as another relevant area of overlap. While corruption and gender equality are factors included in the Freedom House Score, Transparency International evaluates 175 countries with the Corruption Perception Index. Column three lists each country's 2014 rank (Transparency International, 2015). More variation is seen in these figures. Bangladesh appears as the most corrupt, but there are

parallels between Bangladesh, Kyrgyzstan and Pakistan. Issues related to government corruption may directly relate to the willingness of crime victims to approach state institutions for assistance or resolution. To the extent that the Islamic traditions in these countries shape their respective cultural, administrative and judicial realms, findings regarding prevalence and response to crime in Bangladesh may be useful. Moreover, non-governmental organizations (NGOs) that are operating empowerment programs in Bangladesh are also working on economic, social and political programs in other countries. Insights from Bangladesh could influence research or reforms in other regional societies.

Bangladesh is also an interesting case due to several noteworthy socio-economic changes that have taken place over the last few decades. Societal and family-level changes may be attributed to the development of the textile and ready-made garment sectors and the success of various development programs undertaken by the government and NGOs like BRAC and Grameen Bank (International Labor Organization, 2014; Schuler et al., 2013). Bangladesh is one of the few developing countries with a large Muslim population that has a fairly high rate of female participation in the labor force (57%) (The World Bank, 2012). In neighboring India and Pakistan, each having large Muslim populations, the rates of female participation in the labor force are much lower: 29% and 24% respectively (The World Bank, 2012). More than 80% of workers in garment factories are women (ILO, 2014).

Country	EIU Ranking 2012	Freedom House Score 2014	CPI Ranking 2014	% Muslim (var. yr.)
Indonesia	53	3.0	107	86.10
Malaysia	64	4.0	50	60.40
Bangladesh	84	3.5	145	89.50
Turkey	88	3.5	64	99.80
Kyrgyzstan	106	5.0	136	75.00
Pakistan	108	4.5	126	96.40

*Note.* Table information from Central Intelligence Agency, 2014; Freedom House, 2014; The Economist Intelligence Unit, 2013; Transparency International, 2015. EIU = Economist Intelligence Unit. CPI = Corruption Perception Index. Var. yr. = various years.

Table 3.1 Freedom Assessments for Emerging Democracies with Majority Muslim Populations in Asia

Bangladesh has performed better than India and Pakistan in lowering gender gaps over the past few decades. In the 2013 UNDP Human Development Report, India and Pakistan both had a score of .56 and were ranked 127 on the gender inequality index, whereas Bangladesh was ranked 115 with a score of .52 (United Nations Development Program, 2013).

Garment manufacturing jobs have affected the family lives of women in the areas of education, marriage and decision-making. Women employed in the garment sector tend to delay marriage and child birth and receive more education (Heath & Mobarak, 2015; Naved, Newby and Amin, 2001). Very young girls also benefit from longer enrollment in school when they live proximate to garment factories (Heath & Mobarak, 2015). Women who are employed outside the home or are members of NGOs report more participation in family decisions (Head et al., 2015). One national study found employed women were about 40% more likely to be highly empowered and 44% less likely to have husbands who make all of the decisions (Head et al., 2015). In a qualitative



study conducted in four rural areas of Bangladesh, respondents credited employment opportunities with improved marital relations (Schuler et al., 2013).

Despite the progress, there still is considerable gender inequality in Bangladesh. Muslim and Hindu traditions work to establish and reinforce gender hierarchy through culture and institutions (Amin & Pebley, 1994; Dil, 1985; Zaman, 1999). With household authority typically residing in a senior male, and women dependent on him for material needs and protection, the established societal structure can be classified as strongly patriarchal (Amin & Pebley, 1994; Hashemi et al., 1996; Head et al., 2015; Kabeer, 2011; Kabeer, Mahmud & Tasneen, 2011; Khan, 2005; Schuler, Hashemi, Riley, & Akhter, 1996). For many, educating girls is not considered a wise investment, so young women are not given adequate educational training or skills needed to support themselves or live independently (Siddique, 1998). Instead, they marry young and rely on their husbands for everything from food and clothing to permission to leave the house (Siddique, 1998). Meanwhile, patrilocal living arrangements after marriage distance women from their own family connections when they formally become part of their husband's family group (Kabeer, 2011). Muslim law allows men to take up to four wives and divorce without providing grounds (Zaman, 1999). For a woman, the process of securing divorce, even in instances where she is subject to ruthless violence by her husband or his family, is complicated, lengthy and typically just the beginning of overwhelming obstacles that the woman will face if the divorce is granted (Zaman, 1999). Even though there is evidence that employment may lead to more joint or autonomous decision making, the majority of Bangladeshi women are still not participating in household decisions (Head et al., 2015). Joint decision-making occurs in only about 15% of families and women possessing the

sole authority to make decisions on her own healthcare are a small minority (Head et al., 2015; Kabeer, Mahmud & Tasneem, 2011). Less than half of women working outside the home feel that her income accords her more respect among family members (Kabeer, Mahmud & Tasneem, 2011).

Gender hierarchy is reinforced outside the home through male proprietorship of public spaces and the controlling practice of *purdah*, the designation of economic, social and political life to men (Amin & Pebley, 1994; Hashemi et al., 1996; Kabeer, Mahmud & Tasneem, 2011; Nazneen, 1996; Schuler et al., 1996). The expectation that women veil themselves in public has become more widespread in urban areas with the development of the garment sector and increasing numbers of women engaged in paid employment (Nazneen, 1996). Urban women realize more mobility through external employment (Amin & Pebley, 1994; Anwary, 2003). Women engaged in formal work outside the home are more likely to feel comfortable travelling unaccompanied to other public places such as a health clinic, market or to visit their own families (Kabeer, Mahmud & Tasneem, 2011). Beyond mobility, women are still largely excluded from society (Kabeer, Mahmud & Tasneem, 2011). Very high numbers of surveyed women report voting in local elections but about 56% say they make their own voting decisions (Kabeer, Mahmud & Tasneem, 2011). The percentages of women attending rural committee meetings and participating in *shalish* or protests are very small (Kabeer, Mahmud & Tasneem, 2011). Echoing the family-level findings, overall 16% of women surveyed feel that their income contributions have afforded them improved status in the larger society with variation in responses based on the type of employment (Kabeer, Mahmud & Tasneem, 2011).

Muslim tradition and gender hierarchy also influence the legal environment that Bangladeshi women face when they are victims of domestic violence. The law is faintly bifurcated into constitutional codes and an informal family law influenced by religious traditions. There exists, in other words, a formal and informal legal system (Schuler et al., 2008). Officially, the formal statute should prevail when religious practices and state laws conflict, as is frequently the case in the areas of inheritance, marriage, divorce, and child custody (Hasan, 1994). Both the secular and religious laws discriminate against women by favoring the male position in these and other legal issues (Dil, 1985; Hasan, 1994).

Many Bangladeshi citizens, poor and rich alike, generally forego the formal, state-sponsored justice system in favor of other means of resolution (Pecotich, Rahtz, & Shultz, 2010). *Shalish*, an informal legal process lead by local or religious men is used to solve disputes in civil and criminal matters particularly in rural areas (Hasan, 1994; Schuler et al., 2008; Schuler et al., 1996). Many women consider both the formal court system and *shalish* biased towards men (Khan, 2005; Schuler et al., 2008). Bangladeshi women are also deeply skeptical of the ability or willingness of law enforcement to assist them when they have been victims of violent crime (Nasrin, 2011; Naved et al., 2006). Police harassment of women involving intimidation, beating and rape has been documented repeatedly (Khan, 2005; Schuler et al., 1996; Zaman, 1999). Whereas many women in rural areas had been unaware of their legal rights (Rafi & Chowdhury, 2000), a recent survey shows rural women feel that their access to resources of recourse have improved even if the institutions remain ineffective (Schuler et al., 2013).

### *Dowry & domestic violence in Bangladesh*

Dowry remains a common practice in Bangladesh even though offering or taking it has been illegal since the passage of the Dowry Prohibition Act in 1980 (Chowdhury, 2010; Nasrin, 2011). The extant evidence suggests the practice has been on the rise since the 1960s in rural parts of Bangladesh (Anderson, 2007; Chowdhury, 2010; Nasrin, 2011). A study by Anderson (2007) reported that in 1975 about 11% of families living in rural Bangladesh paid dowry, but by 1990 it had increased to 44%, rising further to 76% by 1996. Other current estimates range from 50 to 80% of all weddings in rural areas (Chowdhury, 2010; Nasrin, 2011; Naved & Persson, 2010). Naved and Persson (2010) found that dowry was demanded in just over half of rural weddings but in only 14% of urban weddings. One explanation for the growth of dowry in Bangladesh relates to legal changes that occurred between 1961 and 1974 (Ambrus et al., 2010). The Muslim Family Law Ordinance of 1961 required all marriages to be registered, substantially reducing the incidence of polygamy. Later, the Registration of Muslim Marriages and Divorces Act of 1974 identified the court process as the only legitimate method for ending a marriage. This meant an increased cost of divorce for men because *mehr* payment, the financial maintenance provision outlined in a marriage contract and payable when a husband initiates divorce proceedings, was much more likely to be enforced (Ambrus et al., 2010). With costs of divorce increasing for men, larger dowries were needed to induce men to marry (Ambrus et al., 2010).

Not only has the fraction of dowry marriages increased in Bangladesh, other trends have been observed. Over recent decades, bequest forms of dowry have been decreasing while price dowry, dowry payment made to the groom, has become more

common (Arunachalam & Logan, 2016). Price dowries are much more likely than bequest dowries to be cash-only exchanges (Arunachalam & Logan, 2016). The amounts of price dowries have been increasing about 4% per year while bequest dowry amounts fall about 7% per year (Arunachalam & Logan, 2016). In the mid-1990s, the average dowry payment in Bangladesh was about 12,700 *Taka* amounting to 62% of average gross annual income of one household (Anderson, 2007). In 2004, mean non-bequest dowry (price dowry) was over 30,000 *Taka* (Ambrus et al., 2010). Research shows that the size of dowry payments tends to increase with bride's age, so parents with meager means face tremendous pressure to marry their daughters at a young age (Bates et al., 2004; Jeyaseelan et al., 2015). This circumstance creates many disadvantages as the formal education of girls or young women may be cut short and they enter marriage with relatively less life experience than their husbands (Bates et al., 2004).

The Dowry Prohibition Act has been unsuccessful in reducing dowry practice and its negative corollaries (Chowdhury, 2010; Taher & Jamaluddin, 2015). As with domestic violence, education appears to have a mitigating effect. Increased education of either men or women correlates negatively with frequency of dowry payments (Bates et al., 2004; Naved & Persson, 2010). Similarly, households with higher income tend to demand dowry less often than households with lower income (Bates et al., 2004; Naved & Persson, 2010).

As in other South Asian countries, a connection between dowry and domestic violence has been found in Bangladesh (Schuler, Hashemi, & Badal, 1998; Schuler et al., 1996; Taher & Jamaluddin, 2015). Women whose marriages involve dowry agreements are more likely to suffer domestic abuse (Bates et al., 2004; Naved & Persson, 2010).

Schuler et al. (1996, p. 1733) equated dowry with “institutionalized extortion” whereby young wives are victimized by their husbands until dowry promised is paid or further demands are met. Naved and Persson (2010) found that dowry demands in marriage increased the likelihood, frequency, and severity of physical abuse among married women in Bangladesh regardless of the status of dowry payment. The study also noted that Bangladeshi men may actually have an incentive to mistreat or divorce their wives to pursue additional dowry opportunities (Naved & Persson, 2010).

Beyond using violence as an instrument of extortion, many Bangladeshi men abuse their wives for mistakes made in housekeeping and for reasons over which women have no control (Schuler et al., 1998). Cross-sectional studies estimate that between 10% and 67% of married women have experienced abuse during their lifetimes with variations among study findings attributed to methodological differences (Bates et al., 2004; Garcia-Moreno et al., 2006; Naved et al., 2006; Rahman, Hoque, & Makinoda, 2011; Sambisa et al., 2011; Schuler et al., 1996; Schuler et al., 2013). Men are considered the foremost perpetrators; between 55% and 68% of surveyed men acknowledge that they physically abuse their spouses (Aklimunnessa, Khan, Kabir, & Mori, 2007; Garcia-Moreno et al., 2006; Sambisa, Angeles, Lance, Naved, & Curtis, 2010). The most common forms of physical abuse include slapping, twisting, pushing, shaking and throwing something at the victim (Aklimunnessa et al., 2007; Rahman et al., 2011; Sambisa et al., 2011). Bangladeshi men are more likely to perpetuate marital violence when they were exposed to parental violence as children (Murshid & Murshid, 2015). Correlates with decreased probability of domestic violence include increased marital age for men, duration of marriage and larger households (Murshid, 2015). Increased education is also negatively

related to the frequency and severity of domestic violence experienced by Bangladeshi women (Ahmed, 2005; Aklimunnessa et al., 2007; Bates et al., 2004; Koenig et al., 2003; Sambisa et al., 2011; Schuler et al., 1996; Schuler et al., 2013).

Results regarding the effect of women's economic independence on domestic violence in Bangladesh have been mixed. Koenig et al. (2003) initially found that participation in savings or credit programs significantly elevated the risk of domestic violence in more socially conservative areas. These results contradict conclusions made by Schuler et al. (1996) that BRAC and Grameen Bank micro-credit programs were effective in reducing domestic violence. Another study by Bates et al. (2004) found no connection between domestic violence and involvement in a microcredit program. Others showed that microcredit and micro-savings program members experienced domestic violence more frequently than non-members but the violence decreased with the duration of their involvement or when members participated in training programs (Ahmed, 2005; Chowdhury, Mushtaque, & Bhuiya, 2004). Rahman et al. (2011) suggested that men's need to assert their authority might be a key reason behind the increases in domestic violence accompanying increases in earning or employment. More recently, women living in rural Bangladesh have ascribed decreases in the frequency of intimate partner violence to women's income generation enabled through their increased education (Schuler et al., 2013). Some women working outside the home have used their status as income-earners to renegotiate their household's gender roles (Schuler et al., 2013). Improved marital relations may have reduced the incidence of domestic violence. Divorce rates have not increased, but women who are not financially dependent on men

may be less tolerant of domestic violence. At the same time, men report feeling anger and frustration with these social changes (Schuler et al., 2013).

Several studies have examined victims' responses to domestic violence in Bangladesh. Using survey and interview data, researchers have found that most women do not report incidences of domestic violence or seek recourse at all (Naved et al., 2006; Taher & Jamaluddin, 2015). The most common reasons given by victims for remaining silent are failure of the law to grant them custody of their children and potential worsening of the abuse (Naved et al., 2006; Schuler et al., 2008; Taher & Jamaluddin, 2015). Other research noted that abused women rarely turn to institutions because local leaders generally uphold patriarchal systems and may even endorse violence against women to maintain traditional roles. Law enforcement agents also do not offer much assistance (Aklimunnessa et al., 2007; Sayem & Khan, 2012; Taher & Jamaluddin, 2015).

