Testing the GRIP: An Empirical Examination of the Gender Roles Inhibiting Prosociality Model

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Declarations

Abstract

Although men and women help others, there are systematic gender differences in the type of helping they perform. Consistent with traditional gender roles and stereotypes, men typically help in agentic ways, and women typically help in communal ways. Drawing on the Theory of Planned Behavior, the Gender Roles Inhibiting Prosociality model predicts that gender stereotypes about gender-inconsistent helping create negative attitudes, restrictive subjective norms, and low self-efficacy that undermine helping intentions, which, in turn, reduce engagement in gender-inconsistent helping contexts. Across three studies ($N = 1,355$), we find empirical support for the hypothesized model: When asked to imagine engaging in a gender-inconsistent (vs. gender-consistent) helping scenario, participants anticipated feeling worse, expected others to judge them more negatively, and reported decreased self-efficacy beliefs, and these factors predicted lower intentions to engage in gender-inconsistent helping. Critically, behavioral intentions explained some of the variance in gender-inconsistent helping during the following month. Internal meta-analyses of the differences between gender-consistent and -inconsistent helping on attitudes, subjective norms, self-efficacy, and behavioral intentions across studies revealed small-to-medium average effect sizes (ds = 0.16 - 0.47). These results have the potential to inform interventions aimed at increasing helping in all its forms.

Keywords: gender, stereotypes, gender roles, prosocial behavior, helping

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Prosociality refers to kind actions that benefit others. Prosocial actions take on many familiar forms, like charitable giving, volunteering, donating blood, or the everyday kinds of helping that we focus on in the current research, such as sharing food or offering advice to others (Aknin & Whillans, 2021). Prosociality is a hallmark of a well-functioning society (Bowles & Gintis, 2003; Rand & Nowak, 2013), and performing prosocial acts can provide personal benefits to the helper, including positive reputational rewards (Willer, 2009; Willer et al., 2010), better physical health (Brown et al., 2009; Kushlev et al., 2020; Lyubomirsky et al., 2005; Whillans et al., 2016), and increased emotional well-being and meaning in life (Aknin et al., 2013,2015; Van Tongeren et al., 2016). Despite the benefits of prosociality, people sometimes choose not to help others, and research has examined factors that restrict helping behaviors (Latané & Darley, 1970; Piliavin et al., 1981), including gender roles. Traditional gender role stereotypes have been identified as a barrier to helping others (Eagly, 2009; Eagly & Crowley, 1986), and the present research builds on this theorizing by empirically examining the proximal factors that undermine engagement in everyday forms of prosociality that violate gender roles.

Gender Differences in Prosocial Behavior

Gender stereotypes characterize men as more *agentic* than women, and women as more *communal* than men (Wood & Eagly, 2010). Agency is associated with traits like competitiveness, independence, and dominance over others, while communion is linked to traits like friendliness, concern for others, and increased emotional expression. Gender stereotypes inform the behavior of people in a variety of contexts, including when and how people decide to

help others (Eagly, 2009; Eagly & Crowley, 1986). Although there are no gender differences in

overall helping frequency (i.e., there is not a more helpful sex), men and women typically help in

ways that are congruent with gender stereotypes (i.e., *gender-consistent* helping) and avoid

helping in ways that are incongruent with gender stereotypes (i.e., *gender-inconsistent* helping;

Diekman & Clark, 2015; Eagly, 2009; Eagly & Crowley, 1986). That is, men tend to help in

agentic ways by taking initiative to provide unsolicited assistance to strangers, engaging in

chivalrous actions to protect weaker others, and performing physically strenuous and risky tasks

in emergency scenarios (Becker & Eagly, 2004; Eagly, 2009; Rankin & Eagly, 2008). These

helping behaviors are more frequently observed in men than women and involve traits like

assertiveness and taking initiative, which are congruent with masculine gender stereotypes.

Conversely, women tend to help in communal ways by engaging in caregiving behaviors and by

providing personal and emotional support to close others (Diekman & Clark, 2015; Eagly, 2009).

These helping behaviors are typically performed by women more than men and require attributes

like expressiveness and concern about the needs of others, which are in line with feminine

gender stereotypes. Gender-inconsistent helping for men involves helping that is more

communal, whereas gender-inconsistent helping for women involves helping that is more

agentic.

The Gender Roles Inhibiting Prosociality (GRIP) model

The Gender Roles Inhibiting Prosociality (GRIP) model (Croft et al., 2020) is an

integrative process model that explains how gender stereotypes undermine helping behavior. It

integrates Social Role Theory (Wood & Eagly, 2010) and the Theory of Planned Behavior

(Ajzen, 1991, 2002) to outline the distal and proximal factors that prevent people from helping in

gender-inconsistent ways. The present research is the first empirical examination of the GRIP

model and tests the *proximal* predictors of helping in a series of incremental studies (see Figure 1

for components of the model tested in the current research). Below we include a brief description

of the GRIP model but see Croft et al., 2020 for a more in-depth discussion.

Briefly, the GRIP model uses Social Role Theory to explain how gender stereotypes lead

people to engage in gender-consistent forms of helping at the *distal-level*. According to Social

Role Theory, gender stereotypes about how men and women *are* and *should be* arise from

repeated observations of the types of social roles that men and women typically occupy in a

society (Wood & Eagly, 2010). Because people tend to observe others engaging in helping

behaviors that are consistent with gender roles (and avoiding helping behaviors inconsistent with

gender roles), gender stereotypes continue to enforce the norm that people should help others in

gender normative ways (Eagly, 2009). Importantly, these gender stereotypes are internalized into

the self-concept during early gender socialization processes, and people use them as a standard

against which they evaluate their own behavior through self-stereotyping (Hentschel et al.,

2019), and to evaluate the behavior of others. As a consequence, people come to learn that

gender-consistent helping is expected and appropriate, and that gender-inconsistent helping

should be avoided.

In addressing how gender stereotypes influence helping behavior, the GRIP model

considers not only societal-level, but also individual-level factors. It proposes that gender

stereotypes operate to decrease engagement in gender-inconsistent helping by negatively

impacting *proximal,* psychological factors known to predict behavior. Drawing on the Theory of

Planned Behavior (Ajzen, 1991, 2002), the GRIP model predicts that engagement in a helping

behavior is predicted by people's intentions to help others, and intentions to help others are

predicted by a combination of (a) one's attitudes toward the helping behavior, (b) one's

perception of the subjective norms regarding the helping behavior, and (c) one's perceived

control or self-efficacy over the helping behavior. Thus, the more positive a person's attitudes,

the more they perceive that others approve of them engaging in a behavior, and the higher their

self-efficacy, the greater their intentions to engage in the behavior will be. The model predicts

that when people are confronted with an opportunity to help in a gender-inconsistent manner,

they experience negative attitudes toward the behavior, increased concern about negative

evaluations from others, and low self-efficacy– all of which combine to predict lower behavioral

intentions and engagement. In the following section, we discuss each proximal factor in greater

detail, grounded within existing research, then outline predictions for behavioral intentions and

engagement.

Attitudes toward the behavior. People are more likely to engage in behaviors if they

hold favorable attitudes toward those behaviors, and attitudes are predicted by expectations about

the potential outcomes associated with a given behavior (Ajzen, 1991, 2002). To illustrate, if a

person has the opportunity to help someone and they expect that doing so will result in favorable

outcomes (e.g., a boost in mood, achievement of an important goal), then they should form more

positive attitudes toward that behavior, which, in turn, should increase their behavioral intentions

and engagement. But if someone anticipates a behavior will result in negative outcomes, they

should form more negative attitudes toward that behavior, which should decrease behavioral

intentions and engagement.

