

A DUAL-PROCESSING APPROACH TO EXAMINING GENDER ROLE CONFLICT IN
MEN

By

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To my advisor, and his tireless efforts in mentorship

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Gender role conflict (GRC) results when socialized gender role expectations disallow men behavioral flexibility in adapting to situational demands. Despite its outsized impact on the psychology of men and masculinities, some scholars argue the GRC approach inadequately addresses how, when, and why men experience gender role conflict. One promising approach to addressing these concerns is functionality. From a functional perspective, male gender roles can be understood as serving heuristic functions, ways men can quickly understand, evaluate, and respond to situations. Their use can be understood as reflecting what Daniel Kahneman labels System 1 (or heuristic) thinking. The purpose of this dissertation was to evaluate to the extent to which Gender Role Conflict Scale scores served as heuristics during activation of System 1 (vs. System 2, which is effortful and intentional) thinking. This approach represents a conceptual shift away from treating masculine gender roles as fixed traits and toward treating them as heuristics men automatically use quickly and effortlessly in response to situational demands, though sometimes at significant cost. Data from a posttest-only, control-group experimental design assessed three different ways System 1 vs. 2 might affect the GRC-behavioral intention relationship. Results did not support

the hypothesis that men would report experiencing greater gender role conflict in the System 1 condition than the System 2 condition. Nor did they support the hypothesis that men would favor traditionally masculine behavioral intentions more in System 1 than System 2. However, in support of Hypothesis 3, regression analyses demonstrated that GRC subscale scores more powerfully predicted behavioral intention scores in the System 1 and control conditions, than in the System 2 condition, consistent with predictions. These results provide support for the promise of dual processing models in understanding the relationship between men's gender role beliefs and their behavioral intentions. Heuristic (vs. effortful) processing did not have a direct impact on GRC beliefs or on behavioral intentions. Instead, the System 1 regression model predicted 61% more variance and the Control Condition model predicted 53% more variance than the System 2 model, consistent with Hypothesis 3.

CHAPTER 1 INTRODUCTION

Gender Role Conflict (GRC; O'Neil, Helms, Gable, David, & Wrightsman, 1986) is a psychological state in which socialized gender roles have negative consequences for individuals. GRC occurs when conformity to ostensibly rigid, sexist, or restrictive gender roles results in personal restrictions, deviations, or violations of others or oneself. The ultimate outcome of this conflict is a restriction of the human potential of either the person experiencing it or those around that person, or both. This definition has evolved from a series of theoretical and research publications produced over the past 35 years (O'Neil, 1981, 2008, 2012, 2015; O'Neil & Denke, 2016). However, it is important to note that GRC is distinct from theories about (including the measurement of) masculinity ideologies (e.g., Levant & Richmond, 2016) or hegemonic masculinity (Connell & Messerschmidt, 2005). Specifically, masculinity ideologies are beliefs and attitudes about masculine norms, and hegemonic masculinity refers to the dominant position of those ideologies. GRC, conversely, is a consequence of conformity to those beliefs and attitudes in situations which the contextual demands are most effectively met with a different behavioral approach (e.g., Wester & Vogel, 2012). Essentially, GRC results when socialized gender role expectations do not allow individual men the behavioral flexibility to respond adaptively to specific situational demands (e.g., Wester, 2008). For the purpose of this study, two specific components of GRC were assessed. Namely, conflict and conformity (i.e., behavioral intentions).

Growing, as it did, out of a feminist approach to deconstructing gender roles (e.g., Brooks & Elder, 2016; O'Neil, 2015, chapter 2), GRC was one of the first theories developed to explore negative interpersonal and intrapersonal consequences of

enacting the male role for men, for those near them, and for society as a whole. Over 200 publications, in addition to 240 dissertations document that GRC promotes a myriad of psychological consequences, and to a lesser degree document broader societal consequences of GRC. This line of research has been of great value to the field of psychology by identifying the consequences associated with masculine gender roles as well as potential ways mental health professionals can work with men and those around them to improve their lives.

However, despite its impact on the extant literature, the GRC paradigm is not without its critics. Many have argued, for example, that the research program has failed to assess GRC longitudinally by identifying development tasks and contextual demands that interface with men's socialization (Smiler, 2004). Others have asserted that despite being useful in understanding the experiences of men from marginalized groups (e.g., Wester, 2008), the original theory developed from a primarily heterosexual, heteronormative, White perspective, which limits its applicability in understanding and benefitting men of color and men of different sexual orientations. Still others offer the criticism that both the psychology of men, and the GRC construct have become, regardless of the original intent of the scholars, trait-based and therefore of limited utility in assessing the situational dynamics of men's gendered behavior. As a result of these concerns, scholars have argued that the current state of GRC does not take into account situational and other real-life contingencies that affect men's lives (Addis, Mansfield, Syzdek, 2010; Jones & Heesacker, 2012; Smiler, 2004).

Taken together, these concerns suggest that the GRC model does not address adequately the questions of how, why, and when men become conflicted with their

gender roles. On potential approach to addressing how, why, and when is *functionality*, in this case the functionality of traditional gender roles, or the degree to which behaviors society has traditionally labeled as masculine enable men to successfully meet situational goals (e.g., Addis, Mansfield, & Syzdek, 2010). Functionality may explain why traditional gender roles exist and are still endorsed by many men, despite evidence suggesting the resulting behavior can be dysfunctional in some situations. For instance, research has demonstrated that suppressing verbal expression of emotions has been linked to a slowing of the onset and progression of cancer (e.g., Consedine, Magai, & Bonanno, 2002) as well as the regulation of grief (e.g., Bonanno, 2001) even though emotion suppression is also predictive of interpersonal distress, according to the GRC paradigm. What determines whether emotion suppression functions effectively or ineffectively? O'Neil and Denke's (2016) newly proposed information processing model has promise in beginning to address this type of question, but lacks any theoretical specifications regarding the mechanism through which men meet situational goals effectively or ineffectively.

To that end, from a functional perspective, male gender roles can be understood as a label people give to a category of heuristics that men activate to understand and evaluate the situation, and to select and implement a behavioral response (e.g., Addis, Mansfield, & Syzdek, 2010) designed to achieve a goal. For the purpose of this inquiry, I refer to heuristics in the cognitive tradition, i.e., practical approaches to problem solving which are neither optimal or perfect, but are efficient and considered sufficient for achievement of the immediate goals (e.g., Tversky & Kahneman, 1974). Using

heuristics, which are often dubbed mental shortcuts, speeds up the process of finding a satisfactory solution while generating little additional cognitive load.

Which potential behaviors are activated by heuristics depends on both the cues individuals perceive in the situation and on the habit strength of activating that particular heuristic (Tversky & Kahneman, 1974; Verplanken & Aarts, 1999). For instance, the more frequently a particular heuristic is activated, the more likely it is to be activated in the future. Given that gender socialization begins prenatally (see Ehrhardt & Meyer-Bahlburg, 1981) and is nearly incessant throughout life, and because gendered thinking saturates most cultures and subcultures (Connell, 1998, 2001), most men's gendered heuristics (behaviors) are likely to have very high habit strength and to be activated by lots of environmental features.

Further, male gender roles are socially constructed, and therefore largely, though not completely, shared among groups of men. Nonetheless, these social constructions of gender also reside at the individual person level, as a complex interconnected set of heuristics, what O'Neil (e.g., 2015) and others have described as gender role schemas, which activate automatically (that is, heuristically) in response to situational demands.

Male gender schemas, therefore, may serve to organize a repository of interconnected and relatively simple guidelines for behavior which, like all heuristics, take the place of more careful, effortful, and complex analyses and responses. Why rely on heuristics? Humans are generally reluctant to undertake intentional, effortful cognitive processing, and thus have been dubbed cognitive misers by Fiske and Taylor (1984). People are more likely to rely on gender schemas in situations where quick action requires or where engaging in effortful thinking is difficult. This perspective that

humans are generally stingy with their effortful and intentional thinking suggests a function for the traditional male gender role components that are largely automatic. The function appears to serve is as heuristics or decisional shortcuts. Their use in making decisions reflects what Daniel Kahneman (2011), among others, has called System 1 (or heuristic) thinking.

System 1 thinking is automatic and often, but not always, unconscious, emotional and intuitive. It reacts quickly to the environment and quickly produces responses in reaction to the incoming stimuli. System 1 is designed to guide responses to the environment as quickly as possible, through automatic activation and application a relevant heuristic that guides behavior based upon simple and largely unexamined rules. Applied to the male gender role, for example, "immediately observable contextual cues [microcontexts]... activate corresponding stereotypes and belief systems" (Deaux & Major, 1987, p. 374).

The fast reaction time increases the likelihood of survival in some situations, and perhaps confers an evolutionary advantage in those situations. These belief systems that Deaux and Major (1987) referred to can be understood as heuristics, as well. They contain information about gender, appropriate behaviors, and the match between a given situation and one's gender role, and knowledge "about how men and women should behave in various types of situations" (Eagly, 1987, pp. 25-26).

In contrast, System 2 thinking is effortful, rational, and intentional. This is the system that activates when humans are called upon to think carefully and solve complex problems, and some novel problems. It also is responsible for the review and revision of one's behaviors in light of relevant feedback and the perceived outcomes of

one's behavior. System 2 requires cognitive resources, i.e., it takes time to sort through and dispassionately assess the many potential choices an individual might face in any given situation. Indeed, System 2 may become activated when reliance on System 1 produces goal failures or other unanticipated and undesirable consequences. However, once activated, System 1 sometimes recruits System 2 to engage in defense of System 1 thinking.

People typically rely on System 1, with its heuristic processing, but not always (Kahneman, 2011). Context heavily determines activation of System 1 vs. System 2 (though so do individual factors), but the default condition is System 1 (Kahneman, 2011). However, when people have sufficient motivation to think effortfully (for example when they perceive the cost of behavioral errors to be high) and have the available capacity (e.g., not stressed, not anxious, not using available capacity on something else, not fatigued, not intoxicated, not distracted), they will rely on System 2 (Kahneman, 2011).

