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Self-regulation of Gendered Behavior in Everyday Life

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Abstract The present research tested whether gender self-concepts influence behavior through self-regulatory processes, with emotions and self-esteem signaling that people's responses meet or fail to meet their gender standards. In the first study, cross-sectional survey data from 3,174 young adults living in the United States revealed that esteem increased with behavioral conformity to gender standards for personality. In the second study, an experience-sampling diary design provided a dynamic view of regulation to gender standards for personality and romance. One hundred seventy-seven American undergraduates reported their emotions and esteem immediately following everyday social interactions. As anticipated, students became more positive when they acted in ways that confirmed rather than disconfirmed personal gender standards.

Keywords Gender differences · Self-regulation · Gender and personality · Gender and romance

Introduction

According to gender stereotypes, men, more than women, are *agentic*—that is, masterful, assertive, competitive, and dominant (e.g., Newport 2001; Spence and Buckner 2000). Women, more than men, are *communal*—that is, friendly,

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unselfish, concerned with others, and emotionally expressive. These stereotypic beliefs are surprisingly evident across cultures, although with some variation (Best and Thomas 2004; Williams and Best 1990). Why do these gender stereotypes persist? To the extent that members of a society value particular attributes for men or women, the attributes will serve as gender ideals that society members may internalize and strive to achieve. Although the current research tests these ideas in the domains of agency, communion, and romance with U.S. participants, the underlying self-regulatory mechanisms that we demonstrate should extend to a broad set of gender standards that might be valued by individuals in a given society.

Gender stereotypes influence behavior when they are incorporated into men's and women's self-concepts and thereby become *gender identities* (Wood and Eagly 2009, 2010). Gender identities arise because most people accept, or internalize, at least some aspects of the cultural meanings associated with their biological sex. Yet, people differ in the extent to which a gendered identity is important to them. Some men may be especially sensitive and some women especially powerful. Furthermore, not everyone does masculinity and femininity in the same way. People may differ in the aspects of gender roles that they adopt. For example, women who regard themselves as feminine could be invested in culturally feminine traits such as kindness and emotional expressiveness or in feminine interests such as dating and romance.

Gender identities, as part of the self-concept, should influence behavior through self-regulatory processes. If people use gender identity as a standard to regulate their behavior, then they should feel good when living up to that standard and bad when violating it. The present article tests these self-regulatory mechanisms through two studies. The first used cross-sectional data on gender gathered from a

national sample of young adults in the United States (Udry 2003). The second used a U.S. undergraduate sample and an event-sampling diary method to capture the dynamic regulation of gendered behavior in everyday social interaction.

Self-regulation Processes

Self-regulation proceeds in stages, beginning with *testing* the extent to which current behavior matches self-standards (e.g., Carver and Scheier 2000). Successful regulation, or match of behavior to gendered standards, is signaled by positive emotions and increased self-esteem, whereas unsuccessful regulation, or deviation of behavior from standards, is signaled by negative feelings and decreased esteem. When failing to meet standards, people *operate* on their behavior to bring it more in line with the desired standard. In this way, esteem and emotions constitute feedback about whether adjustments are necessary to meet valued personal standards.

The idea that gender identities serve as guides for responding has precedent in gender theories of the self (see Diekman and Eagly 2000; Gardner and Gabriel 2004). For example, in Bem's gender schema theory (1981), measures of masculinity, femininity, and associated socially-desirable personality traits are used as indicators of gender schemas, and these schemas guide responses through self-regulatory processes. As Bem explained, gender schemas can serve as "an internalized motivational factor that prompts the individual to regulate his or her behavior so that it conforms to the culture's definition of maleness and femaleness" (p. 355).

Preliminary evidence that people regulate their behavior toward gender standards and that such regulation has psychological consequences was provided by Wood et al. (1997). They first assessed U.S. undergraduates' gender identities on items that evaluated, for example, the importance of being similar to the ideal man or woman in society. Then participants imagined acting in masculine (dominant and assertive) or feminine (warm and communal) ways. Participants who were strongly identified with their gender showed a self-evaluation boost when their vicarious experience was congruent with that identity—that is, dominant behavior for men and communal behavior for women. Thus, this research provided an initial experimental simulation of the self-regulatory mechanisms that guide gendered responding. Also, consistent with a regulatory model, U.S. undergraduate women's acceptance of gender role ideals reduced psychological well-being to the extent that their actual behavior failed to match their gender-role ideal (Grimmell 1998). However, males' well-being was less affected by the size of these self-discrepancies.

The Present Research

We conducted two studies to test whether men's and women's gender-consistent behavior in everyday life reflects regulation to valued standards. In a preliminary test of the idea that people defining themselves by gender standards regulate their behavior to these standards, we analyzed existing cross-sectional survey data with young adults from the National Longitudinal Study of Adolescent Health (Add Health, Udry 2003). Then, to test this mechanism as it occurs in everyday life, we analyzed newly-collected data from U.S. college students using an event-contingent diary procedure.

In both studies, we used a sequential strategy to test the self-regulatory model. First, to establish that the data were appropriate to test regulatory mechanisms, we demonstrated that people with stronger self-standards behaved in a more gender-typed manner. Specifically, in the first study, gender standards were assessed in terms of agentic or communal self-concepts (Bem 1981). The measure of behavior in the Add Health survey that most closely reflected an agentic self-concept was the extent of assertiveness in decision making with friends about where to go or what to do. The measure of behavior that reflected a communal self-concept was noticing and responding to a dating partners' mood. Thus, to test our hypotheses, we first needed to demonstrate that more agentic people of both genders were more likely to act assertively and that more communal people were more likely to notice and respond to others' moods. Given this pattern, we could then evaluate the self-regulatory consequences of meeting or failing to meet participants' gender standards.