What determines whether or not someone will form positive attitudes toward a helping

behavior? Attitudes have been operationalized as both affective, relating to one's emotional

evaluation of a target or behavior (Wilson & Gilbert, 2003), and cognitive, relating to the

perceived valence of a given construct (Ajzen, 1991, 2002), and the GRIP model theorizes that

both operationalizations should provide meaningful insight into evaluations of gender-consistent and gender-inconsistent helping behaviors (see Croft et al. 2020 for more details). Research on affective forecasting illustrates that people consider how different behaviors will make them feel, and the extent to which a person anticipates feeling negatively after engaging in a behavior (i.e., holds negative attitudes) predicts lower intentions to perform that behavior (Loewenstein et al., 2003; Mellers & McGraw, 2001; Wilson & Gilbert, 2003). People tend to report more positive feelings after engaging in gender-consistent behaviors (Wood et al., 1997), so it is possible that people may anticipate feeling better after engaging in gender-consistent (vs. inconsistent) forms of helping.

With respect to both the cognitive and affective evaluations of attitudes, the Theory of Planned Behavior predicts that people who anticipate that their engagement in a given behavior will yield a negative outcome should be less likely to engage in that behavior (Ajzen, 1991, 2002). Similarly, when people use gender stereotypes to forecast the potential outcomes associated with their engagement in a behavior (Brown & Diekman, 2010; Croft et al., 2019), these forecasts shape the goals and roles that men and women internalize and pursue (Diekman et al., 2010, 2011; Diekman & Eagly, 2008; Evans & Diekman, 2009). As outlined by Goal Congruity Theory, men and women internalize agency and communal-oriented goals to varying degrees, which guides their selection of agentic and communal social roles to afford the achievement of these motivational goals. Applying this theorizing to helping, we posit that people should form positive attitudes toward behaviors that facilitate fulfillment of important goals and gender role expectations, and similarly form negative attitudes toward behaviors that do not facilitate the achievement of important goals and gender role expectations. In other words, people should expect more favorable outcomes (i.e., positive attitudes) to occur if they engaged

in gender-consistent helping, and less favorable outcomes (i.e., negative attitudes) toward

gender-inconsistent forms of helping. Taken together, we hypothesize that people will form less

favorable attitudes toward gender-inconsistent helping opportunities than gender-consistent

helping opportunities (Hypothesis 1a).

Subjective norms. Subjective norms refer to one's perception of what important others

think they should or should not do. If an individual expects that important others disapprove of

them engaging in a particular behavior, they should report lower intentions—and subsequent

engagement—in that behavior. Likewise, if an individual expects that important others approve

of them engaging in a particular behavior, they should report greater intentions—and subsequent

engagement—in that behavior (Ajzen, 1991, 2002).

Gender stereotypes inform expectations for appropriate behavior within a culture.

Although research suggests that men and women are more similar than different (Hyde, 2005,

2014), people often exaggerate and essentialize the differences between them (Prentice &

Carranza, 2002; Prentice & Miller, 2006). Furthermore, the behaviors people perform can lead to

social rewards or punishments. On one hand, when people behave in ways that are consistent

with gender stereotypes, they fulfill perceivers' expectations, and research on Role Congruity

Theory demonstrates that people are rewarded for these actions (Diekman & Goodfriend, 2006).

On the other hand, when people deviate from societal standards set for their group, they

experience social backlash (e.g., Heilman et al., 2004; Rudman & Fairchild, 2004; Rudman &

Glick, 2001; Rudman & Mescher, 2013). Specifically, women who engage in male-stereotypic

(vs. female-stereotypic) behaviors are perceived as less likeable and lower in warmth (Heilman

et al., 2004; Rudman, 1998; Rudman & Glick, 2001; Rudman et al., 2012), and men who engage

in female-stereotypic (vs. male-stereotypic) behaviors are perceived as weaker and lower in

competence (Moss-Racusin et al., 2010; Rudman & Mescher, 2013). Importantly, people are

concerned about the consequences associated with gender role violations, a process known as the

fear of backlash effect, and are motivated to avoid social backlash by engaging in gender

congruent behaviors (Amanatullah & Morris, 2010; Moss-Racusin & Rudman, 2010; Rudman &

Fairchild, 2004).

Because gender-inconsistent forms of helping violate gender stereotypes, people may

anticipate that others will evaluate them negatively if they engage in these behaviors, which

should lead to decreased intentions and enactment of this form of helping. Thus, we hypothesize

that people will report more restrictive subjective norms toward gender-inconsistent helping than

gender-consistent helping (Hypothesis 1b).

Self-efficacy. Perceived behavioral control captures one's subjective beliefs about their

ability to perform a given behavior (i.e., self-efficacy) and external factors that may inhibit

performance of the behavior (Ajzen, 1991, 2002). In the current research, we consider the self-

efficacy component of perceived behavioral control (and exclude external, actual control over

the behavior) because perceptions of self-efficacy are informed by cultural stereotypes about

behaviors that are appropriate for one's gender group (Eagly, 2009; Wood & Eagly, 2010). As

explained in more detail below, we reason that if an individual does not believe they have the

ability or skill-set necessary to perform a given behavior, they should report low self-efficacy

toward the behavior, which in turn leads to decreased intentions and actual engagement in the

behavior.

Gender stereotypes may impair actual performance in a given social role. People come to

develop varying levels of expertise and comfort in gender stereotypical roles due to repeated

experience (Diekman & Clark, 2015). As a consequence, if someone rarely engages in a

behavior, they likely will not have the skills necessary to perform it effectively. As illustrated by Expectancy Value Theory, beliefs about one's ability to accomplish a particular task influences whether or not they will engage in it; if the task is estimated to involve a skillset outside of one's own, then people should be less likely to engage in that particular task (Eccles, 1994).

Early socialization practices can also negatively influence self-efficacy beliefs toward gender-inconsistent helping opportunities. Gender identity is one of the first social group distinctions people make, and once able to make categorizations based on gender, children begin to form implicit associations for the traits and attributes that are appropriate for their gender group (Baron et al., 2014). As people internalize gender norms, they may come to view their self-efficacy and performance in a given behavior through the lens of gender stereotypes. For instance, adult men may be reluctant to pursue female-stereotypic occupations because masculine stereotypes dictate that men are not skilled at communal tasks (Cejka & Eagly, 1999), leading men to form low self-efficacy in these domains (Giles & Rea, 1999). Likewise, people may also come to undervalue their contributions and performance in gender atypical tasks (Haynes & Heilman, 2013; Heilman, 1983). For instance, women working on a team to perform an agentic task report they contributed less, and that their contributions were less valuable than their male counterparts (Haynes & Heilman, 2013). Taken together, we reason that people should also expect that they will not perform gender-inconsistent helping well, and hypothesize that people will report lower self-efficacy for gender-inconsistent versus gender-consistent helping behaviors (Hypothesis 1c).

Behavioral intentions and engagement. As discussed previously, prior research demonstrates that people more often perform helping behaviors that are congruent with gender roles (Eagly, 2009; Eagly & Crowley, 1986). In the GRIP model, we theorize this process

unfolds because people may hold (a) negative attitudes, (b) unfavorable subjective norms, and

(c) decreased self-efficacy beliefs toward gender-inconsistent helping opportunities (Croft et al.,

2020). In combination, these three constructs inform an individual's behavioral intentions, such

that negative attitudes, restrictive subjective norms, and reduced self-efficacy beliefs are linked

to decreased intentions to engage in a behavior. In the current research, we tested this directly by

examining whether people reported decreased intentions to engage in gender-inconsistent

compared to gender-consistent forms of helping (Hypothesis 2). Because behavioral intentions

operate as a direct antecedent to one's behavior (Ajzen, 1991, 2002), we also examined whether

people with lower intentions to engage in gender-inconsistent helping also reported less actual

engagement in these forms of helping (Hypothesis 3).