There are many examples of these dual-processing models in psychology, starting with Craik and Lockhart's (1972) analysis of dual processing as an alternative to long term vs. short term memory, Craik and Tulving's (1975) deep vs. shallow memory processing accounting for systematic differences in recall, continuing through research on attitude change and persuasion, such as Petty and Cacioppo's (1986) elaboration likelihood model of attitude change. However, much of the scholarship on the psychology of men has been, understandably, focused on understanding the consequences of what can be conceptualized as System 1 thinking, though that conceptualization has only recently been reflected in the research literature, in a chapter

I co-authored (Wester, Heesacker, O'Neil, & Snowden, 2015). Evolving beyond a study of those consequences, in effect working toward a comprehensive understanding of why men behave the way they do in various contexts (e.g., Addis et al., 2010) would require the study of specific System 1 content, as well as an acknowledgement of the role played by System 2 in maintaining System 1, once System 1 has been activated.

From this perspective, gender role conflict (GRC; O'Neil 1981) exemplifies important content of masculine System 1 thinking, including how and why men engage in particular behaviors (and behavioral intentions). The cognitive aspect of GRC pertains to thoughts and assumptions about gender roles, the understanding of which varies based on the developmental level of the male as well as sociocultural factors. What's more, these cognitive aspects of GRC may be especially influential in heuristic (System 1) processing (see Wester et al., 2015).

Specifically, GRC likely involves many interlocking heuristics (e.g., display rules regarding emotions, the role of competition in a situation, the needs of one's family). Because of their complexity, there is quite likely to be confusion about what heuristic applies best in a particular situation, especially when two or more GRC heuristics could reasonably guide behavior in a particular situation. Because of this, one can think of GRC as the outcome of competing and conflicting heuristics that are activated to guide a man's behavior in a given context.

From this System 1-System 2 perspective, male gender role socialization would produce psychological distress (via gender role conflict) only under specific conditions. For example when GRC heuristics are activated via System 1 and result in dysfunctional responses that produce adverse consequences to a current life situation.

Indeed, conceptualizing GRC as largely the result of System 1 thinking may prove helpful in understanding and addressing the functionality and dysfunctionality resulting from relying on the traditional male gender role.

Hypotheses: The purpose of this study, therefore, was to evaluate if, and to what extent, gender role conflict resulted from activation of System 1 (vs. System 2) thinking. This purpose represented a conceptual shift toward treating masculinity as a set of heuristics by which men quickly respond to situational demands, though sometimes at significant costs. These three hypotheses each assessed a different way in which System 1 vs. System 2 might affect gender role conflict: by changing GRCS scores, by changing intentions, or by altering the degree to which men rely on GRC levels to guide intentions.

Hypothesis 1: Men will report experiencing greater gender role conflict in the System 1 condition than in the System 2 and control conditions.

Hypothesis 2: Men will favor traditionally masculine behavioral intentions (conformity) more in the System 1 condition than in the System 2 and control conditions.

Hypothesis 3: GRCS subscale scores will more powerfully predict participants' behavioral intentions in response to four GRCS subscale-relevant vignettes in the System 1 condition than in the System 2 and control conditions.

CHAPTER 2 REVIEW OF THE LITERATURE

Asking Questions About Masculinity

Bederman (2001) reminded readers that in academic research, the conclusions scholars draw regarding a given topic depends on the questions they ask. This is true even about topics for which answers appear to be self-evident, e.g., “What caused the abolition of slavery in the United States?” or “How can the human genome be mapped?” However, this is also true of subjects that are neither concrete nor intuitively self-evident (Bederman, 2001). Take for instance the psychological study of men and masculinity. “Masculinity,” and by extension male gender roles, are not natural things, like a tree or a table. Similar to “class,” male gender roles are socially constructed. Indeed, the construct of masculinity has not existed throughout human history; in the English language, the word masculinity did not exist before about 1850 and did not come into regular usage until almost the turn of the twentieth century (Bederman, 1995, pp. 17-19). What’s more, the first studies of “gender roles” were not conducted until the 1950’s (Money & Hampson, 1957).

According to Bederman (2011), during the latter half of the 20th century many scholars of gender began inquiring about how certain groups came to identify as men in the first place. In this vein, masculinity became a placeholder. Bederman (2011) suggested that masculinity exists and is useful to scholars, only as it allows them to ask particular types of questions about gender. Without masculinity, she concludes, researchers cannot ask questions about “maleness” in a time, place, psyche, or text.

This use of masculinity allows researchers to ask important questions. For instance, masculinity, as a construct, helps some scholars study men’s behaviors or

men's personality (e.g., Addis & Mahalik, 2003; Edley & Wetherell, 1995; Kilmartin, 1994; Levant & Pollack, 2008). Invoking masculinity helps scholars analyze the kinds of power and authority that men have, or in many cases do not have. Specifically, scholars use masculinity to explain how gender signifies hierarchy, and to explore what masculinity can tell readers about imperialism, state histories, or political theory in different times and places (e.g., Connell & Messerschmidt, 2005; Donaldson, 1993).

However, difficulties arise when scholars focus on masculinity as somehow separate from the people conceptualizing it and internalizing it. This reification of masculinity introduces unstated and largely unsupported assumptions about the nature of masculinity (Bederman, 2011). For instance, reification of masculinity has led to the assumption that masculinity is monolithic, when the evidence suggests that there are multiple masculinities and that aspects of masculinity contradict and are incompatible with other aspects of masculinity. Likewise, when reified and separated from the people conceptualizing and internalizing masculinity, there is an assumption that masculinity is trans-situationally and trans-temporally stable, an assumption not warranted by the evidence (Jones & Heesacker, 2012). This focus on the construct and not the people has also led to simple and inaccurate characterizations of masculinity that often produce the expected result in research (a problem that plague other aspects of science, as well). For example, scholars who associate masculinity with anxiety or conflict are able to document empirically that some men are indeed anxious or are experiencing psychological conflict (Levant, 1998; O'Neil et al., 1986). Those whose models of masculinity entails patriarchy or a will to power over marginalized others find evidence of men who dominate women or engage in racial violence (Anderson & Umberson,

2001; Connell, 1995). Scholars who believe masculinity is closely linked to vulnerability or marginalization will find vulnerable and marginalized men in social groups (e.g., Cheng, 1999; Dunbar, 1999).

Researching masculinity in terms of anxiety, psychological conflict, power, vulnerability, or marginalization is not, in and of itself, a problem. However, problems do occur when scholars divorce masculinity from the people construing masculinity and construing their masculinity. Reifying masculinity as a construct somehow separate and independent from the people who are construing has limited how scholars study and understand men and boys.

For example, it was recently argued (see Wester, Heesacker, & Snowden, 2016) that the primary reason research often demonstrates men as struggling with emotional expression is because researchers presume that this reified construct of masculinity has as an essential feature difficulties with emotional expression (e.g., Levant, 1995). As a result of this focus on the construct without context, men are studied not as complex organisms negotiating a welter of inputs, including gendered personal and social constructs, but as members of a group characterized by this set of more-or-less fixed and stereotypical traits (O'Neil, 2015; see also Kimmel & Davis, 2011; Smiler 2006). Relatively small and context-dependent effects can be overinterpreted as nearly self-evident truths, when the assumption is that men share a stable and unified set of stereotypical traits. If scholars are not careful, these stereotypes can be transformed into science-supported "truths" that circulate back again, tautologically, to reaffirm the very stereotypes that were assumed to be true at the outset. An example of this process

in action is the stereotype that masculinity equals emotional stoicism (e.g., Wester, Heesacker, & Snowden, 2016; see also Shields, 2013).

To be fair, this process of investigating masculinity as a stable, independent entity has led to significant progress in improving the lives of men, as well as women (Englar-Karlson, Kiselica, 2013; Kiselica, Englar-Carlson, 2010; Roberts-Douglass, Curtis-Boles, 2013). What's more, it has also contributed significantly to the rejection of unverified sex differences that underlie sexism for both men and women while also helping scholars resist the temptation to settle for simple answers (i.e., Mars versus Venus; Gray, 1989; Wester, Heesacker, & Snowden, 2016) to complex human problems.

Nonetheless, the predominant treatment of masculinity as a stable and independent entity in the psychological study of men and masculinity (see Wester, Heesacker, O'Neil & Snowden, 2015) stands in sharp contrast to much of the broader gender role scholarship of the 20th century. Indeed, the fields of sociology, social-cognitive neuroscience, anthropology, and history have explicitly treated masculinity as a heuristic category. For example, cultural feminists in the field of sociology tended to focus on how gender roles were constructed and maintained by individuals as well as society rather than the nature of the roles themselves or their impact on society (e.g., Gardiner, 2013, Gilmore, 1990). Scholarship of this nature focuses on the following questions: How are gender roles useful or functional? What purpose do they serve? What aspect are adaptive? Which are maladaptive? How are gendered constructions developed, shared and maintained, in spite of evidence suggesting that complex information often requires complex problem solving?

As stated elsewhere (e.g., Wester, Heesacker, & Snowden, 2016), perhaps it is time for psychologists who study men to move beyond focusing on masculinity as a construct consisting of essential (e.g., Wester & Vogel, 2013) features. My line of research is aimed at understanding how men construct masculinities that are functional and effective for them in any given context. Addis and colleagues have framed this perspective this way, “men (and women) learn to enact gender repertoires of behavior to achieve particular social means and ends” (Addis, Mansfield, & Syzdek, 2010, p. 81). If those means or ends change, so will the observed behaviors. For example, Addis et al. (2010) argued that because all human behaviors are generated within relationships (Gergen, 1985), it is in the context of these social relationships that behaviors should be evaluated. From this point of view “immediately observable contextual cues ... activate corresponding stereotypes and belief systems” (Deaux & Major, 1987, p. 374). Resulting behaviors should therefore be judged in the context of any individual man’s social relationships, and they should only be considered in light of behavioral goals and situational outcomes (e.g., Addis et al., 2010), in addition to being evaluated as to how well they adhered (or did not adhere) to feminist standards regarding masculinity (e.g., Wester, Heesacker, & Snowden, 2016).

The primary challenge facing the psychological study of men and masculinities in the 21st century may be to develop a more robust understanding of men’s behaviors, while “promoting a social discourse that is grounded in empirical research, and consistent with *a priori* values and goals” (Addis et al., p. 78). Addis et al. (2010) were among the first to advocate for a more functional, pragmatic approach to the psychology of men. Their approach focuses on understanding why men do things, through an

analysis of not only the consequences of masculinity but also the meaning men assign the concept of masculinity, as well as the contexts in which masculinity is enacted.

