RECONCILING THE COSTS AND BENEFITS OF GENDER CONFORMITY: THE ROLE OF MOTIVATION

by

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A thesis submitted to the

Graduate School-New Brunswick

Rutgers, The State University of New Jersey

in partial fulfillment of the requirements

for the degree of

Masters of Science

Graduate Program in Psychology

written under the direction of

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New Brunswick, New Jersey

October, 2008

ABSTRACT OF THE THESIS

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Past research has shown that valuing gender conformity is associated with both positive (Guerrero-Witt & Wood, 2007; Wood, Christensen, Hebl, & Rothgerber, 1997) and negative (Sanchez & Crocker, 2005) consequences for self-esteem and positive affect. The current research sought to reconcile these conflicting findings in two studies by considering the role of *autonomous* (behaviors that are freely chosen) and *pressured* (behaviors engaged in due to pressure from others or situation) motivation to engage in gendered behavior (communal behavior for women and agentic behavior for men). Consistent with hypotheses, structural equation modeling in Study 1 demonstrated that autonomous motivation for gender consistent behavior was positively associated with explicit self-esteem and private regard for gender identity, while pressured motivation was negatively associated with explicit self-esteem. Study 2 found that investment in gender ideals and external contingencies of self-worth moderated the effects of gender

motivation on implicit and explicit self-esteem, private regard for gender identity, and positive affect.

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I. Introduction

Gender roles are taught to children in our society at a very young age. Through media, parents, and peers, young boys and girls are taught to behave in gender normative ways (Bem 1983; Bryant & Check, 2000; Bussey & Bandura, 1992; Egan & Perry, 2001; Lott, 1987; Raag & Rackliff, 1998). Some evidence suggests that, as a result, men and women may base their self-esteem on different achievements (e.g,. strong relationships for women and career success for men; Josephs, Markus, & Tafarodi, 1992). Further, people who violate gender norms are often sanctioned by society (Bussey & Bandura, 1992; Rudman, 1998; Rudman & Fairchild, 2004; Rudman & Glick, 2001). For example, women who behave in agentic (i.e. assertive and dominant) ways are evaluated less favorably than comparably agentic men (Eagly, Makhijani, & Klonsky, 1992) and men who behave communally (i.e. warm and caring) are viewed as less competent and hirable than agentic men (Rudman, 1998). Thus, gender norms, which specify differential behaviors for men and women, serve to create and maintain differences between the sexes, and these norms are experienced as a part of daily life (Eagly, 1987; Eagly & Wood, 1991).

Costs and Benefits of Gender Norm Conformity

How does conforming to gender norms affect feelings of self-worth? Research suggests that the pressure for gender conformity experienced by boys and girls negatively affects self-esteem (Carver, Yunger, & Perry, 2003; Egan & Perry, 2001). Early pressure during childhood for gender conformity and the costs of breaking social norms may make some adult men and women invest in gender ideals, that is, feel that it is important to be like society's ideal man or woman. Investment in gender ideals has been found to predict

lower explicit self-esteem among both men and women (Sanchez & Crocker, 2005). Men and women who were highly invested in being the ideal man or woman were more likely to have lower explicit self-esteem because they had external contingencies of self worth (i.e., they based their self-esteem on the approval of others). Thus, investing in gender ideals may come, in part, from an external source: the desire to meet others' approval.

Gender conformity may also have costs for close relationships between men and women. Specifically, valuing gender conformity was found to be negatively associated with sexual pleasure, - a relationship that was accounted for by contingent self-worth and restricted sexual autonomy (Sanchez, Crocker, & Boike, 2005). Placing importance on gender conformity was associated with basing self-esteem on the approval of others as well as decreased feelings of autonomy within sexual situations. Basing self-esteem on other's approval and restricted sexual autonomy were then associated with lower reported sexual pleasure. In sum, gender norm conformity has been shown to have negative effects on women and men's self-esteem.

In contrast, other research has suggested that conforming to gender norms may improve feelings of self-worth (Wood, Christensen, Hebl, & Rothgerber, 1997). These researchers have proposed that societal gender norms can become incorporated into personally held self-standards, such that behaving in accordance with these standards yields positive feelings about the self. Indeed, research has shown that for people who are highly invested in gender ideals, recalling norm-congruent behavior led to positive affect and less discrepancy between the actual, ought, and ideal selves which make up the self-concept (Wood et al., 1997). Thus, for people who are highly invested in gender norms and gender conformity, behaving in accordance with those norms may close the

gap between their actual and ideal selves, leading to positive feelings about the self. Additionally, Guerrero-Witt and Wood (2007) utilized experiental sampling by asking participants to record all social interactions lasting more than ten minutes over the course of one week, as well as their feelings immediately following the interactions. Results showed that for people who hold sex-typed self standards (i.e. men holding agentic self standards, women holding communal self standards), interacting in gender norm congruent ways was associated with higher daily explicit state self-esteem, greater positive emotion, and less negative emotion (Guerrero-Witt & Wood, 2007).

In summary, research on investment in gender ideals and gender conforming behavior has revealed seemingly conflicting findings. On the one hand, Sanchez and colleagues (Sanchez & Crocker, 2005; Sanchez et al., 2005) found evidence that investment in gender ideals is associated with negative evaluations of the self when self-esteem is informed by external sources (i.e., the motivation for others' approval). In contrast, Wood and colleagues' work (Wood et. al, 1997; Guerrero-Witt & Wood, 2007) suggests that gender ideals may be internalized and freely chosen, such that conforming to behavioral gender norms yields positive feelings about the self. However, none of the studies specifically examined participants' motivation to engage in gendered behavior and therefore, conclusions about the costs and benefits of gender conforming behavior cannot be made. In the present studies I attempt to reconcile these conflicting findings regarding the negative or positive consequences of gender conformity by examining whether autonomous versus pressured types of motivation to engage in gendered behavior predict different outcomes, including effects on self-esteem and positive affect.

Communal and Agentic Behavior

Although there are many different gender stereotypes and norms, most traits and behaviors associated with gender fall into the communion-agency dimension. Women are believed to be communally oriented, that is others expect women to be warm and caring, sensitive to others needs, and more group-focused, whereas men are expected to be agentically oriented, that is assertive and confident, dominant over others, and more individually-focused (Conway, Pizzamiglio, & Mount, 1996; Deaux & LaFrance, 1998; Diekman & Eagly, 2000; Prentice & Carranza, 2002). Because agency and communality are the two prominent gender norms, the present study will focus on autonomous and pressured motivations regarding communal and agentic behavior.

Some evidence suggests that men and women conform to these gender norms: women report more communal traits and men report more agentic traits (Bem, 1974; Spence & Buckner, 2000; Spence & Helmreich, 1978). However, it is unclear what motivations underlie women and men's communal and agentic behavior. On the one hand, women and men may act in gender-stereotypical ways because they fear social sanction or backlash (Bussey & Bandura, 1992; Heilman, 2001; Rudman, 1998; Rudman & Fairchild, 2004; Rudman & Glick, 2001). On the other hand, women and men may come to internalize gender norms and therefore freely choose to fulfill those norms (Wood et al., 1997). Conceivably, men and women who are invested in gender ideals may engage in gendered behavior due to both autonomous and pressured motivation, depending on the specific situation with which they are faced. The present research examines how investment in gender ideals can differentially lead to gender motivation, and how gender motivation impacts feelings about the self.

Motivation

In examining a given behavior, it is necessary to investigate the motivational underpinnings in order to fully understand its implications for psychological health. Self-determination theory states that motivation can be described as falling on a continuum from self-determined or autonomous to externally controlled or pressured (Deci & Ryan, 1980; Deci & Ryan, 1987; Deci, Shwartz, Sheinman, & Ryan, 1981). Both poles represent intentional behavior, but they differ in the degree to which the behavior is self-determined vs. externally determined. Autonomous behaviors are freely chosen and anchored within the self, such that autonomous actors see themselves as initiators of their own behavior. Controlled or pressured behaviors are also intentional, but are not freely chosen. Thus, controlled motivation is "experienced as having to do what one is doing" (Deci & Ryan, 1987, p. 1025). Pressured motivation may result from rewards for behaving in a given manner or sanctions for not behaving in the prescribed way.

Research has shown that autonomous motivation is associated with greater enjoyment of a task and more positive affect (Enzle & Ross, 1978; Ryan, Mims, & Koestner, 1983). Autonomy-supportive environments or situations have also been associated with greater self-esteem and perceived competence than controlling situations (Deci, Nezlek, & Sheinman, 1981; Ryan & Grolnick, 1986). For example, children placed in autonomy-supportive classrooms demonstrated increased self-esteem and perceived competence relative to children in controlling classrooms (Deci, Shwartz, Sheinman, & Ryan, 1981). Additionally, self-determination has been shown to improve physical health; when given the opportunity to make choices about their daily activities as well as take responsibility for the care of a plant, elderly residents in a nursing home exhibited increased self-reported health as well as objectively observed physical health,

and these results were maintained at 18 months follow-up (Rodin & Langer, 1977). Feelings of autonomy have been found to positively predict well-being (Deci & Ryan, 1985; see Deci & Ryan, 2000, for a review) in the form of academic success (Steinberg, Elmen, & Mounts, 1989), less engagement in risky health behaviors (Turner, Irwin, Tschann, & Millstein, 1993), greater daily vitality, well-being, and positive affect (Reis, Sheldon, Gable, Roscoe, & Ryan, 2000) and greater sexual pleasure (Sanchez et al., 2005). Thus it appears that self-determined or autonomously motivated behavior, as opposed to controlled or pressured behaviors, is associated with mental and physical benefits.

Societal gender norms, with their capacity to reward conformity and sanction counter-normative behavior, may lead to subjective pressure to meet gender ideals, experienced as controlled or pressured motivation. However, as proposed in Wood et al.'s (1997) work, gender norms may instead become incorporated into the self-concept, and therefore be autonomously motivating, such that a gendered behavior is freely chosen when it reflects one's true inner desires. In the present research, I examine the relationships between autonomous and pressured motivation to conform to gender norms and feelings about the self. I predict that pressured gender motivation will be associated with more negative self-concept and affect, and autonomous gender motivation will be associated with more positive self-concept and affect.

Self-Concept

In the present research, I predict that gender motivation will affect feelings about the self. Although personal self-esteem is often the primary measure of feelings about the self, the construct does not assess an integral part of self-concept: one's social identity

(Tajfel & Turner, 1979, 1986). We are all members of various social groups, and we place more or less value on each social identity. The term collective self-esteem was coined in 1992 to capture individuals' feelings about one's collective or group identity, including private regard for specific identities (Luhtanen & Crocker, 1992). Although one can have many social identities, the current research focuses on private regard for one's gender identity, or feeling positive and prideful about being a man or woman. Private regard for one's gender identity was included because it seemed likely that motives underlying gender normative behavior may be related to the gender self-concept as well as self-esteem. Freely choosing to engage in behaviors associated with one's gender group (autonomous motivation) may lead to more positive feelings about that group and by extension, the self. By contrast, feeling pressure to act in accordance with group norms (pressured motivation) may lead to more negative feelings about one's gender group (as well as the self). Thus, because group identity is an important part of the self-concept, and gendered motivations and behaviors may relate directly to feelings about one's gender identity, private regard for gender identity was included as a measure of feelings about the self.

The Present Research

In two studies, I tested whether motivation to engage in gendered behavior predicts feelings about the self, one's gender identity, and positive affect. In Study 1, I used structural equation modeling to test a hypothesized model in which investment in gender ideals is associated with both autonomous and pressured gender conforming behavior, but autonomous motivation is associated with more positive self-esteem and gender identity while pressured motivation is associated with less positive self-esteem

and gender identity. Support for the model would help to reconcile the inconsistent findings found in past research by showing that different motives for gender conformity are linked to different outcomes.

In Study 2, gender motivation was experimentally manipulated in order to causally test whether autonomous motivation for gender consistent behavior (communal behavior for women, agentic behavior for men) leads to higher self-esteem and positive affect, whereas pressured motivation for gender consistent behavior leads to lower self-esteem and positive affect. If so, the findings would further help to reconcile inconsistencies in the literature (Sanchez & Crocker, 2005; Wood et al., 1997). In order to better compare the results of Study 2 to past research, the moderating effect of investment in gender ideals and external contingencies of self-worth was assessed.

II. Study 1

Participants completed a series of questionnaires designed to assess their motivation to engage in gendered behavior along the warmth – agency dimension as well as dependent measures of personal and collective self esteem. Using structural equation modeling, I tested a model in which the relationship between participants' investment in gender ideals and self-esteem is moderated by motivation for gender conforming behavior. Specifically, I predict that investment in gender ideals will predict both autonomous and pressured motivation for gender conforming behavior (communal behavior for women, agentic behavior for men), and autonomous motivation will be positively linked to self-esteem and private regard for one's gender identity, whereas pressured motivation will be negatively linked to self-outcomes. Thus, I predict that investment in gender ideals will differentially predict self-esteem, depending on the type of gender motivation (autonomous vs. pressured) (see Figure 1). Importantly, investment in gender ideals should not predict motivation to engage in gender-norm violating behavior; women should not report feeling autonomous or pressured motivation to act agentically, and men should not report feeling autonomous or pressured motivation to act communally. The predicted model should only hold for motivation to engage in gender conforming behavior. Moreover, feeling pressured to engage in specific gender conforming behaviors may determine whether men and women value their gender identity. For example, women who feel pressured to be gender normative may not positively regard their gender identity. Thus, pressured gender norm motivation may be associated with lower self-esteem through lower private regard.

Method

Participants

The participants were 401 undergraduate students (175 males, 226 females) recruited from the University subject pool. Ages ranged from 18 to 58 years *(M* = 18.94, *SD* = 2.95) and participants' ethnicities were as follows: 48.9% Caucasian, 26.7 % Asian American, 9.0% Hispanic/ Latino, 8.2% African American, 3.7% Biracial/ Multiracial, 3.0% Other, .2% Native American, .2% did not indicate race. Compensation was given in the form of 2 research credits needed to fulfill an overall credit requirement for introductory psychology classes.

Materials and Procedure

After agreeing to informed consent, participants completed a stapled packet of questionnaires in groups of one to six students. Participants were told that they were completing a study on societal roles and motivations. Following completion of the questionnaire packet, participants were debriefed and thanked. The measures included in the packet are described below. Order of materials was varied such that participants received one of three possible packets; the gender motivation scale was presented as the first questionnaire, in the middle of the packet, or as the last questionnaire. Analyses on all dependent variables showed no significant order effects, *p*s > .50, and therefore will not be discussed further.

Investment in gender ideals. Four items were included to assess the extent that participants felt personally committed or invested in being the ideal man or woman (Wood et al., 1997). Participants were told to think about how society defines the ideal man or woman, and then asked to indicate their answer to the four questions. Example items were "How important is it for you to be similar to the ideal man/woman?" and "To

what extent is being dissimilar to members of the opposite sex an important part of who you are?" Participants indicated their responses on a scale of 1 (*not at all*) to 9 (*a great deal*). Internal scale consistency was good, Cronbach's α = .79. See Appendix A for the full measure.