The Current Research

      We tested the proximal components of the GRIP model incrementally in a series of three

studies ($N = 1,355$) and an internal meta-analysis. We first conducted a study to obtain and pilot

examples of gender-consistent and -inconsistent forms of helping as stimuli for the main studies

(Pretest). Then, using these stimuli, we measured attitudes, subjective norms, and self-efficacy

toward gender-inconsistent (vs. -consistent) helping (Studies 1-3). We further examined if people

report lower intentions to engage in gender-inconsistent (vs. -consistent) forms of helping

(Studies 2 & 3; Hypothesis 2), and if these lower intentions would be mediated by negative

attitudes, less favorable subjective norms and lower self-efficacy (Studies 2 & 3). Finally, we

examined if lower intentions to engage in gender-inconsistent helping would be associated with

lower engagement in gender-inconsistent forms of helping (Study 3; Hypothesis 3). Data and

materials for all studies are available on the project Open Science Framework page

(https://osf.io/h4sca/?view_only=13506da0c1d0482aadcb26350ed4a5c7), and Studies 1 and 3

were pre-registered.

Pretest

Method

Participants

We recruited 107 adults from Amazon Mechanical Turk (34.6% female, $n = 37$; $M_{age} =$

32.79, $SD_{age} = 9.54$, range = 19-72 years) in exchange for $1.25 USD. Prior to data collection, an

institutional review board responsible for the ethical treatment of human participants reviewed

and approved this research study, and all the studies reported in this paper. Participants identified

as Caucasian/White ($n = 70$, 65.4%), Asian ($n = 14$, 13.1%), Black/African American ($n = 10$,

9.4%), Hispanic/Latino ($n = 8$, 7.5%), Middle Eastern ($n = 1$, 0.9%), and other racial/ethnic

categories ($n = 3$, 2.8%). Participants were heterosexual ($n = 86$, 80.4%), bisexual ($n = 12$,

11.2%), gay/lesbian ($n = 7$, 6.5%), other sexual orientation identities ($n = 1$, 0.9%), or preferred

not to identify ($n = 1$, 0.9%).

Procedure

Participants were recruited for a study on perceptions of helping behavior and were asked

to evaluate 25 everyday helping behaviors developed by the research team using previous

theorizing on gender and helping behavior (e.g., Eagly, 2009). The helping behaviors evaluated

are listed in Table 1. Participants rated the *gender stereotypicality* of each behavior using a single

item (*"For each way of helping, indicate how masculine/feminine each behavior is perceived to

be (according to society's expectations)"*; 1 = *extremely masculine*, 3 = *neutral*, 5 = *extremely*

feminine). We used this rating to create two new variables: *masculine stereotypicality* and

feminine stereotypicality, which together added up to 5 (the scale endpoint). For example, if the

average gender stereotypicality rating for a particular helping behavior was 3.5 (i.e., more

feminine than masculine), then we would score the feminine stereotypicality as 3.5, and score the

masculine stereotypicality as 1.5. Participants also reported their *behavioral engagement* ("For

each type of helping, please indicate how many times you have engaged in the behavior during

the past month"; 0 = *never* to 5 = *five times or more*). Participants saw the full list of helping

behaviors at one time and made ratings for each behavior on each dependent variable. The

helping behaviors were presented in the same order for each dependent variable rating.

We selected a subset of five prototypically masculine helping behaviors and five

prototypically feminine helping behaviors through the following process. For each helping

behavior, we created a masculine composite score, which was the average of the z-score of the

masculine stereotypicality variable and the z-score of behavioral engagement ratings from male

participants (i.e., higher z-scores indicated behaviors that were rated as stereotypically

masculine, and which men reported frequently engaging in). We also created a feminine

composite, which was the average of the z-score of the feminine stereotypicality variable and the

z-score of behavioral engagement ratings from female participants (i.e., higher z-scores indicated

behaviors that were rated as stereotypically feminine, and which women reported frequently

engaging in). We created z-scores for these composites because the gender stereotypicality and

behavioral engagement items were scored on different Likert scales. To select prototypical

masculine helping behaviors for use as future stimuli, we selected the behaviors that were

simultaneously high on the masculine composite and low on the feminine composite (and vice

versa for the feminine helping behaviors). The full list of helping behaviors tested are listed in

Table 1, with the ten selected behaviors in bold.

As a preliminary test of the GRIP model, participants reported *anticipated affect* (i.e., attitudes), *perceived favorability* (i.e., subjective norms), and *behavioral* intentions. We did not examine self-efficacy beliefs in this preliminary analysis. Given that we focused participants' attention on our interest in gender, and thus may have influenced how participants responded, we report these results on the project OSF page, but not in this manuscript.

Results and Discussion

To validate our composites, we conducted paired samples *t*-tests to examine whether the five selected masculine helping behaviors were perceived differently along dimensions of gender stereotypicality than the five selected feminine helping behaviors. As expected, the masculine (*M* = 2.34, *SD* = 0.89) and feminine composites (*M* = 3.73, *SD* = 0.73) were rated as significantly different from one another on dimensions of gender-stereotypicality, $t(105) = -11.02$, $p < .001$, $d = -1.72$ CI_{95} [-2.01, -1.41]. We next conducted one sample *t*-tests to determine if the composite masculine and feminine behaviors were significantly different from the scale mid-point of 3, or gender neutral. As expected and consistent with stereotype-based expectations, the feminine composite was rated as significantly different than gender neutral in the direction of being more stereotypically feminine, $t(105) = 10.25$, $p < .001$, $d = 0.97$ CI_{95} [0.74, 1.20]. Following a similar pattern, the masculine composite was rated as significantly different than gender neutral in the direction of being more stereotypically masculine, $t(105) = -7.66$, $p < .001$, $d = -.74$ CI_{95} [-0.96, -0.53]. Thus, we successfully selected stimuli that differentiated stereotypical forms of masculine and feminine helping behavior from one another, and from gender-neutral forms of helping.

In sum, the Pretest allowed us to identify and compare perceptions of a set of stereotypically masculine and feminine helping behaviors. Of the 25 target behaviors, participants' ratings identified five as stereotypically masculine and five as stereotypically

feminine forms of helping. Next, we used these masculine and feminine helping behaviors as stimuli in a series of incremental studies designed to test the proximal components of the GRIP model.

Study 1: Attitudes, Norms, Self-efficacy

In Study 1 we tested for mean differences in attitudes, subjective norms, and self-efficacy with respect to gender-consistent and -inconsistent helping. We pre-registered our study design, materials, and analyses prior to data collection on the project OSF page (https://osf.io/h4sca/?view_only=13506da0c1d0482aadcb26350ed4a5c7).

Method

Participants

We recruited 462 psychology students from The University of Arizona, USA ($n = 407$, 88.1%) and The University of Essex, UK ($n = 55$, 11.9%) in exchange for either course credit or £5 cash. Responses from 50 (10.8%) participants were excluded for the following reasons: 29 (6.3%) participants failed attention checks (see below for additional details), 18 (3.9%) participants did not meet study inclusion criteria (see pre-registration for details), two (0.4%) participants were interrupted during their session due to an unexpected alarm, and one (0.2%) participant misunderstood the directions, leaving their data unusable. Results do not change if these participants are included.

The final sample after exclusions consisted of 412 adults ($n = 302$, 73.3% female; $M_{age} = 20.97$, $SD_{age} = 6.58$, range = 18-64 years). Participants identified as Aboriginal/Native ($n = 4$, 1.0%), Black/African American ($n = 17$, 4.1%), Asian ($n = 29$, 7.1%), Hispanic/Latino ($n = 102$, 24.8%), Middle Eastern ($n = 6$, 1.5%), Caucasian/White ($n = 219$, 53.2%), other racial/ethnic identities ($n = 34$, 8.3%), or preferred not to identify ($n = 1$, 0.2%). Participants reported as

heterosexual (n = 371, 90.0%), gay/lesbian (n = 8, 1.9%), bisexual (n = 24, 5.8%), other sexual

orientation identities (n = 4, 1.0%), or preferred not to identify (n = 5, 1.2%). Participants

politically identified as very liberal (n = 20, 4.9%), liberal (n = 89, 21.6%), somewhat liberal (n =

71, 17.2%), neutral (n = 125, 30.3%), somewhat conservative (n = 37, 9.0%), conservative (n =

34, 8.3%), very conservative (n = 6, 1.5%), or preferred not to identify (n = 30, 7.3%).