This approach is a departure from much of the existing literature because it asserts that the nature of masculinity needs to be understood not just in terms of its consequences, but in the more complicated terms of how men learn to negotiate being men through a complex and often contradictory set of messages about masculinity and about how masculinities help men interpret, understand, and respond to situations. Both developmental and social psychologists have written that the study of gender roles needs to be contextual (Eckes & Trautner, 2000; Smiler, 2004; Trautner & Eckes, 2000), because gender roles are influenced by personal, societal, racial, cultural, political, religious, and situational contingencies (Addis et al., 2010; Deaux & Majors, 1987, Johnston & Morrison, 2007; Jones & Heesacker, 2012).

According to Smiler (2004), "Future researchers must begin to examine the influence of contextual factors [on gender roles], including verification of the assumptions of the invariance of an individual's masculine behavior across settings" (p. 25). Though in its early stages, the consensus is that contextualism can help explain the complexity of gender roles and can guide the future study of gender roles.

One potential explanation for why functionality has been under-addressed within this research literature is that until recently masculinity has generally been conceptualized as stable and monolithic, operating independent of the people who understand and use it. This perspective discouraged consideration of the possibility that there was anything functional or effective about masculinity (Wester, Heesacker, O'Neil, & Snowden, 2015). This discouragement is understandable, given the degree of

controversy that has surrounded the notion that male gender roles serve any beneficial purpose. This perspective has been hotly debated, usually under the heading of evolutionary perspectives on gender (see the review by Kenrick, Trost & Sundie, 2004). To be fair, the evolutionary perspectives have sometimes been used in political discourse to excuse sexist or oppressive behaviors. To be clear, I do not conceptualize functionality as justification for oppressive gender roles, nor does a functional approach justify oppression of women and children by men across the ages. However, if it is indeed time to develop a contextual, constructive understanding of masculinity (e.g., Addis et al., 2010) than an understanding of the functions of masculinity warrants additional study.

Gender Role Conflict Theory

The focus of 209 dissertations, and a veritable cornerstone in the psychological study of masculinity, the GRCS has been regarded as the “most well-known instrument within the traditional counseling literature” that focuses on masculinity (Betz & Fitzgerald, 1993, p. 360). GRC grew directly out of the non-sexist men’s movement. Indeed “the feminist movement of the 1970s was the primary stimulus for the men’s liberation movement that ultimately evolved into men’s studies and the psychology of men” (O’Neil, 2015, p. 14). The goal of the early men’s movement was to be part of the feminist dialogues regarding restrictive gender roles and ultimately to develop a theory and research programs that explained how sexism and gender roles interacted to produce oppression for both sexes. As valuable as this has been, the broader assumptions about masculinity that drove scholarship during this early period arose from an essentialist epistemology perspective that is not consistent with more recent

research, which takes more constructivist and contextual perspectives (Wester & Vogel, 2013).

The goal of researchers focusing on men and masculinity during this period was to reaffirm the ideals of feminism by challenging the socio-cultural forces that constrained men's choices, just as they constrained women's choices (O'Neil, 2015). The core assumption was that society's culturally embedded gender roles were restrictive, in that they prevented individuals from charting their own paths and selecting activities, behaviors, and values congruent with their sense of themselves (O'Neil, 2015). Said another way, there existed a masculinity ideology independent from femininity which consisted of the "internalization of cultural belief systems about masculinity and male gender, rooted in the structural relationships between the sexes" (Pleck, 1995, p. 19). That relationship was characterized by the behavioral differences between men and women which, socialized as they were within a patriarchal society, acted to oppress women, maintain patriarchy, and harm men themselves (e.g., Wester, Heesacker, & Snowden, 2016).

Men are expected, for example, to be stoic and unemotional in order to be defined as masculine (O'Neil, 2015). Boys were taught early on that true men strive for individual success, are fiercely focused in their career, and put those objectives ahead of their family. Violations of those ideologies are punished, both as one grows into adulthood and during that adulthood (O'Neil, 2015). While many men are able to cope with these types of expectations, for others these expectations may become too rigid and even distorted by other ideologically driven messages common in today's society regarding men's expected code of conduct that they are unable to conceive of other

behavioral options (O'Neil, 2015). The distortion occurs because of perceived or actual pressure to meet stereotypical notions of masculinity, resulting in fears and anxieties about not measuring up to traditional gender role expectations (i.e., precarious manhood; see Vandello & Bosson, 2013). Mentioned earlier in this dissertation, this idea that men should strive for power and financial success solely through competitive means is an example of behaviors that are functional in one setting, yet potentially become maladaptive when overused or misapplied.

Indeed, the definition of GRC has evolved from a series of theoretical and research manuscripts produced over the past 35 years (O'Neil, 1981a, 1981b, 1982; 1990; 2008, 2014; O'Neil, et al., 1986; O'Neil et al., 1987; O'Neil & Nadeau, 1999), and a more detailed explanation of GRC theory is found in earlier publications, (O'Neil, 2008, 2014, 2016; O'Neil & Egan, 1992; O'Neil et al., 1993). The cognitive aspects of GRC may relate to a type of heuristic thinking described elsewhere (see Wester, Heesacker, O'Neil, & Snowden, 2015). For example, dualistic thinkers experience gender roles differently than men with more cognitive complexity. Thinking that one does not meet expected masculine norms or can't compete can cause discrepancy strain (Pleck, 1995). The affective domain is how we feel about gender roles, including the degree of comfort or conflict we have living out our gender role identities.

Negative emotions can lead to dysfunction, strain, and GRC (O'Neil, 2008b). Behavioral aspects of GRC include ways we respond to and interact with others and ourselves that produce negative intrapersonal and interpersonal outcomes. Discrimination against men and women based on sexist assumptions are examples of how GRC can be expressed behaviorally. Finally, unconscious GRC is hypothesized to

encompass thoughts, feelings, and behaviors related to conflicts with gender roles that are beyond our awareness (O'Neil, 2015).

Four empirically derived patterns of GRC (O'Neil, Good, & Holmes, 1995), measured by the Gender Role Conflict Scale (O'Neil, et al., 1986), have been linked to many types of men's psychological distress (see Brooks & Good, 2001a; 2001b for reviews). Each pattern gives voice to those specific aspects of the socialized traditional male role deemed problematic for some men in certain situations.

Success, Power, and Competition (SPC), the first GRC pattern, refers to personal attitudes toward success as pursued through power and competition. The second pattern, Restricted Emotionality (RE), discusses the degree to which men are taught to "fear feelings" (O'Neil, Good, & Holmes, 1995, p. 176) and avoid verbally expressions of emotionality. The third pattern, Restricted Affectionate Behavior Between Men (RABBM), explores how men are socialized to have difficulties "expressing [their] feelings and thoughts with other men" (O'Neil, Good, & Holmes, 1995, p. 176) - especially if those thoughts and feelings are of the tender variety. Finally, the fourth pattern, Conflict Between Work and Family Relationships (CBWFR), discusses the degree to which men struggle with "balancing work, school, and family relations" (O'Neil, Good, & Holmes, 1995, p. 176) because of the competing socialized roles.

GRC has also been conceptualized as occurring in four general contexts (or experiences) that give the construct a form. These contexts were defined as GRC within the man (intrapersonal); GRC expressed toward others (interpersonal); GRC experienced from others (also interpersonal); and GRC during gender role transitions. GRC in an intrapersonal context is a man's experience of negative emotions and

thoughts about his masculinity that cause personal gender role devaluations, restrictions, and violations. In the interpersonal context, GRC expressed toward others occurs when the man's gender role problems cause him to devalue, restrict, or violate someone else by, for example, telling sexist jokes or committing sexual harassment or violence against women. GRC from others occurs when someone devalues, restricts, or violates another person who deviates from or conforms to masculinity or femininity ideology and norms (O'Neil, 2015).

Three personal experiences of GRC are defined as gender role (a) devaluations, (b) restrictions, and (c) violations. Gender role devaluations are negative critiques of self or others when conforming to, deviating from, or violating stereotypical gender role norms of masculinity ideology. An example of this might be when a man is shamed for showing tender emotions in public. He then learns to devalue that part of himself. The second gender related experience is gender role restrictions, which imply that GRC confines oneself or others to stereotypical and restrictive norms of masculinity ideology and expected gender roles. Gender role restrictions also result in attempts to control people's behavior, limit their own or other's potential, and decrease human freedom. Gender role violations represent the most severe kind of GRC. They occur when men harm themselves, harm others, or are harmed by others because of the more extreme aspects of the socialized male gender role.

Another central concept in the GRC research program is the gender role journey, a framework that can be employed to help people examine how their gender role socialization, GRC, and sexism have affected their lives. The journey has three empirically derived phases including accepting traditional gender roles, gender role

ambivalence fear, anger and confusion, and personal and professional activism (O'Neil & Egan, 1992; O'Neil, Egan, Owen, & Murry, 1993). The journey involves a retrospective analysis of early family experiences with gender roles, making an assessment of one's present situation with sexism, and making decisions about how to act in the future using the three phases (O'Neil, 1995). It includes resolving gender role transitions defined as events in a person's gender role development that produces changes in his or her gender role identity, self-assumptions, and gender role schemas. Gender role schemas are ways of thinking about maleness and femaleness based on sex and gender roles that guide attitudes and behaviors. Examples of schemas are power, control, emotionality, success, intimacy, competition to name a few. Gender role schemas are related to a person's self-concept and are used to evaluate one's personal adequacy as male or female.

The issue of personal adequacy to meet the demands of restrictive gender role schema is part of the GRC that both men and women experience given that gender role schemas can be distorted or exaggerated causing hypermasculinity, hyperfemininity, and GRC. The gender role journey phases provide a way to understand the situational aspects of GRC within the man or in interpersonal interactions.

Many men have learned gender role schemas that are distorted and based on sexist stereotypes. Distorted gender role schemas are exaggerated thoughts and feelings about masculinity and femininity as applied to major life issues. The distortion occurs because of perceived or actual pressure to meet stereotypical notions of masculinity, resulting in fears and anxieties about not measuring up to traditional gender role expectations. These distorted gender role schema are part of the man's restricted

masculinity ideology that produce GRC and may also contribute to precarious manhood (Vandello & Bosson, 2003; Vandello, et al., 2008). Examples of distorted gender role schema for competition is “I have to always win to feel good”. For power the distortion is “Without my power, I am less of man”.