Gender motivation scale. A previously validated measure of intrinsic and extrinsic motivation (Ryan & Connell, 1989; Vallerand & Bissonette, 1992) was adapted to measure motivation to engage in gendered behavior along the warmth-agency dimension. In 16 questions, participants were asked to rate on a 7-point scale (1 = *strongly disagree*, 7 = *strongly agree*) the extent to which they engage in communal and agentic behaviors due to autonomous motivation or felt pressure from others. Sample items included, "It brings me pleasure if I act warmly towards others" (Autonomous Communal, subscale α = .76), "I enjoy being assertive" (Autonomous Agentic, subscale α = .78), "I am kind to others because other people like me better when I act that way" (Pressured Communal, subscale α = .81), "I act in an assertive way because that is how I'm supposed to be" (Pressured Agentic, subscale α = .88). Factor analysis was conducted to assess how well the intended items measured each construct. For the two autonomous subscales (communal and agentic) the one reversed item per subscale loaded below .50. Therefore, in order to improve scale reliability, the Autonomous Communal and Autonomous Agentic subscales were shortened to include only 3 items by removing the reverse-coded item from each subscale (revised α = .81 and α = .88 respectively). See Appendix B for the full scale.

Private regard for gender identity. The Collective Self-Esteem Scale – Gender Version (CSEG) (Luhtanen & Crocker, 1992) was used to assess participants' private

regard for their gender identity. The private regard subscale consists of 4 questions, with answer choices ranging from 1 = *strongly disagree* to 7 = *strongly agree*. Sample items include "In general, I'm glad to be a member of the gender group I belong to" and "I often regret that I belong to my gender group." The CSEG private regard subscale demonstrated good internal consistency ($\alpha = .77$). See Appendix C for the full measure.

Self-esteem. The widely used 10-item Rosenberg Self-Esteem Scale (Rosenberg, 1965) was used to assess participants' self esteem at time of testing. Answers are on a 7-point scale from 1 = *strongly disagree* to 7 = *strongly agree*. Sample items include, "I feel that I have a number of good qualities" and "I feel that I do not have much to be proud of" (reversed). Scale reliability was high ($\alpha = .88$). See Appendix D for the full scale.

Demographic information. The final page of the packet asked participants to indicate their age, gender, and ethnicity.

Results

Means and standard deviations for all variables are shown in Table 1. Independent t-tests were performed on all variables to examine gender differences (see Table 1). Men and women differed significantly only on autonomous motivation to engage in communal behavior; women reported slightly higher autonomous motivation than men. Zero-order correlations between all study variables are presented in Table 2. Pressured motivation to engage in both communal and agentic behaviors were highly correlated; a principle components factor analysis with oblimin rotation revealed that all 8 items of the two subscales loaded onto one factor (.63 or higher). Due to this overlap, I felt that I did not

successfully measure distinct constructs, and the two subscales were therefore combined into one variable measuring general pressured motivation.

Structural equation modeling was used to assess hypothesized relationships between investment in gender ideals, motivation to engage in gendered behavior, private regard for one's gender identity, and self-esteem. Domain representative parcels were created for all variables (Kishton & Widaman, 1994), with the exception of the autonomous motivation variables, for which the three items were used as indicators. Specifically, I divided investment in gender ideals and private regard into two parcels, and pressured motivation and self-esteem into three parcels. Although parceling is somewhat controversial (Hau & Marsh, 2004; Little, Cunningham, Shahar, & Widarman, 2002), it is a common and effective method of accounting for measurement error (Coffman & MacCullum, 2005). Intercorrelations among all variables included in the structural equation analyses for the entire sample are presented in Table 3, as well as their means, standard deviations, and standardized residuals.

Analyses were conducted with EQS 6.1 software using maximum likelihood estimation, and the model was specified such that cases with missing data were deleted, which resulted in 11 cases being removed from analyses. According to past research on model fit (see Hu & Bentler, 1999), a good fit can be claimed for the model if the comparative fit index (CFI), the nonnormed fit index (NNFI), and Bollen's (1989) incremental fit index (IFI) are .95 or higher, and the root mean square of approximation (RMSEA) is .06 or lower (χ^2 is also reported to compare fit between nested models). Data screening procedures utilizing tests of normality as well as visual inspection of histograms and stem and leaf plots indicated that several variables were not univariate

normal. Nonnormality is not especially problematic with structural equation modeling, however estimates of standard error may be biased (McDonald & Ho, 2002). To correct for any possible bias, robust standard errors and fit statistics are presented.

Measurement Models

Before testing the fit of a structural model utilizing latent variables, it is important to first test how well the indicators relate to the latent variables in the measurement model. Measurement models essentially test a confirmatory factor analysis of all latent variables included in the model, linked by covariances, but without any direct paths between the factors (Kline, 2005). Before testing a structural model, it is necessary to demonstrate a good fitting measurement model. The measurement model for the entire sample fit the data well, χ^2/df = 153.44/ 89, *CFI* = .97, *NNFI* = .96, *IFI* = .97, *RMSEA* = .04 (90% Confidence Interval: .03 - .05) (see Table 4). Next I tested the measurement model within gender, with all factor loadings and covariances between factors constrained to be equal for men and women; this model also demonstrated good fit, χ^2/df = 269.60/ 203, *CFI* = .97, *NNFI* = .96, *IFI* = .97, *RMSEA* = .04 (90% Confidence Interval: .03 - .05). This suggests that the measurement of latent variables operates in the same way for both men and women. Therefore in all further gender analyses, the measurement model will be constrained to be equal for both men and women.

Hybrid Models

A hybrid model, with both measurement and structural components included, was specified with the paths illustrated in Figure 1[1]. This model is recursive and identified because the number of observations is greater than the number of free parameters ($df > 0$), and unit loading identification constraints were set to 1.0 (Kline, 2005). Although

disturbances of the motivation variables were allowed to covary, they are not specified to be structurally related and therefore the model remains recursive. Because the expected relationships between investment in gender ideals, motivation, private regard, and self esteem were only predicted to hold for gender consistent behavior (communal behavior for women, agentic behavior for men) the test of primary interest compares men and women along these relationships. Therefore, I primarily focus on reporting the nested gender analyses; however, the overall model fit the data well for the entire sample, χ^2/df = 167.19/ 91, *CFI* = .96, *NNFI* = .95, *IFI* = .96, *RMSEA* = .05 (90% Confidence Interval: .04 - .06) (see Figure 1)[1,2].

To examine whether the overall model fit the data equally well for both men and women, I first tested the nested gender model, with all paths constrained to be equal (see Table 5 for correlation matrix). The fully constrained gender model demonstrated adequate model fit, χ^2/df = 283.48/ 202, *CFI* = .96, *NNFI* = .96, *IFI* = .96, *RMSEA* = .05 (90% Confidence Interval: .03 - .06)[3]. However, I predicted that investment in gender ideals would only be related to motivation for gender consistent behavior, and only gender consistent motivation would be related to self-outcomes (private regard and self-esteem). Therefore, the equality constraints for the paths from investment in gender ideals to autonomous communal and agentic motivations were released, as well as the paths

[1] Disturbance correlations were specified between the three motivation variables (autonomous communal, autonomous agentic, and pressured motivation). Feeling motivated to behave in a given way may include both autonomous and pressured motivations, and therefore overlap may occur between those variables.

[2] Due to univariate nonnormality of several variables included in the model, a model was tested with all nonnormal variables transformed using an inverse normal transformation. This model fit the data approximately the same as the original data, χ^2/df = 324.274/ 202, CFI = .956, NNFI = .948, IFI = .957, RMSEA = .056 (.044, .067), therefore all further analyses utilize the original data. In attempt to account for nonnormality, robust standard errors and fit statistics are presented.

[3] Standardized residuals for each gender are available from the author upon request.

from the autonomous motivation variables to private regard for gender identity and self-esteem. Due to the measurement problems of the pressured motivation scale, as discussed above, and subsequent combination of pressured motivation for communal and agentic behaviors into one general pressured motivation variable, differences in pressured gender consistency could not be assessed; therefore paths leading to and from the pressured motivation variable remained constrained to be equal for both men and women. Correlations between the disturbances associated with the three motivation variables were allowed to vary. The hypothesized model demonstrated adequate model fit, χ^2/df = 275.12/ 195, *CFI* = .96, *NNFI* = .95, *IFI* = .96, *RMSEA* = .05 (90% Confidence Interval: .03 - .06), and was not significantly different from the fully constrained model, $\Delta\chi^2(7)$ = 8.35, n.s., (see Figure 2, Tables 6a, 6b)[4]. Because the hypothesized model presents a better test of my predictions, I interpret that model rather than the fully constrained model, even though the two models did not fit differently.

The hypothesized model generally supported my predictions. For both men and women, investment in gender ideals was positively related to pressured motivation, which was negatively related to self-esteem. For men, investment in gender ideals was positively associated with autonomous motivation for agentic behavior, which was positively related to self-esteem. For women, autonomous motivation for communal behavior was positively associated with self-esteem, but contrary to predictions, was not associated with investment in gender ideals. Lastly, for both men and women,

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[4] According to convention (McDonald & Ho, 2002) I constructed a figure that included the measurement as well as structural aspects of the nested hypothesized model. However, some information could not be displayed (ex. error variances, disturbance values and correlations, etc.) because the figure would be too complicated and difficult to read; therefore I present a simplified version of the model in Figure 2, and the full details in Tables 6a and 6b.

autonomous motivation for gender consistent behavior was positively associated with private regard, which was positively related to self-esteem.

Tests of Mediation

In order to test the mediating effect of private regard on the relationship between autonomous gender consistent motivation and self-esteem, a model was computed without a path from private regard to self esteem. In this model, the direct effect of men's autonomous agentic motivation on self-esteem ($\beta = .29$) and the direct effect of women's autonomous communal motivation on self-esteem ($\beta = .34$) were significant. Next, I compared these direct path coefficients to the coefficients obtained with the mediating path from private regard to self-esteem included in the model (presented above as the hypothesized model nested by gender). In this model, although still significant, the direct paths from autonomous gender consistent motivation to self-esteem were reduced (men $\beta = .20$, women $\beta = .23$). Sobel's tests confirmed significant partial mediation (Kline, 2005; Preacher & Hayes, 2004; Sobel, 1982) (see Table 7). Specifically, for women private regard for gender identity partially mediated the relationship between autonomous communal motivation and self-esteem. For men, private regard for gender identity partially mediated the relationship between autonomous agentic motivation and self-esteem. Table 7 displays the full calculations.

Alternative Models

Because the data are correlational, directionality cannot be determined. Therefore it is possible that other model specifications (as well as the exact reverse causal model) may fit the data equally as well as the hypothesized model. To examine this possibility, I tested several alternative models. In Alternative Model A, I tested a reverse causal model

on the full sample, in which the three motivation variables predicted investment in gender ideals, which predicted private regard and self esteem (i.e. the effect of motivation on self esteem was mediated by investment in gender ideals, and the effect of investment on self-esteem was mediated by private regard). The motivation variables in this model were exogenous and therefore allowed to covary. This model fit the data well, χ^2/df = 188.85/ 95, *CFI* = .96, *NNFI* = .94, *IFI* = .96, *RMSEA* = .05 (90% Confidence Interval: .04 - .06).

Additionally, a second alternative model (Alternative Model B) was tested, in which the three motivation variables predicted private regard and self-esteem, which predicted investment in gender ideals (i.e. the effect of motivation on investment in gender ideals was mediated by private regard and self-esteem). Disturbances of private regard and self-esteem were allowed to covary. This model also fit the data well, χ^2/df = 186.13/ 95, *CFI* = .96, *NNF*I = .95, *IFI* = .96, *RMSEA* = .05 (90% Confidence Interval: .04 - .06).

Lastly, I considered the possibility that private regard for one's gender identity might lead to more investment in gender ideals and therefore greater motivation to act in a gender consistent manner. I tested an alternative model (Alternative Model C) on the full sample, in which private regard predicted investment in gender ideals, which predicted the three motivation variables, which predicted self-esteem. Disturbances of the motivation variables were allowed to covary. This model demonstrated adequate fit, χ^2/df = 202.04/ 94, *CFI* = .95, *NNFI* = .94, *IFI* = .95, *RMSEA* = .05 (90% Confidence Interval: .04 - .07).

In summary, all three alternative models appeared to fit the data well. Because the alternative models are not nested, a chi square difference test cannot be conducted to

compare the alternative models to the full sample hypothesized model. However, in cases of nonhierarchical models, fit comparisons can be made using the Akaike information criterion (AIC) (Kline, 2005). For a set of models, the model with the lowest AIC value can be said to be preferred over the others. As can be seen in Table 8, the hypothesized model has a lower AIC value than all of the alternative models tested. Therefore, although I cannot claim causal direction, there is some evidence that the hypothesized model presented in Figure 2 best describes the data (see Table 8).

Discussion

Past research has shown that investment in gender ideals and gender conformity is associated with both costs (Sanchez & Crocker, 2005; Sanchez et al., 2005), and benefits (Guerrero-Witt & Wood, 2007; Wood et al., 1997). The present research adds to the literature by attempting to reconcile these findings by considering motivation to engage in gender conforming behavior. I do not contend that past research is incorrect or faulty, but simply that a piece of the puzzle (motivation) has been neglected. In Study 1, the data suggest that investing in gender ideals can lead to both autonomous motivation (for men only) and pressured motivation (for men and women), and that it is only autonomously motivated gender-role consistent behaviors that lead to positive self-outcomes and pressured motivations that lead to negative outcomes. Thus, investing in gender ideals is not positive or negative per se, but can lead to both positive and negative outcomes through the moderating role of motivation. Expanding the view to include measures of motivation provides a more complete picture of gender conformity and investment in gender ideals.

It is important to note that for women, investment in gender ideals was not significantly associated with autonomous communal motivation, although the relationship was positive. This may be due to measurement problems with the motivation scale. The scale was newly developed for this research and may need more refinement to adequately capture the constructs it is intended to measure. For example, no gender differences were found for communal or agentic motivations (both autonomous and pressured). If communal and agentic gender norms are as pervasive as previous research has asserted, men should feel more highly motivated to fulfill the masculine gender role and women should feel more highly motivated to fulfill the feminine gender role. The lack of gender differences found suggests that motivation along the communal-agency dimension was not adequately assessed. Indeed, the communal and agentic pressured motivation subscales were so highly correlated that they were not measuring distinct constructs. Additionally, autonomous and pressured motivations were correlated, suggesting that participants were not making the distinction between the two types of motivation when thinking about their own behavior. Future research should improve upon the measurement of motivation for gender consistent behavior.

New to the current research, the relationship between gender motivation and private regard for gender identity was investigated. Results showed that the relationship between autonomous motivation for gender consistent behavior and self-esteem was mediated by private regard. Perhaps participants who freely choose to act in gender conforming ways feel more positively about their gender identity, which leads to higher self-esteem. Although the data presented here are correlational and thus, we cannot rule out different causal directions, I believe the present work provides an interesting basis for

future work on the relationship between private regard for gender identity and motivation to act in gender conforming ways.

Study 2 attempts to correct for these limitations by improving measurement of motivation and gendered behavior, as well as employing an experimental design to better address my primary research question: Does the type of gender-role consistent motivation engaged in change feelings about the self and gender identity? Instead of asking participants to rate whether they behave communally or agentically for autonomous or pressured reasons, they will be asked to recall an interaction with another person in which they behaved in a communal or agentic way. This task was shown to be an effective manipulation of gender-role conforming behavior and thus will be implemented in the same manner as in previous research (Wood et al., 1997). The only modification to the recall task will be to include aspects of motivation; thus, participants will be asked to recall an interaction in which they behaved communally or agentically, for autonomous or pressured reasons. Because this task has been previously validated, I expect that it will serve as a better indicator of participants' motivation and gendered behavior.