Hypotheses for Study 1

Participants with a gender-typed self-concept (communal/agentic) who act in a consistent manner (noticing others' mood/making decisions) will have greater self-esteem than those who act less consistent with their gender self-standard. For participants with a less gender-typed self-concept, self-esteem will not depend on these behaviors. This pattern will emerge in significant interactions between gender self-concept and extent of performance of behaviors when regressed on self-esteem.

Study 1

Method

Participants and Procedure

The National Longitudinal Study of Adolescent Health (Udry 2003) is a U.S. nationally-representative, probability-

based survey obtained from 80 high schools and 52 middle schools. Responses regarding communal and agentic personality attributes, relationship dynamics, and mental health were collected during the third wave of data, from July 2001 through April 2002, when participants were 18–26 years of age. Only participants with complete data for all variables were included in the analyses, resulting in a sample of 3,174.

Measure

Chronic Self-esteem

Four items were taken from the Rosenberg (1965) Self-Esteem Scale, including having many good qualities, having a lot to be proud of, liking yourself just the way you are, and feeling that you are doing things just about right. Response options (recoded so that higher numbers reflect greater self-esteem) were 1 (*strongly disagree*) to 5 (*strongly agree*). The four items were averaged to create a composite for chronic self-esteem ($\alpha = .78$).

Gendered Personal Standards

Thirty items from the Bem (1974) Sex Role Inventory (BSRI) were used to assess feminine standards in terms of communal attributes and masculine standards in terms of agentic attributes (See Appendix). The response scale ranged from 1 (*never or almost never true*) to 7 (*always or almost always true*). We conducted an exploratory factor analysis of the 30 items using principle factors with promax rotation. The scree plot revealed three factors (eigenvalues>1.0) explaining 98% of the variance, one consisting of communal attributes, one consisting of agentic attributes, and one consisting of negative attributes. We calculated a mean rating across the personality attributes within each of the first two factors to form a *communion* scale ($\alpha = .92$) and an *agency* scale ($\alpha = .84$).

Gendered Behavior

The feminine behavior was the proportion of time participants tried "to notice and respond to [partner's] mood changes." The masculine behavior was the proportion of time they decided "what to do or where to go when you go out." Possible responses ranged from 0 (*never/hardly ever*) to 4 (*most of the time/every time*), with the midpoint of 2 (*about half the time*).

Results

Mean Ratings

Participants generally reported high levels of chronic self-esteem ($M=4.24$, $SD=.56$), with men reporting significantly higher levels of self-esteem ($M=4.31$, $SD=.56$) than did women ($M=4.19$, $SD=.56$), $t(2,851)=-5.96$, $p<.01$. In addition, participants generally tended to hold moderately strong communal self-concepts ($M=5.62$, $SD=.95$), with women reporting strong communal self-concepts ($M=5.78$, $SD=.88$) than did men ($M=5.38$, $SD=.99$), $t(2,616)=11.70$, $p<.01$. Furthermore, participants generally had moderately agentic self-concepts ($M=5.62$, $SD=1.02$), with women reporting slightly stronger agentic self-concepts ($M=5.65$, $SD=.98$) than did men ($M=5.58$, $SD=1.06$), $t(2,694)=1.90$, *ns*. Also, participants usually tried to notice and respond to their partner's mood changes ($M=2.94$, $SD=1.16$), with similar levels of noticing for men ($M=2.95$, $SD=1.18$) and women ($M=2.94$, $SD=1.15$), $t(2,795)=-.31$, *ns*. Finally, about half of the time participants decided where to go or what to do when they went out ($M=2.14$, $SD=.90$), with men deciding slightly more often ($M=2.16$, $SD=0.96$) than did women ($M=2.12$, $SD=.86$), $t(2,625)=-1.34$, *ns*.

Standards Guide Behavior

To demonstrate that the data were appropriate to test our hypotheses, we first conducted analyses to demonstrate that participants with stronger communal and agentic self-concepts acted more consistently with those standards. Participants' gender was included as a covariate in all regression analyses. In addition, given that people with strong agentic self-concepts were likely to have strong communal self-concepts, agency was included as a covariate in the analysis for communion, and communion was included as a covariate in the analysis for agency.

As expected, in models predicting noticing and responding to partner's mood from the BSRI factor composites, more communal participants reported more noticing, unstandardized regression coefficient, $b=.41$, $SE=.04$, $t(124)=10.76$, $p<.01$. In models predicting decision making, more agentic participants reported more decision making, $b=.16$, $SE=.03$, $t(124)=5.09$, $p<.01$. In addition, gender was a significant covariate in one of the models, indicating that in general men spent more time trying to notice and respond to their partner's moods than did women. No other predictors were significant.

Indicating that the behavior prediction effects held for both men and women, the interaction between communal standard and participant gender was not significant in predicting noticing and responding behavior. We further tested continuity across genders by analyzing the models separately for men and women. In these analyses, more communal men and women reported greater noticing of others' moods than less communal men and women (ps<.05). Similarly, more agentic men and women reported greater decision making than less agentic men and women (ps<.05).

Testing Self-regulatory Mechanisms

To test whether self-evaluation serves as a self-regulatory signal, we constructed two separate regression models to predict students' ratings of self-esteem from (a) the strength of communal/agentic self-concept, (b) extent of noticing moods/making decisions, and (c) the interaction between the relevant self-concept and noticing/decision-making behavior.