This review of the extant GRC literature strongly suggests that GRC involves many interconnected heuristics (e.g., the display rules regarding emotions, the role of competition in any situation, the needs of one’s family) when it is activated, furthermore, there is quite likely to be variability in how it is activated, and perhaps even confusion about what heuristic applies best or perhaps whether two or more can appropriately (i.e., functionally) guide behavior in a particular situation. Because of this, one can think of GRC as the outcome of competing and conflicting heuristics being used to guide a men’s behavior in a given context. Said another way: Do I adhere to the display rules regarding emotion, or do I address the interpersonal needs of my friend/partner/spouse/family?

Heuristics

Making the best choice, or even a good choice, is not always an easy task. Often, information necessary to make effective decisions may not always be available. What’s more it might not be possible to consider all options fully because of limitations in both time and cognitive processing power (Simon, 1955; Gigerenzer & Todd, 1999; Marsh, 2002). These frequent dilemmas can often be solved or aided by heuristics. Heuristics are cognitive shortcuts that enable individuals to make evaluations on the basis of one or a few simple rules or cues, thereby avoiding the processing and time costs related to exploring an exhaustive set of possibilities (Marsh, 2002).

According to Smith and DeCoster (2001), heuristic processing is the activation and application of judgmental rules and heuristics are presumed to be learned and stored in memory. It is used when people are making accessible decisions such as "experts are always right" (System 1) and systematic processing is inactive when individuals make effortful scrutiny of all the relevant information which requires cognitive thinking (System 2).

To date, many judgment and decision-making heuristics have been proposed and tested (Kahneman, 2011), but the issue of how, why and when people employ heuristics as social tools has remained largely neglected (Marsh, 2002). What's more, the extent to which traditional gender roles function as heuristics has yet to be assessed.

Bounded Rationality

A promising step in understating the social utility of heuristics is within the context of bounded rationality (Simon, 1957). Put simply, bounded rationality is the idea that when individuals make decisions, their rationality is limited by the information they have, the cognitive limitations of their minds, and the time available to make the decision (Simon, 1982). Simon (1957) proposed bounded rationality as an alternative to the mathematical modeling of decision making, as used in economics, political science and related disciplines. It complements rationality as optimization, which views decision-making as a fully rational process of finding an optimal choice given limited information (Gigerenzer & Selten, 2002)

Heuristics as tools of bounded rationality are thought to guide behavior and decisions in the social environment (Hertwig & Hoffrage, 2013). According to Hertwig and Hoffrage (2013) social environments tend to be characterized by complexity and

uncertainty, and individuals with limited informational or cognitive resources may rely on simple rules of thumb to make decisions. They suggest that the class of phenomena described by social heuristics overlap with those typically investigated by social psychology and cognitive neuroscience.

Indeed, within social psychology, some researchers have viewed heuristics as closely linked to cognitive biases (Krueger & Funder, 2004), which may also lead to distress or poor decision making in long-term scenarios. Others have argued that these biases result from the application of social heuristics depending on the complexity of the environment in which they operate (Pachur, Hertwig & Rieskamp, 2013). Researchers in the latter approach treat the study of heuristics as closely linked to social rationality, a field of research that applies the ideas of bounded rationality and heuristics to the realm of social environments (Hertwig & Hoffrage, 2013). From the perspective of this study, it is proposed that in conditions of bounded rationality, men engage in heuristic thinking (in terms of gender roles), which can, at times, result in GRC.

Dual-Process Theory

Psychologically speaking, a dual-process theory provides an account of how judgment or decision-making can occur in two different ways, or as a result of two different processes (Stanovich & West, 2000). Often, the two processes consist of an implicit (automatic), unconscious process and an explicit (controlled), conscious process. For instance, verbalized explicit processes or attitudes and actions may change with persuasion or education; that said, implicit process or attitudes usually take a long time to change with the forming of new habits (Stanovich & West, 2000). Dual process theories can be found in a variety of fields of psychology, including social, personality, cognitive, and clinical psychology.

Dual-process theory posits that there are two systems or minds in one brain (Kahneman, 2011). Specifically, there are two distinctively separate cognitive systems underlying thinking and reasoning and that these different systems were developed through evolution (Evans, 2003). These systems are often referred to as being either implicit (automatic) or explicit, however many theorists prefer to emphasize the functional differences between the two systems and not the consciousness factor and thus refer to the systems simply as System 1 and System 2 (coined by Stanovich & West, 2000).

System 1

Bargh (1994) reconceptualized the notion of an automatic process by breaking down the term “automatic” into four components: awareness, intentionality, efficiency, and controllability. One way for a process to be labeled as automatic is for the person to be unaware of it. Bargh (1994) stated that there are three ways in which a person may be unaware of a mental process: they can be unaware of the presence of the stimulus (subliminal), how the stimulus is categorized or interpreted (unaware of the activation of stereotype or trait constructs), or the effect the stimulus has on the person’s judgments or actions (misattribution). Another way for a mental process to be labeled as automatic is for it to be unintentional (Bargh, 1994). Intentionality refers to the conscious start-up of a process. An automatic process may begin without the person consciously willing it to start. The third component of automaticity is efficiency (Bargh, 1994). Efficiency refers to the amount of cognitive resources required for a process. An automatic process is efficient because it requires few resources. The fourth component is controllability, referring to the person’s conscious ability to stop a process (Bargh, 1994). An automatic process is uncontrollable, meaning that the process will run until

completion and the person will not be able to stop it. Bargh (1994) conceptualizes automaticity as a component view (any combination awareness, intention, efficiency, and control) as opposed to the historical concept of automaticity as an all-or-none dichotomy.

Taken together, therefore, System 1 thinking is best characterized as automatic and unconscious, emotional and intuitive. It reacts quickly to the environment and quickly produces responses in reaction to the incoming stimuli. This is the critical component linking the aforementioned superorganism status to problem-solving methodology. Specifically, System 1 guides responses to the environment as quickly as possible. Through automatic application, a relevant heuristic guides behavior based upon decision rules that are simple and largely unexamined. This short reaction time increases the likelihood of survival in situations, which probably confers some evolutionary advantage. Applied to male gender roles, for example, "immediately observable contextual cues [or what Jones & Heesacker, 2013 describe as microcontexts]... activate corresponding stereotypes and belief systems" (Deaux & Major, 1987, p. 374). The presence of a female, for example, might activate specific behavioral patterns in men – whether those behavioral patterns be the display rules regarding emotional expression, or the simple act of straightening one's posture in order to present a more "manly" physique. These beliefs systems are the heuristics discussed earlier; they contain information about the nature of gender-role appropriate behaviors, data regarding the match between any given situation and one's gender role, and knowledge "about how men and women should behave in various types of situations" (Eagly, 1987, pp. 25-26).

System 2

System 2 is evolutionarily recent (Evans, 2003). It is also known as the explicit system, the rule-based system, the rational system (Evans, 2003), or the analytic system (Tsuji & Wantanabe, 2009). It performs the more slow and sequential thinking. It is domain-general, and performed in the central working memory system (Evans, 2003). Because of this, it has a smaller capacity and is purposefully slower than System 1. It is known as the rational system because it reasons according to logical standards (Tsuji & Wantanabe, 2009). Evans (2003) summarized the common properties associated with System 2: analytic, effortful, controlled, demanding of cognitive capacity, and slow.

Taken together, System 2 thinking is effortful, rational, and intentional. System 2 is the slower, more reflective thinking system. It allows humans to deliberate and consider options carefully. This is the system humans employ when they rely upon well-articulated reasons and more fully developed evidence. It is reasoning based on what we have learned through careful analysis, evaluation, explanation, and self-correction. This is the system which comes into play when humans are called upon to think carefully and solve complex or novel problems. It also is responsible for the review and revision of our behaviors in light of relevant guidelines, rules of procedure, or goal-meeting outcomes. System 2 is a luxury; it takes time to sort through the myriad of potential choices an individual might face in any given moment. Indeed, System 2 decisions are directly influenced by the correct or incorrect application of heuristic maneuvers - correct or incorrect being defined exclusively as the meeting (or not meeting) of situational goals rather than any externally imposed, ideologically-based

definition. Said another way, it is the meeting of those goals (or not) which is at stake regardless of how society might evaluate the good or bad of resultant behavior.

CHAPTER 3 METHODS

Participants

Participants were recruited through Amazon Mechanical Turk (MTurk), which provides a form of monetary compensation that can only be used to purchase products on Amazon.com, to individuals who participate in surveys and other online tasks. MTurk contains the major elements required to conduct research: an integrated participant compensation system; a large participant pool; and a streamlined process of study design, participant recruitment, and data collection. There are many benefits of participant recruitment via MTurk. Typical MTurk users represent a diversity of backgrounds, spanning a wide range of ages, ethnicities, socioeconomic statuses, languages, and countries of origin (Buhrmester, Kwang & Gosling, 2011; Casler, Bickel & Hackett, 2013). The typical gender composition of workers is 45% male and 55% female, with a median age of 30 and average age of approximately 32; a majority of MTurk workers earn roughly \$30,000 per annum, though not all from MTurk (Mason & Suri, 2012). U.S. workers on MTurk are arguably closer to the U.S. population as a whole than subjects recruited from traditional university subject pools (Paolacci, Chandler, & Ipeirotis, 2010).

Research on the use of internet-based utilities for running studies, including MTurk, is quite supportive of the practice. Birnbaum (2000) found that participants who volunteer for a study via the internet are more consistent in their responding than laboratory participants. Indeed, a review completed by Buhrmester and colleagues (2011) concluded that the data obtained from MTurk users are at least as

reliable as those obtained via traditional methods, and low compensation rates do not appear to affect the quality of data (Buhrmester et al., 2011).

However, one potential drawback of MTurk (and all web-based or home-based experiments) is that participants are unsupervised, so may be less attentive than subjects in the lab with an experimenter (Paolacci et al., 2010). Given this concern, Oppenheimer, Meyvis and Davidenko (2009) discussed the effective use of simple instructional manipulation checks (IMCs) to decrease noise and increase the validity of data produced by online mediums. In this study, a pair of simple directions, one in a question approximately $\frac{1}{3}$ of the way through the survey and the other approximately $\frac{2}{3}$ of the way through the survey (i.e., “please mark option X”) will comprised the IMC. Participants were presented with a brief description of the study, the compensation for participation, and the informed consent document. Each participant received \$0.25 for compensation. Participants missing responses to 20% or more of the items were removed from data analysis, consistent with generally-accepted practice (Parent, 2012). Missing data for participants with fewer than 20% of their responses missing was replaced with scale or subscale means, as appropriate ($n = 2$). This simple replacement is as appropriate as and in some cases more appropriate than multiple imputation approaches (Parent, 2012). In total, 600 participants began the survey. However, 44 participants were removed because they identified as female and 50 participants were removed because they did not complete at least 80% of the survey items. Normality tests suggested that seven cases appeared to represent random responding and therefore also were removed. These decisions resulted in the final sample of 499 participants.