Additionally, although research on gender conformity generally utilizes self-report measures of self-esteem, recent research suggests that explicit measures may not be as sensitive or reliable as implicit measures (Farnham, Greenwald, & Banaji, 1999; Greenwald & Banaji, 1995). Specifically, explicit measures of self-esteem may be vulnerable to self-enhancing bias or self presentation style (Farnham et al., 1999). However, implicit measures of self-esteem, such as the name-letter effect, are not under conscious control, and therefore do not suffer from these biases (Farnham et al., 1999; Kitiyama & Karasawa, 1997; Koole, Dijksterhuis, & van Knippenberg, 2001). Therefore,

in the present research, self-esteem will be assessed implicitly. However, because most past research concerning gender conformity and motivation has utilized explicit methods, self-reported self-esteem will also be assessed to facilitate better comparison.

Finally, in order to better compare the results of the current studies to past research, a measurement of external contingencies of self-worth will be included (Sanchez & Crocker, 2005). It is predicted that participants who are more externally contingent will report lower self-esteem and private regard for gender identity. The primary limitation of Study 1 was its correlational design; without experimentation, the direction of the observed link between gender-role consistent motivation, behaviors, and private regard cannot be determined. In order to address the direction of the model and assess causation, Study 2 employs an experimental design. Taken together, the two studies hope to provide more conclusive evidence as to the role of motivation in determining self-outcomes stemming from gender conforming behavior.

III: Study 2

Based on previous work by Wood and colleagues (1997) gender motivation was experimentally manipulated by asking participants to recall a time when they acted in a masculine (agentic) or feminine (communal) manner for either autonomous or pressured reasons. A control group of participants was asked to recall a masculine or feminine behavior, but not asked about their motivations.

Wording of the communal-agentic manipulation was borrowed directly from Wood et al. (1997), with the motivation manipulation added for this study. It was not expected that the experimental manipulation would have lasting effects beyond that of the testing session; therefore dependent measures were worded to assess immediate or state private regard for gender identity and self esteem. Again, I hypothesized that 1) recall of pressured motivation for gender-role consistent behavior would be associated with negative self beliefs, and 2) recall of autonomously motivated gender-role consistent behavior would be associated with positive self beliefs. Additionally, consistent with self-determination theory, there may be a main effect of motivation, such that autonomous motivation recall leads to more positive outcomes that pressured motivation. However, I propose that the gender-role consistent conditions (women recalling communal behaviors, men recalling agentic behaviors) will show the greatest differences with regard to autonomous and pressured motivation (see Figure 3 for predicted results). It is presumed that gender norm consistent behaviors are more strongly associated with one's gender identity and self-esteem. Therefore, gender norm consistent behaviors should be more highly motivated, and recall should lead to a more robust relationship with feelings about the self.

In addition to the dependent variables utilized in Study 1 (collective self esteem and self-esteem) positive affect was also measured, in order to more directly compare the results of Study 2 to Wood et al., (1997), who found that for those individuals highly invested in gender ideals, behaving in a norm-congruent way increased their positive affect. Additionally, in order to directly compare the results of Study 2 to Wood et al., (1997) and Sanchez & Crocker (2005), measures of investment in gender ideals and external contingencies of self-worth were was also included as moderators (see hypotheses below).

Hypotheses

Hypothesis 1. Motivation to act in a gender conforming way will affect the self-concept. Women recalling communal and men recalling agentic behaviors will report more positive feelings about the self and more positive affect when the behavior was autonomously motivated rather than pressured.

Hypothesis 2. The effect of motivation for gender-role consistent behavior on the self-concept will be moderated by investment in gender ideals. Only individuals high in investment will be affected by the manipulation.

Hypothesis 3. The effect of motivation for gender conforming behavior on feelings about the self will be moderated by external contingencies of self-worth. Effects will be most pronounced in individuals high in external contingencies.

Method

Participants

The participants were 361 undergraduate students (152 males, 206 females, 3 unspecified) recruited from the University subject pool. Because gender is central to the

hypotheses, data from the 3 participants who did not indicate their gender were removed, resulting in an *N* of 358 participants. Ages ranged from 18 to 32 years *(M* = 18.82, *SD* = 1.24) and participants' ethnicities were as follows: 42.9% Caucasian, 30.5 % Asian American, 8.9% African American, 8.3% Hispanic/ Latino, 5.5% Biracial/ Multiracial, 2.8% Other, 1.1% not indicated. Compensation was given in the form of 2 research credits needed to fulfill an overall credit requirement for introductory psychology classes.

Materials and Procedure

Participants completed a computer based questionnaire in groups of one to six students. Participants were told that they were completing a study on societal roles and motivations. A 3 (gender motivation: autonomy, pressure, neutral) x 2 (gender role behavior: communal or agentic) x 2 (gender of participant: male or female) design was utilized. Each session of participants was randomly assigned to a motivation and gender role condition (i.e. all participants in a given session received the same manipulation). Instructions presented on the computer screen directed participants to raise their hand after completing the investment in gender ideals and external contingencies of self-worth measures. In each session, when all participants' hands were raised, the experimenter read the interaction recall prompt aloud, and then directed participants to continue on and write their response. Immediately following completion of the recall task, participants completed all dependent measures. Written informed consent was obtained prior to testing. Following completion of the questionnaire, participants were verbally debriefed as well as given a debriefing form and thanked. The following measures were included in the questionnaire:

Investment in gender ideals. As in Study 1, participants were asked to think about how society defines the ideal man or woman. Then, four items assessed the extent that participants felt personally committed or invested in being the ideal man or woman (Wood et al., 1997). Example items were "How important is it for you to be similar to the ideal man/woman?" and "To what extent is being dissimilar to members of the opposite sex an important part of who you are?" Participants indicated their responses on a scale of 1 (*not at all*) to 9 (*a great d*eal). Internal scale consistency was good, Cronbach's α = .80. Refer to Appendix A.

External contingencies of self-worth. The four 5-item subscales of the Contingencies of Self-Worth Scale (Crocker et al., 2003) representing external contingencies (academic, appearance, competition, and others' approval) was used to assess the degree to which participants' based their self-worth on external sources. Participants indicated their responses on a scale of 1 (*not at all*) to 7 (*a great deal*). Sample items included, "Doing well in school gives me a sense of self-respect," (academic), "My sense of self-worth suffers whenever I think I don't look good," (reversed - appearance), "I feel worthwhile when I perform better than others on a task or skill," (competition), and "I don't care if other people have a negative opinion about me," (reversed - others' approval). Individually, each subscale demonstrated good scale reliability (academic α = .74, appearance α = .79, competition α = .81, others' approval α = .79), and the combined scale also performed well, Cronbach's α = .87. See Appendix E for the items included.

Interaction recall. The recall prompt contained the experimental manipulation. Participants were asked to think of a time when they interacted with another person in a

"warm, caring, close-to-others way" (Wood et al,. 1997) or a "dominant, powerful, and assertive way" (female or male gender role behavior) because they personally chose (autonomous motivation) or because they felt pressure (pressured motivation) to behave that way. Neutral participants were simply asked to recall the gender role behavior, with no prompt regarding motivation. Following recall, participants wrote about the interaction, and their reasons for performing this behavior. Neutral participants were not asked to write about their motivation or reasons. Through this manipulation, six conditions were created. An example of the manipulation for the Autonomous Communal condition is as follows:

> Please think about a past interaction with another person when you personally chose to behave in a warm, caring, close-to-others way. Please describe the details of the interaction and your warm and caring behavior in the space provided below. Please also think about and describe why you chose to act in this way.

See Appendix F for all six versions of the interaction recall.

Manipulation check. To ensure that participants understood and correctly responded to the interaction recall prompt, six items were included as manipulation checks. On a scale of 1 (*not at all*) to 7 (*very much*), participants were asked to rate the extent to which the behavior they recalled was: (1) freely chosen, (2) a personal choice, (3) what you really wanted to do, (4) due to pressure from others, (5) because you felt influenced by others, (6) what you felt you should do. Factor analysis revealed 2 distinct factors, with the first three items loading positively on an autonomous factor (Cronbach's $\alpha = .85$); the remaining items loaded onto a second factor (pressure) however the last item loaded negatively and was therefore deleted from analyses. The Pressure manipulation check measure therefore contains only items 4 and 5 (Cronbach's $\alpha = .85$). See Appendix G for the full measure.

Implicit self-esteem. Implicit self-esteem was measured by assessing participants' liking of the letters in their own names. Past research has shown that preference for the letters in one's own name or initials can be used as an indirect measure of self-esteem (Bosson et al., 2000; Kitayama & Karasawa, 1997; Koole et al., 2001; Nuttin 1985, 1987). In Study 2, participants were asked to rate their liking for each of the 26 letters in the English alphabet (presented in random order) on a scale of 1 (*dislike very much*) to 7 (*like very much*). On a separate screen, participants were then shown a list of all 26 letters and asked to indicate whether each letter was in their name, in their initials, or not in their name. Because 34 participants did not indicate any letters as being in their initials, I used participants' liking for all of the letters in their names as the measure of implicit self-esteem. To calculate the Name-Liking measure, I first computed the mean liking rating for each letter for persons whose name did not contain that letter (non-name liking baseline). Then for each person, a difference score was computed between their ratings of their name letters and the non-name liking baseline for those letters. The mean of the difference scores associated with each participant's name letters is their Name-Liking score. Thus, the measure was between subjects, with a positive score indicating greater implicit self-esteem.

Mood. The Multiple Affect Adjective Checklist (MAACL-R) was used to assess participants' mood at time of manipulation (Zuckerman & Lubin, 1965). Participants were asked to rate the extent to which they felt a certain way on 6 items, with responses ranging from 0 (*not at all*) to 6 (*a huge amount*). Sample items include, "Right now, I feel anxious," and "At this moment, I feel calm." The MAACL-R contains 3 subscales, measuring hostility, anxiety, and depression. The subscales were combined and reversed

so that high scores indicate more positive affect. Scale reliability was adequate, Cronbach's α = .72. See Appendix H for the full scale.

Explicit self-esteem. As in Study 1, the Rosenberg Self-Esteem Scale (Rosenberg, 1965) was used to assess participants' explicit self esteem at time of testing. Again, the wording of items was revised to reflect self-esteem in the moment, not general self-esteem. Sample items included, "At this moment, I am inclined to feel that I am a failure," and "Right now, I am satisfied with myself." Scale reliability was high, Cronbach's α = .89. Refer to Appendix D.

State private regard for gender identity. As in Study 1, participants completed the private regard subscale of the CSEG scale (Luhtanen & Crocker, 1992). In Study 2, however, participants were directed to choose their answer based on how they were feeling right after recalling the interaction, not on general feelings. Sample revisions included, "At this moment, I'm glad to be a member of the gender group I belong to," and "Right now, I feel that the gender group of which I am a member is not worthwhile." Scale reliability of the state measure was good, Cronbach's α = .83. Refer to Appendix C.

Demographic information. The final computer screen asked participants to indicate their age, gender, and ethnicity.

Results

Means and standard deviations for all variables by condition are shown in Tables 9a and 9b. Independent *t*-tests were performed on all dependent variables to examine gender differences (see Tables 9a, 9b). No significant gender differences were found on

any of the dependent variables, within any of the six conditions. Zero-order correlations among all dependent variables are presented in Table 10[5].

ANOVA Analyses

Manipulation Checks. Manipulation checks were included immediately following the behavioral recall, which asked participants to indicate how autonomous and pressured they felt in the interaction they recalled. A 3 (motivation condition: autonomous, pressured, neutral) x 2 (gender role: communal or agentic) ANOVA revealed that participants rated communal behaviors (M = 5.60. SD = 1.52) as significantly more autonomous than agentic behaviors (M = 5.34, SD = 1.47), $F(1, 351) = 4.45$, $MS = 7.83$, $p = .036$. Consistent with predictions, a main effect of motivation was also found, $F(2, 351) = 42.88$, $MS = 75.41$, $p < .001$, with participants in the autonomous (M = 6.06, SD = 1.13) and neutral (M = 5.84, SD = 1.26) conditions rating their behaviors as significantly more autonomous than those in the pressured condition (M = 4.66, SD = 1.59), $t_{aut}(256) = 8.06$, $SE = .17$, $p < .001$, $t_{neut}(234) = 6.12$, $SE = .19$, $p < .001$. The neutral and autonomous conditions did not differ, $t(218) = 1.38$, $SE = .16$, $p = .17$. Additionally, a significant gender role by motivation interaction was found, $F(2, 351) = 9.08$, $MS = 15.98$, $p < .001$; consistent with predictions, for both communal and agentic behaviors, autonomous behaviors were rated as more autonomous than pressured behaviors ($p < .001$) and autonomous and neutral behaviors did not differ. However, for communal behaviors, neutral behaviors were rated as significantly more autonomous than pressured behaviors, whereas this difference was not significant for agentic behaviors.

[5] To rule out bias due to social desirability, the Balanced Inventory of Desirable Responding (BIDR) was administered (Paulhus, 1998). Results showed that impression management correlated positively with explicit self-esteem ($r = .23$, $p < .001$), private regard ($r = .17$, $p = .001$) and positive affect ($r = .17$, $p =$

For answers to the pressured motivation manipulation check, participants rated communal behaviors (M = 2.62, SD = 1.77) as less pressured than agentic behaviors (M = 3.23, SD = 1.92), $F(1, 351) = 12.01$, $MS = 34.18$, $p = .001$. Confirming the motivation manipulation, a main effect of motivation was also found, $F(2, 351) = 34.77$, $SE = 98.97$, $p < .001$, with participants in the pressured condition (M = 3.88, SD = 1.82) rating their behaviors as significantly more pressured than those in the autonomous (M = 2.27, SD = 1.56) or neutral conditions (M = 2.44, SD = 1.76), $t_{aut}(256) = 7.59$, $SE = .21$, $p < .001$, $t_{neut}(234) = 6.09$, $SE = .24$, $p < .001$. The neutral and autonomous conditions did not differ, $t(218) = .76$, $SE = .22$, $p = .45$.

Confirming the manipulations, across autonomous motivation conditions, mean ratings of autonomous motivation were above the scale midpoint of 4 (M = 6.06, SD = 1.13) and mean ratings of pressured motivation were below the scale midpoint of 4 (M = 2.27, SD = 1.56). However, contrary to the manipulations, across pressured motivation conditions, mean ratings of pressured motivation were below the scale midpoint of 4 (M = 3.88, SD = 1.82) and mean ratings of autonomous motivation were above the scale midpoint of 4 (M = 4.66, SD = 1.59). Thus, in both autonomous and pressured motivation conditions, participants rated their behavior as somewhat more autonomous than pressured.

Testing Hypothesis 1. To examine the effects of motivation for gender conforming behavior, separate 3 (motivation: autonomous, pressured, neutral) x 2 (gender role: communal or agentic) x 2 (gender: male or female) between-subjects ANOVAs were computed on implicit self-esteem, explicit self-esteem, private regard for

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.001), and negatively with investment in gender ideals (r = -.13, p = .01). Social desirability was not related to implicit self-esteem (r = .00, p = .99) or external contingencies of self-worth (r = -.05, p = .32).

gender identity, and positive affect. Contrary to predictions, no significant effects were found for any of the dependent variables.