For communion, the anticipated interaction emerged between possession of communal attributes and extent of noticing and responding to partner's mood, $b = .05$, $SE = .01$, $t(122) = 4.32$, $p < .01$. To interpret this interaction, we calculated simple regression slopes between extent of communal self-concept and self-esteem at varying levels of noticing (Cohen et al. 2003). To identify the levels of communion to use in the simple regressions, we estimated scores one standard deviation above the mean and one standard deviation below the mean (see Fig. 1). Consistent with our predictions, the simple slope was positive for people with greater communal self-concepts, indicating that they had higher self-esteem when they spent more time noticing, whereas it was not as positive, and in fact was slightly negative, for people with less communal self-concepts.

For agency, the anticipated interaction also emerged between agentic self-concept and extent of decision making, $b = .04$, $SE = .02$, $t(122) = 2.63$, $p < .05$. The simple effects are displayed in Fig. 2. Consistent with predictions, the simple slope was positive for people with greater agency, indicating that they had higher state self-esteem when they made more decisions, whereas the slope was less positive and even slightly negative for people with less agentic selves. Thus, participants with stronger gendered selves were more likely to feel good about themselves when they acted in ways consistent with those standards.
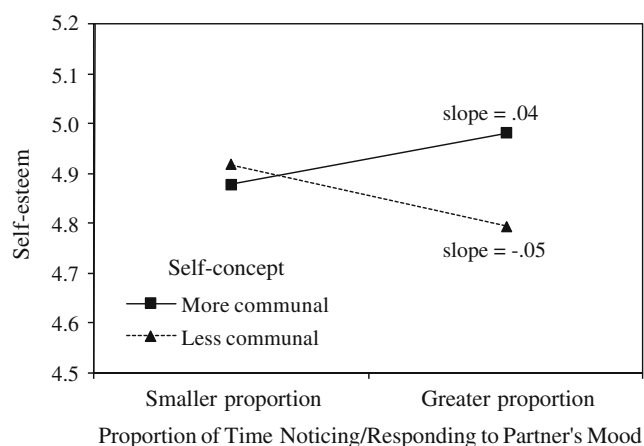

Fig. 1 Regression predicting self-esteem from communal self-concept and proportion of time noticing/responding to partner's mood.
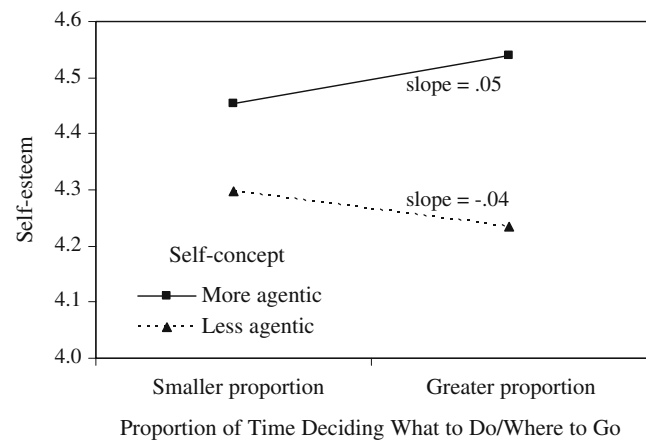

Fig. 2 Regression predicting self-esteem from agentic self-concept and proportion of time deciding what to do/where to go.

In addition, the main effects for gender and agentic self-concept were significant, indicating that in general men and more agentic individuals reported higher levels of self-esteem than did women and less agentic individuals (ps < .05). No other predictors were significant. Given that gender was a significant covariate, we evaluated whether the predictions held for both men and women. As expected, participant gender did not interact with communal/agentic standards and behavior in predicting well-being. In addition, when the models were estimated separately for each gender, men and women with greater communal self-concepts exhibited higher self-esteem when they spent more time noticing others' moods (ps < .05). Additionally, women with greater agentic self-concepts exhibited higher self-esteem when they made more decisions ($p < .05$), and the agency effect for men was in the same direction but did not reach significance.

Discussion

This first study provides preliminary evidence for our self-regulatory model of gender. Specifically, self-esteem appeared to serve as a regulatory signal that behavior was congruent with participants' gendered self-concepts. When participants in the study acted in ways consistent with their agentic or communal self-concepts, they had greater self-esteem than when they did not act according to their self-concepts. Furthermore, this effect was not one in which participants with positive self-standards engaged in positive behaviors and reported higher self-esteem. Instead, the effects emerged in a more specific form in which communal attributes predicted self-esteem following noticing others' moods but not decision making, and agentic attributes predicted self-esteem following decision making and not noticing moods.

Although the cross-sectional data from the adolescent health study are in line with our model, they are silent with respect to the causal order of the effects. As specified in our

self-regulatory model, positive self-esteem might arise as people use gendered self-concepts to guide behavior (i.e., standards → behavior). Alternatively, it could be that esteem arises after-the-fact as people draw gendered inferences about the self from their behavior (i.e., behavior → standards). To clarify the causal ordering of the role of emotion and self-evaluation in regulatory processes, we conducted a second study using an event-contingent diary design. We examined whether individuals' gendered personal standards serve as on-line guides to their behavior within their daily interactions, and whether emotion and self-esteem serve as dynamic, changing signals that co-occur with behavior to indicate its match to gendered standards.