Procedure

As a cover story, participants were told the purpose of the study was to examine people's

ability to visualize imaginary scenarios. Participants were randomly assigned to read a gender-

consistent or gender-inconsistent helping scenario and spent five minutes reflecting on the

imagined experience in writing. In the reflection prompt, participants were encouraged to

consider how they might feel, how they might be perceived by others, but not self-efficacy

beliefs (e.g., "In your journal consider the following: How might you expect to feel after this

experience? If other people were around, how do you think they might perceive you?"). After

completing the visualization exercise, participants reported their attitudes, subjective norms, and

self-efficacy beliefs for the behavior illustrated in their scenario. Participants always completed

the attitude items first, with the order of the subjective norms and self-efficacy items

counterbalanced. Finally, participants reported demographic information and were debriefed.

We included four attention check questions in this study. Three attention checks were

embedded in questionnaires and asked participants to select a particular response option (e.g., "If

you are reading this, select strongly disagree"). The fourth attention check asked participants to

disclose how closely they read the study materials at the end of the survey: "How closely did you

read the visualization scenario you were asked to imagine yourself in? (I didn't read it at all, I

skimmed it, I read it closely). Participants' data were excluded from analyses if they answered

any of the first three questions incorrectly or indicated that they did not read the visualization

scenario closely.

Manipulated Variable

Participants were randomly assigned to imagine themselves in a stereotypically

masculine or stereotypically feminine helping scenario. Helping scenarios were drawn from the

Pretest; we selected the highly ranked masculine and feminine behaviors that were most likely to

be equivalent in terms of their feasibility and likelihood of occurring in everyday life. In the

feminine helping scenario, participants were asked to imagine their friend was going on a date

and asked for their help picking out an outfit ("Imagine your friend is going on a date and they

ask you to help them pick out something to wear."). This scenario was coded as gender-

consistent for women, and gender-inconsistent for men. In the *masculine helping scenario*,

participants were asked to imagine their friend was hanging a heavy picture frame and asked for

their assistance ("Imagine your friend asks you to help them hang a heavy picture frame."). This

scenario was coded as gender-consistent for men, and gender-inconsistent for women. In both

scenarios, participants were told their friend was grateful for their assistance.

Measured Variables

Attitudes. Participants completed a modified version of the Positive and Negative Affect

Schedule (PANAS; Watson et al., 1988). The PANAS is a 20-item scale with 10 items assessing

positive affect (e.g., excited) and 10 items assessing negative affect (e.g., distressed). Following

methodological approaches used by other researchers (e.g., Aknin et al., 2015), the item "happy"

was added to the positive affect subscale. Participants rated the extent to which they would feel

each of 21 emotions if they were to engage in their imaginary scenario ("Doing your best to

imagine what it would be like to be in this scenario, please rate how much you think you would

feel the following.") using a 5-point Likert scale (1 = *very slightly or not at all*, 5 = *extremely*).

Following scoring conventions prescribed by Watson and colleagues (1988), we calculated sum

scores for the 11 positive affect (α = .88) and 10 negative affect (α = .80) items.

Subjective norms. Participants completed an 8-item adapted version of the Fear of

Backlash Index (Rudman & Fairchild, 2004). The Fear of Backlash index assesses the extent to

which people are concerned about negative evaluations from others following gender role

violations (e.g., "Would you worry that people might think you were odd?"). Participants

answered each question in response to their imagined scenario, and responses were scored using

a 5-point Likert scale ranging from 1 (*not at all*) to 5 (*very much*). The items were aggregated to

create a mean subjective norms score (α = .73).

Self-efficacy. Self-efficacy was measured using a 6-item questionnaire. Items were

designed for the study to assess the extent to which participants expected that they would have

the ability necessary to engage in the task described in their scenario ("Compared to other

people, I would do well helping someone in this way", "I am qualified to provide help in this

way", "I would feel concerned about my ability to help in this way", "I would feel frustrated

about my ability to help this individual in this way", "The person I would help would think I did

a good job", "For me to help someone in this way would be extremely difficult"). All items were

scored using a 7-point Likert scale ranging from 1 (*not at all certain*) to 7 (*extremely certain*).

We calculated a mean score to create a single index of self-efficacy (α = .83).

Demographics. Participants reported their age, gender, sexual orientation, race/ethnicity,

and political orientation.

Results

We used independent samples *t*-tests to assess mean differences in attitudes, subjective

norms, and self-efficacy by helping condition (gender-consistent vs. gender-inconsistent).

Mean Differences by Helping Condition

All means and standard deviations are located in Table 2. Consistent with pre-registered

Hypothesis 1a, participants who imagined helping in a gender-inconsistent way reported lower

anticipated positive affect (i.e., less positive attitudes) than those who imagined helping in a

gender-consistent way, $t(410) = 3.90$, $p < .001$, $d = 0.38$, CI_{95} [0.19, 0.58]. We had no pre-

registered predictions for negative affect, and there were no differences in anticipated negative

affect by helping condition, $t(410) = 0.44$, $p = .66$, $d = 0.04$, CI_{95} [-0.15, 0.23]. Counter to our

pre-registered Hypothesis 1b, there was no difference in subjective norms by helping condition,

$t(407) = -0.29$, $p = .77$, $d = -0.02$, CI_{95} [-0.21, 0.17]; people reported similarly low fears of

backlash when engaging in gender-consistent and gender-inconsistent helping. Finally,

consistent with our pre-registered Hypothesis 1c, participants who imagined helping in a gender-

inconsistent way reported lower self-efficacy than participants who imagined helping in a

gender-consistent way, $t(410) = 7.07$, $p < .001$, $d = 0.70$, CI_{95} [0.50, 0.90].

Exploratory Analyses

We conducted a series of exploratory 2 (help type: masculine vs. feminine) x 2

(participant gender: male vs. female) between-subjects ANOVAs on attitudes, subjective norms,

and self-efficacy beliefs. Results from these analyses are in Table 3. The interaction effects for

positive affect, negative affect, and subjective norms were not statistically significant. While we

did observe a significant interaction for self-efficacy, pairwise comparisons revealed a difference

in magnitude rather than direction. That is, men who imagined helping in a gender-consistent

(i.e., masculine) way reported higher self-efficacy than men who imagined helping in a gender-

inconsistent (i.e., feminine) way, $p < .001$. Following a similar pattern, women who imagined

helping in a gender-consistent (i.e., feminine) way reported higher self-efficacy than women who

imagined helping in a gender-inconsistent (i.e., masculine) way, $p < .001$.

Discussion

Study 1 provided partial support for Hypotheses 1a-c. People who imagined performing

gender-inconsistent helping reported lower anticipated positive affect (Hypothesis 1a) and self-

efficacy (Hypothesis 1c) relative to participants who imagined a gender-consistent scenario.

However, counter to our prediction, there were no condition differences for subjective norms

(Hypothesis 1b), suggesting that people did not expect others to evaluate them negatively after

engaging in a gender-consistent or gender-inconsistent form of helping.