Regression Analyses

Testing Hypothesis 2. In Wood et al.,'s (1997) study, recalling a gender norm congruent experience only led to positive outcomes for those individuals who were highly invested in meeting gender ideals. Therefore, regression analysis was conducted with investment in gender ideals as a possible moderator of the relationships between gender, motivation, and gender role recall. To examine effects on implicit self-esteem, hierarchical linear regression was conducted with gender (coded 0 = male, 1 = female), gender role (coded 0 = communal, 1 = agentic), motivation (coded 0 = autonomous, 1 = pressured, neutral not included), and investment in gender ideals added at step 1, all two-way interactions added at step 2, all three-way interactions added at step 3, and the four-way interaction added at step 4[6].

Results revealed no significant main effects or interactions with investment in gender ideals; however, a significant three-way interaction of gender, gender role, and motivation emerged, $\beta = .77$, $p = .05$. To investigate this interaction, regression analyses were conducted separately for men and women, with gender role, motivation, and investment in gender ideals entered at step 1, all two-way interactions entered at step 2, and the three-way interaction entered at step 3. For men, there was a marginally significant interaction of gender role and investment in gender ideals, $\beta = .32$, $p = .058$.

[6] Wood et al. (1997) tested the moderating effect of investment in gender ideals by classifying all participants scoring in the top quartile as highly invested, and comparing that group to the rest of the participants, classified as low to moderately invested. Similar analyses were conducted with the current data, however small cell sizes precluded any meaningful interpretation. Specifically, only 37 of the current participants could be classified as highly invested, and when distributed across the six conditions, this led to very small cell sizes (some *n*s as low as 1). Therefore, regression analysis was conducted with investment in gender ideals included as a continuous moderator.

Investment in gender ideals did not seem to affect implicit self-esteem when men recalled agentic interactions; however, when men recalled communal interactions, greater investment was associated with lower implicit self-esteem (see Figure 4). For women, no significant main effects or interactions were found.

Next, the same regression analysis was performed, but with explicit self-esteem as the dependent variable. At step 1, main effects of investment in gender ideals ($\beta = -.18$, $p = .003$) and gender role ($\beta = -.15$, $p = .017$) were found, such that greater investment was associated with lower explicit self-esteem, and agentic recall was associated with lower explicit self-esteem. These main effects became nonsignificant at later steps, but a significant three-way interaction of investment in gender ideals, gender, and motivation emerged at step 4, $\beta = -.30$, $p = .038$. To examine this interaction, analyses were conducted separately for men and women, with gender role, motivation, and investment in gender ideals included as independent variables, as well as all possible two- and three-way interactions. For men, there were no significant findings. For women, a significant main effect of investment in gender ideals ($\beta = -.22$, $p = .007$) was found at step 1, such that greater investment was associated with lower explicit self-esteem. This effect became non significant at step 2 and a significant interaction of motivation and investment in gender ideals emerged ($\beta = -.32$, $p = .004$); for women recalling an autonomously motivated interaction, greater investment in gender ideals was associated with greater explicit self-esteem. Pressured recall was not affected by investment in gender ideals (see Figure 5).

Next, I examined state private regard for gender identity as a dependent variable, with investment in gender ideals, gender, gender role, motivation, and all subsequent

interactions as predictors. A significant main effect of gender role was found, β = -.17, *p* = .008, such that agentic recall was associated with lower state private regard than communal recall. No other main effects or interactions were found.

Finally, I examined positive affect using the same regression analysis as above. Significant main effects of investment in gender ideals (β = -.13, *p* = .04) and gender role were found (β = -.14, *p* = .03). Greater investment in gender ideals was associated with less positive affect, and recall of agentic behavior was associated with less positive affect. These main effects became nonsignificant at later steps, and no other significant main effects or interactions emerged.

Testing Hypothesis 3. To better compare the current study to past research (Sanchez & Crocker, 2005), the role of external contingencies of self-worth as a potential moderator was examined[7]. Hierarchical linear regression analyses were conducted on implicit self-esteem as above, but with external contingencies, gender, gender role, and motivation entered at step 1, all two-way interactions entered at step 2, all three-way interactions at step 3, and the four-way interaction at step 4. A significant three-way interaction of gender, gender role, and motivation was found, β = .83, *p* = .04. To investigate the interaction, regression analyses were conducted separately for men and women. For men, there was a significant interaction of gender role and external

[7] Importance of gender identity was also tested as a possible moderator of the effects of motivation to engage in gender conforming behavior. Results showed that when recalling communal behavior, participants who placed higher importance on their gender identity had lower implicit self-esteem, but when recalling agentic behavior, participants who placed higher importance on gender identity had higher implicit self-esteem, β = .20, *p* = .04. Additionally, when recalling communal behavior motivated by pressure, participants placing greater importance on gender identity reported higher explicit self-esteem; for autonomous communal recall, participants placing greater importance on gender identity reported lower explicit self-esteem, β = .38, *p* = .04. When recalling agentic behavior motivated by autonomy, greater importance of gender identity was associated with higher explicit self-esteem, whereas for pressured agentic behavior, greater importance was associated with lower explicit self-esteem, β = -.58, *p* = .04. Finally, for women, placing greater importance on gender identity was associated with reporting higher

contingencies, β = .31, p = .04. When recalling communal interactions, higher external contingency was associated with lower implicit self-esteem, but when recalling agentic interactions, higher external contingency was associated with higher implicit self-esteem (see Figure 6). For women, there were no significant effects.

Explicit self-esteem was also examined as a dependent variable, with external contingencies of self worth, gender, gender role, motivation, and all subsequent interactions as predictors. Significant main effects of external contingency (β = -.26, p < .001) and gender role (β = -.14, p < .02) emerged, such that greater external contingency was associated with lower explicit self-esteem, and participants recalling agentic interactions reported lower explicit self-esteem than those recalling communal interactions. These main effects became nonsignificant in later steps, and no significant interactions emerged.

Additionally, using the same set of predictors as above, state private regard for gender identity was examined as an outcome variable. A significant main effect of gender role was found at step 1, β = -.17, p = .007. Participants recalling agentic interactions had state lower private regard for their gender identity than those recalling communal interactions.

Finally, regression analyses were performed on positive affect, with external contingency, gender, gender role, motivation, and all interactions as predictors. A significant main effect for gender role was found, β = -.13, p = .04, such that agentic recall was associated with less positive affect. A significant main effect of external contingencies was also found, β = -.13, p = .05, such that greater external contingencies

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state private regard for gender identity, whereas for men this relationship was not as strong, β = .23, p = .03.

of self-worth was associated with less positive affect. These effects became nonsignificant at later steps, and no other significant main effects or interactions emerged.

Discussion

Study 2 sought to experimentally manipulate gender motivation by asking participants to recall a communal or agentic behavior, either motivated by autonomous or pressured motivation. It was expected that recall of autonomously motivated gender-role consistent behavior (women recalling communal behavior and men recalling agentic behavior) would result in increased self-esteem (explicit or implicit), more positive regard for one's gender identity, and greater positive affect than recall of pressured gender-role consistent behavior. This hypothesis was not supported; no differences were found on any of the dependent variables for the different conditions.

The second prediction was that the effect of motivation for gender conforming behavior would be moderated by investment in gender ideals. Consistent with past research (Wood et al., 1997), I predicted that only those individuals placing great importance on living up to gender ideals would experience changes in the self-concept as a result of gender motivation. Results showed that men who were more invested in societal gender ideals experienced decreased implicit self-esteem after recalling gender norm violating behavior (communal recall). For women, when recalling autonomously motivated behavior, investment in gender ideals was associated with greater explicit self-esteem. Overall, greater investment was associated with lower explicit self-esteem and less positive affect for both men and women.

Although somewhat mixed, the results of Study 2 do support past research showing a negative relationship between investment in gender ideals and self-esteem (Sanchez & Crocker, 2005). Additionally, the results partially support research by Wood and colleagues (1997) in that investment in gender ideals was associated with greater explicit self-esteem in women, when their behavior was autonomously motivated. In general, although the hypothesis was not overwhelmingly supported, Study 2 does reinforce the findings of Study 1; investment in gender ideals can lead to both autonomous and pressured motivation for gender conforming behavior, but the type of gender motivation differentially affects self-esteem.

Finally, I predicted that external contingencies of self-worth might moderate the influence of gender motivation on the self-concept. Results showed that when recalling gender conforming behavior (agentic), men with greater external contingency experienced increased implicit self-esteem, but when recalling gender violating behavior (communal), men with greater external contingency experienced decreased implicit self-esteem. However, greater external contingency was associated with lower explicit self esteem and less positive affect in men and women, regardless of condition. The results of Study 2 appear to be consistent with past research showing a negative relationship between external contingencies of self-worth and self-esteem. External contingency is the basing of one's self-worth on sources outside the self, such as the approval of others. It is interesting to note therefore, that when men with greater external contingency acted in accordance with societal (others') gendered expectations, they demonstrated greater implicit self-esteem than when they violated others expectations.

Although the experimental design of Study 2 has advantages, the actual manipulation of gender motivation may have introduced limitations. Manipulation checks revealed that participants in the autonomous motivation conditions rated their behavior as significantly more autonomous than participants in the pressured conditions, and participants in the pressured conditions rated their behavior as more pressured than participants in the autonomous conditions. However, participants in the pressured conditions actually rated their behavior as more autonomous than pressured. This suggests that the manipulation of motivation was not entirely successful. Perhaps participants did not understand the prompt, or perhaps their past experiences of societal or peer pressure may be too subtle for them to explicitly label as "pressured." Additionally, because freedom and independence are so highly valued in American culture and are incorporated into Americans' self-construals, the admission by our participants that one's behavior could be pressured may be socially undesirable (Makus & Kitiyama, 1991; Schwartz, 1997, 2000). Regardless of the reason, participants generally reported their behavior as relatively autonomous and free from pressure, indicating that the manipulation did not adequately induce a feeling of pressured motivation.

IV: General Discussion

Past research has shown that investment in gender ideals and gender conformity is associated with costs (Sanchez & Crocker, 2005; Sanchez et al., 2005), and benefits (Guerrero-Witt & Wood, 2007). The present research adds to the literature by attempting to reconcile these findings by considering motivation to engage in gender conforming behavior. Using structural equation methods, Study 1 showed that investment in gender ideals can lead to both autonomous and pressured motivation for gendered behavior. The type of motivation then predicts self-esteem. In Study 1, autonomous gender consistent motivation was positively associated with self-esteem, whereas pressured motivation was negatively associated with self-esteem. Study 2 partially supported this conclusion by utilizing Wood et al.'s (1997) experimental paradigm, with the added motivation manipulation; generally investment in gender ideals was negatively associated with self-esteem, but when women recalled autonomously motivated behavior, investment in gender ideals was positively associated with explicit self-esteem. Thus, expanding the view to include measures of motivation provides a more complete picture of gender conformity and investment in gender ideals.

New to the current research, the relationship between gender motivation and private regard for gender identity was investigated. In Study 1, autonomously motivated gender-role consistent behavior was associated with increased collective self-esteem or regard for one's gender identity. Collective self-esteem is associated with increased personal self-esteem (as found in Study 1); indeed, for both women and men, private regard mediated the relationship between autonomous gender-consistent behavior and self-esteem. However, little is known about how we come to value our gender identities.

Perhaps a person's regard for his or her gender identity is contingent on whether or not s/he enjoys the behaviors associated with that identity, and therefore feels autonomously motivated to act in accordance with that gender role. Supporting this idea, in Study 2, when investment in gender ideals was included in the regression equation, women reported greater private regard after recalling gender-consistent behavior (communal) than gender norm violating behavior (agentic).

Limitations and Future Directions

One must be careful in drawing conclusions from the data collected from university populations due to limited sample characteristics. It is unclear whether these effects would replicate in an older, more diverse population. In addition, experimental realism is limited in Study 2 by only assessing recall of past behavior. It cannot be assumed that recall of past motivation is the same as participants' actual motivation at the time of behavior. Future research could set up a laboratory situation in which motivation is manipulated and real-time behavior is observed; contexts featuring situational pressure vs. autonomy support could be used to induce participants to act in a gender conforming or violating manner. For more ecological validity, future research could utilize experience sampling to record participants' motivation at multiple points in the day as they engage in gender-role consistent or inconsistent behaviors.

The primary limitation across both studies was measurement of pressured motivation. In Study 1, pressured motivation for agentic vs. communal behavior could not be established as distinct constructs, and therefore I was unable to draw any conclusions about pressured motivation for gender consistent vs. inconsistent behavior. Instead, I could only determine that pressured motivation in general was negatively

associated with self-esteem. Additionally, in Study 2, participants asked to recall a behavior motivated by pressure found it difficult to do so. On average, these participants rated their recalled behavior as more autonomous than pressured. The recall prompt was intentionally left open, and did not define "pressure," but perhaps participants were unable to understand the term and how it would relate to their everyday behavior. For example, some participants may have interpreted pressured to mean forced (such as having a gun to one's head). Other participants may have interpreted pressure to be a more subtle, situation-induced feeling. Perhaps, people experience different types of pressure from various sources that might better elicit emotional responses. For example, people may feel pressure from peers, parents, work, romantic partners, etc. and more emotionally-based pressure may have a greater impact on feelings about the self. Additionally, by asking participants to recall a past pressured behavior, I neglected to take into account potential dissonance-reduction strategies employed by participants (Elliot & Devine, 1994; Festinger, 1957). If participants felt pressured to act in a certain manner, they may have felt psychological discomfort, with a need to reduce that felt discomfort. Retrospective recall of pressure may have been affected by dissonance reduction strategies, leading participants to feel that in actuality their behavior was freely chosen and volitional. To correct for these limitations in the wording of the prompt, future research could specifically define pressure and give examples of different types of pressure that may be experienced, as well as specify a given time frame for the behavior (i.e. in the past week, past month, past year). More recent behaviors may be felt with more emotional acuity and not be psychologically resolved, such that they are still experienced as felt pressure.

Other future directions include examination of the cause of gender motivation. Wood and colleagues (1997) theorize that societal norms, although they may begin as pressure, can be incorporated into the self-concept and become autonomously motivating. When and how does this transformation take place and what situations foster the development of autonomous gender motivation? Research on self-determination theory shows that reward (and punishment) for behavior is negatively associated with autonomous motivation (Deci & Ryan, 1987; Enzle & Ross, 1978). Perhaps individuals who experience more reward (sanction) for their gender typical (atypical) behavior may be more likely to experience pressured gendered motivation, whereas individuals who have not experienced acute consequences of gender conformity or violation may simply incorporate gender into the self-concept.

Additionally, it is not clear whether the effects of pressured and autonomous motivation on self-esteem and private regard are specific to gender ideals, or whether the type of behavioral motivation would affect outcomes of behavior in accordance with any societal ideal? For instance, if there is a societal ideal of integrity, would being honest about an indiscretion increase or decrease one's feelings about the self, depending on whether the confession was motivated by choice or pressure? Or are the findings presented here specific to gender norms of communality and agency? I expect that type of motivation may differentially affect self-outcomes for any societal ideal that is tied to a specific identity. Therefore, just as the current research showed to some degree that autonomously motivated gender-role consistent behaviors were associated with greater private regard for one's gender identity, regard for ethnic or racial identity, religious identity, or even a career identity may be contingent upon being autonomously motivated

to act in a manner consistent with the ideals of that identity. I would predict that feeling autonomously motivated to act in accordance with an ideal would be associated with higher self-esteem than feeling pressured to fulfill an ideal.