In the second study, participants reported their gendered standards with respect to two domains, personality traits and romantic relations. These domains allowed us to replicate the findings from the first study with respect to personality and to extend them to a new gender stereotypic domain involving romance. Romantic gender standards are evident in the stereotypic beliefs that men pursue and women attract. For example, sexual scripts for how men and women behave on a first date involve men initiating, planning, and paying and women waiting, grooming, and rejecting sexual advances (Rose and Frieze 1989). Also relevant is the sexual double standard, as evident in men's greater acceptance of premarital sex (Oliver and Hyde 1993).

We first assessed the extent to which participants held gendered standards. We then conducted a week-long diary assessment in which participants reported via an event-contingent diary record on their gender-consistent behavior during everyday social interactions and their emotions and state self-esteem. From these ratings, we could evaluate the dynamic influence of behaviors that met or failed to meet gendered standards on emotion and self-esteem.

Our analysis strategy was the same as the first study in that we first had to demonstrate that participants with more gendered self-concepts acted more consistently with those standards. That is, men and women with more communal/agentic/gender-typed romantic self-concepts acted in more gender-typed ways than those with less gendered self-concepts.

Hypotheses for Study 2

Participants with gender-typed self-concepts (agentic/communal/romantic) who act in consistent ways (agency/communion/romance) will have greater self-esteem and experience more positive emotion than those who act in less consistent ways. For participants with less gender-typed self-concepts, self-esteem and emotion will not depend on performance of these behaviors. This pattern will emerge in significant interactions between gendered self-concept and extent of behavior performance when regressed on self-esteem and emotion.

Study 2

Method

Participants

One hundred seventy-seven undergraduate students (115 women and 62 men) participated in partial fulfillment of a requirement in their introductory psychology course. The data from an additional 25 participants were excluded from the analyses due to unreliable reports; they completed at least 25% of reports 30 min or more following the interaction.

Procedure

In groups of approximately eight, participants attended an introductory meeting for a study entitled "Sex Roles." Upon arrival, they completed a battery of questionnaires about gender identity (via the computer, see below) and then a daily diary of social interactions for 1 week (see interaction diary form booklet below).

The diary procedure was adapted from the standard structure devised in the Rochester Interaction Record (Reis and Wheeler 1991). Participants were to carry their diary forms with them and to complete a diary record for each interaction with one or more persons that lasted at least 10 min. A social interaction was defined as verbal communication or nonverbal contact in which the behavior of one person influenced the behavior of another, such as two or more people engaging in conversation or one person expressing interest in or giving the cold shoulder to another person. As is standard in such procedures, to ensure accuracy, participants were told to complete the diary form within 30 min of the end of that interaction or to disregard that interaction.

To encourage completion of the diary, at the first session participants formed implementation intentions by describing how they would remember to complete the form after each relevant interaction (Gollwitzer 1999). In addition, participants signed a "Contract" indicating their commitment to complete the data collection. Participants then scheduled a follow-up session and were excused.

Participants returned individually every two to three days to submit completed forms, answer questions concerning the accuracy of their reports, and take more forms if needed. At the end of the week, participants received experimental credit, were debriefed, and were excused.

Pre-test Measures

Chronic Self-esteem

Rosenberg's (1965) self-esteem scale assessed chronic self-esteem. This measure consists of 10 items that each are

rated on 9-point scales anchored by 1 (*strongly disagree*) and 9 (*strongly agree*). The ten items were averaged to create a composite for chronic self-esteem (α=.87).

Gendered Personal Standards

For personality, all participants rated one item for communal traits and one item for agentic traits. For communal traits, men and women rated, "to what extent is it important that you act in a caring, warm, or sensitive manner?" For agentic traits, men and women indicated, "to what extent is it important that you act in a dominant, powerful, or assertive manner?" Own gender-typed standards were always assessed first, such that for women, communion was assessed first, and for men, agency was assessed first. Each description was rated on a 9-point scale, ranging from 1 (*not at all*) to 9 (*very much so*).

For romance, all participants rated one item regarding how important it was that they display gender-consistent behavior. Women rated, "to what extent is it important that you act in a feminine manner with respect to romance (flirting, dating, etc.)?" Men rated, "to what extent is it important that you act in a masculine manner with respect to romance (flirting, dating, etc.)?" Each item was rated on a 9-point scale, ranging from 1 (*not at all*) to 9 (*very much so*). Because we assessed only the gender-appropriate standard for romance, we conducted the analyses on women's endorsement of feminine standards and men's endorsement of masculine standards. Our assessment of two domains of gender-typical standards (i.e., personality, romance) and the use of slightly different designs to assess their effects are strengths of the research because they test the robustness of our regulatory model across these minor variations in operationalization.

In addition to personality traits and romantic relations, we initially explored a third domain, gender-typical standards with respect to physical appearance. However, concerns about appearance did not vary with gender among our college student participants, and instead appeared to be guided by other standards (e.g., attractiveness, physical fitness). Thus, these findings are not discussed further.

Diary Measures

State Self-esteem

For a brief measure of state self-esteem in the diaries, we used Robins et al.'s (2001) single-item self-esteem scale. This measure consists of the item, "I have high self-esteem." We adapted the wording of the item to tap current self-evaluation, "Right now I feel like I have high self-esteem." It was measured on a 9-point scale ranging from 1 (*not true of me*) to 9 (*very true of me*).

Emotion

To assess the positive and negative emotion experienced during the interaction, participants indicated, "to what extent did the interaction make you feel good?" and then they indicated, "to what extent did the interaction make you feel bad?" The two items were measured on 9-point scales ranging from 1 (*very weak positive/negative feelings*) to 9 (*very strong positive/negative feelings*). Because participants' ratings for positive feelings were correlated with their ratings for negative feelings, $r(175)=-.61$, $p<.01$, we created a composite for emotion by subtracting negative emotion from positive emotion. Although we report only the analyses for the composite measure for emotion, we obtained almost identical results when we conducted the analyses on positive and negative ratings separately.