One potential explanation for the null effect on subjective norms may lie in how this

variable was operationalized. The Fear of Backlash index does not directly measure subjective

norms (i.e., beliefs about what important others think one should or should not do), but instead

measures *concerns about backlash* for violating social norms. The Fear of Backlash index also

lacked specificity with respect to *whose* evaluations the participant might be concerned with

(e.g., the helping recipient, outside observers, or people in general), and may not have accurately

captured subjective norms as intended. Finally, it may have been challenging for participants to

consider subjective norms in this context because both forms of helping were likely to be

provided in the absence of outside perceivers. On a related note, it may also be the case that

people were less concerned about backlash in this context because the gender role violation they

were asked to consider in the helping scenario was less severe and occurred in a relatively

private setting with a friend. In Study 2 we address these limitations by using an adapted Theory

of Planned Behavior questionnaire that more directly specifies and captures subjective norms,

and by adjusting the helping scenarios to increase the severity of the gender violation by

changing the helping target to a less familiar person (i.e., a neighbor).

Study 2: Behavioral Intentions

In Study 2, we sought to replicate and extend Study 1 by measuring behavioral intentions.

Using a design similar to that of Study 1, we asked participants to imagine engaging in a gender-

consistent or gender-inconsistent manner, then report attitudes (using a valence-based measure),

subjective norms, self-efficacy, and behavioral intentions.

Method

Participants

We recruited 445 adults recruited from TurkPrime in exchange for $0.40 USD. We

excluded a total of 15 (3.4%) participants for the following reasons: nine (2.0%) participants

failed attention checks (see below for additional information) and six (1.3%) failed to meet

inclusion criteria (see pre-registration for details), leaving a final sample of 430 adults (63.0%

female, $n = 271$; $M_{age} = 38.52$, $SD_{age} = 13.07$, range = 18-80 years). Results remained unchanged

with these participants included. Participants identified as Aboriginal/Native ($n = 2$, 0.5%),

Black/African American ($n = 42$, 9.8%), Hispanic/Latino ($n = 26$, 6.0%), Middle Eastern ($n =1$,

0.2%), Asian ($n = 25$, 5.9%), White/Caucasian ($n = 320$, 74.4%), other racial/ethnic identities (n

$= 12$, 2.8%), or preferred not to identify ($n = 2$, 0.5%). Participants reported as heterosexual ($n =$

382, 88.8%), gay/lesbian ($n = 12$, 2.8%), bisexual ($n = 27$, 6.3%), other sexual orientation

identities ($n = 3$, 0.7%), or preferred not to identify ($n = 6$, 1.4%). Participants politically

identified as very liberal ($n = 51$, 11.9%), liberal ($n = 109$, 25.3%), somewhat liberal ($n = 54$,

12.6%), neutral ($n = 86$, 20.0%), somewhat conservative ($n = 47$, 10.9%), conservative ($n = 57$,

13.3%), very conservative ($n = 19$, 4.4%), or preferred not to identify ($n = 7$, 1.6%). Two

hundred and fifty-one (58.3%) participants reported making less than $50,000 per year, 142

(33.1%) reported income between $50,000 and $99,999, and 37 (8.6%) reported income greater

than $100,000.

Participants completed two attention checks: The first asked participants to select a

particular response on a questionnaire scale (e.g., "If you're reading this, select strongly

disagree") and the second asked participants to describe what they ate for their last meal. These

attention checks were designed to test if participants were reading each question and to filter out

responses from computerized bots. The data from participants who either (a) answered the first

question incorrectly or (b) provided a nonsense response to the second question were excluded

from analyses.

Manipulated Variable

Participants were randomly assigned to imagine helping a new neighbor in a gender-

consistent or gender-inconsistent helping scenario. Specifically, participants assigned to the

feminine helping scenario were told, "Your new neighbor is going on a date and they are very

nervous. They ask for your advice, so you help them by offering emotional support. You also

help them pick out something to wear." This scenario was coded as gender-consistent for

women, and gender-inconsistent for men. Meanwhile, participants assigned to the *masculine*

helping scenario were told, "Your new neighbor is moving, and they are very overwhelmed.

They ask for your assistance, so you help them by offering to move their heavy furniture. You

also help them with household repairs at their new house." This scenario was coded as gender-

consistent for men, and gender-inconsistent for women. The gender of the neighbor was not

specified. We used a neighbor as the help recipient in this study (as opposed to a friend in Study

1) to increase generalizability of the helping target.

Measured Variables

After reading the helping scenario, participants reported attitudes, subjective norms, self-efficacy, and behavioral intentions using an adapted Theory of Planned Behavior questionnaire (Fishbein & Ajzen, 2010).

Attitudes. Participants reported their attitudes toward the helping behavior using a 3-item scale adapted for this study (Fishbein & Ajzen, 2010; e.g., "My helping in this way would be…" 1 = *bad*, 7 = *good*; 1 = *unpleasant*, 7 = *pleasant*; 1 = *worthless*, 7 = *valuable*). Items were scored using a 7-point semantic differential scale and higher scores indicated more favorable attitudes toward the behavior. All items were averaged to create a composite score (α = .80).

Subjective norms. Perceptions of the subjective norms around the helping behavior were measured using a 3-item scale adapted for this study (Fishbein & Ajzen, 2010). The items included: "It is expected of me to help an individual in this way" (1 = *definitely false*, 7 = *definitely true*), "Most people who are important to me would approve of me helping this individual in this way" (1 = *disagree*, 7 = *agree*), and "Most people who are like me would help in this way" (1 = *unlikely*, 7 = *likely*). Items were scored on a 7-point Likert scale with higher scores indicating more favorable subjective norms. All items were averaged to create a composite score (α = .68).

Self-efficacy. Participants completed a 3-item scale adapted for this study (Fishbein & Ajzen, 2010). The items included: "I am confident that I would be able to help an individual in this way" (1 = *false*, 7 = *true*), "My decision to help an individual in this way would be up to me" (1 = *disagree*, 7 = *agree*), and "For me to help an individual in this way would be…" (1 = *extremely difficult*, 7 = *extremely easy*). Items were scored using a 7-point Likert scale, and

higher values indicated greater self-efficacy. All items were averaged to create a composite score

($\alpha = .71$).

Behavioral intentions. Intentions to engage in the helping behavior were assessed using

a 3-item scale adapted for this study (Fishbein & Ajzen, 2010). The items included: "If I were in

this scenario, I would intend to help this individual in this way" (1 = *unlikely*, 7 = *likely*), "I

would make the effort to help this individual in this way" (1 = *I definitely would not*, 7 = *I*

definitely would), and "If I were in this scenario, I would plan to help an individual in this way"

(1 = *extremely unlikely*, 7 = *extremely likely*). Items were scored using a 7-point Likert scale,

with higher values indicating greater intentions to engage in the helping behavior. All items were

averaged to create a composite score ($\alpha = .94$).

Demographics. Participants reported their age, gender, sexual orientation, race/ethnicity,

income, and political orientation.

Results

Independent samples *t*-tests were used to test for mean differences in attitudes, subjective

norms, self-efficacy, and behavioral intentions between helping conditions. We also tested the

hypothesis that attitudes, subjective norms, and self-efficacy would mediate the relationship

between helping condition and helping intentions using a parallel mediation analysis.

Mean Differences by Helping Condition

All means and standard deviations are illustrated in Table 2. Participants who imagined

helping in a gender-inconsistent way did not report less favorable attitudes toward the behavior

than participants who imagined helping in a gender-consistent way, $t(428) = 1.74$, $p = .08$, $d =$

0.17, CI_{95} [-0.02, 0.37], failing to support Hypothesis 1a. In line with Hypothesis 1b, participants

in the gender-inconsistent condition reported less favorable subjective norms relative to

participants in the gender-consistent condition, $t(428) = 2.13$, $p = .03$, $d = 0.21$, CI_{95} [0.02, 0.40].