Applying motivation and self-determination theory (Deci & Ryan, 1985) to the psychological consequences of gender conforming behavior opens up a rich area of inquiry for future research. The research presented here attempts to add to the body of knowledge regarding gender conformity and self determination theory by demonstrating that the type of motivation affects the psychological self-outcomes of gender conforming behavior. Gender conformity may be detrimental to those who feel pressure to fulfill societal gender norms, while at the same time beneficial for those who have internalized societal norms and find internal satisfaction in living up to that gender ideal.

Appendix A: Investment in Gender Ideals

DIRECTIONS:
Think of how society defines the ideal woman or man. On a scale of 1 to 9 (1= not at all, 9= a great deal), circle the response that corresponds to your answer.

If you are a woman, please answer questions in section A. If you are a man, please answer questions in section B:

SECTION A:

How important is it for you to be similar to the ideal woman?
1 2 3 4 5 6 7 8 9
not at all----------a great deal

To what extent is being similar to the ideal woman an important part of who you are?
1 2 3 4 5 6 7 8 9
not at all----------a great deal

If you are a man, please fill out this section:

SECTION B

How important is it for you to be similar to the ideal man?
1 2 3 4 5 6 7 8 9
not at all----------a great deal

To what extent is being similar to the ideal man an important part of who you are?
1 2 3 4 5 6 7 8 9
not at all----------a great deal

FOR BOTH MEN AND WOMEN:

How important is it for you to be dissimilar to typical members of the opposite sex?
1 2 3 4 5 6 7 8 9
not at all----------a great deal

To what extent is being dissimilar to typical members of the opposite sex an important part of who you are?
1 2 3 4 5 6 7 8 9
not at all----------a great deal

Appendix B: Gender Motivation Questionnaire

		Strongly Disagree	Disagree	Disagree Somewhat	Neutral	Agree Somewhat	Agree	Strongly Agree
1.	I enjoy being communal and caring for others.	1	2	3	4	5	6	7
2.	It brings me pleasure if I act warmly towards others.	1	2	3	4	5	6	7
3.	It is important to me to act sensitively towards others.	1	2	3	4	5	6	7
*4.	It is important to me not to behave selfishly or thoughtlessly towards others.	1	2	3	4	5	6	7
5.	I enjoy being assertive.	1	2	3	4	5	6	7
6.	It brings me pleasure to behave in a dominant or assertive way.	1	2	3	4	5	6	7
7.	It is important to me to be assertive.	1	2	3	4	5	6	7
*8.	It is important to me not to act passively with others.	1	2	3	4	5	6	7
9.	I act in a caring way towards others because I want others to like me.	1	2	3	4	5	6	7
10.	In general, I act warmly towards others because I want others' acceptance and approval.	1	2	3	4	5	6	7
11.	In general, I am sensitive to others because that is what others expect from me.	1	2	3	4	5	6	7
12	I am caring to others because that is how others think I should be.	1	2	3	4	5	6	7

		Strongly Disagree	Disagree	Disagree Somewhat	Neutral	Agree Somewhat	Agree	Agree Strongly
13	I act in an assertive way because I want others to like me.	1	2	3	4	5	6	7
14	In general, I act confidently because I want others' acceptance and approval.	1	2	3	4	5	6	7
15	In general, I am assertive because that is what others expect from me.	1	2	3	4	5	6	7
16.	I am assertive and confident with others because that is how others think I should be.	1	2	3	4	5	6	7

Note. *indicates item dropped from analyses

Appendix C: Private Regard for Gender Identity

INSTRUCTIONS: We are all members of different social groups or social categories. We would like you to consider **your gender group** (e.g., women or men) in responding to the following statements. There are no right or wrong answers to any of these statements; we are interested in your honest reactions and opinions. Please read each statement carefully, and respond by using the following scale from 1 to 7:

		Strongly Disagree	Disagree	Disagree Somewhat	Neutral	Agree Somewhat	Agree	Strongly Agree
1.	I am a worthy member of the gender group I belong to.	1	2	3	4	5	6	7
*2.	I often regret that I belong to my gender group.	1	2	3	4	5	6	7
3.	Overall, my gender group is considered good by others.	1	2	3	4	5	6	7
4.	Overall, my gender group has very little to do with how I feel about myself.	1	2	3	4	5	6	7
5.	I feel I don't have much to offer to the gender group I belong to.	1	2	3	4	5	6	7
*6.	In general, I'm glad to be a member of the gender group I belong to.	1	2	3	4	5	6	7
7.	Most people consider my gender group, on average, to be more ineffective than the other gender group.	1	2	3	4	5	6	7
8.	The gender group I belong to is an important reflection of who I am.	1	2	3	4	5	6	7
9.	I am a cooperative participant in the gender group I belong to.	1	2	3	4	5	6	7
*10.	Overall, I often feel that the gender group of which I am a member is not worthwhile.	1	2	3	4	5	6	7
11.	In general, others respect the gender group that I am a member of.	1	2	3	4	5	6	7
12.	The gender group I belong to is unimportant to my sense of what kind of a person I am.	1	2	3	4	5	6	7
13.	I often feel I'm a useless member of my gender group.	1	2	3	4	5	6	7
*14.	I feel good about the gender group I belong to.	1	2	3	4	5	6	7
15.	In general, others think that the gender group I am a member of is unworthy.	1	2	3	4	5	6	7
16.	In general, belonging to gender group is an important part of my self image.	1	2	3	4	5	6	7

Appendix D

Rosenberg Self-Esteem Scale

INSTRUCTIONS: Please respond to each of the following statements by selecting your answer using the scale from "1 = Strongly disagree" to "7 = Strongly agree."

1. I feel that I am a person of worth, at least on an equal basis, with others right now.
   1 2 3 4 5 6 7
strongly disagree----------strongly agree

2. I feel that I have a number of good qualities.
   1 2 3 4 5 6 7
strongly disagree----------strongly agree

3. At this moment, I am inclined to feel that I am a failure.
   1 2 3 4 5 6 7
strongly disagree----------strongly agree

4. I am able to do things as well as most people.
   1 2 3 4 5 6 7
strongly disagree----------strongly agree

5. I feel that I do not have much to be proud of.
   1 2 3 4 5 6 7
strongly disagree----------strongly agree

6. I take a positive attitude toward myself.
   1 2 3 4 5 6 7
strongly disagree----------strongly agree

7. Right now, I am satisfied with myself.
   1 2 3 4 5 6 7
strongly disagree----------strongly agree

8. I wish I could have more respect for myself.
   1 2 3 4 5 6 7
strongly disagree----------strongly agree

9. I certainly feel useless at times.
   1 2 3 4 5 6 7
strongly disagree----------strongly agree

10. At times, I think I am no good at all.
   1 2 3 4 5 6 7
strongly disagree----------strongly agree

Appendix E

External Contingencies of Self-Worth

	1 (Strongly Disagree)	2	3	4 (Neutral)	5	6	7 (Strongly Agree)
1. When I think I look attractive, I feel good about myself.	1	2	3	4	5	6	7
2. I feel worthwhile when I perform better than others on a task or skill.	1	2	3	4	5	6	7
3. My self-esteem is unrelated to how I feel about the way my body looks.	1	2	3	4	5	6	7
4. I don't care if other people have a negative opinion about me.	1	2	3	4	5	6	7
5. I can't respect myself if others don't respect m e.	1	2	3	4	5	6	7
6. Knowing that I am better than others on a task raises my self-esteem.	1	2	3	4	5	6	7
7. My opinion about myself isn't tied to how well I do in school.	1	2	3	4	5	6	7
8. I don't care what other people think of me.	1	2	3	4	5	6	7
9. My self-esteem is influenced by attractive I think my face or facial features are.	1	2	3	4	5	6	7
10. Doing well in school gives me a sense of self-respect.	1	2	3	4	5	6	7
11. Doing better than others gives me a sense of self-respect.	1	2	3	4	5	6	7
12. My sense of self-worth suffers whenever I think I don't look good.	1	2	3	4	5	6	7
13. I feel better about myself when I know I'm doing well academically.	1	2	3	4	5	6	7

14. What others think of me as no effect on what I think about myself.	1	2	3	4	5	6	7
15. My self-worth is affected by how well I do when I am competing with others.	1	2	3	4	5	6	7
16. My self-esteem is influenced by my academic performance.	1	2	3	4	5	6	7
17. My self-esteem does not depend on whether or not I feel attractive.	1	2	3	4	5	6	7
18. My self-worth is influenced by how well I do on competitive tasks.	1	2	3	4	5	6	7
19. I feel bad about myself whenever my academic performance is lacking.	1	2	3	4	5	6	7
20. My self-esteem depends on the opinions others hold of me.	1	2	3	4	5	6	7

Appendix F

Interaction Recall

Autonomous Communal:

DIRECTIONS:

Please think about a past interaction with another person when you personally chose to behave in a warm, caring, close-to-others way. Please describe the details of the interaction and your warm and caring behavior in the space provided below. Please also think about and describe why you chose to act in this way.

Pressured Communal:

DIRECTIONS:

Please think about a past interaction with another person when you felt pressured to behave in a warm, caring, close-to-others way. Please describe the details of the interaction and your warm and caring behavior in the space provided below. Please also think about and describe how you felt pressured to act in this way.

Neutral Communal:

DIRECTIONS:

Please think about a past interaction with another person when you behaved in a warm, caring, close-to-others way. Please describe the details of the interaction and your warm and caring behavior in the space provided below.

Autonomous Agentic:

DIRECTIONS:

Please think about a past interaction with another person when you personally chose to behave in a dominant, powerful, and assertive way. Please describe the details of the interaction and your dominant and assertive behavior in the space provided below. Please also think about and describe why you chose to act in this way.

Pressured Agentic:

DIRECTIONS:

Please think about a past interaction with another person when you felt pressured to behave in a dominant, powerful, and assertive way. Please describe the details of the

interaction and your dominant and assertive behavior in the space provided below. Please also think about and describe how you felt pressured to act in this way.

Neutral Agentic:

DIRECTIONS:

Please think about a past interaction with another person when you behaved in a dominant, powerful, and assertive way. Please describe the details of the interaction and your dominant and assertive behavior in the space provided below.

Appendix G

Manipulation Check

Please think back to the interaction you just wrote about.

To what extent was your behavior:

	1 (Not at all)	2 (Very little)	3 (Some-what)	4 (Moderate Amount)	5 (Much)	6 (Very much)	7 (A huge amount)
Freely Chosen	1	2	3	4	5	6	7
Due to pressure from others	1	2	3	4	5	6	7
A personal choice	1	2	3	4	5	6	7
Because you felt influenced by others	1	2	3	4	5	6	7
What you really wanted to do	1	2	3	4	5	6	7
What you felt you should do	1	2	3	4	5	6	7

Appendix H

MAACL-R

You will now be asked a series of questions asking you how you feel **AT THIS MOMENT**. Please respond to each of the following statements by selecting your answer using the following scale:

0	1	2	3	4	5	6
Not at All	Very Little	Somewhat	Moderate Amount	Much	Very Much	Huge Amount

_____ 1. Right now, I feel anxious.

_____ 2. At this moment, I feel calm.

_____ 3. Right now, I feel sad (or depressed).

_____ 4. At this moment, I feel happy.

_____ 5. Right now, I feel angry.

_____ 6. At this moment, I feel content.

References

Bem, S. L. (1974). The measurement of psychological androgyny. *Journal of Consulting and Clinical Psychology, 42,* 155-162.

Bem, S. L. (1983). Gender schema theory and its implications for child development: Raising gender-aschematic children in a gender-schematic society. *Signs, 8,* 598-616.

Bosson , J. K., Swann, W. B. Jr., Pennebaker, J. W. (2000). Stalking the perfect measure of implicit self-esteem: The blind men and the elephant revisited? *Journal of Personality and Social Psychology, 79,* 631-643.

Bryant, A., & Check, E. (2000). How parents raise boys and girls. *Newsweek: Your child, 136,* 64-65.

Bussey, K., & Bandura, A. (1992). Self-regulatory mechanisms governing gender development. *Child Development, 63,* 1236-1250.

Carver, P. R., Yunger, J. L., & Perry, D. G. (2003). Gender identity and adjustment in middle childhood. *Sex Roles, 49,* 95-109.

Coffman, D. L., & MacCallum, R. C. (2005). Using parcels to convert path analysis models into latent variable models. *Multivariate Behavioral Research, 40*(2), 235-259.

Conway, M., Pizzamiglio, M. T., & Mount, L. (1996). Status, communality, and agency: Implications for stereotypes of gender and other groups. *Journal of Personality and Social Psychology, 71,* 25-38.

Crocker, J., Luhtanen, R. K., Cooper, M. L., Bouvrette, A. (2003). Contingencies of self-worth in college students: Theory and measurement. *Journal of Personality and Social Psychology, 85,* 894-908.

Deaux, K., & Lafrance, M. (1998). Gender. In D. T. Gilbert, S. T. Fiske , & G. Lindsey (Eds.), *The handbook of social psychology (4th ed., Vol. 1, pp. 788-827).* New York: McGraw-Hill.

Deci, E. L., Nezlek, J, & Sheinman, L. (1981). Characteristics of the rewarder and intrinsic motivation of the rewardee. *Journal of Personality and Social Psychology, 40,* 1-10.

Deci, E. L., & Ryan, R. M. (1980). The empirical exploration of intrinsically motivated processes. In L. Berkowitz (Ed.), *Advances in experimental social psychology* (Vol. 13, pp. 39-80). New York: Academic Press.

Deci, E. L, & Ryan, R. M. (1985). *Intrinsic motivation and self-determination in human behavior.* New York: Plenum Press.

Deci, E. L., & Ryan, R. M. (1987). The support of autonomy and the control of behavior. *Journal of Personality and Social Psychology, 53,* 1024-1037.

Deci, E. L., & Ryan, R. M. (2000). The "what" and "why" of goal pursuits: Human needs and the self-determination of behavior. *Psychological Inquiry, 11,* 227-268.

Deci, E. L., Schwartz, A. J., Sheinman, L., & Ryan, R. M. (1981). An instrument to assess adults' orientation toward control versus autonomy with children: Reflections on intrinsic motivation and perceived competence. *Journal of Educational Psychology, 73,* 642-650.

Diekman, A., B., & Eagly, A. H. (2000). Stereotypes as dynamic constructs: Women and men of the past, present, and future. *Personality & Social Psychology Bulletin, 26,* 117-1188.

Eagly, A. H. (1987). *Sex differences in social behavior: A social role interpretation.* Hillsdale, NJ: Erlbaum.

Eagly, A. H., Makhijani, M. G., & Klonsky, B. G. (1992). Gender and the evaluation of leaders: A meta-analysis. *Psychological Bulletin, 111,* 3-22.

Eagly, A. H., & Wood, W. (1991). Explaining sex differences in social behavior: A social role perspective. *Personality and Social Psychology Bulletin, 17,* 306-315.

Egan, S. K., & Perry, D. G. (2001). Gender identity: A multidimensional analysis with implications for psychosocial adjustment. *Developmental Psychology, 17,* 451-463.

Elliot, A. J., & Devine, P. G. (1994). On the motivational nature of cognitive dissonance: Dissonance as psychological discomfort. *Journal of Personality and Social Psychology, 67,* 382-394.

Enzle, M. E., & Ross, J. M. (1978). Increasing and decreasing intrinsic interest with contingent rewards: A test of cognitive evaluation theory. *Journal of Experimental Social Psychology, 14,* 588-597.