While the prior research on the subject of dowry solicitation and domestic violence in Bangladesh has formed a strong foundation on which to build, to date no comprehensive national study of frequency or response has been undertaken. Nor has there been any attempt to contextualize the prevalence of gender crime in Bangladesh among the various types of violent and non-violent crime Bangladeshis experience. This study does both. By examining observations from a dataset carefully designed to proportionately represent every gender, religious and ethnic group in rural and urban areas across Bangladesh's six administrative districts, a sense of the pervasiveness of dowry solicitation and domestic violence in every corner of the country may be gained.



Further, we can assess whether differences exist in actions taken in response to the two gender crimes or among the six districts.

### Data and Methods

Data for this study came from a national household survey in Bangladesh, sponsored by the World Bank, about citizens' experiences with formal and informal legal institutions. The household surveys were conducted in 2009 through in-person interviews by Mitra and Associates, a research firm in Bangladesh. The Bangladesh Bureau of Statistics shared their Integrated Multipurpose Sample (IMPS) design containing 1000 Primary Sampling Units of approximately 200 households per unit spread across the country (The World Bank, 2011a). Two-stage stratified cluster sampling and additional sampling were used to ensure that the gender, geographic residency, age, ethnicity and religion of respondents were representative of the population (The World Bank, 2011a). Trained survey teams visited each administrative division and made two follow-up visits to individuals who were selected but not available at the time of the first interview attempt. The original sample size was 10,710 households, with half represented by women. People in 957 households were not available or did not agree to the interview which resulted in the final dataset containing 9,753 observations.

The survey instrument and the dataset can be found in the Microdata section of The World Bank website (The World Bank, 2011b). The survey instrument has a total of 25 questions. Parts A, B and C, the sections that are relevant for this paper, ask respondents about their experiences of abuses, civil disputes and crimes and the response actions that the household took. Everyone surveyed was asked if the household experienced each type of abuse, dispute or crime. The action taken questions were posed

only related to the crime that the household representative deemed the “most serious” of all the legal conflicts experienced. Action is defined as taking one or more of the five non-mutually exclusive types of action identified in the survey: alone or with help from family members, approaching local leaders, going to the police, consulting government officials or approaching an NGO.

To understand who tends to relate experiences of dowry solicitation and domestic violence, logistic regression analyses is used. The first logistic regression model utilizes a binary dependent variable, Dowry, which equals one if the household representative related an incident of dowry solicitation. The main effects, Female, Rural, Income Earner, and No Education are all dummy variables that equal 1 if yes. Age and Poverty Score, the only two continuous variables, are standardized by taking the difference from the mean. The mean age of household representatives is 38.95 (standard deviation = 14.51) and the mean poverty score is 56.11 (standard deviation = 17.68). The second dowry model explores potential interaction of respondent gender with education-level, income status, and rural status. The same structure is used to identify correlates of domestic violence; the only difference being the addition of the binary Dowry variable to the domestic violence model.

To avoid any potential problems of heteroscedasticity, robust standard errors are used to assess the statistical significance of the predictors of dowry and domestic violence. Log odds generated by maximum likelihood are transformed into odds ratios to better assess the effect size of each predictor. Odds ratios greater than one indicate a positive relationship between the independent variable and dowry or domestic violence experience. An odds ratio of two indicates twice the likelihood, holding all other

variables constant. The odds ratios reported for interaction terms must be added to the odds ratios for the main effects and the constant to determine the total differential effects. These differential effects are presented as figure plots.

Due to the small number of observations associated with some of the actions, multivariate analysis cannot be conducted on the household responses to the two gender crimes. Instead, chi-square tests are employed. Since the literature suggests that reaction decisions would be made by the household head (likely a male), gender differences in response action are not expected. The chi-square tests, however, will show if residential setting (rural/urban), education level or administrative division result in differences in response actions.

## Results

Table 3.2 compares household reports of dowry and domestic violence with household reports of other crimes in Bangladesh. In total, there were 3,545 incidents of crime reported in the survey. The five most frequent reported crimes, theft/burglary, dowry solicitation, mugging, domestic violence and robbery together make up 90% of this total. Women disclosed 57% of these five crime types and rural residents accounted for 69% of the total (not shown). Dowry solicitation and domestic violence, both gender-related crimes, appear in the top five. Dowry solicitation has the second highest rate of incidence with 449 total household disclosures. This amounts to 13% of all the crimes reported in the survey. More than half those interviewed acknowledged personally knowing a victim and being “fairly worried” about dowry solicitation (not shown). In addition, household representatives reported 274 incidents of domestic violence, 8% of the total related crime experiences.

Crime	Total Reported	% of Crimes
Theft/Burglary	1927	54.36
Dowry	449	12.67
Mugging	312	8.80
Domestic Violence	274	7.73
Robbery	220	6.21
Arson	73	2.06
Extortion	66	1.86
Drug related abuse/crime	45	1.27
Sexual Harassment in Public	38	1.07
Murder	36	1.02
Assault (Non-family)	29	0.82
Kidnapping & ransom	24	0.68
Violence using firearms	20	0.56
Religious/Ethnic Violence	16	0.45
Rape	11	0.31
Acid violence	5	0.14
TOTAL	3545	100.00

Note. n = 9753.

Table 3.2 Crime in Bangladesh Ranked by Total Incidents Related

Table 3.3 reports descriptive statistics for those relating encounters with dowry solicitation and domestic violence. The gender differences are visible with 62% of the dowry experiences and 77% of the domestic violence incidents related by female household representatives. Rural residents disclosed 76% of the dowry and 71% of the domestic violence occurrences. The Rajshahi division had the most household victims of dowry and the second highest frequency of domestic violence. Chittagong, despite being the third largest division, had the second highest number of dowry and the highest number of domestic violence encounters.

Descriptive statistics for each of the variables used in the regression analysis are shown in Table 3.4. In Table 3.5, the results of the logistic regression analyses are reported. Models 1 and 3 show the direct effects (i.e., odds ratios) of respondent and household characteristics and geographic regions (i.e., divisions) on the likelihood of being dowry and domestic violence victims. The models including two-way interaction effects (models 2 and 4) reveal that women are almost two and a half times more likely than men to recount experiencing dowry and nearly three times as likely to report domestic violence (Dowry significant at  $p < .01$ , Domestic Violence at  $p < .05$ ). For households whose survey respondent has no education, the likelihood of relating dowry is 1.4 times higher than household representatives with some formal education ( $p < .05$ ), but there is no similar effect for domestic violence. Looking at the sample as a whole, income earners have roughly even odds of relating dowry experience and lower odds of domestic violence. To gain a sense of intergenerational differences, age group dummy variables are included in each model. When compared to the 31-40 year age group, the respondents of every other age group showed increased odds of relating dowry experience. Respondents who were 51-60 years old had the highest likelihood (2.7) of disclosing dowry experience as compared to 31-40 year olds. Again, these results were not mirrored in the domestic violence models where only the younger age group showed an increased likelihood of relating domestic violence.

Household Characteristic	Dowry <sup>a</sup>			Domestic Violence <sup>b</sup>	
	Total %	Total Related	% of Dowry	Total Related	% of DV
Female	53.59	277	61.69	211	77.01
Male	46.41	172	38.31	63	22.99
Rural	70.32	342	76.17	194	70.80
Urban	29.68	107	23.83	80	29.20
No Education	39.05	232	51.67	121	44.16
Some Education	60.95	217	48.33	153	55.84
Muslim	89.52	394	87.75	254	92.70
Non-Muslim	10.47	55	12.25	20	7.30
Income Earner	46.49	187	41.65	85	31.02
Non-Income Earner	53.51	262	58.35	189	68.98
Microfinance Member	39.10	195	43.43	120	43.80
Non-Microfinance Member	60.90	254	56.57	154	56.20
District					
Barisal	8.07	23	5.12	17	6.20
Chittagong	17.88	106	23.61	78	28.47
Dhaka	27.97	106	23.61	46	16.79
Khulna	14.96	34	7.57	48	17.52
Rajshahi	25.49	171	38.08	75	27.37
Sylhet	5.63	9	2.00	10	3.65

Note. n = 9753. DV = Domestic Violence.

<sup>a</sup>Dowry n = 449. <sup>b</sup>Domestic Violence n = 274.

Table 3.3 Descriptive Statistics for Incidences of Dowry and Domestic Violence

Turning next to household characteristics, the odds of being a victim of dowry for rural residents are 1.75 times those of urban residents ( $p < .01$ ). Rural residents show a higher likelihood of domestic violence experience (1.58), though this result is not statistically significant. Non-Muslim households have slightly higher odds of dowry experience but lower odds of domestic violence. Likewise, the odds of being a victim of dowry are slightly higher for households that are members of microfinance programs

( $p < .05$ ), but membership with a microfinance program does not have any influence on the likelihood of being a victim of domestic violence. In addition, those who were victims of dowry also were 2.5 times more likely to experience domestic violence ( $p < .01$ ).

The results in Table 3.5 also uncover some interesting regional differences with regards to incidences of dowry and domestic violence in Bangladesh. For instance, the odds of being a victim of dowry were much higher for individuals living in the Rajshahi division in comparison to those living in Barisal (.41), Dhaka (.55), Khulna (.32), and Sylhet (.23) divisions ( $p < .01$  for each). The odds of being a victim of domestic violence for individuals living in the Chittagong division were significantly higher than those residing in the Rajshahi division (1.67,  $p < .05$ ), and for individuals living in the Dhaka division, the odds of being a domestic violence victim were lower (.59,  $p < .01$ ) than those living in the Rajshahi division.

Separate regression models with three two-way interaction effects are estimated to assess the possibility that the influence of respondents' gender on their recounts of dowry and domestic violence were contingent on whether they had any formal schooling, were income earners, and were living in rural households. As shown in model 2 in Table 3.5 and in Figure 3.1, on average, females had a higher probability of disclosing incidences of dowry than males regardless of living in rural or urban households. There was no significant difference between rural versus urban females with regards to reporting dowry. Males living in the urban areas were the least likely to disclose dowry (see Figure 3.1). The difference in the probability of reporting dowry was highest between urban females and urban males.

Variable	Mean	Std. Dev	Min	Max
Female	0.54	0.50	0	1
No Education	0.39	0.49	0	1
Earn an Income	0.47	0.50	0	1
Age 1	0.08	0.26	0	1
Age 2	0.26	0.44	0	1
Age 3	0.27	0.44	0	1
Age 4	0.20	0.40	0	1
Age 5	0.12	0.33	0	1
Age 6	0.08	0.27	0	1
Not Married	0.13	0.34	0	1
Minority Ethnicity	0.02	0.13	0	1
Rural	0.70	0.46	0	1
Non-Muslim	0.11	0.31	0	1
Poverty Score	0.00	17.68	-53.11	43.89
Microfinance Member	0.39	0.49	0	1
Barisal	0.08	0.27	0	1
Chittagong	0.18	0.38	0	1
Dhaka	0.28	0.45	0	1
Khulna	0.15	0.36	0	1
Sylhet	0.06	0.23	0	1
Rajshahi	0.26	0.44	0	1

Note. n = 9,753

Table 3.4 Descriptive Statistics of Household Representatives



Predictors	Dowry		Domestic Violence	
	(1)	(2)	(3)	(4)
Female	1.67*** (0.27)	2.43*** (0.81)	3.33*** (0.73)	2.81** (1.29)
No Education	1.45*** (0.16)	1.39** (0.23)	1.08 (0.16)	0.80 (0.23)
Income Earner	1.11 (0.18)	1.08 (0.31)	1.20 (0.24)	0.66 (0.24)
Age < 20 years	1.56** (0.35)	1.56* (0.35)	1.06 (0.26)	1.01 (0.25)
Age 20-30 years	1.16 (0.17)	1.16 (0.17)	0.90 (0.14)	0.90 (0.14)
Age 41-50 years	1.72*** (0.26)	1.73*** (0.26)	0.76 (0.15)	0.77 (0.15)
Age 51-60 years	2.68*** (0.43)	2.66*** (0.43)	0.56** (0.15)	0.57** (0.15)
Age > 60 years	1.64** (0.35)	1.63** (0.35)	0.86 (0.25)	0.82 (0.24)
Rural	1.21 (0.14)	1.75*** (0.36)	0.90 (0.13)	1.58 (0.51)
Non-Muslim	1.32* (0.21)	1.32* (0.21)	0.69 (0.17)	0.69 (0.16)
Micro-Org Member	1.23** (0.13)	1.25** (0.13)	1.22 (0.16)	1.22 (0.16)
Dowry			2.51*** (0.73)	2.47*** (0.73)
Barisal	0.41*** (0.09)	0.41*** (0.10)	0.81 (0.22)	0.81 (0.22)
Chittagong	0.95 (0.12)	0.95 (0.12)	1.68*** (0.29)	1.67*** (0.29)
Dhaka	0.55*** (0.07)	0.55*** (0.07)	0.60*** (0.12)	0.59*** (0.11)
Khulna	0.32*** (0.06)	0.32*** (0.06)	1.21 (0.23)	1.19 (0.23)
Sylhet	0.23*** (0.08)	0.23*** (0.08)	0.58 (0.20)	0.59 (0.20)
Rural Female		0.57** (0.14)		0.49** (0.18)
Female Income Earner		1.02 (0.36)		2.17* (0.93)
Constant	0.02*** (0.01)	0.02*** (0.01)	0.01*** (0.00)	0.02*** (0.01)

Note. n = 9,752. Robust standard errors are in parentheses. Age 31-40 years and Rajshahi are comparison groups.

\*\*\* p<0.01, \*\* p<0.05, \* p<0.10.

Table 3.5 Logistic Regression Analyses Results

With regards to disclosing incidences of domestic violence, females in either rural or urban households had significantly higher probability than males. As shown in Figure 3.2, there was no difference between rural and urban females and between rural and urban males with regards to disclosing domestic violence. Urban males were the least likely to report domestic violence and the difference in the probability of reporting domestic violence was highest between urban females and urban males. Furthermore, the interaction between gender and income-earner was positive and statistically significant ( $p < .10$ ). Figure 3.3 provides a graphical illustration of this effect (with 90 percent confidence intervals). As indicated in Figure 3.3, income-earner females were significantly more likely to disclose incidences of domestic violence than non-income-earner females and both income-earner and non-income-earner males. There was no difference between income-earner and non-income-earner males with regards to reporting domestic violence.