Behavior

Two items assessed the extent to which, during an interaction, participants acted in a gender-typed way with respect to personality: "to what extent did you act in a dominant, powerful, or assertive manner?" and then, "to what extent did you act in a caring, warm, or sensitive manner?" Two other items assessed the extent to which, during an interaction, participants acted gender-typed in general: "to what extent did you act in a feminine manner?" and then, "to what extent did you act in a masculine manner?" Each item was measured on a 9-point scale, ranging from 1 (*not at all*) to 9 (*a great deal*). During the initial explanation of how to fill out the measure, examples were provided of acting feminine versus masculine (e.g., wearing feminine clothing, comforting a friend versus initiating sexual contact, paying for a date). In addition to these behavioral measures, participants also rated the number and gender of interaction partners for each of the interactions they reported. Because these factors did not yield any systematic effects, we do not discuss them further.

Results

Mean Ratings and Correlations

Mean ratings of individual difference and social interaction variables are presented by gender in Table 1. Participants generally reported high levels of chronic self-esteem and positive emotions. In addition, people tended to hold gender-consistent personal standards with respect to personality and romance. Also, participants indicated that, during the interactions, their behavior was moderately communal, agentic, and gender-consistent (i.e., masculine for men, feminine for women).

Table 1 Mean ratings for individual difference and social interaction variables by gender.

	Men		Women	
	M	SD	M	SD
Number of reported diary interactions	20.42	7.20	20.51	8.72
Rosenberg's (1965) chronic self-esteem scale	7.50[a]	1.29	6.97[c]	1.26
Personal standards for communion	6.47[a]	1.95	7.87[b]	1.48
Personal standards for agency	5.89	1.78	5.49	1.99
Personal standards for gender-consistent romance	6.77	1.61	6.94	1.48
Diary measure of self-esteem	7.29	.95	7.07	.96
Diary measure of emotion	4.42	1.53	4.23	1.71
Diary measure: Did P act communal?	4.29[a]	1.17	6.21[b]	1.11
Diary measure: Did P act agentic?	5.90[a]	1.05	4.69[b]	1.45
Diary measure: Did P act gender-consistent?	6.83[a]	1.04	6.53[c]	1.16

Higher numbers reflect greater chronic self-esteem (range 1–9), greater importance of displaying communal, agentic behavior, or gender-consistent romantic behavior (range 1–9), greater diary self-esteem (range 1–9), more extreme positive emotions (range −8 to 8), and greater communal, agentic, and gender-consistent behavior during the interaction (range 1–9). $N=115$ for women, $N=62$ for men.

[ab] indicates gender difference is consistent at the .01 level.

[ac] indicates gender difference is consistent at the .05 level.

Bivariate correlations between the various measures are reported in Table 2. In general, people who held communal, agentic, or gender-consistent romantic standards reported acting consistently with those standards during the interactions.

Analytic Strategy

Given that interaction reports are nested within individual participants and thus are not independent, we analyzed the data using multilevel regression, which first estimates a

regression equation for each participant to represent the relationship between between-subjects predictors (e.g., personal standards for communion) and a within-subjects outcome (e.g., self-esteem) and then essentially aggregates the intercepts and slopes from these equations to yield a mean intercept and slope across participants (Kenny et al. 1998). For these analyses, personal standards were centered across participants and behavior was grand-mean centered.

To evaluate whether our hypothesized effects varied with participant gender and chronic self-esteem, we used a two-pronged strategy because specification of the model was

Table 2 Correlations among chronic self-esteem and emotion, personal standards for personality and romance, and behavior by gender.

	Global self-esteem Rosenberg (1965)	Mean esteem	Mean emotion	Standards communion	Standards agency	Standards romance	Communal behavior	Agentic behavior	Gender-Consistent behavior
Rosenberg global self-esteem		.49**	.42**	.06	.06	.18	.03	−.06	.22^
Mean level of state self-esteem	.50**		.76**	.01	.15	.12	.06	−.03	.27*
Mean level of state emotion	.27**	.66**		.15	−.01	.13	.09	−.11	.15
Communal standards	.05	.14	.16^		−.32*	−.05	.53	−.23^	−.11
Agentic standards	−.002	.02	−.11	−.05		.23^	−.16	.33**	.26*
Romance standards	.09	.12	.09	.18^	.18^		−.03	.32*	.29*
Communal behavior	−.03	.30**	.29**	.40**	−.07	.10		−.17	−.05
Agentic behavior	.0004	.10	−.25**	−.05	.52**	.23*	−.02		.57**
Gender-consistent behavior	.07	.26**	.14	.15	.13	.38**	.44**	.20*	

Correlations for men ($N=62$) are above the diagonal; correlations for women ($N=115$) are below the diagonal.

^$p<.10$. *$p<.05$. **$p<.01$.

challenged by the large number of possible predictors. We first constructed a set of models that tested the effects of participant gender in conjunction with other predictors and then we constructed a set of models that tested the effects of chronic esteem in conjunction with other predictors. In the models separately evaluating the effects of participant gender and chronic esteem, these factors did not interact with the variables of interest. Thus, for ease of presentation, we report in the text the models that included as control variables only the main effects of gender and chronic self-esteem.

In addition, we anticipated that our predictions for gender-typed romantic standards would hold primarily in peer settings in which romance is relevant to the interaction. Therefore, our analyses for romance only included those social interactions that involved peers (i.e., 66% of all interaction records). Nonetheless, analyses on the full set of interaction records yielded similar patterns.