Farnham, S. D., Greenwald, A. G., & Banaji, M. R. (1999). Implicit self-esteem. In D. Abrams & M. A. Hogg (Eds.), *Social identity and social cognition: An introduction* (pp. 230-248). Blackwell.

Festinger, L. (1957). *A theory of cognitive dissonance.* Stanford, CA: Stanford University Press.

Greenwald. A. G., & Banaji, M. R. (1995). Implicit social cognition: Attitudes, self-esteem, & stereotypes. *Psychological Review, 102,* 4-27.

Guerrero-Witt, M., & Wood, W. (2007). Self-regulation of gendered behavior in everyday life. Manuscript submitted for publication. Duke University.

Hau, K., & Marsh, H. W. (2004). The use of item parcels in structural equation modelling: Non-normal data and small sample sizes. *British Journal of Mathematical and Statistical Psychology, 57*(2), 327-351.

Heilman, M. (2001). Description and prescription: How gender stereotypes prevent women's ascent up the organizational ladder. *Journal of Social Issues, 57,* 657-674.

Hu, L., & Bentler, P.M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling, 6,* 1–55.

Josephs, R. A., Markus, H., & Tafarodi, R. W. (1992). Gender and self-esteem. *Journal of Personality and Social Psychology, 63,* 391-402.

Kishton, J. M., & Widaman, K. F. (1994). Unidimensional versus domain representative parceling of questionnaire items: An empirical example. *Educational and Psychological Measurement, 54,* 757-765.

Kitiyama, S., & Karasawa, M. (1997). Implicit self-esteem in Japan: Name letters and birthday numbers. *Personality and Social Psychology Bulletin, 23,* 736-742.

Kline, R. B. (2005). *Principles and practice of structural equation modeling* (2nd ed.). New York: Guilford.

Koole, S. L., Dijksterhuis, A., & van Knippenberg, A. (2001). What's in a name: Implicit self-esteem and the automatic self. *Journal of Personality and Social Psychology, 80,* 669-685.

Little, T. D., Cunningham, W. A., Shahar, G., & Widaman, K. F. (2002). To parcel or not to parcel: Exploring the question, weighing the merits. *Structural Equation Modeling, 9*(2), 151-173.

Lott, B. E. (1987). *Women's lives themes and variations in gender learning*. Pacific Grove, CA: Brooks/Cole.

Luhtanen, R. & Crocker, J. (1992). A collective self-esteem scale: Self-evaluation of one's social identity. *Personality & Social Psychology Bulletin,* 18, 302-318.

Markus, H. R., & Kitayama, S. (1991). Culture and the self: Implications for cognition,

emotion, and motivation. *Psychological Review, 98,* 224–253.

McDonald, R. P., & Ho, M. R. (2002). Principles and practice in reporting structural equation analyses. *Psychological Methods, 7,* 64-82.

Nuttin, J. M. Jr. (1985). Narcissism beyond Gestalt and awareness: The name letter effect. *European Journal of Social Psychology, 15,* 353-361.

Nuttin, J. M. Jr. (1987). Affective consequences of mere ownership: The name letter effect in twelve European languages. *European Journal of Social Psychology, 17,* 381-402.

Paulhus, D. L. (1998). *Assessing self-deception and impression management in self-reports: The Balanced Inventory of Desirable Responding.* (Manual available from the author at the Department of Psychology, University of British Columbia, Vancouver, B. C., Canada V6T 1Y7.)

Preacher, K. J., & Hayes, A. F. (2004). SPSS and SAS procedures for estimating indirect effects in simple mediation models. *Behavior Research Methods, Instruments, & Computers, 36,* 717–731.

Prentice, D. A., & Carranza, E. (2002). What women and men should be, shouldn't be, are allowed to be, and don't have to be: The contents of prescriptive gender stereotypes. *Psychology of Women Quarterly, 26,* 269-281.

Raag, T., & Rackliff, C. L (1998). Preschoolers' awareness of social expectations of gender: Relationships of toy choices. *Sex Roles, 38,* 685-700.

Reis, H. T., Sheldon, K. M., Gable, S. L., Roscoe, J., & Ryan, R. M. (2000). Daily well-being: The role of autonomy, competence, and relatedness. *Personality and Social Psychology Bulletin, 26,* 419-435.

Rodin, J., & Langer, E. J. (1977). Long-term effects of a control-relevant intervention with the institutionalized aged. *Journal of Personality and Social Psychology, 35,* 897-902.

Rosenberg, M. (1965). *Society and the adolescent self-image.* Princeton, NJ: Princeton University Press.

Rudman, L. A. (1998). Self-promotion as a risk factor for women: The costs and benefits of counterstereotypical impression management. *Journal of Personality and Social Psychology, 74,* 629-645.

Rudman, L. A., & Fairchild, K. (2004). Reactions to counterstereotypic behavior: The role of backlash in cultural stereotype maintenance. *Journal of Personality and Social Psychology, 87,* 157-176.

Rudman, L. A., & Glick, P. (2001). Prescriptive gender stereotypes and backlash toward agentic women. *Journal of Social Issues, 57*, 743-762.

Ryan, R. M., & Connell, J. P. (1989). Perceived Locus of Causality and Internalization: Examining Reasons for Acting in Two Domains. *Journal of Personality and Social Psychology, 57,* 749-761.

Ryan, R. M., & Grolnick, W. S. (1986). Origins and pawns in the classroom: Self-report and projective assessments of individual differences in children's perceptions. *Journal of Personality and Social Psychology, 50*, 550-558.

Ryan, R. M., Mims, V., & Koestner, R. (1983). Relation of reward contingency and interpersonal context to intrinsic motivation: A review and test using cognitive evaluation theory. *Journal of Personality and Social Psychology, 45*, 736-750.

Sanchez, D. T., & Crocker, J. (2005).Why investment in gender ideals affects well-being: The role of external contingencies of self-worth. *Psychology of Women Quarterly, 29*, 63-77.

Sanchez, D. T., Crocker, J. & Boike, K. R. (2005). Doing gender in the bedroom: Investing in gender norms and the sexual experience. *Personality and Social Psychology Bulletin, 31*, 1445-1455.

Schwartz, B. (1997). Psychology, "idea technology," and ideology. *Psychological Science, 8*, 21–27.

Schwartz, B. (2000). Self-determination: The tyranny of freedom. *American Psychologist, 55*, 79-88.

Sobel, M. E. (1982). Asymptotic confidence intervals for indirect effects in structural equations models. In S. Leinhart (Ed.), *Sociological methodology 1982* (pp. 290–312). San Francisco: Jossey-Bass.

Spence, J. T, & Buckner, C. E. (2000). Instrumental and expressive traits, trait stereotypes, and sexist attitudes. *Psychology of Women Quarterly, 24*, 44-62.

Spence, J. T., & Helmreich, R. L. (1978). *Masculinity and femininity: Their psychological dimensions, correlates and antecedents*. Austin, TX: University of Texas Press.

Steinberg, L., Elmen, J. D., & Mounts, N. S. (1989). Authoritative parenting, psychosocial maturity, and academic success among adolescents. *Child Development, 60*, 1424-1436.

Tajfel, H., & Turner, J. C. (1979). An integrative theory of intergroup conflict. In W. Austin & S. Worchel (Eds.), *The Social Psychology of Intergroup Relations*

(pp.34-48). Pacific Grove, CA: Brooks/Cole.

Tajfel, H., & Turner, J. C. (1986). The social identity theory of intergroup behavior. In S. Worchel & W. Austin (Eds.), *Psychology of Intergroup Relations* (2nd ed, pp. 7-24). Chicago: Nelson-Hall.

Turner, R. A., Irwin, C. E., Tschann, J. M., & Millstein, S. G. (1993). Autonomy, relatedness, and the initiation of health risk behaviors in early adolescence. *Health Psychology, 12,* 200-208.

Vallerand, R. J. & Bissonnette, R. (1992). Intrinsic, extrinsic, and amotivational styles as predictors of behavior: A prospective study. *Journal of Personality, 60,* 599-620.

Wood, W., Christensen, P. N., Hebl, M. R., & Rothgerber, H. (1997). Conformity to sex-typed norms, affect, and the self-concept. *Journal of Personality and Social Psychology, 73,* 523-535.

Zuckerman, M., & Lubin, B. (1965). *Manual for the Multiple Affect Adjective Checklist.* San Diego, CA: Educational and Industrial Testing Service.

Table 1

Means and Standard Deviations for all Study 1 Variables by Gender.

	Women	Men	*t*	*df*	*SE*	Cohen's *d*
Investment in Gender Ideals	5.63 (*SD* = 1.51)	5.76 (*SD* = 1.47)	.91	397	.15	.09
Autonomous Motivation Communal Behavior	5.95 (*SD* = .76)	5.70 (*SD* = .94)	-2.94**	398	.08	.29
Autonomous Motivation Agentic Behavior	4.57 (*SD* = 1.24)	4.53 (*SD* = 1.18)	-.30	391	.12	.03
Pressured Motivation Communal Behavior	4.31 (*SD* = 1.21)	4.27 (*SD* = 1.28)	-.29	397	.13	.03
Pressured Motivation Agentic Behavior	3.29 (*SD* = 1.19)	3.48 (*SD* = 1.31)	1.52	398	.13	.15
Private Regard for Gender Identity	6.03 (*SD* = .85)	6.11 (*SD* = .91)	.92	396	.09	.09
Self-Esteem	5.40 (*SD* = 1.01)	5.49 (*SD* = 1.07)	.91	395	.11	.09

* $p < .05$, ** $p < .01$

Table 2

Zero-order Correlations Among All Study 1 Variables for the Entire Sample.

	1	2	3	4	5	6	7
1. Investment in Gender Ideals	--						
2. Autonomous Motivation Communal Behavior	.08	--					
3. Autonomous Motivation Agentic Behavior	.09	.03	--				
4. Pressured Motivation Communal Behavior	.26**	.15**	-.05	--			
5. Pressured Motivation Agentic Behavior	.28**	.07	.24**	.60**	--		
6. Private Regard for Gender Identity	.21**	.14**	.16**	.05	.07	--	
7. Self-Esteem	.04	.16**	.15**	-.17**	-.10*	.36**	--

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

Table 3

Correlation and Standardized Residual Matrix for the Full Sample, with Means and Standard Deviations.

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1. Investment in Gender 1	---	.000	.024	-.028	.008	-.008	.001	.037	-.019	.048	.000	-.109	.003	.007	.001	-.016
2. Investment in Gender 2	.383**	---	.031	-.043	.006	-.024	-.002	-.036	-.001	.073	-.005	-.012	.008	.065	-.018	.008
3. Autonomous Communal 1	.098	.087	---	.000	-.005	.009	-.049	.030	.002	-.024	.007	.005	.049	.076	.022	-.097
4. Autonomous Communal 2	.040	.009	.766**	---	.006	.020	-.028	.001	.008	-.047	-.020	-.058	.032	.058	.021	-.138
5. Autonomous Communal 3	.061	.045	.528**	.525**	---	.036	-.070	-.025	.006	.052	.061	-.055	-.045	.062	.027	-.091
6. Autonomous Agentic 1	.081	.033	.056	.059	.063	---	.002	.000	-.040	-.062	-.010	-.033	-.010	.116	-.007	.019
7. Autonomous Agentic 2	.079	.051	-.021	-.003	-.063	.686**	---	-.002	.016	.011	.068	.021	-.005	.104	-.093	-.038
8. Autonomous Agentic 3	.115*	.025	.071	.035	.001	.740**	.680**	---	-.020	-.020	.036	.028	.006	.149	-.034	-.025
9. Pressured Motivation 1	.254**	.186**	.113*	.114*	.087	.048	.101*	.073	---	-.001	.001	-.047	.000	-.051	.008	-.077
10. Pressured Motivation 2	.254**	.216**	.057	.035	.109*	.008	.067	.058	.664**	---	-.001	.003	-.033	-.023	.025	-.086
11. Pressured Motivation 3	.272**	.182**	.113*	.084	.134**	.074	.150**	.128*	.847**	.668**	---	.052	.003	.033	.054	-.049
12. Private Regard 1	.184**	.125*	.146**	.086	.044	.088	.130**	.148**	.018	.048	.112*	---	.087	.086	-.002	-.049
13. Private Regard 2	.201**	.144**	.191**	.175**	.056	.106*	.097	.121*	.057	.008	.058	.601**	---	-.021	-.047	.019
14. Self-Esteem 1	.038	.088	.216**	.197**	.154**	.229**	.203**	.257**	-.151**	-.102*	-.065	.322**	.322**	---	.026	-.003
15. Self-Esteem 2	.040	.008	.194**	.193**	.139**	.131**	.038	.096	-.116*	-.076	-.067	.287**	.262**	.621**	---	.000
16. Self-Esteem 3	.012	.029	.047	.007	.001	.135**	.072	.083	-.183**	-.171**	-.151**	.284**	.244**	.473**	.676**	---
Mean	5.86	5.52	5.95	6.01	5.57	4.80	4.30	4.59	3.80	3.81	3.86	6.10	6.03	6.11	5.54	4.64
SD	1.86	1.73	.91	.91	1.16	1.32	1.39	1.38	1.25	1.31	1.17	1.05	.90	.79	1.16	1.66

Note. Correlations are below the diagonal, standardized residuals are above, *$p < .05$, ** $p < .01$

Table 4

Maximum Likelihood Parameter Estimates for Full Sample Measurement Model

Parameter	Unstandardized	*SE*	Standardized
Factor Loadings			
Investment in Gender Ideals → IGI1	1.00[a]	---	.735
Investment in Gender Ideals → IGI2	.679	.149	.532
Autonomous Communal → AC1	1.00[a]	---	.883
Autonomous Communal → AC2	.986	.067	.865
Autonomous Communal → AC3	.852	.082	.588
Autonomous Agentic → AA1	1.00[a]	---	.864
Autonomous Agentic → AA2	.974	.054	.799
Autonomous Agentic → AA3	1.045	.056	.856
Pressured Motivation → P1	1.00[a]	---	.920
Pressured Motivation → P2	.839	.048	.732
Pressured Motivation → P3	.936	.039	.919
Private Regard → PR1	1.00[a]	---	.788
Private Regard → PR2	.812	.104	.756
Self-Esteem → SE1	1.00[a]	---	.700
Self-Esteem → SE2	1.858	.161	.883
Self-Esteem → SE3	2.220	.218	.738
Measurement Error Variances			
E_{IGI1}	1.582	.404	.678
E_{IGI2}	2.174	.257	.847
E_{AC1}	.180	.045	.469
E_{AC2}	.209	.054	.502
E_{AC3}	.877	.118	.809
E_{AA1}	.432	.066	.503
E_{AA2}	.688	.099	.602
E_{AA3}	.509	.075	.517
E_{P1}	.240	.050	.392
E_{P2}	.806	.077	.682
E_{P3}	.212	.047	.394
E_{PR1}	.422	.148	.615
E_{PR2}	.343	.067	.655
E_{SE1}	.316	.039	.714
E_{SE2}	.296	.074	.470
E_{SE3}	1.251	.123	.675
Factor Variances and Covariances			
Investment in Gender Ideals (IGI)	1.858	.446	1.000
Autonomous Communal (AC)	.637	.099	1.000
Autonomous Agentic (AA)	1.276	.127	1.000
Pressured Motivation (P)	1.320	.116	1.000
Private Regard (PR)	.693	.130	1.000
Self Esteem (SE)	.303	.058	1.000
IGI ↔ AC	.102[b]	.085	.094
IGI ↔ AA	.202[b]	.121	.131
IGI ↔ P	.605	.127	.386
IGI ↔ PR	.381	.101	.336
IGI ↔ SE	.036[b]	.057	.048
AC ↔ AA	.053[b]	.061	.058
AC ↔ P	.120	.066	.131
AC ↔ PR	.130	.047	.196
AC ↔ SE	.098	.031	.222
AA ↔ P	.159	.073	.123
AA ↔ PR	.184	.066	.196
AA ↔ SE	.113	.042	.182
P ↔ PR	.079[b]	.058	.083
P ↔ SE	-.093	.038	-.148
PR ↔ SE	.202	.050	.442

Note. Standardized estimates for measurement errors are proportions of unexplained variance. [a]Not tested for statistical significance, [b]$p > .05$, all other unstandardized estimates $p < .05$.