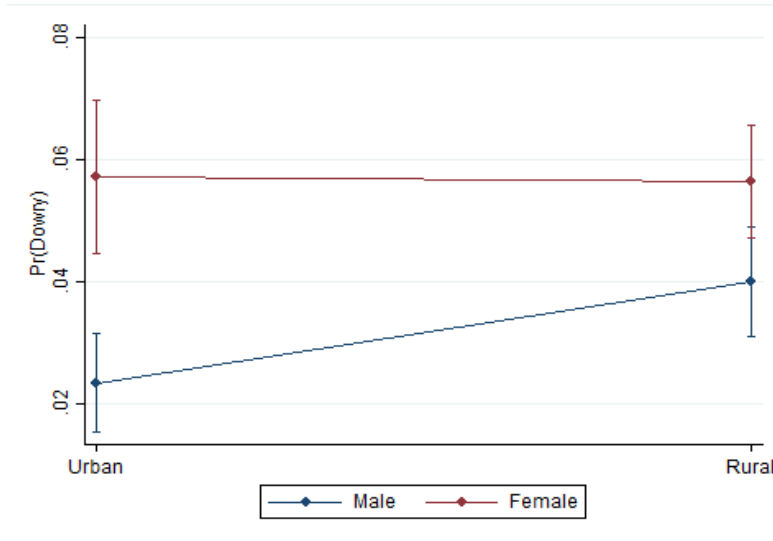


Figure 3.1 Gender and Residential Interaction Effects for Dowry Solicitation Experience

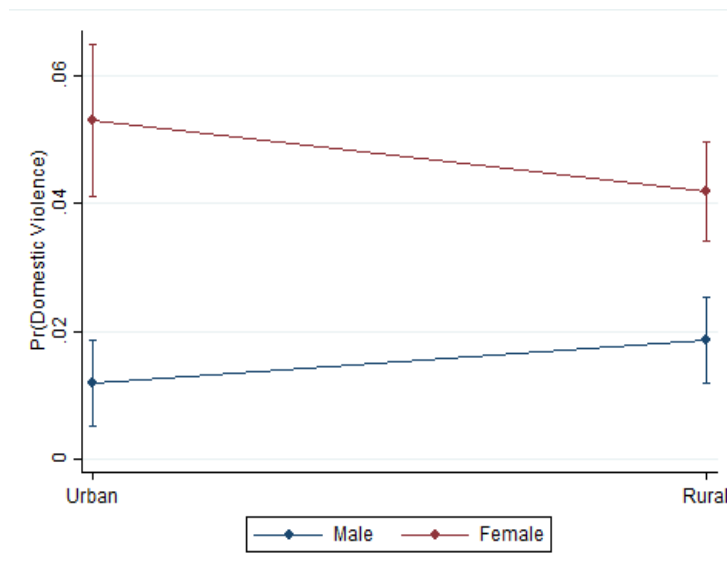


Figure 3.2 Gender and Residential Interaction Effects for Domestic Violence Experience

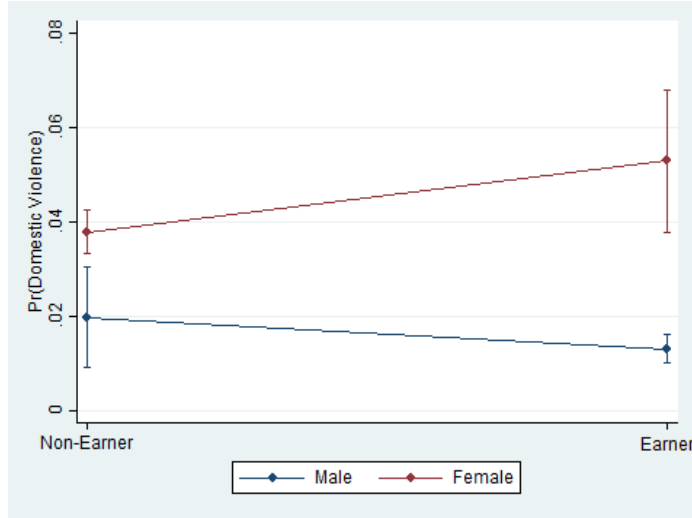


Figure 3.3 Gender and Income Earner Interaction Effects for Domestic Violence Experience

To provide context about household representatives' perceived relative significance of the two crimes, Table 3.6 shows the percentage of dowry and domestic violence that household representatives considered most serious (A) and the number who took action (B). These are presented by individual or household characteristic and administrative division. First, focus on column (A). Of the 449 incidents of dowry solicitation, 198 households (44%) believed that to be the most serious crime they faced. Eighty of the 274 household representatives relating domestic violence identified that as the most serious crime. A higher percentage of household representatives with no education claimed dowry was the most serious crime (59.60%). It was household representatives with at least some education that claimed a higher percentage of most serious domestic violence cases (58.75%). Sixty-four percent of the most serious dowry incidents and 78.75% of domestic violence were non-income earners. Rajshahi had the

highest percentage of most serious dowry and domestic violence incidents followed by Dhaka then Chittagong for dowry and Chittagong then Dhaka for domestic violence.

As shown in section (B), 87 households that experienced dowry and 54 households that reported domestic violence pursued at least one of the five action types included on the survey. Females and rural residents reported that some type of action was taken more often than males for both types of crime. Respondents with at least some education related action-taking less frequently than uneducated households (40.23% vs. 59.77%) in response to dowry but more for domestic violence (59.26% vs. 40.74%). Households in Rajshahi had the highest percentage of both gender-related crimes and the highest percentage of households taking action; 34.48% for dowry and 33.33% for domestic violence.

For any household that experienced either dowry or domestic violence but did not identify either as the most serious incident confronted, Table 3.7 shows the broad category of conflicts that the respondents judged more serious. Land or property disputes are the most common response making up 29% of the total. Overall, 47% of the households revealed that other crimes, both violent and non-violent, were more serious.

	(A) Most Serious Incident Experienced		(B) Took Action	
	Dowry <sup>a</sup>	Domestic Violence <sup>b</sup>	Dowry <sup>c</sup>	Domestic Violence <sup>d</sup>
Gender				
Female	69.19	77.50	63.22	77.78
Male	30.81	22.50	36.78	22.22
Area				
Rural	76.77	68.75	73.56	62.96
Urban	23.23	31.25	26.44	37.04
Education				
No Education	59.60	41.25	59.77	40.74
Some Education	40.40	58.75	40.23	59.26
Income Status				
Income Earner	36.36	21.25	43.68	24.07
Non-Income Earner	63.64	78.75	56.32	75.93
Microfinance Membership				
Member	45.45	40.00	47.13	42.59
Non-member	54.55	60.00	52.87	57.41
District				
Barisal	5.56	7.50	8.05	7.41
Chittagong	18.69	25.00	25.29	27.78
Dhaka	24.75	16.25	26.44	12.96
Khulna	4.55	15.00	2.30	14.81
Rajshahi	44.44	31.25	34.48	33.33
Sylhet	2.02	5.00	3.45	3.70

Note: All numbers are percentages. <sup>a</sup> n=198. <sup>b</sup> n=80. <sup>c</sup> n=87. <sup>d</sup> n=54.

Table 3.6 Descriptive Statistics for Dowry and Domestic Violence

Conflict	Total	% of Total
Land/property related disputes	114	29.00
Family and inheritance disputes	68	17.00
Abuse by service providers, local authorities or government agents	51	13.00
Other crimes	47	12.00
Abuse by law enforcement authorities and processes	44	11.00
Business disputes	40	10.00
Abuse at work	21	5.00
Environmental/consumer related abuse	11	3.00
Drug related abuses/crimes	1	0.00
<b>TOTAL</b>	<b>397</b>	<b>100.00</b>

*Note: n = 675.*

**Table 3.7 Conflicts that Victims of Dowry and Domestic Violence Considered More Serious**

To give a sense of the most common courses of action in response to dowry and domestic violence, Table 3.8 lays out the type and frequency of actions in each of the six geographic divisions. Acting alone or with the help of family is the most commonly reported action type everywhere for both crimes. In all but one division, more than 90% of households reacted alone or with the help of family as a result of a dowry solicitation. This response was utilized by at least 75% of domestic violence households in four divisions. The percentages also show that local leaders were approached more often than law enforcement agents in every division. In Dhaka, the largest division, only 13.64% of dowry victim families approached law enforcement and in Chittagong, only 6.67% of domestic violence households involved the police. Contacting government officials or NGOs had 5 household reports each, though it is interesting to note that four of the NGO actions were by Rajshahi households in response to dowry.

	Barisal % HH	Chittagong % HH	Dhaka % HH	Khulna % HH	Rajshahi % HH	Sylhet % HH
Dowry Solicitation <sup>a</sup>	p = 0.03					
No. of Households (HH) Taking Action	7	22	23	2	30	3
Alone/Family	100.00	95.45	91.30	50.00	90.00	100.00
Local Leaders	57.14	45.45	30.43	100.00	30.00	66.67
Law Enforcement	57.14	13.64	4.35	100.00	16.67	33.33
Government Officials	14.29	-	-	50.00	-	-
NGO	-	-	-	-	13.33	-
Domestic Violence <sup>b</sup>	p = 0.02					
No. of Households (HH) Taking Action	4	15	7	8	18	2
Alone/Family	100.00	93.33	85.71	75.00	55.56	50.00
Local Leaders	50.00	40.00	28.57	75.00	72.22	50.00
Law Enforcement	50.00	6.67	28.57	37.50	22.22	-
Government Officials	75.00	-	-	-	-	-
NGO	25.00	-	-	-	-	-

*Note.* Percentages in each region may be greater than 100 because some households took more than one type of action. HH = Household.

<sup>a</sup>Dowry n = 198. <sup>b</sup>Domestic Violence n = 80.

Table 3.8 Household Action Types Taken after Dowry Solicitation and Domestic Violence by Division

## Discussion and Conclusion

In many developing countries, inconsistency in upholding the rule of law, wrought by institutional weaknesses and corruption, provide disincentives to report gender-related crimes to authorities (Andersson et al, 2010; Gracia, 2004). Cultural traditions, social tolerance, stigma and institutional discrimination may disenfranchise women victims particularly (Andersson et al., 2010; Gracia, 2004; Heise et al., 1994; The World Bank, 2011a; Watts & Zimmerman, 2002). For these reasons, government statistics are not reliable and cross-sectional surveys and recordkeeping of NGOs are often the best sources of information about gender crime (The World Bank, 2011a; Watts



& Zimmerman, 2002; Zaman, 1999). A key contribution of this essay is further insight about crimes in Bangladesh and the contextualization of gender-related crimes with respect to all crimes reported by household representatives in a comprehensive, nationally representative sample.

More than three decades after the dowry prohibition act was passed, dowry solicitation remains the second most common crime experienced by Bangladeshis. The problem is not confined to a specific region or residential setting. This study corroborates previous findings, such as those of Koenig et al. (2003), Naved et al. (2006) and Naved and Persson (2010), on the relative prevalence of dowry in rural areas, the correlations between dowry and domestic violence and female autonomy and domestic violence. These findings also confirm that a relatively small proportion of households seek help from sources outside their family members. The findings of Bates et al. (2004) and Naved and Persson (2010) pointing to the moderating effect of education on dowry are also upheld by these data. Survey respondents with at least some education have a reduced probability of relating household dowry victimization.

In addition to providing additional empirical support for the existing understanding of the correlates of gender crimes in Bangladesh, this study offers some new insights. Specifically, these data indicate no difference between rural and urban women relating either dowry solicitation or domestic violence. There are, however, some generational differences as household representatives between the ages of 51 and 60 years are two and a half times more likely to disclose experience with dowry than respondents between ages 31 to 40 years. While rural households may be more likely to experience dowry solicitation overall, urban households with less educated members are

highly vulnerable as well. Our analysis also reveals that gender-related crimes are particularly widespread in the Rajshahi and Chittagong divisions.

Domestic violence is the most common violent crime in Bangladesh as well as the fourth most frequent crime overall. This substantiates prior research on the problem's extensiveness. Even though income earners are about half as likely to disclose experience of domestic violence compared to non-income earners, this does not hold true for female respondents who earn an income. These results also validate previous studies that show Bangladeshi women engaging in non-household employment relate increased experience of domestic violence (Ahmed, 2005; Chowdhury et al., 2004; Koenig et al., 2003). Unlike previous studies, these findings indicate no link between education and domestic violence.

Residents of the Rajshahi and Chittagong divisions have the highest likelihood of dowry and domestic violence, though the reason cannot be ascertained by these data. With four of the five NGO actions taken in Rajshahi, the possibility exists that NGO activity in that region may have increased awareness about the criminality of dowry solicitation or what constitutes domestic violence. With respect to gender-related crime, citizens throughout the country do not consider state-sponsored systems a viable option for help. In four of the five divisions, less than 50% of dowry victim households chose to approach law enforcement. Less than half of households in every single division went to law enforcement for help with domestic violence. The numbers are even worse for government officials signifying an overall lack of confidence in formal justice venues. Meanwhile, informal action, such as acting alone or with help from family members or

taking no action at all are the most frequent responses in every division and across both crimes.

Taken all together, the implication of these findings is the need for improved governance in Bangladesh. Though the government has taken a step in passing legislation to do this, policy enforcement has been lacking. Furthermore, some government sectors appear to be contributing to the problem; 51 households with dowry and/or domestic violence experience claim to have had a more serious conflict with government agents (Table 3.7). Many NGOs conduct poverty alleviation and women's empowerment programs to address the complex problems of gender-related crime and other forms of inequality in Bangladesh (Amin & Pebley, 1994; BRAC, 2014; Zohir, 2004). This work is done in areas conventionally considered the jurisdiction of the state such as education, health services and justice (Amin & Pebley, 1994; Zohir, 2004). As neither NGO work nor legislative measures alone can change the social status of women in Bangladesh, calls have been made for increased cooperation between state and non-state institutions (Aklimunnessa et al., 2007; Panchanadeswaran & Koverola, 2005; Siddique, 1998). The Bangladesh Women Lawyer's Association (BNWLA) circulated legal petitions that initiated government reforms (Hasan, 1994) showing that empowerment programs influence governance improvements. Other women's advocacy groups have been successful in securing government-provided medical and rehabilitation services, and prompting legislation ordering a life sentence for those convicted of acid throwing (Anwary, 2003).

NGOs working on poverty alleviation and empowerment should enter the social struggle for equality. If, as Khan (2005, p. 225) states "it would be fair to say that NGOs

have become a part of everyday life among rural households” non-state organizations may have built a solid position to engage rural and urban community leaders. Increased pressure from these development groups could be the next step in abating the patriarchy driven violence and oppression of women in Bangladesh. While literature suggests NGOs have been relatively more focused on rural empowerment, this research shows that domestic violence and dowry demand continue to be a problem in urban areas, too. Shifting attention and resources to urban areas may be necessary. On a regional or national level, NGOs working in Bangladesh should continue relationship building with political and government leaders to influence policymaking in favor of enforcement of existing laws and crafting policies promoting gender equality.

Despite the contributions to extant understanding of dowry and domestic violence in Bangladesh, some limitations of this research should be noted. Three aspects of the survey may contribute to significant underreporting of both dowry and domestic violence. First, the survey concentrated on a wide range of legal incidents and crime that included dowry and domestic violence but was not focused on them. Household representatives hesitant to disclose victimization for stigma, legal or other reasons may not have been sufficiently encouraged to be open about their experience. Second, to our knowledge, the survey administrators did not attempt to define domestic violence or dowry, leaving the respondent to reply based on their individual perception of what constitutes each of these crimes. If verbal abuse and physical violence such as slapping, shoving or twisting are as prevalent as the literature suggests, men and women perpetrating or experiencing them may not define them as domestic violence. Instead they may reserve the term for other more severe forms of physical violence. Respondents in one Bangladesh study, for

example, did not consider some forms of physical violence by husbands to be examples of domestic violence (Khan and Hussain, 2008). In addition, the World Bank survey asked a single individual about household experiences, making it difficult to know the gender of the crime victim living in the household. This study, then, describes differential results in accounts or disclosures of violence by gender rather than direct victimization by gender. Third, cross-sectional surveys such as the one used for this study may present the best data available but causality cannot be determined. The results regarding the impact of education or income generation, therefore, should be regarded as potential contributing factors, rather than causes of these two crimes in Bangladesh. Finally, while the frequency, amount, and types of dowry exchanged have changed over time in Bangladesh, due to data limitations, these data precluded an examination of how dowry trends in the country affected incidences of domestic violence. Future research should adopt a longitudinal design and examine this relationship. Additional research should also study the degree to which unmarried, employed women are saving their own dowries and how much control they retain over these funds/goods. Assessing the impact of own-source dowry on domestic violence after marriage would also be an important next step.