Standards Guide Behavior

To demonstrate that the data were appropriate to test our hypotheses, we first conducted analyses to demonstrate that participants with stronger gender standards acted more consistently with those standards. We constructed three multilevel regression models to predict students' communal, agentic, or gender-consistent behavior during their interactions from their standards for communion, agency, or romance.

The analyses yielded the anticipated main effects in all three models. Participants behaved more communally when they more strongly endorsed self-standards for communion, $b=.32$, $SE=.04$, $t(164)=7.12$, $p<.01$, they behaved more agentically when they more strongly endorsed self-standards for agency, $b=.33$, $SE=.05$, $t(177)=6.99$, $p<.01$, and they behaved more gender-consistently with peers when they more strongly endorsed gender-typical standards for romance, $b=.22$, $SE=.05$, $t(174)=4.26$, $p<.01$. In addition, gender was a significant covariate in each model ($ps<.05$), indicating that men generally acted in less communal and more agentic ways than did women, and that men more than women acted in more gender-consistent ways with peers. However, participant gender did not interact significantly with the gender standards in predicting behavior. Furthermore, when each of the three models was conducted separately for men and women, the predicted effects remained such that men and women with stronger gendered standards acted more consistently with those standards ($ps<.05$).

Furthermore, the standard effects on behavior proved to be specific to each domain. Self-standards for communion did not predict agentic behavior (ns), and standards for agency did not predict communal behavior (ns). Thus, participants generally were successful at tailoring their behavior in everyday social interactions to match specific valued self-standards.

Testing Self-regulatory Mechanisms: Hypothesis 2

To test whether self-evaluation and emotion serve as dynamic signals of success at self regulation, we constructed separate multilevel regression models to predict students' ratings of state self-esteem and emotion after each interaction from (a) the strength of the relevant self-standard, (b) the extent to which behavior was communal/agentic/consistent with gender standards for romance, and (c) the interaction between these predictors. We calculated six regression models given the replication across three domains (i.e., communion, agency, romance) and the prediction of two measures of well-being (i.e., state self-esteem, emotion).

The analyses yielded the predicted interaction between gender standard and behavior in 5 of the 6 models. For communion, the anticipated interaction emerged between endorsement of gendered standards and communal behavior in the analysis on state self-esteem, $b=.03$, $SE=.01$, $t(152)=2.91$, $p<.01$, and emotion, $b=.10$, $SE=.03$, $t(154)=3.42$, $p<.01$. We interpreted the interactions as we did in "Study 1" and simple effects are displayed in Figs. 3 and 4, respectively. As expected, for participants with stronger communal standards, the simple slopes were relatively steep, reflecting higher state self-esteem and more favorable emotions with more communal actions. The slopes were less steep for those who held weaker standards. Suggesting that the effects held for men and women, the Communal Standard × Communal Behavior × Participant Gender analyses were not significant.

For agency, the anticipated interaction emerged between endorsement of agentic standards and agentic behavior in the analysis on emotion, $b=.07$, $SE=.03$, $t(161)=2.32$, $p<.05$, and (marginally) in the analysis on state self-esteem, $b=.02$, $SE=.01$, $t(166)=1.84$, $p<.10$. The simple effects for self-esteem and emotion are displayed in Figs. 5 and 6, respectively. As expected, for participants with more
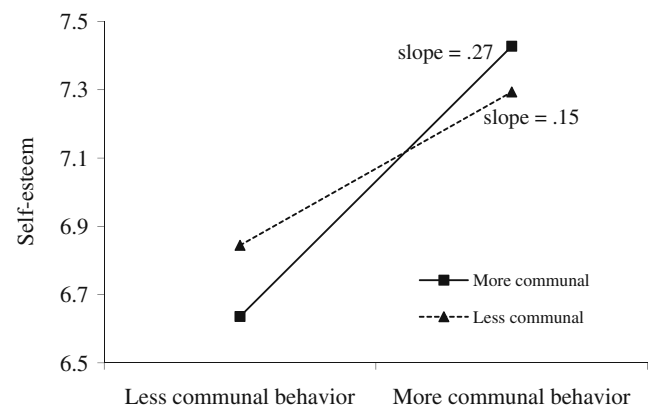

Fig. 3 Regression predicting self-esteem from personal standards for communion and communal behavior.
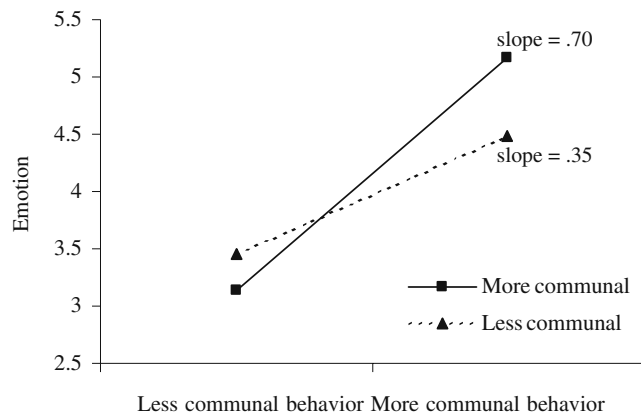
Fig. 4 Regression predicting emotion from personal standards for communion and communal behavior.

agentic standards, the simple slopes were relatively steep, reflecting higher state self-esteem and more favorable emotions with more agentic actions. Suggesting that these effects held for men and women, the 3-way interaction was not significant between agentic standards, agentic behavior, and participant gender.