Table 5

Correlation Matrix for Nested Structural Analysis by Gender, with Means and Standard Deviations.

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1. Investment in Gender 1	---	.378**	.103	.062	.069	.044	.036	.025	.262**	.277**	.298**	.162*	.191**	-.003	-.049	-.056
2. Investment in Gender 2	.391**	---	.161*	.028	.098	.004	.053	-.036	.098	.174**	.123	.149*	.141*	.100	-.019	-.004
3. Autonomous Communal 1	.097	.009	---	.700**	.481**	.052	-.043	.053	.038	.000	.041	.174**	.165*	.228**	.256**	.116
4. Autonomous Communal 2	.027	.010	.824**	---	.446**	.108	.046	.026	.045	-.084	.066	.157*	.182**	.210**	.224**	.031
5. Autonomous Communal 3	.060	-.005	.571**	.584**	---	.061	-.035	-.038	.111	.157*	.157*	.111	.014	.145*	.141*	-.055
6. Autonomous Agentic 1	.131	.082	.058	.006	.060	---	.708**	.750**	-.004	-.041	.018	.053	.062	.170*	.069	.094
7. Autonomous Agentic 2	.135	.049	.004	-.050	-.098	.656**	---	.724**	.058	.028	.127	.114	.046	.217**	.052	.078
8. Autonomous Agentic 3	.233**	.118	.090	.044	.048	.728**	.620**	---	-.013	.018	.053	.096	.076	.205**	.025	.034
9. Pressured Motivation 1	.245**	.295**	.193*	.186*	.073	.112	.153*	.175*	---	.658**	.820**	-.049	.001	-.243**	-.181**	-.257**
10. Pressured Motivation 2	.228**	.274**	.116	.137	.057	.069	.115	.107	.672**	---	.691**	.044	-.015	-.150*	-.104	-.207**
11. Pressured Motivation 3	.253**	.249**	.195**	.123	.136	.145	.177*	.219**	.874**	.650**	---	.061	.007	-.166*	-.123	-.221**
12. Private Regard 1	.210**	.077	.133	.052	-.010	.144	.153*	.225**	.090	.054	.156*	---	.554**	.269**	.245**	.241**
13. Private Regard 2	.213**	.154*	.214**	.169*	.094	.160*	.160*	.177*	.115	.033	.114	.671**	---	.244**	.217**	.208**
14. Self-Esteem 1	.082	.081	.202**	.182*	.158*	.298**	.190*	.320**	-.062	-.055	.034	.394**	.396**	---	.580**	.462**
15. Self-Esteem 2	.146	.045	.132	.174*	.140	.211**	.020	.189*	-.046	-.044	-.009	.341**	.313**	.666**	---	.663**
16. Self-Esteem 3	.099	.062	-.014	.018	.109	.203**	.063	.158*	-.106	-.127	-.090	.326**	.300**	.508**	.703**	---
Mean (Men)	5.90	5.65	5.87	5.86	5.39	4.76	4.30	4.56	3.86	3.80	3.97	6.21	6.01	6.08	5.55	4.85
SD	1.90	1.63	.98	1.05	1.19	1.29	1.37	1.35	1.34	1.37	1.26	1.03	.95	.87	1.21	1.60
Mean (Women)	5.83	5.43	6.01	6.13	5.72	4.83	4.29	4.59	3.76	3.81	3.78	6.01	6.05	6.13	5.53	4.48
SD	1.84	1.81	.84	.77	1.13	1.34	1.41	1.41	1.18	1.26	1.09	1.06	.86	.72	1.13	1.70

Note. Men are presented below the diagonal, women above, * $p < .05$, ** $p < .01$

Table 6a

Maximum Likelihood Estimates for Nested Hypothesized Model

Parameter	Unstandardized	*SE*	Standardized
MEN			
Construct Equations			
Autonomous Communal (AC) =			
IGI	.040	.076	.056
D1	1.000		
Autonomous Agentic (AC) =			
IGI	.228*	.118	.272
D2	1.000		
Pressured Motivation (P) =			
IGI	.427*	.134	.442
D3	1.000		
Private Regard (PR) =			
AC	.129	.094	.129
AA	.207*	.080	.245
P	.024[a]	.044	.033
D4	1.000		
Self-Esteem (SE) =			
AC	.073	.047	.116
AA	.108*	.047	.203
P	-.108*[a]	.026	-.234
PR	.252*[a]	.054	.398
D5	1.000		
Covariances			
D1 ⟷ D2	.041	.098	.043
D1 ⟷ D3	.216*	.137	.209
D2 ⟷ D3	.114	.126	.097

Parameter	Unstandardized	*SE*	Standardized
Error Variances			
E_{IGI1}	1.995*	.545	.737
E_{IGI2}	1.744*	.320	.821
E_{AC1}	.143*	.070	.380
E_{AC2}	.238*	.093	.474
E_{AC3}	.861*	.118	.771
E_{AA1}	.448*	.095	.524
E_{AA2}	.835*	.149	.650
E_{AA3}	.504*	.093	.526
E_{P1}	.193*	.073	.331
E_{P2}	.940*	.121	.675
E_{P3}	.233*	.077	.381
E_{PR1}	.252*	.165	.479
E_{PR2}	.366*	.090	.641
E_{SE1}	.364*	.068	.720
E_{SE2}	.268*	.106	.431
E_{SE3}	1.035*	.166	.622
D_{1AC}	.843*	.187	.998
D_{2AA}	1.095*	.147	.962
D_{3P}	1.264*	.199	.897
D_{4PR}	.771*	.167	.956
D_{5SE}	.244*	.050	.852

Note. [a]Path constrained to be equal across groups, *$p < .05$

Table 6a

Maximum Likelihood Estimates for Nested Hypothesized Model

Parameter	Unstandardized	*SE*	Standardized
WOMEN			
Construct Equations			
Autonomous Communal (AC) =			
IGI	.068	.056	.139
D1	1.000		.990
Autonomous Agentic (AC) =			
IGI	.037	.082	.044
D2	1.000		.999
Pressured Motivation (P) =			
IGI	.288*	.094	.370
D3	1.000		.929
Private Regard (PR) =			
AC	.286*	.102	.247
AA	.088	.066	.130
P	.024[a]	.044	.033
D4	1.000		.957
Self-Esteem =			
AC	.177*	.061	.229
AA	.031	.032	.068
P	-.108*[a]	.026	-.222
PR	.252*[a]	.054	.378
D5	1.000		.844
Covariances			
D1 ⟷ D2	.051	.066	.066
D1 ⟷ D3	-.001	.052	-.002
D2 ⟷ D3	.056	.093	.049

Parameter	Unstandardized	*SE*	Standardized
Error Variances			
E_{IGI1}	1.402*	.488	.653
E_{IGI2}	2.429*	.343	.848
E_{AC1}	.216*	.046	.567
E_{AC2}	.169*	.041	.526
E_{AC3}	.902*	.185	.861
E_{AA1}	.443*	.081	.500
E_{AA2}	.582*	.124	.558
E_{AA3}	.488*	.102	.497
E_{P1}	.283*	.055	.446
E_{P2}	.701*	.093	.680
E_{P3}	.185*	.043	.396
E_{PR1}	.496*	.201	.669
E_{PR2}	.352*	.083	.693
E_{SE1}	.277*	.047	.710
E_{SE2}	.321*	.088	.503
E_{SE3}	1.381*	.152	.714
D_{1AC}	.447*	.069	.990
D_{2AA}	1.328*	.161	.999
D_{3P}	.984*	.116	.929
D_{4PR}	.561*	.136	.957
D_{5SE}	.194*	.038	.844

Note. [a]Path constrained to be equal across groups, *$p < .05$

Table 7

Sobel's Tests of Mediation

Indirect effect	*a*	SE_a	*b*	SE_b	*ab*	SE_{ab}	*z*	*p*
Men								
AutAg → PR → SE	.207*	.082	.252*	.054	.052	.023	2.220*	.026
Women								
AutCom → PR → SE	.282*	.099	.252*	.054	.071	.029	2.431*	.015

Note. *a* = path from IV to mediator, *b* = path from mediator to DV, *ab* = indirect effect of IV on DV, *$p < .05$

Table 8

Fit Statistics for the Alternative Models

	χ^2	df	CFI	NNFI	IFI	RMSEA	AIC
Hypothesized Model	167.19	91	.964	.953	.964	.046	-14.18
Alternative Model A	188.85	95	.956	.944	.956	.050	-1.15
Alternative Model B	186.13	95	.957	.947	.957	.050	-3.87
Alternative Model C	202.04	94	.949	.935	.950	.054	14.04

Note. Models calculated on full sample, robust fit statistics are presented.

Table 9a

Means and Standard Deviations for all Study 2 Variables by Gender (Communal Conditions Only)

Communal Recall	Women	Men	*t*	*df*	*SE*	Cohen's *d*
Autonomous						
Implicit SE	.63 (.66)	.46 (.75)	.91	54	.19	.24
Explicit SE	5.38 (.97)	5.34 (.95)	.15	54	.26	.04
Private Regard	6.04 (.88)	6.15 (.77)	-.49	54	.23	-.13
Positive Affect	5.06 (1.02)	5.00 (.94)	.21	54	.27	.06
Pressured						
Implicit SE	.34 (.75)	.69 (1.07)	-1.53	62	.23	-.38
Explicit SE	5.23 (1.08)	5.43 (.98)	-.76	62	.27	-.19
Private Regard	6.29 (.72)	5.96 (1.00)	1.55	62	.22	.38
Positive Affect	5.19 (.89)	5.05 (.83)	.64	62	.22	.16
Neutral						
Implicit SE	.38 (.83)	.28 (.80)	.44	51	.22	.12
Explicit SE	5.15 (1.17)	5.26 (.99)	-.36	51	.30	-.10
Private Regard	6.13 (.86)	5.68 (1.08)	1.67	51	.27	.46
Positive Affect	4.91 (.81)	5.10 (.85)	-.80	51	.23	-.23

Note. Standard deviations are presented in parentheses, * $p < .05$, ** $p < .01$

Table 9b

Means and Standard Deviations for all Study 2 Variables by Gender (Agentic Conditions Only)

Agentic Recall	Women	Men	*t*	*df*	*SE*	Cohen's *d*
Autonomous						
Implicit SE	.55 (.83)	.80 (.94)	-1.11	63	.22	-.28
Explicit SE	4.84 (1.21)	5.00 (1.25)	-.52	63	.31	-.13
Private Regard	5.78 (1.03)	5.81 (1.01)	-.10	63	.26	-.03
Positive Affect	4.70 (.95)	4.70 (.83)	.00	63	.23	0.0
Pressured						
Implicit SE	.62 (.74)	.58 (.83)	.22	71	.19	.05
Explicit SE	5.16 (1.01)	5.09 (1.37)	.26	71	.28	.06
Private Regard	5.84 (1.05)	5.82 (.98)	.11	71	.24	.02
Positive Affect	4.96 (.84)	5.01 (1.13)	-.22	71	.23	-.03
Neutral						
Implicit SE	.57 (1.03)	.48 (.92)	.32	45	.28	.09
Explicit SE	5.32 (1.13)	5.54 (1.11)	-.67	45	.33	-.20
Private Regard	6.15 (.80)	5.84 (1.08)	1.12	45	.28	.33
Positive Affect	5.19 (.99)	5.03 (.91)	.60	45	.28	.17

Note. Standard deviations are presented in parentheses, * $p < .05$, ** $p < .01$

Table 10

Zero-order Correlations Among All Continuous Study 2 Variables for the Entire Sample.

	1	2	3	4	5	6
1. Implicit Self-Esteem	--					
2. Explicit Self-Esteem	.03	--				
3. State Private Regard	.05	.41**	--			
4. Positive Affect	.12*	.48**	.16*	--		
5. Investment in Gender Ideals	.04	-.18**	.01	-.13*	--	
6. External Contingency	.02	-.22**	.09	-.09	.26**	--

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

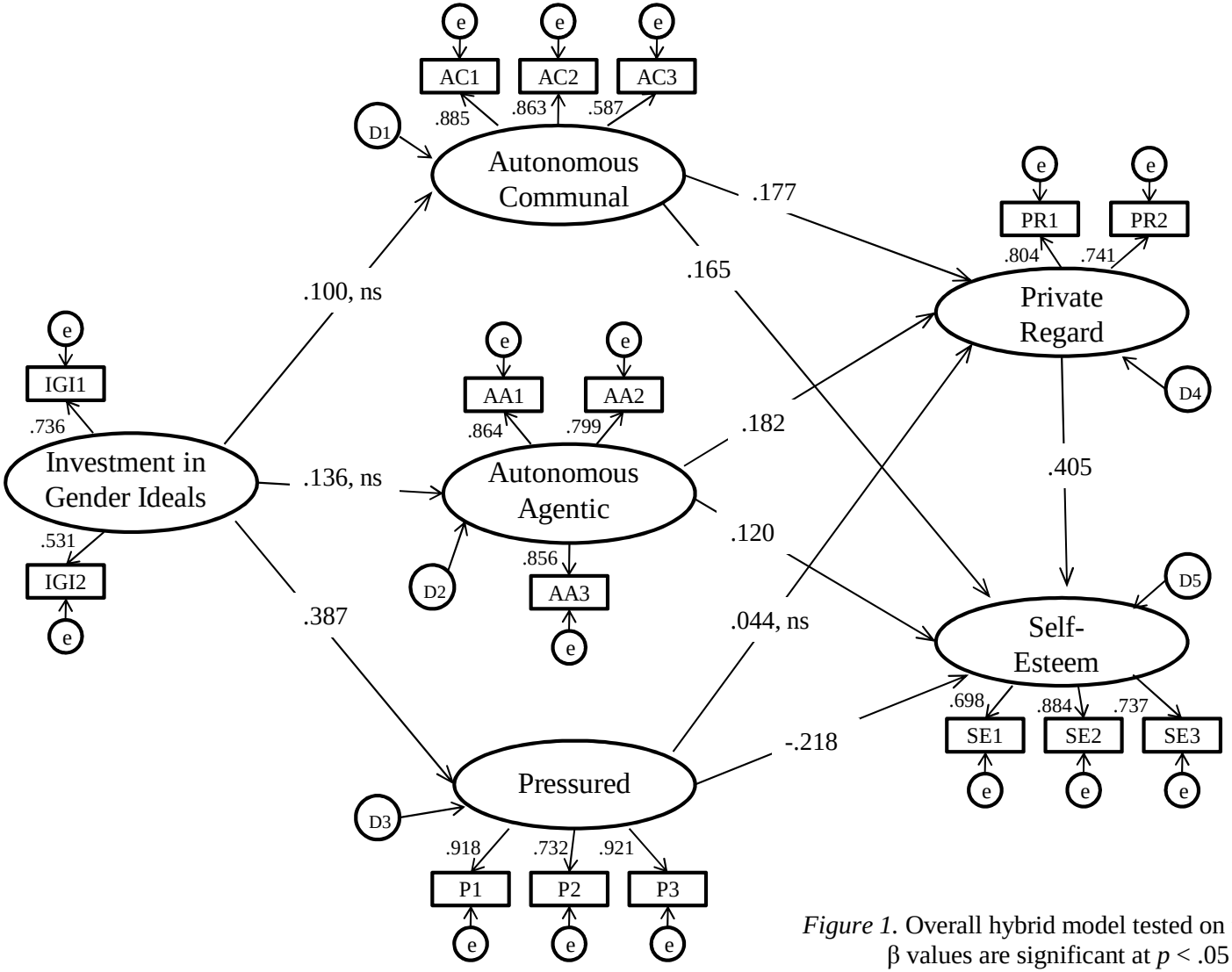

Figure 1. Overall hybrid model tested on full sample.
β values are significant at $p < .05$ unless noted otherwise.