Measures

Gender Role Conflict Scale-Short Form

To measure men's self-reported GRC, the Gender Role Conflict Scale-Short Form (GRCS-SF; Wester, O'Neil, Vogel & Danforth, 2012) was used. This relatively new version of the scale has demonstrated good model fit, appropriate bivariate correlations among its subscales, and similar levels of subscale reliability, with a large, diverse sample of male participants (Wester, O'Neil, Vogel & Danforth, 2012). Because this was an MTurk sample, there was an expectation of much greater participant racial, ethnic, and sexual orientation diversity than those on whom the original GRCS was normed. Therefore, the GRCS-SF was selected instead of the GRCS. In the most recent study examining the factor structure of the GRCS based on diversity variables, Norwalk, Vandiver, White, & Englar-Carlson (2011) identified 18 of the original items as failing to meet cutoff criteria. In contrast, the GRCS-SF omits 15 of those 18 items. Wester, O'Neil, Vogel & Danforth, (2012) confirmed that the four constructs measured within the GRC paradigm—success, power, and competition; restricted emotionality; restricted affectionate behavior between men; and conflicts between work and family relations—apply to, and can be measured within, diverse populations of men without fears of specific items tapping somewhat different constructs based on variables such as race and sexual orientation, when using the GRCS-SF. The GRCS-SF also responds to previous recommendations (e.g., Rogers, Abbey-Hines, & Rando, 1997) to revise and improve the psychometrics of the original GRCS. In the GRCS-SF, weaker loading items have been removed, thereby improving the quality of the final item pool, because many of those items that did not directly assess conflict or contribute to factor invariance between samples were eliminated (Wester,

O'Neil, Vogel & Danforth, 2012). Thus, the total number of items assessing conflict increased from 60% in GRCS to 75% in GRCS-SF. More importantly those items were more evenly distributed across all four subscales. With the original GRCS, only 75% of the RABBM items had conflict terminology, but with the GRCS-SF, 100% now measure conflict. The SPC factor items now more consistently represent competition between individuals as a measure of success, whereas RABBM is now more specifically a measure of conflicts regarding the physical expression of affection. RABBM items regarding verbal expression of affection were not retained, and items measuring verbal affection now reside exclusively on the RE subscale, thereby measuring conflict regarding the expression of emotions within the context of an interpersonal relationship. These improvements make the assessment more valid in terms of actual conflict that men experience (Wester, O'Neil, Vogel & Danforth, 2012).

All told, each of the four scales in the GRCS-SF now directly measure conflicts between the expectations of the socialized male gender role and either interpersonal actions or situational demands. As with other recent revisions to masculinity measures (e.g., Parent & Moradi, 2009), the GRCS-SF shortens the length of questionnaires used in both clinical and empirical settings. Decreasing this "response burden" (Parent & Moradi, 2009, p. 186) on participants, especially for research conducted outside of a collegiate environment, such as MTurk, can lower the risk for boredom, loss of motivation, and random responding (Parent & Moradi, 2009).

Behavioral Intention

Behavioral intention is described as a person's perceived likelihood or subjective probability that he or she will engage in each behavior (Armitage & Conner, 2001).

Behavioral intentions are behavior-specific and is most often operationalized by direct

questions such as "I intend to [behavior]," with Likert scale response choices to measure relative strength of intention. Intention has also been represented in measurement by other synonyms (e.g., "I plan to [behavior]") and is distinct from similar concepts such as desire and self-prediction (Armitage & Conner, 2001). Ajzen (1991) argued that behavioral intentions reflect how motivated a person is to perform the behavior.

Behavioral intentions have been characterized as the most proximal predictor of behavior (Ajzen, 1991). Behavioral intentions have been found to validly predictive behavior (Montano & Kasprzyk, 2015), indicating that in general respondents accurately predict their intention to perform the behavior in question. What's more, several single question measures of behavioral intentions were found in this review (e.g., Lipkus, Green, & Marcus, 2003; Paek, 2008). Meta-analyses reviewed, found from 19% to 38% of variance in behavior explained by behavioral intentions (Armitage & Conner, 2001; Montano & Kasprzyk, 2015; Sheeran & Orbell, 1998; Sheppard, Jon, & Warshaw, 1988; Van den Putte, 1991).

Men's behavioral intentions were assessed using four brief vignettes to determine the participant's level of intention to conform, or not conform, to a behavior associated with each of the four categories of GRC when a similar situation happened in the future. Participants rated their intentions to conform or not conform to each behavior described in the vignette on a 4-point Likert scale (Extremely Unlikely, Unlikely, Likely, Extremely Likely). Because there were no known GRC vignettes available in the existing literature, several were created using available literature on GRC, particularly the 4 subscales of GRC. These example vignettes were then sent to

identified experts on the study of GRC (Drs. James O’Neil and Stephen Wester) for consideration. After a round of revisions, the vignette judged most emblematic of each category was chosen.

Cognitive Reflection Test

The Cognitive Reflection Test (CRT; Frederick, 2005) was developed to measure the tendency to override a prepotent response alternative that is incorrect and to engage in further reflection that leads to the correct response. Toplak, West and Stanovich (2011) demonstrated that the CRT is a more potent predictor of performance on a wide sample of tasks taken from the heuristics-and-biases literature than measures of cognitive ability, thinking dispositions, and executive functioning. Toplak et al. (2011) found that although the CRT has a substantial correlation with cognitive ability, a series of regression analyses indicated that the CRT was a unique predictor of performance on heuristics-and-biases tasks. Indeed, the CRT accounted for substantial additional variance after the other measures of individual differences had been statistically controlled. They argued that neither intelligence tests nor measures of executive functioning assess the tendency to resist effortful processing in the way that the CRT does (Toplak, West & Stanovich, 2011).

In this case, the CRT was used to prime individuals for engaging in either System 1 or System 2 thinking. In their literature review, Pinillos et al. (2011) concluded that responses to the CRT was highly indicative of the activation of System 1 (i.e., incorrect responses) or System 2 (i.e., correct responses) processes on subsequent tasks. What’s more, it has been demonstrated that metacognitive experiences of difficulty or disfluency (e.g., a hard-to-read typeface) appear to activate analytic forms of reasoning that assess and sometimes correct the output of more intuitive reasoning (see Alter,

Oppenheimer, Epley, & Eyre, 2007; Thomson et al., 2013). Thus, in this study the CRT was presented in either a fluent (i.e., easy to read, 100% opacity, 10-point, Times New Roman font) or disfluent (i.e., difficult to read, 10% gray, italicized, 10-point Myriad-web font) font. The specific font manipulations described above were recommended by Alter and colleagues (2007) and Thompson and colleagues (2013) because they have reliably caused System 1 (fluent font) or System 2 (disfluent font) thinking.

Demographics

Participants were asked to provide the following demographic information: (1) self-identified sex (to check for response fidelity, i.e., “you will still be compensated regardless of your answer, please identify whether you identify as “male,” (2) race/ethnicity, (3) current age, (4) level of education, (5) income/perceived socioeconomic class, (6) gender expression and salience, and (7) sexual orientation.

Procedure

Participants were randomly assigned to one of three conditions: System 1, System 2, or a control condition. In the control condition, participants were asked to complete three common phrases (e.g., “That cost me an arm and a X”). Completing common phrases and sayings does not require much cognitive effort (Paas & Merriënboer, 1993) and provides an experience similar to that experienced by participants in the other conditions, while not triggering System 2 thinking.

Once completed, participants went directly onto completing the two dependent variables. One dependent variable task was to read four brief vignettes, each one demonstrating a traditional response to a corresponding of the GRCS-SF (i.e., SPC, RE, RABBM, & CBWFR) and then reporting how similarly (4-point Likert scale; (Extremely Unlikely, Unlikely, Likely, Extremely Likely) they intend to respond the next

time a similar situation occurs in their lives. The other dependent variable task was to complete the GRCS-SF (counterbalanced in each condition to eliminate possible order effects).

In the System 1 Condition, participants first completed the fluent version of the CRT. Participants then selected a response to each of the four GRC scenarios and completed the GRCS-SF and then the demographic survey. In the System 2 condition participants first completed the disfluent version of the CRT. Participants then selected a response to each of the four GRC scenarios and completed the GRCS-SF. Upon completion of these two tasks, all participants in continued on to complete a final, fluent version of the CRT in addition to the demographic survey.

Data Analysis Plan

A posttest-only control group, experimental design was used in this study. As Cook and Campbell (1979) noted, with large samples, this design controls for the same threats to internal and external validity as the classic pretest, posttest control group design and avoid the threats of testing and pretest sensitization, which can be issues in experiments that have pretests. It may also decrease the problem of experimental mortality by shortening the length of the study (no-pre-test), especially important for web-based administrations and when level of cognitive effort is being manipulated (see Kahneman, 2005). In addition, because of random assignment I can assume (though I cannot test) that groups are initially equivalent (see Cook & Campbell 1979, Dimitrov & Rumrill, 2003).

Hypothesis 1

Hypothesis 1 was analyzed using a between-subjects analysis of variance (ANOVA) with condition serving as the independent variable and the participant's self-

reported gender role conflict (i.e., GRCS-SF total score) serving as the dependent variable. Additionally, a one-way multivariate analysis of variance was run to determine the effect of System 1 vs. System 2 thinking on GRC subscale scores. The assumptions of linearity, independence of errors, homoscedasticity, outliers, and normality of residuals were evaluated prior to conducting this analysis.

Hypothesis 2

A between-subjects ANOVA was used to determine if men favored traditionally masculine behavioral intentions (conformity) more when System 1 was activated, than when System 2 was activated. Again, condition served as the independent variable and the participant's total behavioral intention score (sum of responses to the 4 GRCS subscale vignettes) served as the dependent variable. The assumptions of linearity, independence of errors, homoscedasticity, outliers, and normality of residuals were evaluated prior to conducting this analysis.