In conclusion, domestic violence in Bangladesh is gendered through a cultural belief that emotional or physical abuse is an appropriate measure for correcting female inadequacies (Schuler et al., 1998). Dowry likewise is gendered through upholding perceptions of male superiority and conferring economic advantages to men. Dowry can be considered a patriarchal contrivance that leads to the victimization of women (Naved & Persson, 2010). In addition to being correlated with domestic and other violence against women, dowry involves a substantial financial burden to the families of female

children and effectively upholds cultural beliefs of male superiority (Chowdhury, 2010; Nasrin, 2011). Women are rarely granted rights to, or control over, the wealth transferred at the time of marriage and, thus, cannot expect to benefit from its use. Both dowry solicitation and domestic violence are rife in South Asia. Dowry continues to be the second most widespread crime in Bangladesh even 30 years after the passage of legislation that rendered it illegal. While dowry is most common in rural areas of Bangladesh, urban females have a slightly higher likelihood of relating experience with dowry and domestic violence. Income earners overall relate less experience with domestic violence but the probability of domestic violence disclosure by female income earners is higher than for male income earners. More than half of the households that disclosed experience with dowry and domestic violence considered another, sometimes non-violent crime, to be more serious. Eschewing formal state sources of justice, most Bangladeshi citizens responding to these two crimes choose to act alone or with the help of family members. Many hundreds of NGOs have established a strong presence in Bangladesh and may be in a position to pressure local, divisional and national governments for governance enhancing reforms.

## Essay References

- Ahmed, S. M. (2005). Intimate partner violence against women: experiences from a woman-focused development program in Matlab, Bangladesh. *Journal of Health, Population and Nutrition*, 23(1), 95-101.
- Aklimunnessa, K., Khan, M. M. H., Kabir, M., & Mori, M. (2007). Prevalence and correlates of domestic violence by husbands against wives in Bangladesh: evidence from a national survey. *The Journal of Men's Health and Gender*, 4(1), 52-63.
- Ambrus, A., Field, E., & Torero, M. (2010). Muslim family law, prenuptial agreements, and the emergence of dowry in Bangladesh. *The Quarterly Journal of Economics*, 125(3), 1349-1397.
- Amin, S., & Pebley, A. R. (1994). Gender inequality within households: The impact of a women's development program in 36 Bangladeshi villages. *The Bangladesh Development Studies*, 22(2/3), 121-154.
- Anderson, S. (2007). The economics of dowry and brideprice. *Journal of Economic Perspectives*, 21(4), 151-174.
- Andersson, N., Cockcroft, A., Ansari, U., Omer, K., Ansari, N., Khan, A., & Ubaid, U. C. (2010). Barriers to disclosing and reporting violence among women in Pakistan: Findings from a national household survey and focus group discussions. *Journal of Interpersonal Violence*, 25(11), 1965-1985.
- Anwary, A. (2003). Acid violence and medical care in Bangladesh: Women's activism as carework. *Gender & Society*, 17(2), 305-313.
- Arunachalam, R., & Logan, T.D. (2016). On the heterogeneity of dowry motives. *Journal of Population Economics*, 29(1), 135-166.
- Bagri, N.T., & Varma, V. (2013, June 4). American Tourist Gang-Raped in Manali, Police Say. *The New York Times*. Retrieved from <http://india.blogs.nytimes.com/2013/06/04/american-tourist-gang-raped-in-manali-police-say/>

- Bates, L. M., Schuler, S. R., Islam, F., & Islam, M. K. (2004). Socioeconomic factors and processes associated with domestic violence in rural Bangladesh. *International Family Planning Perspectives, 30*(4), 190-199.
- BRAC. (2014). *About BRAC*. Retrieved February 20, 2014, from <http://www.brac.net/>.
- Central Intelligence Agency. (2014). *The World Fact Book*. Retrieved February 23, 2014, from <https://www.cia.gov/library/publications/the-world-factbook/index.html>.
- Chowdhury, A., Mushtaque, R., & Bhuiya, A. (2004). The wider impacts of BRAC poverty alleviation programme in Bangladesh. *Journal of International Development, 16*(3), 369-386.
- Chowdhury, F. D. (2010). Dowry, women, and law in Bangladesh. *International Journal of Law, Policy and the Family, 24*(2), 198-221.
- Dalal, K., Lee, M. S., & Gifford, M. (2012). Male adolescents' attitudes toward wife beating: A multi-country study in South Asia. *Journal of Adolescent Health, 50*(5), 437-442.
- Dhar, S. (2014, January 23). *Indian Woman Says Gang-raped on Order of Village Court*. Retrieved from <http://www.reuters.com/article/2014/01/23/us-india-rape-idUSBREA0M0VH20140123>.
- Dil, S. (1985). Women in Bangladesh: Changing roles and sociopolitical realities. *Journal of Women, Politics & Policy, 5*(1), 51-67.
- Eswaran, M., & Malhotra, N. (2011). Domestic violence and women's autonomy in developing countries: theory and evidence. *Canadian Journal of Economics, 44*(4), 1222-1263.
- Freedom House. (2014a). *Freedom in the World 2013: Bangladesh*. Retrieved February 23, 2014, from <http://www.freedomhouse.org/report/freedom-world/2013/bangladesh#.UwqSBIWxBVc>.
- Freedom House. (2014b). *Freedom in the World 2014*. Retrieved February 23, 2014, from <http://www.freedomhouse.org/report-types/freedom-world#.UwqS24WxBVc>.
- Garcia-Moreno, C., Jansen, H., Ellsberg, M., Heise, L., & Watts, C. (2006). Prevalence of intimate partner violence: findings from the WHO multi-country study on women's health and domestic violence. *Lancet, 368*, 1260-1269.



- Gracia, E. (2004). Unreported cases of domestic violence against women: towards an epidemiology of social silence, tolerance, and inhibition. *Journal of Epidemiology and Community Health*, 58(7), 536-537.
- Hasan, F. R. (1994). Limits and possibilities of law and legal literacy : experiences of Bangladesh women. *Economic and Political Weekly*, 29(44), WS69-WS76.
- Hashemi, S. M., Schuler, S. R., & Riley, A. P. (1996). Rural credit programs and women's empowerment in Bangladesh. *World Development*, 24(4), 635-653.
- Head, S.K., Yount, K.M., Hennink, M.M., & Sterk, C.E. (2015). Customary and contemporary resources for women's empowerment in Bangladesh. *Development in Practice*, 25(3), 360-374.
- Heath, R., & Mobarak, A.M. (2015). Manufacturing growth and the lives of Bangladeshi women. *Journal of Development Economics*, 115, 1-15.
- Heise, L. L., Raikes, A., Watts, C. H., & Zwi, A. B. (1994). Violence against women: a neglected public health issue in less developed countries. *Social Science and Medicine*, 39(9), 1165-1179.
- International Labor Organization. (2014). *A Quiet Revolution: Women in Bangladesh*. Retrieved October 16, 2014 from [http://www.ilo.org/global/about-the-ilo/newsroom/comment-analysis/WCMS\\_234670/lang--en/index.htm](http://www.ilo.org/global/about-the-ilo/newsroom/comment-analysis/WCMS_234670/lang--en/index.htm).
- Jeyaseelan, V., Kumar, S., Jeyaseelan, L., Shankar, V., Yadav, B.K., & Bangdiwala, S.I. (2015). Dowry demand and harassment: Prevalence and risk factors in India. *Journal of Biosocial Science*, 47, 727-745.
- Kabeer, N. (2011). Between affiliation and autonomy: navigating pathways of women's empowerment and gender justice in rural Bangladesh. *Development and Change*, 42(2), 499-528.
- Kabeer, N., Mahmud, S., & Tasneem, S. (2011). *Does Paid Work Provide a Pathway to Women's Empowerment? Empirical Findings from Bangladesh*. Institute for Developing Studies Working Paper 85. Retrieved from <http://dspace.bracu.ac.bd:8080/handle/10361/2598>.
- Khan, A., & Hussain, R. (2008). Violence against Women in Pakistan: Perceptions and Experiences of Domestic Violence. *Asian Studies Review*, 32(2), 239-253.

- Khan, F. C. (2005). Gender violence and development discourse in Bangladesh. *International Social Science Journal*, 57(2), 219-230.
- Kimuna, S.R., Djamba, Y.K., Ciciurkaite, G., & Cherukuri, S. (2012). Domestic violence in India: Insights from the 2005-2006 National Family Health Survey. *Journal of Interpersonal Violence*, 28(4), 773-807.
- Koenig, M. A., Ahmed, S., Hossain, M. B., Khorshed, A. B. M., & Mozumder, A. (2003). Women's status and domestic violence in rural Bangladesh: Individual- and community-level effects. *Demography*, 40(2), 269-288.
- Kumar, H., & Timmons, H. (2013, March 16). Five Arrested in Gang Rape of Swiss Tourist in Central India. *The New York Times*. Retrieved from <http://india.blogs.nytimes.com/2013/03/16/swiss-tourist-gang-raped-in-central-india/>.
- Latha, K., & Narendra, R. (1998). Dowry death: implications of law. *Medicine, Science and the Law*, 38(2), 153-156.
- Lindberg, A. (2014). The historical roots of dowries in contemporary Kerala. *South Asia: Journal of South Asian Studies*, 37(1), 22-42.
- Madhani, F.I., Karmaliani, R., Patel, C., Bann, C.M., McClure, E.M., Pasha, O., & Goldenberg, R.L. (2015). Women's Perceptions and Experiences of Domestic Violence: An observational study from Hyderabad, Pakistan. *Journal of Interpersonal Violence*. Advance online publication. doi: 10.1177/0886260515585533.
- Mirchandani, R. (2006). "Hitting is not manly": Domestic violence court and the re-imagination of the patriarchal state. *Gender & Society*, 20(6), 781-804.
- Mogford, E. (2011). When status hurts: Dimensions of women's status and domestic abuse in rural northern India. *Violence Against Women*, 17(7), 835-857.
- Murshid, N.S. (2015, May 14). Men's report of domestic violence perpetration in Bangladesh: Correlates from a nationally representative survey. *Journal of Interpersonal Violence*. Advance online publication. doi: 10.1177/0886260515585544.
- Murshid, N.S., & Murshid, N. (2015, September 16). Intergenerational transmission of marital violence: Results from a nationally representative sample of men. *Journal*

*of Interpersonal Violence*. Advance online publication. doi:  
10.1177/0886260515604413.

- Nasrin, S. (2011). Crime or custom? *Indian Journal of Gender Studies*, 18(1), 27-50.
- Naved, R. T., Azim, S., Bhuiya, A., & Persson, L. A. (2006). Physical violence by husbands: Magnitude, disclosure and help-seeking behavior of women in Bangladesh. *Social Science and Medicine*, 62(12), 2917-2929.
- Naved, R.T., Newby, M., & Amin, S. (2001). The effects of migration and work on marriage of female garment workers in Bangladesh. *International Journal of Population Geography*, 7, 91-104.
- Naved, R. T., & Persson, L. (2010). Dowry and spousal physical violence against women in Bangladesh. *Journal of Family Issues*, 31(6), 830-856.
- Nazneen, R. (1996). A half step back - revival of purdah in Bangladesh. *Labor Capital and Society*, 29(1/2), 42-55.
- Panchanadeswaran, S., & Koverola, C. (2005). The voices of battered women in India. *Violence Against Women*, 11(6), 736-758.
- Pecotich, A., Rahtz, D. R., & Shultz, C. J. (2010). Systemic and service dominant socio-economic development: Legal, judicial and market capacity building in Bangladesh. *Australasian Marketing Journal*, 18(4), 248-255.
- Rafi, M., & Chowdhury, A.M.R. (2000). Human rights and religious backlash: the experience of a Bangladeshi NGO. *Development in Practice*, 10(1), 19-30.
- Rahman, M., Hoque, A., & Makinoda, S. (2011). Intimate partner violence against women: Is women empowerment a reducing factor? *Journal of Family Violence*, 26(5), 411-420.
- Roulet, M. (1996). Dowry and prestige in north India. *Contributions to Indian Sociology*, 30(1), 89-108.
- Sambisa, W., Angeles, G., Lance, P. M., Naved, R. T., & Curtis, S. L. (2010). Physical and sexual abuse of wives in urban Bangladesh: Husbands' reports. *Studies in Family Planning*, 41(3), 165-178.

- Sambisa, W., Gustavo, A., Lance, P. M., Naved, R., & Thornton, J. (2011). Prevalence and correlates of physical spousal violence against women in slum and non-slum areas of urban Bangladesh. *Journal of Interpersonal Violence, 26*(13), 2592-2618.
- Sayem, A. M., & Khan, M. A. U. (2012). Women's strategic responses to intimate partner violence: A study in a rural community of Bangladesh. *Asian Social Work and Policy Review, 6*(1), 23-39.
- Schuler, S. R., Bates, L. M., & Islam, F. (2008). Women's rights, domestic violence, and recourse seeking in rural Bangladesh. *Violence Against Women, 14*(3), 326-345.
- Schuler, S. R., Hashemi, S. M., & Badal, S. H. (1998). Men's violence against women in rural Bangladesh: undermined or exacerbated by microcredit programs? *Development in Practice, 8*(2), 148-157.
- Schuler, S. R., Hashemi, S. M., Riley, A. P., & Akhter, S. (1996). Credit programs, patriarchy and men's violence against women in rural Bangladesh. *Social Science and Medicine, 43*(12), 1729-1742.
- Schuler, S.R., Lenzi, R., Nazneen, S., & Bates, L.M. (2013). Perceived decline in Intimate Partner Violence Against Women in Bangladesh: Qualitative Evidence. *Studies in Family Planning, 44*(3), 243-257.
- Sen, P. (1999). Enhancing women's choices in responding to domestic violence in Calcutta: A comparison of employment and education. *The European Journal of Development Research, 11*(2), 65-86.
- Sheel, R. (1999). *The Political Economy of Dowry: Institutionalization and Expansion in North India*. New Delhi, India: Manohar Publishers and Distributors.
- Shenk, M. (2007). Dowry and public policy in contemporary India. *Human Nature, 18*(3).
- Siddique, M. A. B. (1998). Gender issues in poverty alleviation: a case study of Bangladesh. *International Journal of Social Economics, 25*(6/7/8), 1095-1111.
- Taher, M.A., & Jamaluddin, S.Z. (2015). Reluctance to seeking legal remedy in dowry violence cases in Bangladesh: An analysis of influencing factors. *Women's Studies International Forum, 53*, 83-89.