In evidence that these effects for agency and communion were domain-specific, self-esteem and emotion did not vary as a function of matching agentic behavior to communal standards. Also, these measures of well-being did not vary as a function of matching communal behavior to agentic standards.

For gender-consistent standards for romance, the anticipated interaction emerged (marginally) between endorsement of the gender standard and masculinity/femininity of behavior in the analysis on state self-esteem, $b=.03$, $SE=.02$, $t(133)=1.69$, $p<.10$. The simple effects are displayed in Fig. 7. As expected, for men with more masculine standards and women with more feminine ones, the simple slope was relatively steep, reflecting higher self-esteem with more gender-consistent actions. The slope was less steep for participants with weaker gender identity for romance. Furthermore, the effects held across men and women—the 3-way interaction between participant gender, gender standard, and behavior was not significant.

Discussion

The findings of this second study illustrate how self-regulatory mechanisms function in ongoing social interaction. For participants who more strongly endorsed gendered standards, state self-esteem and emotions appeared to serve as dynamic signals indicating their success or failure at meeting the standard during social interactions in everyday life. Furthermore, the signaling role of emotions and esteem was sufficiently robust to emerge across two different behavioral domains, personality traits and romance, and

across two sets of gender-typical traits within the personality domain, agency and communion.

The diary method in the second study provides unique insight into the dynamics of regulatory mechanisms. We conceive of this process as having multiple stages. In the first stage, a match or mismatch between standards and behavior during a social interaction yields a particular emotional experience, and in the second stage, positive outcomes orient people to repeat actions whereas negative ones orient them to change actions to align more closely with standards. Our data provide direct evidence of the first stage in this process. Although prior research had already examined the effect of gender-related self-discrepancies on negative well-being (Grimmell 1998; Grimmell and Stern 1992; Halliwell and Dittmar 2007), the full pattern of these effects had to date escaped direct test. That is, acting consistently with standards promotes well-being whereas acting inconsistently impairs it. Our diary method also tapped the dynamic nature of this process in demonstrating that well-being varies as a regulatory consequence of each person's behavior across everyday life events. Although we did not evaluate the second stage in the regulatory process, in which emotions guide future action, these relations already have been documented securely in research relating future performance to the presence of positive outcomes (e.g., praise or acceptance) and absence of negative outcomes (e.g., not being criticized or rejected; see Moretti and Higgins 1999).

Nature of Gender Identity

In addition to addressing the self-regulatory mechanisms guiding gendered behavior, the present findings provide insight into the nature of gender identity. Our results suggest that gendered self standards are domain specific and are not well-captured by a single, overall construct that reflects feminine or masculine identity. Evidence for this
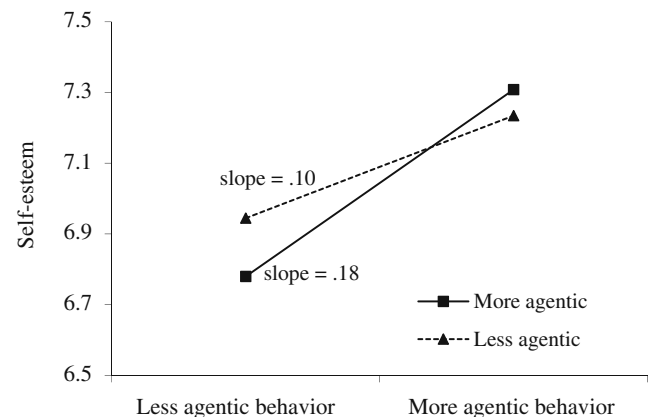

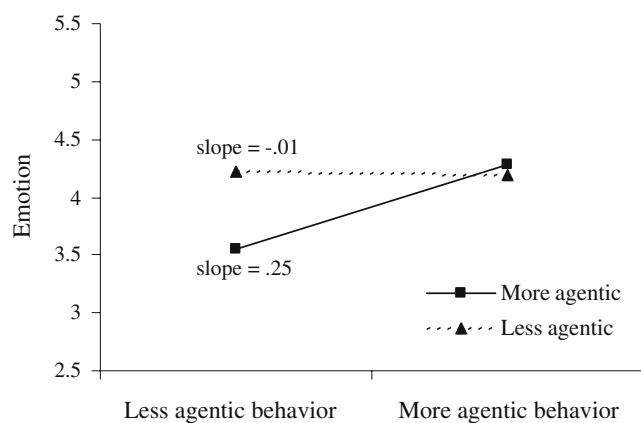Fig. 5 Regression predicting self-esteem from personal standards for agency and agentic behavior.

Fig. 6 Regression predicting emotion from personal standards for agency and agentic behavior.

specificity stems from the small bivariate correlations that emerged between the various measures of gender standards in "Study 2" (see Table 2). That is, our participants who strongly identified with their own gender group with respect to communion did not necessarily do so with respect to agency or to romantic relations. Thus, gender-typing appears to be a multifaceted construct such that people hold gender standards with respect to some domains but not others (see Wood and Eagly 2010).