Congruent with Hypothesis 1c, participants also reported lower self-efficacy when they imagined

helping in a gender-inconsistent (versus gender-consistent) manner, $t(428) = 4.50$, $p < .001$, $d =$

0.45, CI_{95} [0.26, 0.65]. Finally, at odds with Hypothesis 2, participants did not significantly differ

between conditions in their intentions to engage in gender-inconsistent helping, $t(428) = 1.75$, p

$= .08$, $d = 0.18$, CI_{95} [-0.01, 0.37].

Exploratory Analyses

As in Study 1, we conducted a series of exploratory 2 (help type: masculine vs. feminine)

x 2 (participant gender: male vs. female) between-subjects ANOVAs on attitudes, subjective

norms, self-efficacy beliefs, and behavioral intentions. Results from these analyses are presented

in Table 4. There were no significant main effects or interaction effects on attitudes, subjective

norms or behavioral intentions. We did observe a main effect of help type on self-efficacy that

was qualified by a significant help type x participant gender interaction. Pairwise comparisons

revealed that women who imagined helping in a gender-consistent (i.e., feminine) way reported

greater self-efficacy than women who imagined helping in a gender-inconsistent (i.e., masculine)

way, $p < .001$. However, there were no significant differences in self-efficacy ratings from men

who imagined helping in a gender-consistent (i.e., masculine) or gender-inconsistent (i.e.,

feminine) way, $p = .81$.

Mediation Model

To test Hypothesis 3, we conducted a multiple mediation analysis to examine the extent

to which attitudes, subjective norms, and self-efficacy statistically mediate the relationship

between helping condition and behavioral intentions. Using model 4 in PROCESS version 3.5

for SPSS (Hayes, 2017), we entered helping condition (0 = gender-consistent, 1 = gender-

inconsistent) as the predictor variable, attitudes, subjective norms, and self-efficacy as

continuous mediators, and intentions to engage in the behavior as the outcome variable.

The full mediation model is illustrated in Figure 2. Bias-corrected confidence intervals

for the indirect effects were calculated using 5,000 bootstrapped samples. The indirect effects of

subjective norms and self-efficacy were statistically significant (subjective norms: ab = -0.12, se

= 0.06, CI_{95} [-0.24, -0.01]; self-efficacy: ab = -0.22, se = 0.06, CI_{95} [-0.35, -0.12]). However, the

indirect effect of attitude toward the behavior was not statistically significant (ab = -0.06, se =

0.04, CI_{95} [-0.13, 0.01]). The direct effect of helping condition on intentions decreased in size

when including attitudes, subjective norms, and self-efficacy in the model (c' = 0.14, p = .05),

providing evidence for partial mediation. In sum, these results yield partial support for

Hypothesis 3 such that subjective norms and self-efficacy mediated the relationship between

helping condition and behavioral intentions, but attitudes did not. For a report of exploratory

analyses including participant gender as a moderator, see the project OSF page.

Discussion

Results from Study 2 lend additional support for the proximal components of the GRIP

model. Consistent with Hypotheses 1b-c, participants who imagined helping in a gender-

inconsistent way reported less favorable subjective norms and lower self-efficacy than

participants who imagined helping in a gender-consistent way. Although mean differences in

attitudes (Hypothesis 1a) and intentions (Hypothesis 2) were in the predicted direction, these

effects were not statistically significant. We also found evidence for partial mediation between

helping condition and behavioral intentions through subjective norms and self-efficacy, partially

supporting Hypothesis 3. Counter to prediction, attitudes toward the behavior was not a

significant mediator.

One notable limitation in the current study is the contextual differences between the masculine and feminine helping behaviors. In the masculine scenario, participants were asked to imagine helping their friend during a move, but in the feminine scenario participants were asked to imagine help their friend prepare for a date. We address this limitation in Study 3 by using more contextually similar helping scenarios.

Study 3: Behavioral Engagement

The aim of Study 3 was to replicate Studies 1 and 2 and extend them by testing the full proximal portion of the GRIP model (including predicting real-world recalled helping behavior) in a single sample with a common and well-validated paradigm for testing the Theory of Planned Behavior (e.g., van der Linden, 2011; Warburton & Terry, 2000). Participants were randomly assigned to imagine performing a gender-consistent or gender-inconsistent helping behavior, and reported their attitudes, subjective norms, self-efficacy, and behavioral intentions. The same participants were re-contacted one month later and reported the frequency with which they had engaged in particular gender-consistent and gender-inconsistent helping behaviors over the course of that month. We pre-registered our study design, materials, and analyses on the project OSF page (https://osf.io/h4sca/?view_only=13506da0c1d0482aadcb26350ed4a5c7).

Method

Participants

We recruited 756 adults from TurkPrime in exchange for $0.30 USD. Participants were re-contacted approximately four weeks later for a follow-up survey and 523 participants (69.0% of the original sample) completed the second portion of the study. At Time 2, participants received $0.60 as compensation. Ten participants (1.3%) were excluded in accordance with our pre-registered exclusion criteria because they failed attention checks ($n = 9$, 1.2%; see below for

additional information) or did not engage with the task ($n = 1$, 0.1%), leaving a final sample of

513 adults (65.7% female, $n = 337$; $M_{age} = 40.79$, $SD_{age} = 13.79$, range = 18-81 years). Results

remain unchanged with these participants included. Participants identified as aboriginal/native (n

= 1, 0.2%), Caucasian/White ($n = 378$, 73.7%), Black/African American ($n = 47$, 9.2%),

Hispanic/Latino ($n = 26$, 5.1%), Asian ($n = 36$, 7.0%), Middle Eastern ($n = 4$, 0.8%), other/mixed

racial identities ($n = 14$, 2.7%), or preferred not to identify ($n = 7$, 1.4%). Participants reported as

heterosexual ($n = 461$, 89.9%), gay/lesbian ($n = 13$, 2.5%), bisexual ($n = 31$, 6.0%), other sexual

orientation identities ($n = 5$, 1.0%) or preferred not to identify ($n = 3$, 0.6%). Participants

politically identified as very liberal ($n = 58$, 11.3%), liberal ($n = 121$, 23.6%), somewhat liberal

($n = 68$, 13.3%), neutral ($n = 104$, 20.3%), somewhat conservative ($n = 59$, 11.5%), conservative

($n = 74$, 14.4%), very conservative ($n = 24$, 4.7%), or preferred not to identify ($n = 5$, 1.0%).

Three hundred and three (59.1%) participants reported making less than $50,000 per year, 156

(30.4%) reported income between $50,000 and $99,999, and 54 (10.5%) reported income greater

than $100,000.

As an attention check, participants were asked to report the weather in their current

location using a few sentences. This check was designed to filter out responses from

computerized bots, or participants who were not paying attention to each question. The data from

participants who provided a nonsense response to this question were excluded from analyses.

Procedure

The present study utilized a two-wave longitudinal design. The design and procedure of

Time 1 were identical to Study 2. Participants were randomly assigned to imagine themselves in

a gender-consistent or -inconsistent helping scenario and then asked to report their attitudes,

subjective norms, self-efficacy, and intentions to engage in the behavior. One month later the

same participants were re-contacted for follow-up. At Time 2, participants were asked to indicate

how often they had engaged in a set of gender-consistent and gender-inconsistent helping

behaviors. The behaviors used were those we pilot tested and selected from the Pretest (see items

bolded in Table 1).

Manipulated Variable

Similar to Studies 1 and 2, at Time 1 participants were randomly assigned to imagine

helping a friend in a gender-consistent or inconsistent manner. In both scenarios, participants

were told their friend was moving because they received a job in a nearby city. This adjustment

was made to the manipulation from Study 2 to strengthen the design by ensuring the masculine

and feminine helping scenarios were contextually similar to each other. In the *feminine helping*

scenario, participants were asked to imagine they helped their friend who was moving by

providing emotional support and going to the mall to help them pick out new clothing for their

job. This condition was coded as gender-consistent for women, and gender-inconsistent for men.