- The Economist Intelligence Unit. (2013). *Democracy index 2012*. Retrieved from <http://www.eiimedia.com/index.php/daily-comment/item/1010-global-democracy-is-at-a-standstill>.
- Transparency International. (2014). *Corruption Perceptions Index 2014*. Retrieved from <http://www.transparency.org/whatwedo/publication/cpi2014>.
- United Nations Development Program. (2013). *2013 Human Development Report*. Retrieved from [http://hdr.undp.org/sites/default/files/reports/14/hdr2013\\_en\\_complete.pdf](http://hdr.undp.org/sites/default/files/reports/14/hdr2013_en_complete.pdf)
- United Nations Entity for Gender Equality and the Empowerment of Women. (2014). *Facts and Figures: Ending Violence Against Women*. Retrieved from <http://www.unwomen.org/en/what-we-do/ending-violence-against-women/facts-and-figures>
- Venis, S., & Horton, R. (2002). Violence against women: a global burden. *Lancet*, 359(9313).
- Watts, C., & Zimmerman, C. (2002). Violence against women: global scope & magnitude. *Lancet*, 359, 1232-1237.
- Weitzman, A. (2014). Women's and men's relative status and intimate partner violence in India. *Population and Development Review*, 40(1), 55-75.
- The World Bank. (2011a). *Bangladesh - Citizen's Experiences of the Legal System 2009 Study Description Overview*. Retrieved from <http://microdata.worldbank.org/index.php/catalog/616/study-description>.
- The World Bank. (2011b). *Bangladesh Citizen's Experiences of the Legal System 2009*. Retrieved from <http://microdata.worldbank.org/index.php/catalog/616>.
- The World Bank. (2012). *Labor force participation rate, female (% of female population ages 15+)*. Retrieved from <http://data.worldbank.org/indicator/SL.TLF.CACT.FE.ZS>.
- World Health Organization. (2012). *Understanding and addressing violence against women*. Retrieved from [http://apps.who.int/iris/bitstream/10665/77432/1/WHO\\_RHR\\_12.36\\_eng.pdf](http://apps.who.int/iris/bitstream/10665/77432/1/WHO_RHR_12.36_eng.pdf).
- Zaman, H. (1999). Violence against women in Bangladesh: Issues and responses. *Women's Studies International Forum*, 22(1).

Zohir, S. (2004). NGO sector in Bangladesh: An overview. *Economic and Political Weekly*, 39(36), 4109.

## Dissertation Conclusion

The starting point for this dissertation was that gender is an individual, interactional and institutional phenomenon produced through social and cultural processes in each society (Rubin, 1975; West & Zimmerman, 1987; Wharton, 2012). Each of the essays included in this dissertation provides different perspectives and approaches to aid understanding of the ways in which the complex, adaptable and socially determined gender concept is relevant to social life. Each also discusses the inequality (workplace discrimination, gender-based crime) or suboptimal economic outcomes (failure to sufficiently prepare for disasters) associated with gender in society. These gender issues suggest the need for government attention and intervention as outlined in the following sections. The takeaways from each essay that recommend government attention are discussed in turn and the final section outlines areas of future research.

### *Diversity and decision-making*

Government intervention promoting improvements in managing diversity is highly relevant for disaster management. In the United States, disaster preparedness and emergency management are public sector issues (Gerber, 2007). Immediately before and after a disaster, these are the purview of local governments, but as the severity of a disaster event increases, state and federal governments become increasingly involved

(Gerber, 2007). The disaster preparedness of firms, an important element in establishing a robust local and regional economy, becomes a public-sector issue as local, state, and federal governments provide assistance. Although individual decisions aggregate into collective decisions with social-level impacts, the individual decisions made by middle market managers can have important economic consequences. Findings from the individual-level study examining the influence of sex and gender on decisions to invest in inventories offer new insights into the effects of gender diversity. The results indicated that when gender is conceptualized as culturally determined masculinity and femininity attributes, gender diversity may contribute to increased economic resilience. Where there were no male/female differences in the willingness to allocate a firm's resources to disaster preparedness, individuals (regardless of sex category) that identified with more feminine personality traits were more likely to choose investment.

Governments may have an interest in publicizing this information or otherwise incentivizing increased diversity among firm decision makers. If the gender diversity of key decision makers is increased, firms may invest more in economic resilience, and improve their ability to recover when a disaster subsequently occurs. This, in turn, may reduce the cost to the public of assisting private sector firms in their recoveries following a human-induced or natural disaster event. Gender diversity, then, has the potential to improve economic outcomes. As Atkinson and Stiglitz emphasize, "if everyone had identical tastes and endowments, then many public finance questions would lose their significance" (2105, p 249). Government policies comprised of information campaigns or incentive programs may be necessary to promote gender diversity that leads to better economic resilience investment decisions.



Although they are disparate essays, the findings from the assimilation study (essay two) can be combined with those from the resilience investment study (the first essay) to make an important point. Gendered personality traits tend to correspond with sex categories on average, but the adoption of these traits differs from person to person. This implies that increasing sex diversity (including more women among decision makers, for instance) may lead to improved resilience decisions. However, when androcentrism is present, such as in management culture, increasing sex diversity may not necessarily lead different decisions or improved resilience outcomes. Selection based on masculine behavior and pressure to assimilate to prioritized masculine attributes may mean that femininities shown to correspond to increased resilience investments will not be as present in decision makers of middle market firms. This is supported by the observed gender trait differences between students and managers in the second essay and the differences in decision making described in the first essay. Therefore, diversity policies have to take into account not only gender (not just sex category), but also should address the androcentrism in management in order to be effective.

#### *Workplace discrimination*

Rubin's classic sex vs. gender theory holds that social processes prompt males and females to align their personalities and behavior based on socially constructed notions of what is preferred or appropriate for men and women, respectively (Rubin, 1975). Together, biosocial origin and role theory (Eagly & Carli, 2007; Wood & Eagly, 2002) and social identity theory (Ashforth & Mael, 1989) shed light on how particular attributes and conduct become associated with sex and gender, and why individuals are motivated to adopt these traits and behaviors. Stereotypes are an interaction-level

phenomenon, as they cannot exist without a target and a perceiver. Through stereotypes and norms, social identities both describe and prescribe an individual's attitudes and behaviors and can be used for self-reflective evaluation (Hogg & Terry, 2001). However, role incongruence can occur when the behavior associated with multiple roles, or identities, conflict. In these situations, individuals may be marginalized or face pressure to assimilate to a particular set of normative behaviors. The second essay in this dissertation described evidence of women's assimilation with the androcentric attributes valued in management culture. The average masculinity scores of female managers did not differ from male managers, though they differed substantially from female students. The femininity scores of female managers and female students did not differ, but female managers and male managers were unlike in this personality dimension. These results lead to the conclusion that not only are masculinities still prioritized for management positions, feminine attributes are still excluded, as evidenced by the differences between male managers and all other gender and job role groups.

In addition to a number of negative outcomes, scholars studying social roles and role incongruence for decades have asserted that discrimination is still a potential result and a reality for would-be managers who are women (Eagly & Carli, 2007). In the United States, governments at various levels have intervened with policies meant to improve fairness by promoting equal opportunities and ending discrimination (Ricucci, 2002). Federal-level legal protections aimed at enabling protected classes of people to equal organizational access resulted in Equal Opportunity laws (Ricucci, 2002). Affirmative Action has sought to achieve workforce diversity and representation through legal provisions in hiring practices and promotion decisions (Ricucci, 2002). State and local

governments have initiated transgender and sexual orientation protections (Ricucci, 2002). If androcentrism in management culture is shown to lead to discrimination, then government intervention through regulatory or legal policies would warrant consideration.

Even when overt or covert discrimination is not present or identifiable, androcentrism is an organizational issue that impacts private sector, non-profit, and public sector organizations and threatens diversity in a couple of ways. Prioritizing masculine attributes and behaviors leads to the role conflict previously discussed, and it also erases diversity when individuals assimilate to a single mode of behaving. When females and males, regardless of their natural dispositions, are expected to adopt stereotypically masculine attributes and behaviors to be seen as effective leaders, diversity is extinguished. Britton (2000) notes,

As Williams (1995) rightly notes, this implies that change directed only to altering the sex balance in occupations will do little to transform the deeply gendered nature of the workplace – organizations themselves must be restructured to place equal value on masculine and feminine characteristics. (p 426)

As a strategic (as opposed to a legal) endeavor, managing diversity has been motivated by pragmatic concerns about morale and productivity improvements that contribute to the furthering of organizational goals (Ricucci, 2002). In other words, managing diversity has been framed as a way to optimize organizational performance by creating and sustaining synergies, rather than focusing on reducing bias and rectifying past discrimination. Training, informational campaigns, and incentives are ways governments can intervene to reduce the androcentrism that impedes diversity. These

types of policies may be necessary to restructure organizations and eradicate androcentrism in management culture.

### *Gender crime*

In South Asia, the custom of transferring money and material goods in connection with marriage implies that the bride, alone, is an insufficient consort. This notion works to uphold a strict gender hierarchy, a patriarchal social structure, which leads to the economic dependence of women on men, institutional or other forms of gender discrimination, and violence against women. While each of these circumstances contributes to the pervasiveness of domestic violence in South Asia, disagreement about dowry payment is one of the most commonly reported causes throughout India, Bangladesh, and Pakistan (Heise et al., 1994; A. Khan & Hussain, 2008; Kimuna, Djamba, Ciciurkaite, & Cherukuri, 2012; Naved & Persson, 2010).

Using national-level data, the results indicate that dowry solicitation is the second most common crime (violent and non-violent) and domestic violence is the fourth. These issues are not limited to rural areas but exist throughout every administrative region in Bangladesh. At the same time, discriminatory laws or policies (or discriminatory implementation of laws and policies) mean state institutions do not provide recourse for victims of violence, which further perpetuates gender based crime. More than two thirds of households with victims of these gender crimes took no action in response. Among those that did seek some sort of recourse, they did not turn to the police or court institutions; they acted alone or with the help of family or friends.

The gendered nature of many different Bangladeshi institutions contributes to these conditions. Marriage, family roles, the legal system, and cultural customs such as

dowry are four examples of institutions that either explicitly or implicitly specify different treatment or produce disparate outcomes for men and women. The legal system in Bangladesh is indicative of a gendered institution by virtue of producing “decisions and procedures that control, segregate, exclude, and construct hierarchies based on gender” (Acker, 1992 p 568). Cultural customs produce gendered institutions through “images, symbols and ideologies that justify, explain, and give legitimacy to institutions (Acker, 1992, p 568). For instance, one suggested purpose of dowry is to compensate a husband’s family for taking a dependent female into the household (Lindberg, 2014; Nasrin, 2011). Marriage, family roles and the legal system also prompt gendered interactions between individuals. For instance, a husband’s superior status as a man in a patriarchal society sometimes enables him to abuse his wife, a woman with inferior status, without worry of being punished. Nor is the female-victim able to shed her inferior status as a woman when she faces an all-male police force, group of local leaders or *shalish*.

The institutional-level perspective adopted for the study of gender crime in Bangladesh, as well as the conclusions it produced, has relevance for public policy agenda setting and intervention/policy design. This sort of descriptive or exploratory research that incorporates the role of gender in social and political interaction may be used to direct the attention of policy makers toward harmful, inequitable situations and inform the content of policy solutions. Gender mainstreaming,<sup>13</sup> is a global-scale transformative project that has transitioned from feminist theory to policy application

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<sup>13</sup> Gender mainstreaming involves “efforts to scrutinize and reinvent processes of policy formulation and implementation across all issue areas and at all levels from a gender-differentiated perspective, to address and rectify persistent and emerging disparities between men and women” (True, 2003, p 369).

upon ratification by all United Nations members after being introduced in 1995 (True, 2003). Its inclusion in the global policymaking agenda has been enabled by the proliferation of new rhetoric about women's rights equality, the emergence of new, transnational women's networks, and actors in governance positions interested in gender equality (True, 2003). More importantly, gender mainstreaming has been an influence in policies addressing injustice (True, 2003). Quantitative studies, such as this, complement vital qualitative accounts of the impacts of gender injustice by providing measures of the scope, the pervasiveness, of gender inequality. This information can help draw attention to matters that are all too often marginalized and can help equip gender policy entrepreneurs<sup>14</sup> with the information they need to pursue policy changes.

Beyond agenda setting, this type of research and the conclusions that follow can help guide the types of interventions governments pursue. Dowry and domestic violence are both illegal in Bangladesh and have been for decades. Yet the pervasiveness of gender crime throughout the country and the lack of confidence of citizens in institutions indicate that these legal prohibitions and processes are not sufficient for deterring harmful behavior. Reforming all aspects of the patriarchal society is not feasible, but reforming the government institutions (i.e. police, and state and religious courts) tasked with enforcing the law would be a first step in providing support and recourse for gender crime victims. Anticorruption and equality initiatives are essential for making the police and courts effective resources for justice for women in Bangladesh. These are introspective, internal, government policies that could mediate one aspect of the

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<sup>14</sup> Gender policy entrepreneurs are socially astute and well situated leaders who incorporate the perspectives of women and men in a variate of social context to pursue gender justice-enhancing policy changes (True, 2003).

institutionalized instances of patriarchy. Following internal reforms, government sponsored information campaigns aimed at helping crime victims gain access to justice resources should also be implemented. Markets are not interested in ensuring gender equality, and individual-level efforts will be insufficient to eliminate the many negative effects of patriarchy. Government intervention, through internal and external public policies, is necessary to promote the gender equality that will eradicate gender crime.

*Future research.*

The next steps in extending research for each of the studies is discussed in each essay and some of my future research will align with those recommendations. A substantial portion of my research agenda will focus on gender issues in public sector organizations and on assessing the effects of policies meant to promote equality in the public and private sectors. In addition, I will continue to push myself and my field to think carefully about how gender is operationalized in our studies.

As detailed in the dissertation introduction, gender is a complex, multi-level phenomenon that structures or is present in almost every aspect of social life. In the public policy vernacular, gender inequality may be thought of as a “wicked problem” (Rittel & Weber, 1973). For some research questions relating to gender and gender inequality, biological sex may serve as a necessary or adequate operationalization of gender. Many public administration and policy studies have provided important insights and useful conclusions using dichotomous male/female constructs. Still, regarding gender solely as an unvarying aspect of the individual may miss relevant social realities such as how gender influences interactions and institutions (West & Zimmerman, 1987). Taking

a multi-level approach, or designing studies at the nexus of individual, interactional, and institutional levels may be useful in exploring complex, or wicked, questions.

Along these lines, a specific research question I will pursue is how masculinity and femininity influence the dynamics and outputs of collaboratively-made economic resilience decisions. In some firms, disaster preparedness decisions may be made in groups, such as with a collection of executives or a board or directors, rather than individually. When groups of individuals are tasked with making economic resilience decisions, gender identity and social dynamics may change the decision-making outcomes from what was observed when individual-level decisions were analyzed, as in the first dissertation essay. This question, “how does gender identity influence group economic resilience decisions?” is an example of inquiry at the intersection of individual and interactional frameworks. When advice, particularly advice given by male or female experts, comes into play, additional interactional considerations become relevant. Results of gender and group decision-making studies may provide useful information for government efforts to diffuse emergency management information. For instance, if there is a sex or gender difference in willingness to accept or act on advice, the target audience of government information about disaster risk may be structured accordingly.

The continued sex segregation of the U.S. workforce (Guy & Newman, 2004; Eagly & Carli, 2007) and the known ways in which institutions are gendered (Acker, 1992; Britton, 2000) provides another line of future research. Comparison of the public and private sectors or different private sector industries attaches an institutional lens onto individual and interactional questions about economic resilience. Future research investigating the question, “what is the relationship between industry/institution,



individual gender identity and interactional outcomes?” represents research at the nexus of all three social frameworks and may shed light on how broader institutional-level forces perpetuate gender inequality.