Our conclusion that gender self-standards serve as self-regulatory guides is not uniformly accepted. In an alternative view, Sanchez and Crocker (2005) proposed that gendered standards function like contingencies of self-worth. They argue that standards are experienced primarily as negative pressures that are detrimental to mental health and general well-being. Yet, several aspects of our data challenge this view. In "Study 1", greater endorsement of masculinity and femininity (as assessed through items from the BSRI) was associated with greater self-esteem, rs(3172)=.21 and .13, for masculinity and femininity, respectively (ps<.05). In addition, the highest levels of self-esteem were expressed by gender-typed people who engaged in gender-appropriate behavior. Furthermore, the lowest self-esteem was not expressed by individuals who reported gendered standards and failed to act in a consistent manner. In "Study 2", our results provided evidence that gendered standards for romance and for personality function like other self-regulatory guides and are not generally detrimental to well-being. That is, standards in the domains in our research were essentially unrelated to chronic levels of self-esteem, with correlations ranging from r(175)=.11 to r(175)=−.02, ns. In fact, gendered standards enhanced well-being when participants lived up to them and impaired well-being when participants violated them. That is, gendered standards only appeared harmful for participants who strongly endorsed them but consistently failed to meet them. We

believe that this pattern is characteristic of most self-guides, such that endorsing the guide is neutral overall with respect to self-worth, but becomes a boon when met and a bane when unmet.

Although our hypotheses concerned the self-evaluation of participants who endorsed gender-typical standards, it is interesting to consider the participants who did not identify with their gender. If participants who scored low on our gender identity measures were expressing counter-stereotypic identities, they should have felt better about themselves when they acted in ways counter to conventional gender-typing. However, this pattern did not emerge. That is, in the regression analyses predicting self-esteem and emotions, the participants who scored one standard deviation below the mean on standards for personality or romance did not feel better about themselves when acting in non-gender typical ways. The relatively flat line for these participants suggests instead that their self-worth was insensitive to whether their behavior was gender-consistent on the relevant dimension. It may be that participants with lesser endorsement of gender-typed standards guided their behavior according to standards in domains unrelated to gender, such as hedonistic principles or religious values.

Nature of Self-regulation

We did not in this study evaluate the specific comparison group with whom participants judged their gender-typed standards and behavior, and we do not know, for example, whether women judged their femininity with respect to other women, men, or both genders (see Collins et al. 2006). Nonetheless, from a self-regulatory perspective, the critical aspect to the judgment process is whether behavior matched or mismatched personal standards and the resulting emotions and self-evaluation. As long as people believe that their responses match their standards, positive self-
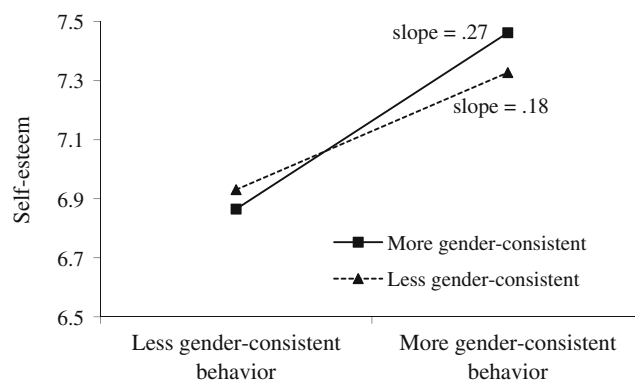

Fig. 7 Regression predicting self-esteem from gender-consistent personal standards for romance and gender-consistent behavior.

esteem and emotion will result. When behavior does not match standards, self-esteem and emotions are lowered, and some adjustment presumably is required.

Given that participants completed a set of gendered ratings and self-evaluations for each interaction rated in "Study 2", it is worth considering whether the obtained effects are a product of the assessment process itself. Perhaps the assessment focused participants' attention on their gendered behavior and self-esteem, and gender-typed individuals systematically linked these because they intuited our hypotheses. However, this kind of demand characteristic is not especially plausible given that our questionnaire included a variety of additional questions, in particular regarding gendered standards for appearance. If participants responded in the way they did because they guessed the hypothesis, then those who thought it important to be masculine or feminine in their appearance and who acted accordingly should have reported similar changes in self-esteem and emotion to those reported in the text for personality and romance. But appearance standards did not show the same effect (see Study 2 "Method"). Further weakening a demand explanation, Study 1 used a very different design but provided additional evidence that participants who acted consistently with gender standards felt better about themselves than those who acted inconsistently.

Conclusion

This research provides important insight into the self-regulatory mechanisms underlying gendered behavior. For participants with stronger gender standards with respect to personality or romance, emotions and self-evaluation served as regulatory signals that behavior was matching or failing to match those standards.

The two studies used a correlational design, with the first study testing our hypotheses in a cross-sectional design and the second study using a diary method to track gender regulation as it emerged dynamically in ongoing interactions. These investigations augment Wood et al.'s (1997) earlier experimental simulation in which men and women were randomly assigned to experience vicariously communal or dominant social interactions. In that highly structured setting, participants who held strong personal standards for gender reported feeling better about themselves when acting in gender-consistent ways. In the present investigation, we demonstrated that these emotion and self-evaluative signals emerge naturally as part of ongoing social interaction (Study 2) and that they influence people's chronic self-assessments (Study 1). Thus, across these various research paradigms, a coherent picture is emerging of the self-regulatory mechanisms that guide gendered behavior.

Appendix

Items from Bem (1974) Sex Role Inventory (BSRI)

Agentic	Communal	Negative
Defends beliefs	Is affectionate	Is moody
Is independent	Is conscientious	Is jealous
Is assertive	Is sympathetic	Is forceful
Is reliable	Is sensitive	Is secretive
Has a strong personality	Is understanding	Willing to take risks
Has leadership skills	Is compassionate	Is dominant
Willing to take a stand	Is truthful	Is conceited
	Eager to heal hurt feelings	Is aggressive
	Is warm	
	Is adaptable	
	Is tender	
	Loves children	
	Is tactful	
	Is gentle	
	Is conventional	

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