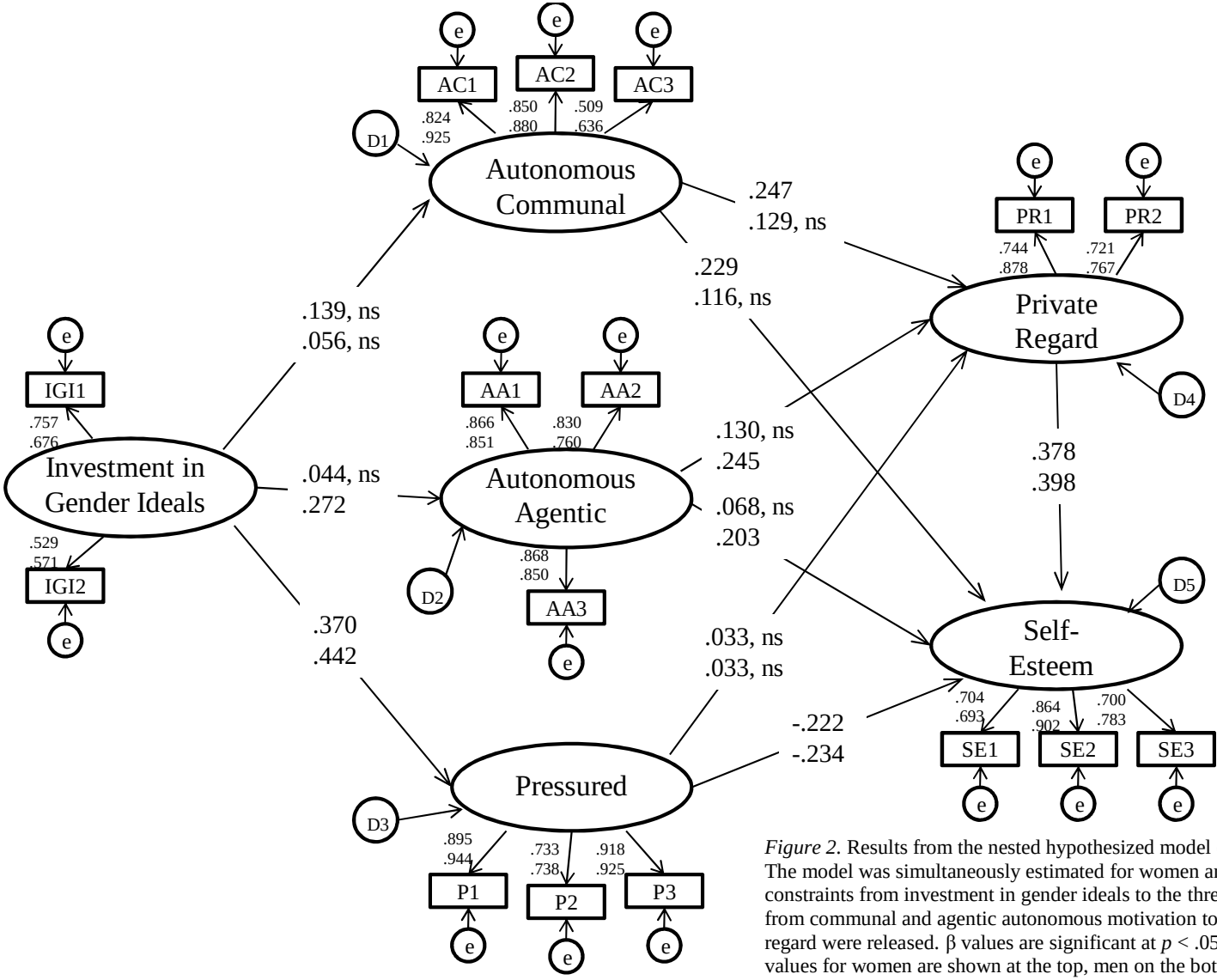

Figure 2. Results from the nested hypothesized model (Tables 6a, 6b) are shown. The model was simultaneously estimated for women and men. The equality constraints from investment in gender ideals to the three motivation variables and from communal and agentic autonomous motivation to self esteem and private regard were released. β values are significant at $p < .05$ unless noted otherwise. β values for women are shown at the top, men on the bottom.

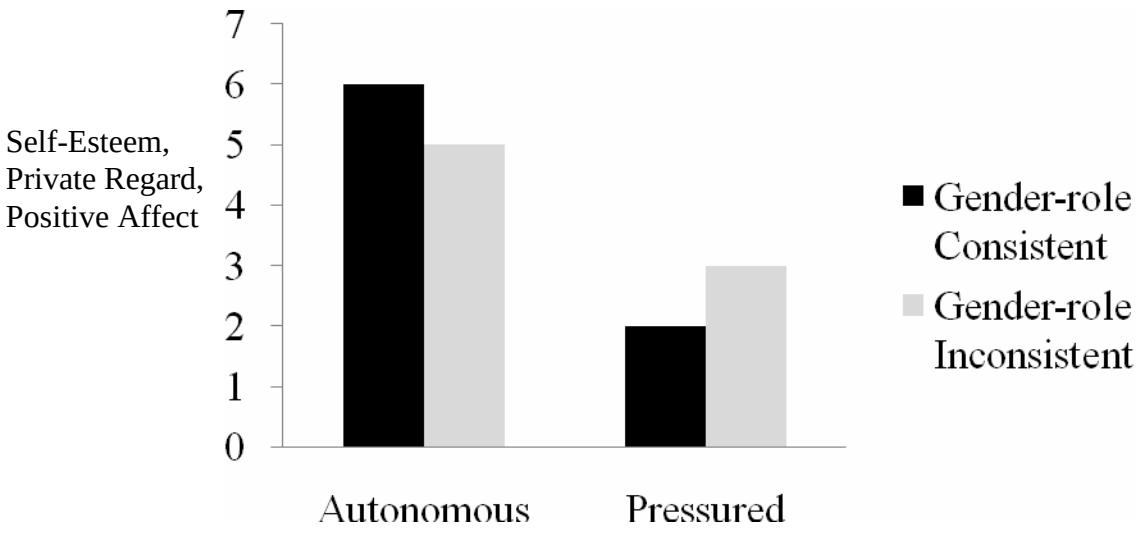

Figure 3. Predicted results of Study 2.

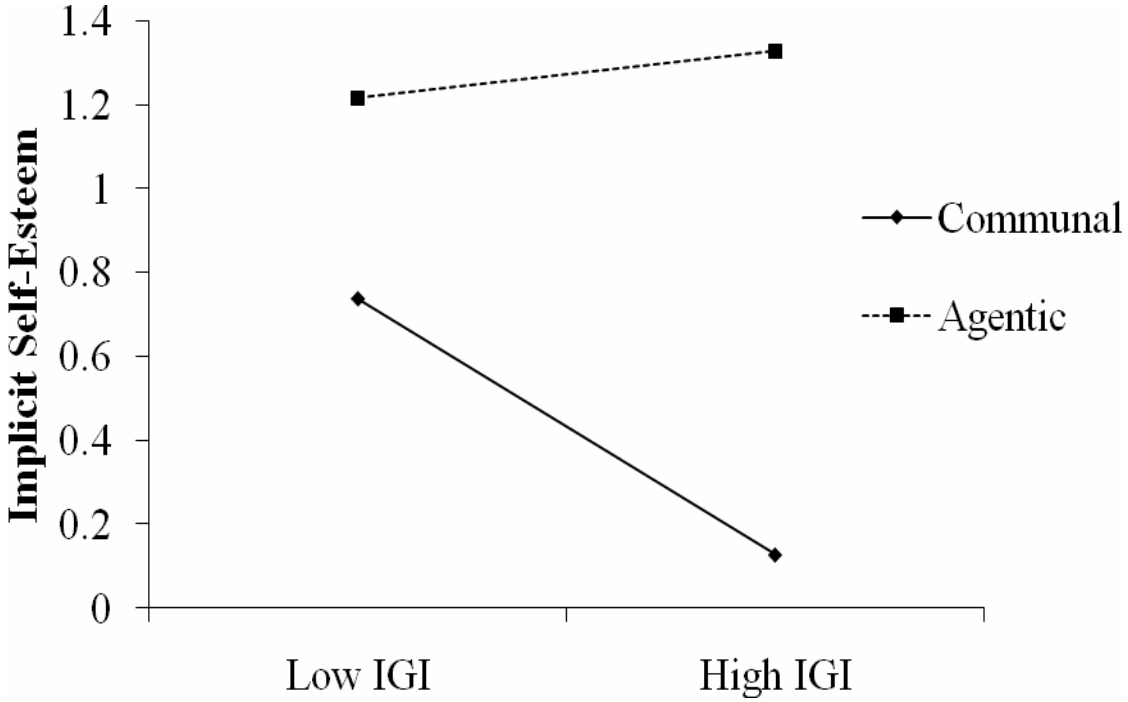

Figure 4. Significant interaction of gender role (communal or agentic) and investment in gender ideals (IGI) on implicit self-esteem for men in study 2.

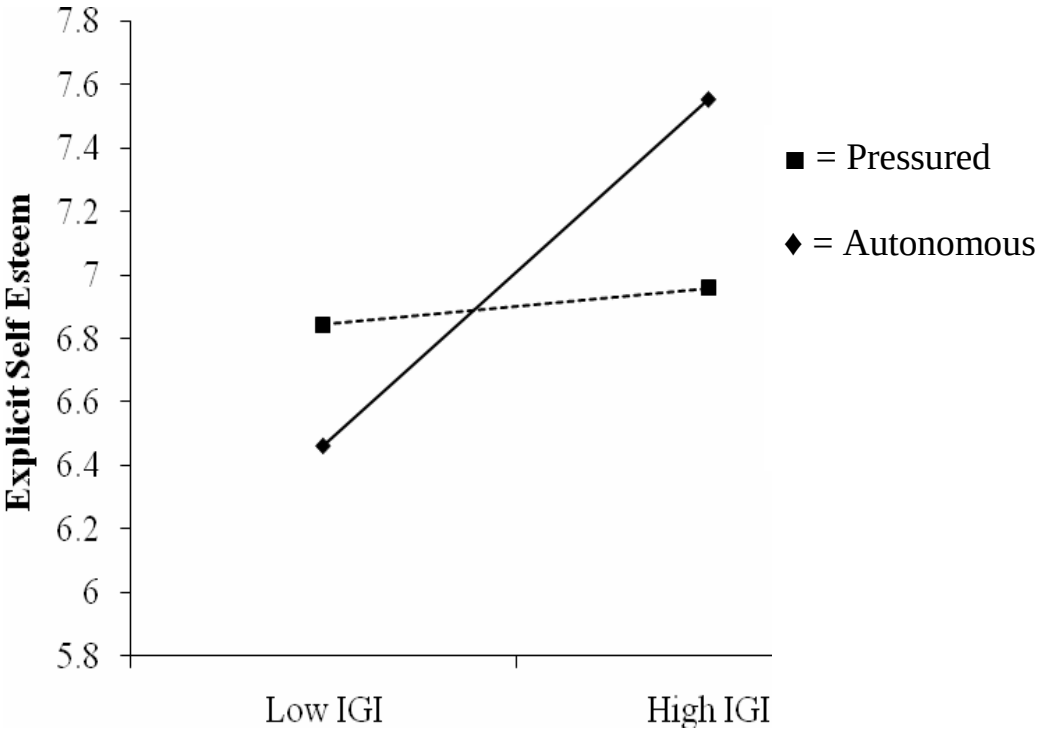

Figure 5. Significant interaction of motivation (autonomous or pressured) and investment in gender ideals on explicit self-esteem for women in study 2.

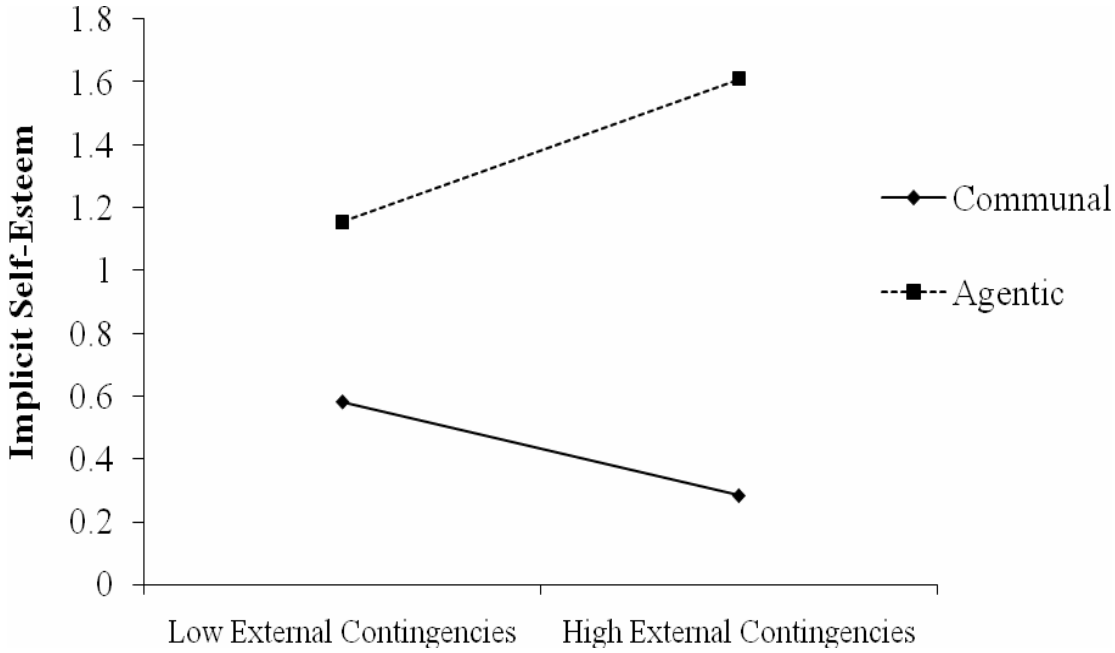

Figure 6. Significant interaction of gender role (communal or agentic) and external contingencies of self-worth on implicit self-esteem for men in study 2.