Solutions to wicked problems are known to be a problematic undertaking. Wicked problems differ from other types of problems, even complex ones like certain types of market failures, because a single best answer is not possible (Rittel & Weber, 1973). When faced with a positive or negative market externality, a Pigouvian tax or subsidy will restore market efficiency (Munger, 2000). To combat the adverse market effects of monopoly, regulation or taxation solutions may improve efficiency (Pindyck & Rubinfeld, 2013). The inclusion of gender considerations in individual, interactional, and institutional aspects of social life means that one line of attack is unlikely to resolve the issue of gender inequality. Again, taking a multi-level approach, or designing studies at the nexus of individual, interactional, and institutional levels may be useful.

Regarding gender wage and promotion gaps, some differences between the public and private sectors have been observed (Eagly & Carli, 2007). After controlling for education, experience and other factors, women federal employees are still promoted less often than men but this difference is much smaller than in the private sector (Eagly & Carli, 2007). This suggests that equality policies and processes in the government organizations are relatively more effective than those in the private sector. Research focused on why these differences exist would combine institutional and individual lenses and might produce information useful in crafting equality improving regulations, information campaigns, and/or incentive programs. It may be the case that androcentrism is part of management culture to a different degree for private sector organizations.

During the next few years, I will be seeking data collection and analysis possibilities that allow comparison of androcentrism between the public and private sectors and among different organizations within each of these two sectors. Knowing that there are more women in redistributive agencies than in regulatory or distributive agencies (Choi, 2010) suggests there could be differences in the androcentric management cultures of these organizations. There may or may not be observable differences between public education and military work environments, for example. An inter-agency comparison (or a comparison among private industry sectors) would be very interesting. It may also contribute to understanding about the factors that influence the degree of androcentrism in a workplace.

Whether the androcentrism in U.S. management culture is perpetuated through selection or through conscious assimilation is a particular question I hope to pursue. It may be that women who naturally possess more stereotypically masculine personality traits are identified early as potential leaders, groomed and ultimately selected for management roles. On the other hand, it may be possible that women sense that more masculine traits are required to secure an advantageous leadership or management job, so they strategically adopt the required attributes. It may be that the policy solution to a selection-based androcentric culture differs from a strategy-based androcentric culture, but more research is required to determine if this is the case. Although the wage gap may be smaller in the public sector, prior public administration research has shown that women make up a disproportionately low number of decision-making roles (Guy, 1993). Prior research in public administration has also suggested that *caritas*, care work or emotional labor, is a hidden and uncompensated requirement of many public sector

jobs (Guy & Newman, 2004). Another line of future research intersecting institutional, interactional, and individual frames would look at the question, “what types of work environment changes challenge the unequal expectations for emotional labor between men and women working in the public sector?”

In addition to the relevance to policy and management practices outlined above, this collection of essays sought to push scholars studying public policy, management, and organizations to expand how gender is defined, measured, and reported in scholarly studies. In our field, policy and management research projects have often characterized gender as differences between men and women operationalized as a male/female question on a survey. The links between male and female and gender attributes are assumed. For some questions, this may oversimplify the socially constructed, culturally determined concept of gender which is an important component of individual identity, attitudes, and behavior. This occurs when variation *among* women and *among* men is obscured by a construct that includes only two possibilities. What is more, a dichotomous variable signifying an individual’s sex category may preclude relevant consideration of interactional and institutional elements of gender production and reproduction (West and Zimmerman, 1987). Research questions specifically concerned with culture and institutions may produce more useful results if expanded gender constructs are incorporated.

Through this inter-disciplinary dissertation, I have located theories from psychology, sociology, economics, and public affairs in the three frameworks that organize gender in social life. These theories motivated research that produced conclusions about the importance of public policy intervention to improve institutional,

interactional, and individual-level gender equality and outcomes. The conclusions of public affairs research may become stronger, more insightful, and more useful if gender as a complex, adaptable social phenomenon is considered and thus operationalized. Research at the nexus of individuals, interactions, and institutions may be useful in continuing efforts to address the complex social problem of gender inequality.

## Dissertation References

- Acker, J. (1992). From sex roles to gendered institutions. *Contemporary Sociology*, 21(5), 565-569.
- Adams, R. B., & Funk, P. (2012). Beyond the Glass Ceiling: Does Gender Matter. *Management Science*, 58(2), 219-235.
- Ahmed, S. M. (2005). Intimate partner violence against women: experiences from a woman-focused development program in Matlab, Bangladesh. *Journal of Health, Population and Nutrition*, 23(1), 95-101.
- Aklimunnessa, K., Khan, M. M. H., Kabir, M., & Mori, M. (2007). Prevalence and correlates of domestic violence by husbands against wives in Bangladesh: evidence from a national survey. *The Journal of Men's Health and Gender*, 4(1), 52-63.
- Alderson, D. L., Brown, G. G., & Matthew, C. W. (2015). Operational Models of Infrastructure Resilience. *Risk Analysis*, 35(4), 562-586.
- Ambrus, A., Field, E., & Torero, M. (2010). Muslim family law, prenuptial agreements, and the emergence of dowry in Bangladesh. *The Quarterly Journal of Economics*, 125(3), 1349-1397.
- Amin, S., & Pebley, A. R. (1994). Gender inequality within households: The impact of a women's development program in 36 Bangladeshi villages. *The Bangladesh Development Studies*, 22(2/3), 121-154.
- Anderson, S. (2007). The economics of dowry and brideprice. *Journal of Economic Perspectives*, 21(4), 151-174.
- Andersson, N., Cockcroft, A., Ansari, U., Omer, K., Ansari, N., Khan, A., & Ubaid, U. C. (2010). Barriers to disclosing and reporting violence among women in Pakistan: Findings from a national household survey and focus group discussions. *Journal of Interpersonal Violence*, 25(11), 1965-1985.

- Andrews, R. & Johnston Miller, K. (2013). Representative Bureaucracy, gender, and policing: The case of domestic violence arrests in England. *Public Administration Review*, 91(4), 998-1014.
- Anwary, A. (2003). Acid violence and medical care in Bangladesh: Women's activism as carework. *Gender & Society*, 17(2), 305-313.
- Apestequia, J., Azmat, G., & Iriberry, N. (2012). The impact of gender composition on team performance and decision making: Evidence from the field. *Management Science*, 58(1), 78-93.
- Arunachalam, R., & Logan, T.D. (2016). On the heterogeneity of dowry motives. *Journal of Population Economics*, 29(1), 135-166.
- Ashforth, B.E., & Johnson, S.A. (2001). Which hat to wear? The relative salience of multiple identities in organizational contexts. In M.A. Hogg & D.J. Terry (Eds.), *Social identity processes in organizational contexts* (pp. 31-48). Philadelphia, PA: Psychology Press.
- Ashforth, B.E., & Mael, F. (1989). Social identity theory and the organization. *The Academy of Management Review*, 14(1), 20-39.
- Atkinson, A.B., & Stiglitz, J.E. (2015). *Lectures on Public Economics*. Princeton, NJ: Princeton University Press.
- Atkinson, S. M., Baird, S. B., & Frye, M. B. (2003). Do female mutual fund managers manage differently? *The Journal of Financial Research*, 26(1), 1-18.
- Bagri, N.T., & Varma, V. (2013, June 4). American Tourist Gang-Raped in Manali, Police Say. *The New York Times*. Retrieved from <http://india.blogs.nytimes.com/2013/06/04/american-tourist-gang-raped-in-manali-police-say/>
- Barak, B., & Stern, B. (1986). Sex-linked trait indexes among baby-boomers and pre-boomers: A research note. *Advances in Consumer Research*, 13, 204-209.
- Bass, B.M. (1990). From transactional to transformational leadership: Learning to share the vision. *Organizational Dynamics*, 18(3), 19-31.
- Bateman, V. (2016). Women wanted: Victoria Bateman reports on Cambridge's attempts to encourage more women to study economics. *Cambridge Economics*, 9, 5.

- Bates, L. M., Schuler, S. R., Islam, F., & Islam, M. K. (2004). Socioeconomic factors and processes associated with domestic violence in rural Bangladesh. *International Family Planning Perspectives*, 30(4), 190-199.
- Beckmann, D., & Menkoff, L. (2008). Will women be women? Analyzing the gender difference among financial experts. *KYKLOS*, 61(3), 364-384.
- Bem, S.L. (1974). The measurement of psychological androgyny. *Journal of Consulting and Clinical Psychology*, 42(2), 155-162.
- Bem, S.L. (1994). *The lenses of gender: Transforming the debate on sexual inequality*. New Haven, CT: Yale University Press.
- Biddle, B.J. (1986). Recent development in role theory. *Annual Review of Sociology*, 12, 67-92.
- Bolton, S.C. (2015, March 11). Why are there so many female managers but so few CEOs. *The Washington Post*. Retrieved from [https://www.washingtonpost.com/posteverything/wp/2015/03/11/why-there-are-so-many-female-managers-but-so-few-ceos/?utm\\_term=.6e0aa621b1a0](https://www.washingtonpost.com/posteverything/wp/2015/03/11/why-there-are-so-many-female-managers-but-so-few-ceos/?utm_term=.6e0aa621b1a0)
- Booth, A. L., & Katic, P. A. (2013). Cognitive Skills, Gender and Risk Preferences. *Economic Record*, 89(284), 19-30.
- BRAC. (2014). *About BRAC*. Retrieved from <http://www.brac.net/>
- Brandts, J., Groenert, V., & Rott, C. (2015). The impact of advice on women's and men's selection into competition. *Management Science*, 61(5), 1018-1035.
- Brenner, O.C., Tomkiewicz, J., & Schein, V.E. (1989). The relationship between sex role stereotypes and requisite management characteristics revisited. *The Academy of Management Journal*, 32(3), 662-669.
- Britton, D.M. (2000). The epistemology of the gendered organization. *Gender & Society*, 14, 418-434.
- Byrne, K. A., & Worthy, D. A. (2015). Gender differences in reward sensitivity and information processing during decision-making. *Journal of Risk Uncertainty*, 50, 55-71.

- Carter, D. A., D'Souza, F., Simkins, B. J., & Simpson, W. G. (2010). The gender and ethnic diversity of U.S. boards and board committees and firm financial performance. *Corporate Governance: An International Review*, 18(5), 396-414.
- Central Intelligence Agency. (2014). *The World Fact Book*. Retrieved from <https://www.cia.gov/library/publications/the-world-factbook/index.html>
- Chang, S. E., McDaniels, T., Fox, J., Dhariwal, R., & Longstaff, H. (2014). Toward Disaster-Resilient Cities: Characterizing Resilience of Infrastructure Systems with Expert Judgments. *Risk Analysis*, 34(3), 416-434.
- Choi, S. (2010). Diversity in the U.S. Federal Government: Antecedents and correlates of diversity in Federal Agencies. *Review of Public Personnel Administration*, 30(3), 201-321.
- Chowdhury, A., Mushtaque, R., & Bhuiya, A. (2004). The wider impacts of BRAC poverty alleviation programme in Bangladesh. *Journal of International Development*, 16(3), 369-386.
- Chowdhury, F. D. (2010). Dowry, women, and law in Bangladesh. *International Journal of Law, Policy and the Family*, 24(2), 198-221.
- Cimellaro, G. P., Reinhorn, A. M., & Bruneau, M. (2010). Framework for analytical quantification of disaster resilience. *Engineering Structures*, 32, 3639-3649.
- Cronqvist, H., Makhija, A. K., & Yonker, S. E. (2012). Behavioral consistency in corporate finance: CEO personal and corporate leverage. *Journal of Financial Economics*, 103(1), 20-40.
- Crosno, R., & Gneezy, U. (2009). Gender Differences in Preferences. *Journal of Economic Literature*, 47(2), 448-474.
- Cutter, S., Barnes, L., Berry, M., Burton, C., Evans, E., Tate, E., & Webb, J. (2008). A place-based model for understanding community resilience to natural disasters. *Global Environmental Change*, 18(4), 598-606.
- Dalal, K., Lee, M. S., & Gifford, M. (2012). Male adolescents' attitudes toward wife beating: A multi-country study in South Asia. *Journal of Adolescent Health*, 50(5), 437-442.
- Danes, S. M., Lee, J., Amarapurkar, S., Stafford, K., Haynes, G., & Brewton, K. E. (2009). Determinants of family business resilience after a natural disaster by



gender of business owner. *Journal of Developmental Entrepreneurship*, 14(4), 333-354.

- Deem, R. (1998). 'New managerialism' and higher education: The management of performances and cultures in universities in the United Kingdom. *International Studies in Sociology of Education*, 8(1), 47-70.
- Dezsö, C. L., & Ross, D. G. (2012). Does female representation in top management improve firm performance? A panel data investigation. *Strategic Management Journal*, 33(9), 1072-1089.
- Dhar, S. (2014, January 23). Indian Woman Says Gang-raped on Order of Village Court. *Reuters*. Retrieved from <http://www.reuters.com/article/2014/01/23/us-india-rape-idUSBREA0M0VH20140123>
- Dil, S. (1985). Women in Bangladesh: Changing roles and sociopolitical realities. *Journal of Women, Politics & Policy*, 5(1), 51-67.
- Dolan, J. The Senior Executive Service: Gender, attitudes, and representative bureaucracy. *Journal of Public Administration Research and Theory*, 10(3), 513-529.
- Eagly, A.H., & Carli, L.L. (2003). The female leadership advantage: An evaluation of the evidence. *The Leadership Quarterly*, 14, 807-834.
- Eagly, A.H., & Carli, L.L. (2007). *Through the labyrinth: The truth about how women become leaders*. Boston, MA: Harvard Business School Press.
- Eagly, A.H., Johannesen-Schmidt, M.C., & van Engen, M.L. (2003). Transformational, transactional, and laissez-faire leadership styles: A meta-analysis comparing women and men. *Psychological Bulletin*, 129(4), 569-591.
- Eagly, A.H., & Karau, S.J. (2002). Role congruity theory of prejudice toward female leaders. *Psychological Review*, 109(3), 573-598.
- Eagly, A.H., Makhijani, M.G., & Klonsky, B.G. (1992). Gender and the evaluation of leaders: A meta-analysis. *Psychological Bulletin*, 111(1), 3-22.
- Eckel, C. C., & Grossman, P. J. (2002). Sex differences and statistical stereotyping in attitudes toward financial risk. *Evolution and Human Behavior*, 23, 281-295.