Hypothesis 3

Three simultaneous linear multiple regressions, with condition serving as the selection variable, were conducted to determine if GRCS subscale scores more powerfully predicted participants' total behavioral intention score (in response to four GRCS subscale-relevant vignettes) when System 1 was activated compared to the System 2 and control conditions. Additionally, a separate, single multiple regression, with condition dummy-coded and interactions created. The assumptions of linearity, minimal multicollinearity ($VIF < 5$; Field, 2009), homoscedasticity, outliers, and normality of residuals were evaluated prior to conducting this analysis.

CHAPTER 4 RESULTS

The Final Sample

Data were analyzed from 499 participants. The sample was restricted to individuals who were 18 years old or older, resided in the United States, and self-identified as cisgender males. To assess for success of random assignment to condition, a series of chi-square tests (categorical variables) and independent-samples t-tests (continuous variables) were run on all measured variables unlikely to have been affected by experimental manipulations, i.e., demographics. In terms of categorical variables, chi-square tests revealed no significant differences among conditions, all $p > .05$. Among continuous variables, independent-samples t-tests also revealed no significant differences among conditions, all $p > .05$. Taken together, these analyses provide support for the success of random assignment in this dissertation.

Participants ranged in age from 18 to 75 ($M = 35$, $SD = 11.71$, $Mdn = 32$). In a question assessing self-identified race/ethnic category(ies), the following was reported by those who responded: 5.4% identified as African American, 1.2% as American Indian/Native American/Alaskan Native, 8.4% as Asian/Asian American, 75% as Caucasian/European American/White, as 8.8% Hispanic/Latina/o American, <1% as Pacific Islander/Pacific Islander American, and 2% as Biracial/Other. In terms of sexual orientation, approximately 94% of participants identified as “more heterosexual or straight,” with the remainder identifying as “more homosexual or gay/more bisexual.” With regard to highest level of education attained, 17% reported that they had completed an advanced degree (e.g., MA, Ph.D, MD), 32% completed a bachelor’s degree, 11% completed an associate’s degree, 25% completed some college, and 13%

completed high school. In terms of social class, approximately 44.5% identified as middle class, 33.5% as lower-middle class, 13.4% as lower class, 1.2% as upper class, and 6.5% as upper-middle class. With regard to current employment, 51.6% were employed full-time, 18.7% were employed part-time, 17.8% were currently unemployed, 6.5% were self-employed full-time, and 4.2% were self-employed part-time. Regarding gender, 71% of participants reported strongly agreeing or somewhat agreeing that “gender is a very important part of my identity,” where 11% of participants either somewhat or strongly disagreed with this statement. Further, 88% of participants described their gender expression as being either “mostly” or “somewhat” masculine, whereas only 1% of participants described themselves as being “mostly” or “somewhat” feminine.

Manipulation Checks

To determine if the fluency manipulation worked, first I looked at the degree to which participants in each condition rated the CRT instructions and tasks as legible. Legibility was rated using the following question: “The first set of problems was difficult to read,” from 1 (*strongly disagree*) to 4 (*strongly agree*). A between-subjects ANOVA demonstrated that legibility differed significantly between the conditions, $F(2, 496) = 72.95, p < .001, \eta^2 = 0.23$. The degree of reading difficulty was highest in the disfluent font condition ($M = 2.61, SD = 1.08$), followed by control ($M = 1.59, SD = .770$), and finally fluent ($M = 1.58, SD = .811$). Tukey *post hoc* analysis revealed that the mean difference between the disfluent and fluent CRT (1.03, 95% CI [0.80, 1.26]) was statistically significant ($p < .001$), as well as the difference between the disfluent and control condition (1.02, 95% CI [.79, 1.25], $p < .001$), but the difference between fluent CRT and Controls was not statistically significant. In short, participants did find the

disfluent condition the most difficult to read, whereas the fluent and control conditions were easier to read and did not significantly differ from each other.

Once it was determined that participants found the disfluent condition significantly more difficult to read, an independent-samples *t*-test was run to determine if the number of correct responses to the first presentation of the CRT would be greater in the disfluent (System 2) condition, compared to the fluent (System 1) condition, consistent with previous research (Alter et al., 2007; Thomson et al., 2013). Results indicated that participants answered more questions correctly in the System 1 condition ($M = 1.45$, $SD = 1.25$) than the System 2 condition ($M = 1.27$, $SD = 1.26$), not a statistically significant difference, $M = 0.18$, 95% CI [-.088, 0.454], $t(331) = 1.32$, $p > .05$, but the means were opposite to the direction predicted.

Next, a between-subjects ANOVA was conducted to determine if there were any significant differences in the number of correct responses on the final administration of the CRT (fluent across all conditions). The differences between the conditions were not statistically significant, $F(2, 496) = .070$, $p = .932$; control condition ($M = 1.37$ $SD = 1.28$), System 1 condition ($M = 1.32$ $SD = .1.32$), and System 2 condition ($M = 1.32$, $SD = 1.29$). Taken together, these results are inconsistent with previous research, which demonstrates that when participants find a task, such as CRT, more difficult to read, they tended answer more questions correctly (indicating deeper processing).

Results for Hypothesis 1

A between-subjects ANOVA was conducted to determine if Total GRC was highest when System 1 was activated, compared with the System 2 and control conditions. There were no outliers, as assessed by boxplot; data were normally distributed for each group, as assessed by Shapiro-Wilk test ($p > .05$); and the

variances were homogeneous, as assessed by Levene's test of homogeneity of variances ($p = .39$). Total GRC did not significantly differ by condition, $F(2, 496) = .61$, $p = .55$; System 1 condition ($M = 56.55$, $SD = 12.93$), System 2 condition ($M = 55.42$, $SD = 12.13$), Control condition ($M = 56.95$, $SD = 14.10$). Follow-up tests determined no significant impact of gender salience, race/ethnicity, or age on Total GRC by condition, all $p > .05$.

Next, a one-way multivariate analysis of variance was run to determine the effect of System 1 vs. System 2 thinking on GRC subscale scores. Preliminary assumption checking revealed that data was normally distributed, as assessed by Shapiro-Wilk test ($p > .05$); there were no univariate or multivariate outliers, as assessed by boxplot and Mahalanobis distance ($p > .001$), respectively; there were linear relationships, as assessed by scatterplot, no multicollinearity (all $r < .6$); and there was homogeneity of variance-covariance matrices, as assessed by Box's M test ($p = .003$). The analysis revealed no significant differences between System 1 and System 2 thinking on GRC subscale scores, $F(8, 986) = .676$, $p = .713$; Wilks' $\Lambda = .989$; partial $\eta^2 = .005$.

Results for Hypothesis 2

A between-subjects ANOVA was conducted to determine if men favored traditionally masculine behavioral intentions (reflecting traditional gender conformity) more when System 1 was activated, compared to the System 2 and control conditions. There were no outliers, as assessed by boxplot; data was normally distributed for each group, as assessed by Shapiro-Wilk test ($p > .05$); and the variances were homogeneous, as assessed by Levene's test of homogeneity of variances ($p = .510$). First, an increase in total GRC was indeed moderately correlated with an increase in total behavioral intention scores, $r(499) = .426$, $p < .001$. However, ANOVA results

indicate that participants' total behavioral intention did not significantly differ between conditions, $F(2, 496) = .769, p = .464$; System 1 condition ($M = 10.23, SD = 1.85$), System 2 condition ($M = 10.19, SD = 1.80$), control condition ($M = 10.43, SD = 1.84$). Follow-up tests again revealed no significant impact of gender salience, race/ethnicity, or age on total behavioral intention scores by condition, all $p > .05$.

Results for Hypothesis 3

Finally, simultaneous linear multiple regression analyses were used to determine if GRCS subscale scores more powerfully predicted participants' behavioral intentions in response to four GRCS subscale-relevant vignettes when System 1 was activated compared to the System 2 and control conditions. In the System 1 condition, the multiple regression model significantly predicted total behavioral intention scores, $F(4, 156) = 12.63, p < .001, \text{adj. } R^2 = .225$. Three of the four GRC subscale scores added significantly to the prediction, $p < .05$. Conflict Between Work and Family Life was not a significant predictor. Similarly, the control condition multiple regression model significantly predicted total behavioral intention scores and did so at a similar magnitude to the System 1 condition, $F(4, 162) = 12.324, p < .001, \text{adj. } R^2 = .214$. In the control condition, only Success, Power, and Control and Restricted Affectionate Behavior Between Men subscale scores were statically significant predictors, $p < .05$. The System 2 regression was also statistically significant, but the model explained less variance than the System 1 and Control Condition models, $F(4, 166) = 7.923, p < .001, \text{adj. } R^2 = .140$.

Taken together, the best model fit was found in the System 1 condition, followed closely in magnitude by the control condition, and the worst model fit was found in the System 2 condition. Put another way, GRC subscale scores more powerfully predicted

total behavioral intention scores in the System 1 condition ($R^2 = .225$) and control conditions ($R^2 = .214$), compared to the System 2 condition ($R^2 = .140$), consistent with the hypothesis. The System 1 model predicted 61% more variance ($.225/.140$) than the System 2 model, and the Control Condition model predicted 53% more variance ($.214/.140$) than the System 2 model see Table 4-1).

A follow-up, single linear multiple regression was conducted to predict total behavioral intention from the interaction of condition (dummy-coded) by GRCS subscale score. System 2 served as the referent to be compared with System 1 and Control conditions. A significant regression equation was found. $F(2, 496) = 27.153$, $p < .0001$, with an adjusted R^2 of .095, and each interaction term significantly predicted total behavioral intention. Similarly to the previous analysis, the largest increase in behavioral intention was associated with the System 1 condition by GRCS subscale interaction, i.e., $\beta = .259$, followed by control, i.e., $\beta = .242$, with System 2 accounting for the least variance in behavioral intention, i.e., $\beta = .170$

Ancillary Analysis

To assess in more detail whether System 1 produced stronger GRCS-intention relationships than System 2, I analyzed separately the degree of association between each subscale score and its corresponding vignette, by experimental condition. The percentage of variance accounted for by the subscale score predicting behavioral intention was consistently higher for participants assigned to System 1 than those assigned to System 2, with control participants' scores falling in between in all but one case. Some of these differences are small (e.g., 15% vs. 13%) and some are large (13% vs. 1%), but variance accounted for in the System 2 condition is lower in every case (see Table 4-2).