In the *masculine helping scenario*, participants were asked to imagine they helped their friend

who was moving by carrying heavy furniture and going to the hardware store to help them select

supplies for household repairs at their new place. This condition was coded as gender-consistent

for men and gender-inconsistent for women.

Measured Variables

After reading the helping scenario at Time 1, participants reported their attitudes toward

the imagined behavior, their perceptions of the subjective norms about doing this behavior, self-

efficacy, and intentions to do the behavior, using an expanded version of the scale used in Study

2 (Fishbein & Ajzen, 2010). The measures were conceptually similar to those used in Study 2,

but the wording was adjusted to fit within the study time-period (e.g., during the next month). At

Time 2, participants reported the actual frequency with which they had engaged in a set of

gender-consistent and gender-inconsistent helping behaviors during the previous month (since

Time 1).

      Attitudes. Participants reported their attitudes using a 6-item semantic differential scale

(e.g., "My helping in this way would be…"). In addition to the word pairs used in Study 2, the

following additional word pairs were used: *unenjoyable/enjoyable*, *unsatisfying/satisfying*,

unfavorable/favorable. Items were scored on a 7-point scale with higher scores indicating more

favorable attitudes toward engagement in the behavior. All items were averaged to create a

composite score ($\alpha = .95$).

      Subjective norms. Subjective norms were assessed using a 3-item scale adapted for this

study (Fishbein & Ajzen, 2010): "If I decided to help in the way described above during the next

month, those who are most important to me would approve", "Those most important to me think

that I should help in the way described above during the next month", and "Those who are

important to me would not want me to help in the way described above during the next month."

The third scale item was reverse scored. Items were scored using a 7-point Likert scale ranging

from 1 (*strongly disagree*) to 7 (*strongly agree*) and higher values indicated more favorable

subjective norms. All items were averaged to create a composite subjective norm score ($\alpha = .72$).

      Self-efficacy. Participants completed a 4-item scale assessing self-efficacy adapted for

this study (Fishbein & Ajzen, 2010): "If I wanted to, I could easily help in the way described

above during the next month", "Events outside of my control will stop me from helping in the

way described above during the next month", "It would be very difficult for me to help in the

way described above during the next month", and "I expect that I will have the skills to provide

the type of help described above during the next month." The second and third item were reverse

scored. Items were scored using a 7-point Likert scale ranging from 1 (*strongly disagree*) to 7

(*strongly agree*) and higher values indicated greater self-efficacy. All items were averaged to

create a composite self-efficacy score. As outlined in the pre-registration, since the reliability

coefficient was < .65 (α = .63), we made adjustments to improve the scale reliability. We

dropped item four ("I expect that I will have the skills to provide the help described during the

next month."), and the reliability for the revised three item scale improved (α = .82).

Behavioral intentions. At Time 1, intentions to engage in the helping behavior were

assessed using a 3-item scale (Fishbein & Ajzen, 2010): "If asked during the next month, I would

help in the way described above", "I intend to help in the way described above during the next

month", and "It is likely that I will help someone in the way described above during the next

month." Items were scored using a 7-point Likert scale ranging from 1 (*strongly disagree*) to 7

(*strongly agree*). All items were averaged to create a composite score (α = .81).

Behavioral engagement. At Time 2, participants reported the frequency with which they

had engaged in a set of gender-consistent and -inconsistent helping scenarios (e.g., "For each

type of helping, please indicate how many times you have engaged in the behavior during the

past month"; 0 = *never*, 5 = *five times or more*). The behaviors used were identical to those

selected in the Pretest; there were five masculine helping behavior items (α = .75) and five

feminine helping behavior items (α = .77).

Demographics. Participants reported their age, gender, sexual orientation, race/ethnicity,

income, and political orientation.

Results and Discussion

Independent samples *t*-tests compared mean differences in attitudes toward the behavior,

subjective norms, self-efficacy, and behavioral intentions by helping condition. To examine if

there were gender differences in the frequency with which participants engaged in helping

behaviors, we conducted a 2 (participant gender: male vs. female) x 2 (help type: masculine vs.

feminine) mixed model ANOVA on behavioral engagement. Finally, we conducted a structural

equation model to test the full proximal components outlined by the GRIP model.

Mean Differences by Helping Condition

Consistent with our pre-registered Hypotheses 1a-c and Studies 1 and 2, at Time 1

participants who imagined helping in a gender-inconsistent way reported less favorable attitudes

toward the behavior, $t(511) = 2.83$, $p < .01$, $d = 0.25$, CI_{95} [0.08, 0.43], less favorable subjective

norms, $t(511) = 3.00$, $p < .01$, $d = 0.26$, CI_{95} [0.09, 0.44], and lower self-efficacy, $t(511) = 3.68$, p

$< .001$, $d = 0.36$, CI_{95} [0.19, 0.53], than participants in the gender-consistent condition.

Furthermore, in line with Hypothesis 2, participants who imagined helping in a gender-

inconsistent way reported lower intentions to engage in the behavior than participants who

imagined helping in a gender-consistent way, $t(511) = 2.34$, $p = .02$, $d = 0.21$, CI_{95} [0.03, 0.38].

See Table 2 for descriptive statistics.

Exploratory Analyses

We conducted exploratory participant gender x help type between-subjects ANOVAs on

attitudes, subjective norms, self-efficacy, and behavioral intentions (see Table 5 for full results).

We found no significant interactions on attitudes, subjective norms, and behavioral intentions.

There was a significant main effect of help type on self-efficacy beliefs, which was qualified by

a significant interaction. Women who imagined helping in a gender-consistent (i.e., feminine)

way reported higher self-efficacy than women who imagined helping in a gender-inconsistent

(i.e., masculine) way, $p < .001$. There were no significant differences in self-efficacy reported by

men who imagined helping in a gender-consistent or gender-inconsistent way, $p = .06$.

Are there gender differences in helping engagement?

At Time 2, we measured participants' recalled engagement in both masculine and feminine types of helping during the past month. Because we did not necessarily expect recalled behavior at Time 2 to be impacted by random assignment to imagining either a gender-consistent or -inconsistent helping scenario at Time 1, a 2 (help type: masculine vs. feminine) x 2 (participant gender: male vs. female) mixed ANOVA was conducted to test for gender differences in recalled behavioral engagement. There was a significant main effect of help type, $F(1, 511) = 5.80$, $p = .02$, $\eta_p^2 = .01$. People reported more frequently engaging in masculine ($M = 2.14$, $SD = 1.00$) than feminine helping behaviors ($M = 2.07$, $SD = 0.97$), though the magnitude of this effect was quite small, $d = 0.07$, CI_{95} [-0.01, 0.16]. The main effect of participant gender was not statistically significant, $F(1, 511) = 0.001$, $p = .97$, $\eta_p^2 < .001$, nor was the help type x participant gender interaction, $F(1, 511) = 2.61$, $p = .11$, $\eta_p^2 = .01$.

Testing the Full Structural Equation Model

Using the lavaan package in R statistical software version 3.6.1 (Rosseel, 2012), we conducted a structural equation model (SEM) to test the relevant proximal sections of the GRIP model in a single analysis. SEM is an ideal analytic technique in this context because it allows for the simultaneous testing of measurement models that correct for measurement error and a priori path models, and allow for model complexity (e.g., inclusion of mediators and multiple outcome variables). As part of the SEM model, we conducted confirmatory factor analyses (CFAs) for attitudes, subjective norms, self-efficacy and behavioral intentions using the fixed-factor method to set the scale of the unobserved latent variables (i.e., setting the variance to 1 and mean fixed at 0; Beaujean, 2014). In order to account for multivariate non-normality in the continuous outcome variables, the model was estimated using Satorra-Bentler scaled measures

that utilize maximum likelihood estimation with robust standard errors and corrected model test statistics (Kline, 2015; Satorra & Bentler, 1994). Following reporting conventions, to assess model fit we report the scaled chi-square (χ^2) statistic with degrees of freedom and *p*-value, scaled Comparative Fit Indices (CFI), Standardized Root Mean Square Residual (SRMR), and scaled Root-Mean Squared Error Approximation (RMSEA) with a 95% confidence interval (Beaujean, 2014; McDonald & Ho, 2002).