- Eckel, C. C., & Grossman, P. J. (2008). Forecasting risk attitudes: An experimental study using actual and forecast gamble choices. *Journal of Economic Behavior and Organization*, 68, 1-17.
- Ellemers, N., Rink, F., Derks, B., & Ryan, M.K. (2012). Women in high places: When and why promoting women into top positions can harm them individually or as a group (and how to prevent this). *Research in Organizational Behavior*, 32, 163-187.
- Embrey, L. L., & Fox, J. J. (1997). Gender differences in the investment decision making process. *Financial Counseling and Planning*, 8(2), 33-40.
- Englander, A. (2015). Multidimensional ambiguity and individual willingness to take preventative action. Senior Thesis. Department of Economics, The Ohio State University.
- Estes, R., & Hosseini, J. (1988). The gender gap on wall street: An empirical analysis of confidence in investment decision making. *The Journal of Psychology*, 122(6), 577-590.
- Eswaran, M., & Malhotra, N. (2011). Domestic violence and women's autonomy in developing countries: theory and evidence. *Canadian Journal of Economics*, 44(4), 1222-1263.
- Fernandez, J., & Coello, M.T. (2010). Do the BSRI and PAQ really Measure Masculinity and Femininity. *The Spanish Journal of Psychology*, 13(2), 1000-1009.
- Fisher, P. J. (2010). Gender Differences in Personal Saving Behaviors. *Journal of Financial Counseling and Planning*, 21(1), 14-25.
- Freedom House. (2014a). *Freedom in the World 2013: Bangladesh*. Retrieved from <http://www.freedomhouse.org/report/freedom-world/2013/bangladesh#.UwqSBIWxBVc>
- Freedom House. (2014b). *Freedom in the World 2014*. Retrieved from <http://www.freedomhouse.org/report-types/freedom-world#.UwqS24WxBVc>
- Flynn, J., Slovic, P., & Mertz, C. (1994). Gender, Race, and Perception of Environmental Health Risks. *Risk Analysis*, 14(6), 1101-1108.

- Garcia-Moreno, C., Jansen, H., Ellsberg, M., Heise, L., & Watts, C. (2006). Prevalence of intimate partner violence: findings from the WHO multi-country study on women's health and domestic violence. *Lancet*, 368(9543), 1260-1269.
- Gerber, B. J. (2007). Disaster management in the United States: Examining key political and policy changes. *Policy Studies Journal*, 35(2), 227-238.
- Gerhart, B. (2008). Cross cultural management research: Assumptions, evidence, and suggested directions. *International Journal of Cross Cultural Management*, 8(3), 259-274.
- Gracia, E. (2004). Unreported cases of domestic violence against women: towards an epidemiology of social silence, tolerance, and inhibition. *Journal of Epidemiology and Community Health*, 58(7), 536-537.
- Graham, J., Stendardi, E. J., Myers, J. K., & Graham, M. J. (2002). Gender differences in investment strategies: An information processing perspective. *International Journal of Bank Marketing*, 20(1), 17-26.
- Guy, M.E., & Newman, M.A. (2004). Women's jobs, men's jobs: Sex segregation and emotional labor. *Public Administration Review*, 64(3), 289-298.
- Hair, J.F., Black, W.C., Babin, B.J., Anderson, R.E., & Tatham, R.L. (2006). *Multivariate Data Analysis* (6<sup>th</sup> Ed.). Upper Saddle River, NJ: Pearson Prentice Hall.
- Hasan, F. R. (1994). Limits and possibilities of law and legal literacy : experiences of Bangladesh women. *Economic and Political Weekly*, 29(44), WS69-WS76.
- Hashemi, S. M., Schuler, S. R., & Riley, A. P. (1996). Rural credit programs and women's empowerment in Bangladesh. *World Development*, 24(4), 635-653.
- Haslam, S.A., & Ryan, M.K. (2008). The road to the glass cliff: Differences in the perceived suitability of men and women for leadership positions in succeeding and failing organizations. *The Leadership Quarterly*, 19, 530-546.
- Head, S.K., Yount, K.M., Hennink, M.M., & Sterk, C.E. (2015). Customary and contemporary resources for women's empowerment in Bangladesh. *Development in Practice*, 25(3), 360-374.
- Heath, R., & Mobarak, A.M. (2015). Manufacturing growth and the lives of Bangladeshi women. *Journal of Development Economics*, 115, 1-15.

- Heilman, M.E. (2012). Gender stereotypes and workplace bias. *Research in Organizational Behavior*, 32, 113-135.
- Heilman, M.E., & Eagly, A.H. (2008). Gender stereotypes are alive, well, and busy producing workplace discrimination. *Industrial and Organizational Psychology*, 1, 393-309.
- Heise, L. L., Raikes, A., Watts, C. H., & Zwi, A. B. (1994). Violence against women: a neglected public health issue in less developed countries. *Social Science and Medicine*, 39(9), 1165-1179.
- Henry, D., & Ramirez-Marquez, E. (2016). On the impacts of power outage during Hurricane Sandy - A resilience-based analysis. *Systems Engineering*, 19(1), 59-75.
- Hoffman, R.M., & Borders, L.D. (2001). Twenty-five years after the Bem Sex-Role Inventory: A reassessment and new issues regarding classification variability. *Measurement and Evaluation in Counseling and Development*, 34, 39-55.
- Hofstede, G. (1993). Cultural constraints in management theories. *Academy of Management Executive*, 7(1), 81-94.
- Hogg, M.A., & Terry, D.J. (2001). *Social identity processes in organizational contexts*. Philadelphia, PA: Psychology Press.
- Hogue, M., & Lord, R.G. (2007). A multilevel, complexity theory approach to understanding gender bias in leadership. *The Leadership Quarterly*, 18, 370-390.
- Hoogendoorn, S., Oosterbeek, H., & van Praag, M. (2013). The impact of gender diversity on the performance of business teams: Evidence from a field experiment. *Management Science*, 59(7), 1514-1528.
- Howard, J.A. (2000). Social psychology of identities. *Annual Review of Sociology*, 26, 367-393.
- Hoyt, C.L (2012). Gender bias in employment contexts: A closer examination of the role incongruity principle. *Journal of Experimental Social Psychology*, 48, 86-96.
- Huang, J., & Kisgen, D. J. (2013). Gender and corporate finance: Are male executives overconfident relative to female executives? *Journal of Financial Economics*, 108, 822-839.

- International Labor Organization. (2014). *A Quiet Revolution: Women in Bangladesh*. Retrieved from [http://www.ilo.org/global/about-the-ilo/newsroom/comment-analysis/WCMS\\_234670/lang--en/index.htm](http://www.ilo.org/global/about-the-ilo/newsroom/comment-analysis/WCMS_234670/lang--en/index.htm)
- Jensen, M. C., & Murphy, K. J. (1990). Performance pay and top management incentives. *Journal of Political Economy*, 98(2), 225-264.
- Jeyaseelan, V., Kumar, S., Jeyaseelan, L., Shankar, V., Yadav, B.K., & Bangdiwala, S.I. (2015). Dowry demand and harassment: Prevalence and risk factors in India. *Journal of Biosocial Science*, 47, 727-745.
- Johnson, S.K., Murphy, S.E., Zewdie, S., & Reichard, R.J. (2008). The strong, sensitive type: Effects of gender stereotypes and leadership prototypes on the evaluation of male and female leaders. *Organizational Behavior and Human Decision Processes*, 106, 39-60.
- Kabeer, N. (2011). Between affiliation and autonomy: navigating pathways of women's empowerment and gender justice in rural Bangladesh. *Development and Change*, 42(2), 499-528.
- Kabeer, N., Mahmud, S., & Tasneem, S. (2011). *Does Paid Work Provide a Pathway to Women's Empowerment? Empirical Findings from Bangladesh*. Institute for Developing Studies Working Paper 85. Retrieved from <http://dspace.bracu.ac.bd:8080/handle/10361/2598>
- Kagel, J., & Roth, A. (. (1995). *The Handbook of Experimental Economics*. Princeton, NJ: Princeton University Press.
- Keiser, L.R., Wilkins, V.M., Meier, K.J., & Holland, C.A. (2002). Lipstick and Logarithms: Gender, Institutional Context, and Representative Bureaucracy. *The American Political Science Review*, 96(3), 553-564.
- Kelly, J., Wildman, H. E., & Urey, J. R. (1982). Gender and sex role differences in group decision-making social interactions: A behavioral analysis. *Journal of Applied Social Psychology*, 12(2), 112-127.
- Kelly, R.M., Guy, M.E., Bayes, J., Duerst-Lahti, G., Duke, L.L., Hale, M.M., Johnson, C., Kawar, A., & Stanley, J.R. (1991). Public Managers in the states: A comparison of career advancement by sex. *Public Administration Review*, 51(5), 402-412).

- Khan, A., & Hussain, R. (2008). Violence against Women in Pakistan: Perceptions and Experiences of Domestic Violence. *Asian Studies Review*, 32(2), 239-253.
- Khan, F. C. (2005). Gender violence and development discourse in Bangladesh. *International Social Science Journal*, 57(2), 219-230.
- Kim, H., & Marcouiller, D. W. (2015). Considering disaster vulnerability and resiliency: The case of hurricane effects on tourism-based economies. *The Annals of Regional Science*, 54, 945-971.
- Kimuna, S.R., Djamba, Y.K., Ciciurkaite, G., & Cherukuri, S. (2012). Domestic violence in India: Insights from the 2005-2006 National Family Health Survey. *Journal of Interpersonal Violence*, 28(4), 773-807.
- Kirchmeyer, C. (1996). Gender roles and decision-making in demographically diverse groups: A case for reviving androgyny. *Sex Roles*, 34(9), 649-663.
- Klenke, K. (2003). Gender influences in decision-making processes in top management teams. *Management Decision*, 41(10), 1024-1034.
- Koenig, M. A., Ahmed, S., Hossain, M. B., Khorshed, A. B. M., & Mozumder, A. (2003). Women's status and domestic violence in rural Bangladesh: Individual- and community-level effects. *Demography*, 40(2), 269-288.
- Kumar, H., & Timmons, H. (2013, March 16). Five Arrested in Gang Rape of Swiss Tourist in Central India. *The New York Times*. Retrieved from <http://india.blogs.nytimes.com/2013/03/16/swiss-tourist-gang-raped-in-central-india/>
- Latha, K., & Narendra, R. (1998). Dowry death: implications of law. *Medicine, Science and the Law*, 38(2), 153-156.
- Latu, I.M., Stewart, T.L., Myers, A.C., Lisco, C.G., Estes, S.B., & Donahue, D.K. (2011). What we “say” and what we “think” about female managers: Explicit versus implicit associations of women with success. *Psychology of Women Quarterly*, 25(2), 252-266.
- Lee, J.C. (2017, March 10). Trump’s cabinet so far is more white and male than any first cabinet since Raegan’s. *The New York Times*. Retrieved from [https://www.nytimes.com/interactive/2017/01/13/us/politics/trump-cabinet-women-minorities.html?\\_r=0](https://www.nytimes.com/interactive/2017/01/13/us/politics/trump-cabinet-women-minorities.html?_r=0).

- Lewis, P. (2008). Emotion work and emotion space: Using a spatial perspective to explore the challenging of masculine emotion management practices. *British Journal of Management*, 19, S130-S140.
- Lindberg, A. (2014). The historical roots of dowries in contemporary Kerala, South Asia. *Journal of South Asian Studies*, 37(1), 22-42.
- Lyons, Sean, & Kuron, Lisa. (2013). Generational differences in the workplace: A review of the evidence and directions for future research. *Journal of Organizational Behavior*, 35, S139-S157.
- Madhani, F.I., Karmaliani, R., Patel, C., Bann, C.M., McClure, E.M., Pasha, O., & Goldenberg, R.L. (2015). Women's Perceptions and Experiences of Domestic Violence: An observational study from Hyderabad, Pakistan. *Journal of Interpersonal Violence*. Advance online publication. doi: 10.1177/0886260515585533
- Martin, R., & Sunley, P. (2014). On the notion of regional economic resilience: Conceptualization and explanation. *Journal of Economic Geography*, 15, 1-42.
- Meier, K.J. & Nicholson-Crotty, J. (2006). Gender, representative bureaucracy, and law enforcement: The case of sexual assault. *Public Administration Review*, November/December, 850-860.
- Meier-Pesti, K., & Penz, E. (2008). Sex or gender? Expanding the sex-based view by introducing masculinity and femininity as predictors of financial risk taking. *Journal of Economic Psychology*, 29, 180-196.
- Mirchandani, R. (2006). "Hitting is not manly": Domestic violence court and the re-imagination of the patriarchal state. *Gender & Society*, 20(6), 781-804.
- Mogford, E. (2011). When status hurts: Dimensions of women's status and domestic abuse in rural northern India. *Violence Against Women*, 17(7), 835-857.
- Munger, M.C. (2000). *Analyzing Policy: Choices, Conflicts, and Practices*. New York, NY: W.W. Norton & Company.
- Murshid, N.S. (2015, May 14). Men's report of domestic violence perpetration in Bangladesh: Correlates from a nationally representative survey. *Journal of Interpersonal Violence*. Advance online publication. doi: 10.1177/0886260515585544

- Murshid, N.S., & Murshid, N. (2015, September 16). Intergenerational transmission of marital violence: Results from a nationally representative sample of men. *Journal of Interpersonal Violence*. Advance online publication. doi: 10.1177/0886260515604413
- Nasrin, S. (2011). Crime or custom? *Indian Journal of Gender Studies*, 18(1), 27-50.
- Naved, R. T., Azim, S., Bhuiya, A., & Persson, L. A. (2006). Physical violence by husbands: Magnitude, disclosure and help-seeking behavior of women in Bangladesh. *Social Science and Medicine*, 62(12), 2917-2929.
- Naved, R.T., Newby, M., & Amin, S. (2001). The effects of migration and work on marriage of female garment workers in Bangladesh. *International Journal of Population Geography*, 7, 91-104.
- Naved, R. T., & Persson, L. (2010). Dowry and spousal physical violence against women in Bangladesh. *Journal of Family Issues*, 31(6), 830-856.
- Nazneen, R. (1996). A half step back - revival of purdah in Bangladesh. *Labor Capital and Society*, 29(1/2), 42-55.
- Nielsen, S., & Huse, M. (2010). The contribution of women on boards of directors: Going beyond the surface. *Corporate Governance: An International Review*, 18(2), 136-148.
- Nielsen, S., & Huse, M. (2010). Women directors' contribution to board decision-making and strategic involvement: The role of equality perception. *European Management Review*, 7, 16-29.
- Nielsen, V.L. (2015). Personal attributes and institutions: Gender and the behavior of public employees. Why gender matters to not only “Gendered Policy Areas”. *Journal of Public Administration Research and Theory (JPART)*, 25, 1105-1029.
- Olsen, R. A., & Cox, C. M. (2001). The influence of gender on the perception and response to investment risk: The case of professional investors. *The Journal of Psychology and Financial Markets*, 2(1), 29-36.
- Opstrup, N., & Villadsen, A. R. (2014). The Right Mix? Gender diversity in top management teams and financial performance. *Public Administration Review*, 75(2), 291-201.