Table 4-1. Regression Summary for Hypothesis 3 GRC Subscale Scores More Powerfully Predicted Behavioral Intention in System 1 Compared to Control and System 2

Variable	System 1			System 2			Control		
	<i>B</i>	<i>SE B</i>	β	<i>B</i>	<i>SE B</i>	<i>B</i>	<i>B</i>	<i>SE B</i>	β
SPC	.125	.033	.276**	.083	.033	.184*	.108	.032	.242**
RE	.079	.029	.215**	.078	.029	.213**	-	.032	-.006
RABBM	.067	.027	.188*	.072	.027	.211**	.108	.027	.319**
CBWFR	.013	.030	.033	-.06	.027	-.016	.035	.030	.094
<i>Adj. R²</i>	.225			.140			.214		

Note: * $p < .05$. ** $p < .01$.

Table 4-2. Variance Accounted for by GRCS Subscale Scores Predicting Matching Vignette Responses, by Condition

Condition	SPC	RE	RABBM	CBWF
System 1	15%	13%	17%	1%
Control	11%	6%	16%	3%
System 2	13%	1%	10%	0%

CHAPTER 5 DISCUSSION

A Dual-Process Account of Gender Role Conflict

O'Neil's (2015) book included several chapters on new directions for GRC research, including context-based and information-processing approaches that could be used to generate and evaluate new empirical questions. O'Neil's new directions are especially important because the scholarship on the psychology of men has, for the most part, focused on generalizations about men's beliefs and attitudes, with little focus on when they guide behavior and when they do not. In keeping with these new directions, the present study examined if, and to what extent, System 2 thinking reduced the predictive power of gender role conflict on men's behavioral intentions. This purpose represents a shift away from conceptualizing masculine gender roles as stable across time and context, and toward thinking of gender roles as set of heuristics by which men quickly and automatically respond to situational demands, unless System 2 is activated. In addition, this study assessed behavioral intentions related one-to-one to each of the GRC subscales. factors. This design addressed the concern that failures to predict intention might be an artifact of asking about the wrong aspect of masculinity for the situation. No published work I have uncovered has applied this or any other well-established, empirically supported, information processing model to conceptualize and predict men's behavior intentions or behavioral conformity to traditional male gender roles. Thus, this study makes a novel contribution to the research literature by demonstrating the utility of applying a well-studied theory of human cognition to explain when men's GRC is more likely and when it is less likely to predict their behavioral intentions.

System 1 vs. System 2 Does not Alter One's Gendered Beliefs

Using between-subjects ANOVA, I assessed if men would report experiencing greater gender role conflict in the System 1 condition compared to the System 2 and control conditions. Results from my analysis did not support this hypothesis. Total GRC in the System 1 condition did not differ significantly from total GRC in the System 2 and control conditions. I found no published or publicly available normative data for the GRC-SF. However, in studies using the scale with similar samples of men, researchers found average total score on the GRCS-SF around 57-59, (see Vogel, Wester & Hammer, 2014; Wimer & Levant 2013). Thus, average total GRCS-SF scores in this study are consistent with previous research, and only trivially lower in the System 2 condition. Why was Hypothesis 1 not supported? My best guess is that it was not supported because System 1 vs. System 2 does not alter one's gender-related beliefs, but rather alters whether one relies on those beliefs to guide behavioral intentions.

Behavioral Intentions and Systems Thinking

Again, using a between-subjects ANOVA, I assessed if men would favor traditionally masculine behavioral intentions (suggesting gender role conformity) more in the System 1 condition than the System 2 and control conditions. Behavioral intentions did not differ as a function of experimental condition, indicating a lack of support for Hypothesis 2. Why was Hypothesis 2 not supported? My best guess is that it was not supported because System 1 vs. System 2 does not *directly* influence intentions. Instead, System 1 vs. System 2 appears to influence whether one relies on heuristics such as one's GRCS beliefs or instead relies on more effortful cognitive processing to guide one's behavioral intentions (Hertwig & Hoffrage, 2013). Hypothesis 3 directly tested that explanation.

I also conducted a separate study to test Hypothesis 2 using a slightly different approach. With a new MTurk sample of 300, instead of using GRCS and behavioral intentions, I used a validated measure of men's conformity to male gender roles, the Conformity to Male Norms Inventory (CMNI; Mahalik et al., 2003) to assess whether conformity levels would differ as a function of experimental condition. The reasoning was that perhaps the method used in the dissertation failed to capture changes in conformity, so using a validated conformity measure might capture conformity changes that were missed in the dissertation study. The findings were similar to the dissertation findings: there were no statistically significant differences in CMNI scores as a function of experimental condition, suggesting that this nonsignificant finding may not be a methodological artifact.

A Potential Link Between Gender Role Conflict and Behavioral Intentions

For the third hypothesis, linear regression was used to assess if GRCS subscale scores would more powerfully predict participants' behavioral intentions when System 1 was activated than when System 2 was activated. Results support the hypothesis: the best model fit was found in the System 1 condition, and the worst model fit was found in the System 2 condition, with the control condition very close to the System 1 condition. It makes sense that the models for the System 1 and Control Conditions accounted for very similar proportions of variance because in normal, everyday life, people rely heavily on System 1 thinking (e.g., Langer, Blank, & Chanowitz, 1978). That is, System 1 is the default system (Kahneman, 2011).

In addition to these hypothesized findings, across experimental conditions total GRC was moderately correlated with an increase in behavioral intention scores. This was an important finding because it demonstrated a link between the GRCS and

behavioral intentions (arguably among the best surrogates for actual behavior), which has been reported relatively little in prior research. Results from these analyses demonstrated that men primed for System 1 thinking were more likely to engage in behaviors consistent with established gender schemas, whereas men primed to engage in more effortful thinking appeared to rely less on these schemas.

Subscale by Vignette Relationships

To assess in more detail whether System 1 produced stronger GRCS-intention relationships than System 2, I analyzed separately the degree of association between each subscale score and its corresponding vignette, by experimental condition. The result was clear: in every case, the percentage of variance accounted for by the subscale score predicting behavioral intention was higher for participants assigned to System 1 than those assigned to System 2, with control participants' scores falling in between in all but one case. This finding is, again, consistent with the idea that men rely more on heuristics, such as GRC levels, when System 1 is activated than when System 2 is activated. Some of these differences are small (e.g., 15% vs. 13%) and some are large (13% vs. 1%), but variance accounted for in the System 2 condition is lower in every case (see Table 4-2).

Hijacking System 2

One important and complicating factor in the otherwise straightforward System 1 vs. 2 perspective is that, according to Haidt (2006), System 2 is sometimes activated to *defend* System 1-derived decisions. This is an explanation for why men can sometimes *rationaly* defend an aspect of their male gender role that is clearly dysfunctional, such as avoiding clearly needed health care or attempting to control and dominate those they love. Specifically, one might operate in System 1 and thereby embrace and apply a

GRC-based heuristic (e.g., Men are tough; as a man I should take control), which one then defends by activating System 2 to justify the heuristic (e.g., men have to be tough or they will not be able to survive, protect their loved ones, or defend the nation in times of war; men should take control because they are the most competent). This notion that Haidt (2012) labelled hijacking of System 2, may help explain some of the complexities in men's narratives about their gender-related behavior. Although this study did not address System 2 hijacking, future studies should investigate the effect of this on how GRCS is sustained in spite of adverse consequences.

Limitations and Future Directions

Although this study made novel contributions, it is important to note the following limitations: namely, sample characteristics and methodological limitations. Participants were recruited through Amazon Mechanical Turk and thus, external validity may be limited. Because participants received compensation for their participation, self-selection bias also may have influenced the generalizability of the results. Although MTurk represents an improvement in participant diversity over the traditional undergraduate subject pool, it is still far from nationally representative. This sample is somewhat higher educated, more white, and more heterosexual than a truly representative national sample. Future studies should attempt to replicate these effects with a wider variety of participants. This variety should include diversity in masculinities, race, ethnicity, social class, employment status, and sexual orientation (see Connell, 2005).

Regarding methodological concerns, although there was a clear effect of the System 1 vs. 2 manipulation, only one of the three manipulation checks provided validation of the success of the manipulation. The check asking about difficulty reading

the material clearly supported the manipulation. However, the two *performance* manipulation checks of System 1 vs. 2, one conducted before participants evaluated vignettes and one after, both failed to validate the manipulation. This represents an important methodological concern, but one that has been encountered in previous research. Unlike most previous studies, which used paper and pencil administrations of the CRT, this dissertation study relied on MTurk workers viewing the CRT, with fluent or disfluent fonts, on computer screens. Viewing the fonts on computer screens may have resulted in an even more difficult reading task or conversely may have made the disfluent font easier to read than on paper. In addition, MTurk participants may not have been as motivated to solve the CRT problems as participants in a face-to-face study. Either way, future studies should attempt to replicate these findings using paper and pencil administrations and other samples.

Perhaps more importantly, in the years since Alter et al. (2007) documented the disfluent font effect, a 13-experiment paper by Meyer and colleagues (2015), which I was unaware of during preparation of the dissertation proposal (same year), casts very serious doubt on the finding that disfluent fonts reliably activate analytic reasoning, such as the CRT problems. It could well be the case that disfluent fonts reduce System 1 thinking and increase System 2 thinking, but that performance on the math problems used in these two manipulation checks are not influenced very strongly if at all. Future research will need to be conducted to sort through these methodological issues and provide greater clarity.

In addition to research on the effectiveness of the disfluent font procedure and on the validity of the CRT to capture System 1 vs. System 2 thinking, future studies should

attempt to implement more robust manipulations of System 2 thinking. One promising manipulation is mindfulness meditation. The practice of mindfulness encompasses focusing participants' attention on the experience of thoughts, emotions, feelings and bodily sensations as they arise and pass, from moment to moment (Moore, Gruber, Derose, & Malinowski, 2012). Mindfulness-based meditation practices involve various attentional skills, including the ability to sustain and focus one's attention. For example, during a simple mindful breathing practice, sustained attention is required to maintain focus on the breath and cognitive control is required to detect mind wandering (Moore, Gruber, Derose, & Malinowski, 2012).

Increasing awareness of one's own thought processes appears to reduce processing of task-irrelevant information (Posner & Rothbart, 1998). Moore and Malinowski (2009) found that self-reported mindfulness was positively correlated with sustained attention and overall executive function. In a neuroimaging study, Short and colleagues (2007), guided meditation heightened activation in executive attention networks that are associated with improvements in sustained attention and error monitoring. These findings provide initial evidence that mindfulness meditation promotes higher-order cognitive processing; specifically conflict monitoring and cognitive control processes. Future research might determine if, and to what extent, mindfulness meditation impacts men's experience of GRC by activating System 2 and deactivating System 1.