- Ostrom, E., Cox, M., & Schlager, E. (2014). An Assessment of the Institutional Analysis and Development Framework and Introduction of the Social-ecological Systems Framework. In P.A. Sabatier & C.M. Weible (Eds.), *Theories of the Policy Process* (3<sup>rd</sup> ed.) (pp 367-306). Boulder, CO: Westview Press.
- Panchanadeswaran, S., & Koverola, C. (2005). The voices of battered women in India. *Violence Against Women, 11*(6), 736-758.
- Park, J., Cho, J., & Rose, A. (2011). Modeling a major source of economic resilience to disasters: Recapturing lost production. *Natural Hazards, 58*, 163-182.
- Pecotich, A., Rahtz, D. R., & Shultz, C. J. (2010). Systemic and service dominant socio-economic development: Legal, judicial and market capacity building in Bangladesh. *Australasian Marketing Journal, 18*(4), 248-255.
- Pelland, D. (1996). Planning to survive; disaster management reaches mid-size firms. Retrieved from <http://go.galegroup.com/ps/i.do?id=GALE%7CA18679719&v=2.1&u=colu44332&it=r&p=AONE&sw=w&asid=bc323519c3db0292ec0255ba5d4c86d2>
- Perrault, E. (2015). Why does board gender diversity matter and how do we get there? The role of shareholder activism in deinstitutionalizing old boys' networks. *Journal of Business Ethics, 128*, 149-165.
- Pindyck, R.S., & Rubinfeld, D.L. (2013). *Microeconomics* (8<sup>th</sup> Ed.). Upper Saddle River, NJ: Pearson.
- Plott, C., & Smith, V. E. (2008). *Handbook of Experimental Economics Results Volume 1*. Amsterdam, Netherlands: North-Holland Press.
- Powell, G.N. (2011). The gender and leadership wars. *Organizational Dynamics, 40*, 1-9.
- Powell, G.N., & Butterfield, D.A. (1979). The “good manager”” Masculine or androgynous? *Academy of Management Journal, 22*(2), 395-403.
- Pratt, M. (2001). Social identity dynamics in modern organizations: An organizational psychology/organizational behavior perspective. In M.A. Hogg & D.J. Terry (Eds.), *Social identity processes in organizational contexts* (pp. 13-30). Philadelphia, PA: Psychology Press.

- Radecki, C.M., & Jaccard, J. (1996). Gender-role differences in decision-making orientations and decision-making skills. *Journal of Applied Social Psychology*, 26(1), 76-94.
- Rafi, M., & Chowdhury, A.M.R. (2000). Human rights and religious backlash: the experience of a Bangladeshi NGO. *Development in Practice*, 10(1), 19-30.
- Rahman, M., Hoque, A., & Makinoda, S. (2011). Intimate partner violence against women: Is women empowerment a reducing factor? *Journal of Family Violence*, 26(5), 411-420.
- Riccucci, N.M. (1986). Female and minority employment in city government: The role of unions. *Policy Studies Journal*, 15(1), 3-15.
- Riccucci, N.M. (2002). *Managing Diversity in Public Sector Workforces*. Boulder, CO: Westview.
- Riccucci, N.M. (2009). The pursuit of social equity in the Federal Government: A road less traveled? *Public Administration Review*, May/June, 373-382.
- Riccucci, N.M. (2014). Representative bureaucracy in policing: Does it increase perceived legitimacy? *Journal of Public Administration Research & Theory*, 24, 537-551.
- Rittel, H.W.J., & Webber, M.M. (1973). Dilemmas in a general theory of planning. *Policy Sciences*, 4(2), 155-169.
- Robson, P. J., Jack, S. L., & Freel, M. S. (2008). Gender and the use of business advice: evidence from firms in the Scottish service sector. *Environment and Planning C: Government and Policy*, 26, 292-314.
- Rose, A. Z. (2004). Defining and measuring economic resilience to disasters. Prevention and Management: *An International Journal*, 13(4), 307-314.
- Rose, A. Z. (2007). Economic resilience to natural and man-made disasters: Multidisciplinary origins and contextual dimensions. *Environmental Hazards*, 7(4), 383-398.
- Roulet, M. (1996). Dowry and prestige in north India. *Contributions to Indian Sociology*, 30(1), 89-108.

- Rubin, G. (1975). The Traffic in Women: Notes on the 'Political Economy' of Sex. In R.R. Reiter (Ed.), *Toward and Anthropology of Women* (pp. 157-210). New York, NY: Monthly Review Press.
- Rudman, L.A., Moss-Racusin, C.A., Phelan, J.E., & Nauts, S. (2012). Status incongruity and backlash effects: Defending the gender hierarchy motivates prejudice against female leaders. *Journal of Experimental Social Psychology*, 48, 165-179.
- Sambisa, W., Angeles, G., Lance, P. M., Naved, R. T., & Curtis, S. L. (2010). Physical and sexual abuse of wives in urban Bangladesh: Husbands' reports. *Studies in Family Planning*, 41(3), 165-178.
- Sambisa, W., Gustavo, A., Lance, P. M., Naved, R., & Thornton, J. (2011). Prevalence and correlates of physical spousal violence against women in slum and non-slum areas of urban Bangladesh. *Journal of Interpersonal Violence*, 26(13), 2592-2618.
- Sayem, A.M., & Khan, M.A.U. (2012). Women's strategic responses to intimate partner violence: A study in a rural community of Bangladesh. *Asian Social Work and Policy Review*, 6(1), 23-39.
- Schneider, A.L., & Ingram, H. (1997). *Policy Design for Democracy*. Lawrence, KA: University of Kansas Press.
- Schneider, A.L., Ingram, H., & deLeon, P. (2007). Social Construction and Policy Design. In P.A. Sabatier (Ed.), *Theories of the Policy Process* (2<sup>nd</sup> ed.) (pp 93-126). Boulder, CO: Westview Press.
- Schneider, A.L., Ingram, H., & deLeon, P. (2014). Democratic Policy Design: Social Constructions of Target Populations. In P.A. Sabatier & C.M. Weible (Eds.), *Theories of the Policy Process* (3<sup>rd</sup> ed.) (pp 105 – 149). Boulder, CO: Westview Press.
- Schrock, D., & Schwalbe, M., (2009). Men, masculinity, and manhood acts. *Annual Review of Sociology*, 35, 277-295.
- Schubert, R., Brown, M., Gysler, M., & Brachinger, H. W. (1999). Financial decision-making: Are women really more risk-averse? *American Economic Review*, 89(2), 381-385.
- Schuler, S. R., Bates, L. M., & Islam, F. (2008). Women's rights, domestic violence, and recourse seeking in rural Bangladesh. *Violence Against Women*, 14(3), 326-345.

- Schuler, S. R., Hashemi, S. M., & Badal, S. H. (1998). Men's violence against women in rural Bangladesh: undermined or exacerbated by microcredit programs? *Development in Practice*, 8(2), 148-157.
- Schuler, S. R., Hashemi, S. M., Riley, A. P., & Akhter, S. (1996). Credit programs, patriarchy and men's violence against women in rural Bangladesh. *Social Science and Medicine*, 43(12), 1729-1742.
- Schuler, S.R., Lenzi, R., Nazneen, S., & Bates, L.M. (2013). Perceived decline in Intimate Partner Violence Against Women in Bangladesh: Qualitative Evidence. *Studies in Family Planning*, 44(3), 243-257.
- Scott, J. M., & Irwin, D. (2009). Discouraged advisees? The influence of gender, ethnicity, and education in the use of advice and finance by UK SMEs. *Environment and Planning C: Government and Policy*, 27, 230-245.
- Scott, K.A., & Brown, D.J. (2006). Female first, leader second? Gender bias in the encoding of leadership behavior. *Organizational Behavior and Human Decision Processes*, 101, 230-242.
- See, K. E., Morrison, E. W., Rothman, N. B., & Soll, J. B. (2011). The detrimental effects of power on confidence, advice taking, and accuracy. *Organizational Behavior and Human Decision Processes*, 116, 272-285.
- Sen, P. (1999). Enhancing women's choices in responding to domestic violence in Calcutta: A comparison of employment and education. *The European Journal of Development Research*, 11(2), 65-86.
- Sheel, R. (1999). *The Political Economy of Dowry: Institutionalization and Expansion in North India*. New Delhi, India: Manohar Publishers and Distributors.
- Shenk, M. (2007). Dowry and public policy in contemporary India. *Human Nature*, 18(3), 242-263.
- Siddique, M.A.B. (1998). Gender issues in poverty alleviation: a case study of Bangladesh. *International Journal of Social Economics*, 25(6/7/8), 1095-1111.
- Sonfield, M., Lussier, R., Corman, J., & McKinney, M. (2001). Gender comparisons in strategic decision-making: An empirical analysis of the entrepreneurial strategy matrix. *Journal of Small Business Management*, 39(2), 165-173.

- Spence, J.T., & Helmreich, R.L. (1978). *Masculinity and femininity: Their psychological dimensions, correlates, & antecedents*. Austin, TX: University of Texas Press.
- StataCorp (2013). *Stata 13 Base Reference Manual*. College Station, TX: Stata Press.
- Stafford, L., Dainton, M., & Haas, S. (2000). Measuring routing and strategic relational maintenance: Scale revisions, sex versus gender roles, and the prediction of relational characteristics. *Communication Monographs*, 39(2), 165-173.
- Stern, B. B., Barak, B., & Gould, S. J. (1987). Sexual Identity Scale: A new self-assessment measure. *Sex Roles*, 27(9/10), 503-519.
- Stewart, A.J., & Healy, J.M. (1989). Linking individual development and social changes. *American Psychologist*, 44(1), 30-42.
- Stivers, C. (2002). *Gender Images in Public Administration: Legitimacy and the Administrative State*, Second Edition. Thousand Oaks, CA: Sage Publications.
- Stone, D. (2002). *Policy Paradox: The Art of Political Decision Making*. New York, NY: W.W. Norton & Company.
- Taher, M.A., & Jamaluddin, S.Z. (2015). Reluctance of seeking legal remedy in dowry violence cases in Bangladesh: An analysis of influencing factors. *Women's Studies Intl Forum*, 53, 83-89.
- The Economist Intelligence Unit. (2013). *Democracy index 2012*. Retrieved from <http://www.eiimedia.com/index.php/daily-comment/item/1010-global-democracy-is-at-a-standstill>
- The World Bank. (2011a). *Bangladesh - Citizen's Experiences of the Legal System 2009* Study Description Overview. Retrieved from <http://microdata.worldbank.org/index.php/catalog/616/study-description>
- The World Bank. (2011b). *Bangladesh Citizen's Experiences of the Legal System 2009*. Retrieved December 19, 2013, 2013, from <http://microdata.worldbank.org/index.php/catalog/616>
- The World Bank. (2012). *Labor force participation rate, female* (% of female population ages 15+). Retrieved from <http://data.worldbank.org/indicator/SL.TLF.CACT.FE.ZS>

- Transparency International. (2014). *Corruption Perceptions Index 2014*. Retrieved from <http://www.transparency.org/whatwedo/publication/cpi2014>
- True, J. (2003). Mainstreaming gender in global public policy. *International Feminist Journal of Politics*, 5(3), 368-396.
- Twenge, J.M. (1997). Changes in masculine and feminine traits over time: A meta-analysis. *Sex Roles*, 36(5/6), 305-325.
- Twenge, J.M. (2001). Changes in women's assertiveness in response to status and roles: A cross-temporal meta-analysis, 1931-1993. *Journal of Personality and Social Psychology* 81(1), 133-145.
- Twenge, J.M. (2011) The duality of individualism: Attitudes toward women, Generation Me, and the method of Cross-Temporal Meta-analysis. *Psychology of Women Quarterly*, 35(1), 193-196.
- United Nations Development Program. (2013). *2013 Human Development Report*. Retrieved from [http://hdr.undp.org/sites/default/files/reports/14/hdr2013\\_en\\_complete.pdf](http://hdr.undp.org/sites/default/files/reports/14/hdr2013_en_complete.pdf)
- United Nations Entity for Gender Equality and the Empowerment of Women. (2014). *Facts and Figures: Ending Violence Against Women*. Retrieved from <http://www.unwomen.org/en/what-we-do/ending-violence-against-women/facts-and-figures>
- Venis, S., & Horton, R. (2002). Violence against women: a global burden. *Lancet*, 359, 1172.
- Vugrin, E. D., Warren, D. E., & Ehlen, M. A. (2011). A resilience assessment framework for infrastructure and economic systems: Quantitative and qualitative resilience analysis of petrochemical supply chain to a Hurricane. *Process Safety Progress*, 30(3), 280-290.
- Watts, C., & Zimmerman, C. (2002). Violence against women: global scope & magnitude. *Lancet*, 359, 1232-1237.
- Weber, J. (2015). Identifying and Assessing Managerial Value Orientations: A Cross-Generational Replication Study of Key Organizational Decision-Makers' Values. *Journal of Business Ethics*, 132, 493-504.

- Weitzman, A. (2014). Women's and men's relative status and intimate partner violence in India. *Population and Development Review*, 40(1), 55-75.
- West, C., & Fenstermaker, S. (1995). Doing difference. *Gender & Society*, 9(1), 8-37.
- West, C., & Zimmerman, D.H. (1987). Doing gender. *Gender & Society*, 1(2), 125-151.
- Wharton, A.S. (2012). *The sociology of gender: An introduction to theory and research* (2<sup>nd</sup> ed.) West Sussex, U.K.: Wiley-Blackwell.
- Widdicombe, B. (2016, March 19). What Happens When Millennials Run the Workplace? *The New York Times*. Retrieved from [http://www.nytimes.com/2016/03/20/fashion/millennials-mic-workplace.html?\\_r=0](http://www.nytimes.com/2016/03/20/fashion/millennials-mic-workplace.html?_r=0)
- Wilkins, V.M., & Keiser, L.R. (2010). Linking passive and active representation by gender: The case of child support agencies. *Journal of Public Administration Research and Theory*, 16, 87-102.
- Wood, W., & Eagly, A.H. (2002). A cross-cultural analysis of the behavior of women and men: Implications for the origins of sex differences. *Psychological Bulletin*, 128(5), 699-727.
- World Health Organization. (2012). Understanding and addressing violence against women. Retrieved June 1, 2015 from [http://apps.who.int/iris/bitstream/10665/77432/1/WHO\\_RHR\\_12.36\\_eng.pdf](http://apps.who.int/iris/bitstream/10665/77432/1/WHO_RHR_12.36_eng.pdf)
- Yanico, B.J. (1985). BSRI scores: Stability over four years for college women. *Psychology of Women Quarterly*, 9, 277-283.
- Young, K.A. (2017). Essay 2. New Evidence of Androcentric Assimilation in U.S. Management Culture in Three Essays on the Importance of Public Intervention to Improve Individual, Interactional, and Institutional Gender Equity and Outcomes. (Unpublished doctoral dissertation). The Ohio State University, Columbus, Ohio.
- Young, K.A., Greenbaum, R.T., & Dormady, N.C. (2015). Gender in Middle Market Resilience Decision Making: Experimental Evidence, Association for Public Policy and Management 37<sup>th</sup> Annual Fall Research Conference, Miami, Florida, November 12-14, 2015.

Young, K.A., Greenbaum, R.T., & Dormady, N.C. (2016). Gender and Middle Market Resilience Decision Making: Experimental Evidence, Midwest Public Affairs Conference, Columbus, Ohio, June 2-5, 2016.

Zaichkowsy, J. (2014). Women in the board room: one can make a difference. *International Journal of Business Governance and Ethics*, 9(10), 91-113.

Zaman, H. (1999). Violence against women in Bangladesh: Issues and responses. *Women's Studies International Forum*, 22(1). 37-48

Zhao, E.Y., & Wry, T. (2016). Not all inequality is equal: Decomposing the societal logic of patriarchy to understand microfinance lending to women. *Academy of Management Journal*. Published online ahead of print August 22, 2016 as doi: 10.5465/amj.2015.0476.

Zohir, S. (2004). NGO sector in Bangladesh: An overview. *Economic and Political Weekly*, 39(36), 4109.