An Alternate Approach to Working With Men in Therapy

In contrast to the approach studied here, namely shifting men from System 1 to System 2, in their book *Entering the Working Phase of Deepening Psychotherapy with Men*, authors Rabinowitz and Cochran (2002) advocate for staying in System 1, but

shifting which heuristics are activated. The premise is that traditional conceptualizations of gender role are instantly and automatically activated by a staggering array of situations and contexts. Thus, gender roles and the resulting gender role conflicts are mostly the province of System 1, and thus require System 1 level interventions. Although this dissertation provides evidence for the System 1 to System 2 perspective, there is also merit to altering the nature of the gender heuristics accessed by System 1.

Closely linked to Rabinowitz and Cochran's reasoning, Norbert Schwarz and colleagues (1991) document an ingenious use of System 1 to influence behavior, which has therapeutic implications (but see Kühnen, 2009 for concerns about the effectiveness of this manipulation). The essence of the approach is that if some individuals struggle too hard to list many examples of something, that individual will infer that he or she is limited in that regard. Conversely, when individuals can come up with a very few examples easily, they conclude they are not limited in that regard. What makes this ease of retrieval effect a classic example of System 1 is that this effect is related the different feelings one has when completing the two tasks. It feels easy to come up with a few examples and it feels difficult to come up with many examples. One's feeling then guide one's inferences, in a System 1 fashion. For example, therapists could ask clients to list a dozen examples of when the traditional male gender role benefitted them. When clients struggle to complete this long list, which they are quite likely to do, their System 1 thinking will conclude that the traditional male gender role hasn't really benefitted them all that much. Likewise, asking men to list only two or three examples of when the traditional male gender role has benefitted them, is likely to

be easy and the System 1 conclusion will be that there are plenty of benefits of operating within traditional male gender roles.

These approaches work because in System 1 thinking, ease of retrieval is often substituted for frequency. If one can recall examples easily, then there must be lots of examples, but if they are difficult to recall, there must not be many of them. This is similar to techniques found in the motivational interviewing approach to enhancing motivation for sobriety and treatment engagement (Miller & Rollnick, 2013). Changing list length changes ease of retrieval and therefore the conclusions about frequency, with the hapless System-1-thinking client none the wiser.

Still, it is possible that men will benefit from relying more on System 2 than System 1. System 2 allows men to evaluate their gendered beliefs and behavior more thoughtfully and carefully, yet in most situations, System 1 is the default mode. Thus, therapy might not only focus on men shifting to System 2 while in therapy, but also on how to shift to System 2 outside of therapy whenever situations and circumstances invite a gendered response (which for most men is very often). It is also important to provide men with psychoeducation aimed at developing an awareness of situations that make System 2 thinking difficult, e.g., fatigue, substance use, and overly stimulating situations. One option is to help men develop coping skills to attenuate such System 2-diminishing elements. A promising therapeutic avenue for such an endeavor is mindfulness-based stress reduction (MBSR; Kabat-Zinn, 1982). A recent (2015) meta-analysis by Khoury, Sharma, Rush and Fournier, as well as a 2005 systematic review completed by Smith, Richardson, Hoffman, and Pilkington concluded that MBSR programs are effective interventions for helping individuals in both clinical and non-

clinical samples learn skills (e.g., meditation, relaxation) to reduce the impact of stress in their lives. The development and practice of mindfulness-based stress reduction techniques may represent a major advance in working with men to reduce barriers to System 2 thinking.

Concluding Remarks

Despite mixed results from the manipulation checks, results from this study clearly show that when male participants were exposed to a manipulation designed to increase System 2 (effortful and intentional) thinking, their gender role conflict scale scores accounted for much less variance in their behavioral intentions in response to masculinity-related vignettes than when participants were exposed to a manipulation designed to maintain System 1 (automatic, minimal effort) thinking or when they were in a placebo control condition. This finding represents promising evidence that, when it is replicated and extended from behavioral intentions to observable behavior, will signal that the influence of gender role conflict on men's responses can be reduced by effortful and deliberate thinking. The costs of gender role conflict are well established, which underscores the importance of studies such as this one, because it demonstrates a promising avenue for potentially disrupting gender role conflict's influence on behavior and thereby improving life for men and those around them.

APPENDIX A
GENDER ROLE CONFLICT SCALE-SHORT FORM

Instructions: In the space to the left of each sentence below, write the number that most closely represents the degree that you Agree or Disagree with the statement. There is no right or wrong answer to each statement; your own reaction is what is asked for.

Strongly Agree						Strongly Disagree
6	5	4	3	2		1

-
- ___ Finding time to relax is difficult for me.
 - ___ Winning is a measure of my value and personal worth
 - ___ Affection with other men makes me tense.
 - ___ I like to feel superior to other people.
 - ___ Talking about my feelings during sexual relations is difficult for me.
 - ___ I have difficulty expressing my emotional needs to my partner.
 - ___ Men who touch other men make me uncomfortable.
 - ___ I have difficulty expressing my tender feelings.
 - ___ Hugging other men is difficult for me.
 - ___ My needs to work or study keep me from my family or leisure more than would like.
 - ___ I strive to be more successful than others.
 - ___ I do not like to show my emotions to other people.
 - ___ My work or school often disrupts other parts of my life (home, family, health, leisure)
 - ___ Being very personal with other men makes me feel uncomfortable.
 - ___ Being smarter or physically stronger than other men is important to me.
 - ___ Overwork and stress caused by a need to achieve on the job or in school affects/hurts my life.

Factor 1 - Success, Power, Competition (4 items)

Items – 2, 4, 11, 15

Factor 2 – Restrictive Emotionality (4 items)

Items – 5, 6, 8, 12

Factor 3 – Restrictive Affectionate Behavior Between Men (4 items)

Items – 3, 7, 9, 14

Factor 4 – Conflicts Between Work and Leisure – Family Relations (4 items)

Items – 1, 10, 13, 16

Total Number of Items = 16

APPENDIX B
COGNITIVE REFLECTION TEST

Below are three items that vary in difficulty. Answer as many as you can.

(1) A bat and a ball cost \$1.10 in total. The bat costs \$1.00 more than the ball. How much does the ball cost? _____ cents

(2) If it takes 5 machines 5 minutes to make 5 widgets, how long would it take 100 machines to make 100 widgets? _____ minutes

(3) In a lake, there is a patch of lily pads. Every day, the patch doubles in size. If it takes 48 days for the patch to cover the entire lake, how long would it take for the patch to cover half of the lake? _____ days

Scoring:

(1) 5 cents

(2) 5 minutes

(3) 47 days

APPENDIX C
DEMOGRAPHIC QUESTIONNAIRE

Please tell us a little about yourself. This information will be used to describe the sample as a group.

Please note that for each of the questions below, we have tried to provide a number of options. However, we recognize that these options will not capture everyone's identities or characteristics. Therefore, for some questions, we have also included an "Other" option for you to describe in your own words your identity if the categories provided do not capture it. Thank you for telling us about yourself!

1. How do you identify your gender? You may select more than one option. Also, if the categories provided do not fully capture your identify, please feel free to use the "Other" category to specify further.
 - a. Man
 - b. Woman
 - c. Trans
 - d. Other (please describe): _____

2. What is your current age?

3. How do you identify your sexual orientation? Please select the one best descriptor. Also, if the categories provided do not fully capture your identity, please feel free to use the "Other" category to specify further.
 - a. Exclusively lesbian or gay
 - b. Mostly lesbian or gay
 - c. Bisexual
 - d. Mostly Heterosexual
 - e. Exclusively Heterosexual
 - f. Asexual
 - g. Other. Please describe: _____

4. What is your current employment status? Please select as many as apply.
 - a. Part-time
 - b. Full-time
 - c. Self-employed part-time
 - d. Self-employed full-time
 - e. Not currently employed

5. Student What is the highest level of education you have completed? Please select the one best descriptor.
 - a. Some high school
 - b. High School Diploma
 - c. Some college
 - d. AA degree

- e. Bachelor's degree
 - f. Tradesperson certification
 - g. Some graduate school
 - h. Masters degree
 - i. Advanced degree (MD, DO, PhD, PsyD, EdD, etc.)
6. If you are currently employed, what field are you employed in? If you are a student and your employment is a part-time on-campus job, please just write 'Student'.
7. How would you identify your family's social class when you were growing up? Please select the one best descriptor.
- a. Lower class
 - b. Lower middle class
 - c. Middle class
 - d. Upper middle class
 - e. Upper class
8. How would you identify your family's social class currently? Please select the one best descriptor.
- a. Lower class
 - b. Lower middle class
 - c. Middle class
 - d. Upper middle class
 - e. Upper class
9. What is your religion? Please select the one best descriptor. Also, if the categories provided do not fully capture your religious identity, please feel free to use the "Other" category to specify further.
- a. Hindu
 - b. Muslim
 - c. Sikh
 - d. Christian
 - e. Jain
 - f. Other: _____

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BIOGRAPHICAL SKETCH

Steven Snowden was born and raised in Chicago, Illinois. He completed a bachelor's degree from Marquette University in 2008, with a focus in psychology and criminology. During his time as an undergraduate, he developed an interest in the psychological study of men and masculinities. Through service learning experiences, he also honed his passion for providing psychotherapy. In 2012, he was accepted into the doctoral program in counseling psychology at the University of Florida, under the mentorship of Dr. Martin Heesacker.

In his doctoral training program, he conducted research on understudied populations, particularly gay men and student veterans, and taught a variety of courses, including developing an undergraduate course in men and masculinities, as well as an introductory course in military psychology. Clinically, he completed a variety of practicum experiences at the Gainesville Veterans Administration Medical Center, which included mental health outpatient services, inpatient mental health services, neuropsychology, and cognitive rehabilitation, as well as dual-diagnosis trauma and substance use residential care. In 2015, he was awarded the Army Health Professions Scholarship, and commissioned as a Captain in the US Army. He went on to complete a predoctoral internship in clinical psychology at the Brooke Army Medical Center, the flagship hospital in the Army medical system.

Steven graduated with his Ph.D. in 2017. He is currently employed as an Army psychologist, completing his post-doctoral residency at Brooke Army Medical Center, with a focus on evidence-based treatments for trauma.