In SEM, each variable is either manifest (i.e., observed, or directly measured) or latent (i.e., not directly measured, but rather a construct assumed to exist as a combination of measured items). Variables are also either endogenous (i.e., a variable whose variability is explained by one or more variables) or exogenous (i.e., a variable whose variability is not explained by any variables in the model). We entered helping condition manipulation (0 = gender-consistent, 1 = gender-inconsistent) as an observed exogenous variable. We entered the three mediator variables (attitudes, subjective norms, and self-efficacy) as latent endogenous variables, and the indicators for each of these latent variables (i.e., the items that assessed each measure) were included as observed variables. Intentions to engage in the behavior were included as a latent endogenous variable and the three indicators for this variable (i.e., the three items) were included as observed variables in the model. Finally, behavioral engagement was entered as an observed endogenous variable.

Behavioral engagement was included in the full test of the model as a between-subjects variable, rather than as a repeated measures variable—which is how it was actually measured (i.e., at Time 2, participants reported the frequency in which they engaged in both masculine and feminine helping). We modelled only the responses for a person's assigned helping condition (gender-consistent or -inconsistent) in order to more directly map onto the between-subjects

Time 1 measures in the model. For example, for men in the gender-consistent condition, the

model only looked at their engagement in gender-consistent behaviors (i.e., their engagement in

gender-inconsistent behaviors were not included in the model).

The model met conventional standards for acceptable fit according to the fit indices of

interest, χ^2 (126, $N = 513$) = 510.97, $p < .001$, CFI = .92, RMSEA = .09 CI$_{95}$ [.08, .10], SRMR =

.05. In line with the hypothesis and the t-tests reported earlier, gender-inconsistent helping was

negatively associated with attitudes, subjective norms, and self-efficacy, and behavioral

intentions (see Figure 3, full model details including measurement models are available on the

project OSF page). Attitudes, subjective norms and self-efficacy positively predicted behavioral

intentions. Behavioral intentions did not significantly predict recalled behavioral engagement,

though the relationship was in the expected positive direction. We calculated bias-corrected

bootstrap confidence intervals for the indirect effects of helping condition on behavioral

intentions using 5,000 samples. Consistent with the hypothesis, the indirect effects of attitudes,

ab = -0.11, se = 0.05, CI$_{95}$ [-0.23, -0.02], subjective norms, ab = -0.27, se = 0.12, CI$_{95}$ [-0.57, -

0.09], and self-efficacy, ab = -0.34, se = 0.12, CI$_{95}$ [-0.63, -0.14] were statistically significant.

The direct effect of helping condition on intentions was not statistically significant after

including attitudes, subjective norms, and self-efficacy in the model (c' = 0.18, p = .23).

In summary, people reported less favorable attitudes, restrictive subjective norms, and

lower self-efficacy with respect to gender-inconsistent helping, which in part explained

decreased intentions to help in a gender-inconsistent way. While the relationship between

behavioral intentions at Time 1 and behavioral engagement at Time 2 was in the predicted

direction, it was not statistically significant.

Meta-Analysis of Mean Differences Across Studies

To establish the average strength and reliability of the key measures assessed across studies, we conducted a fixed effects meta-analysis to obtain the weighted effect sizes of the differences in attitudes, subjective norms, self-efficacy, and behavioral intentions by helping condition (see Figure 4). For attitudes, subjective norms and self-efficacy, effects from Studies 1, 2 and 3 were included ($N = 1,355$), and for behavioral intentions, effects from Studies 2 and 3 were included ($N = 943$). Effect sizes for differences between gender-consistent and gender-inconsistent behaviors were significant for every variable: attitudes, $d = 0.21$ ($r = .20$), CI_{95} [0.12, 0.31]; subjective norm, $d = 0.16$ ($r = .10$), CI_{95} [0.05, 0.26]; self-efficacy, $d = 0.49$ ($r = .24$), CI_{95} [0.38, 0.60]; behavioral intentions, $d = 0.20$ ($r = .10$), CI_{95} [0.07, 0.33].

To interpret the magnitude of the effect sizes calculated, we consider previous effect sizes observed in social psychological research on gender roles and helping behavior. Although Cohen's (1988) benchmarks for effect size are $r = .10$ as small, $r = .30$ as medium, and $r = .50$ as large, updated guidelines specific to social psychology proposed by Richard et al. (2003) indicate $r = .10$ as a small sized-effect, $r = .20$ as a medium sized-effect, and $r = .30$ as a large-sized effect. Furthermore, in a large-scale review of the psychological literature, average effect sizes in research conducted on gender roles and helping behavior were small-to-medium in size (average $r = .18$; Richard et al., 2003). Thus, the effect sizes observed in the current internal meta-analysis are comparable to the effect sizes commonly observed in social psychological research.

General Discussion

The current research is the first empirical test of the proximal components of the GRIP model outlined by Croft and colleagues (2020). Though the findings from individual studies differ, an internal meta-analysis across all studies suggests that people hold less favorable attitudes, perceive more restrictive subjective norms, and feel reduced self-efficacy toward

gender-inconsistent (vs. gender-consistent) helping. Furthermore, people report weaker intentions to engage in gender-inconsistent helping, and though behavioral intentions were not significantly related to decreased engagement in gender-inconsistent helping over the previous month, this effect was in the predicted direction. Taken as a whole, our findings lend initial support for the proximal components outlined in the GRIP model and highlight several reasons why people opt out of gender-inconsistent helping opportunities.

The current research identified the relative strength of the psychological barriers undermining gender-inconsistent helping. While a combination of negative attitudes, less favorable subjective norms, and low self-efficacy explained lower gender-inconsistent helping intentions, low self-efficacy most consistently and robustly mediated this relationship (Studies 2 & 3). Furthermore, the average effect size of self-efficacy ($d = 0.49$) was over twice as large as the effect sizes for attitudes ($d = 0.21$) and subjective norms ($d = 0.16$). These findings suggest that although negative attitudes and concerns about the judgments of others play a role in weaker intentions to engage in gender-inconsistent helping, it is lower self-efficacy beliefs that appear to be the most critical for explaining weaker helping intentions.

People have repeated experiences with gender-consistent behaviors and develop increased comfort and competence with behaviors congruent with gender stereotypes (Diekman & Clark, 2015). Our findings support this reasoning and demonstrate that people report more self-efficacy toward gender-consistent helping opportunities, which predicts intentions to perform these helping behaviors. A lack of experience with gender-inconsistent behaviors stems from early gender socialization experiences that teach and reward young girls and women to perform communal behaviors and young boys and men to perform agentic behaviors (Wood & Eagly, 2010). It is also a possibility that people have fewer opportunities to gain experience

helping others in gender-inconsistent ways because people tend to solicit assistance in gender typical ways. That is, people may turn to men to provide agentic forms of assistance, and to women to provide communal forms of assistance. While the current research did not directly examine the interactions between help seekers and help providers, the present findings suggest that lower self-efficacy beliefs may undermine engagement in gender-inconsistent helping. This may be particularly true for women, as our exploratory analyses including helper gender indicated that women reported decreased self-efficacy in gender-inconsistent domains more consistently than men. It is possible these differences emerged due to differences in confidence between men and women, or perhaps due to the skill-based requirements involved in the male-typed helping versus female-typed helping. The masculine helping behaviors used in the present research require specific skills that people might recognize that they do not have (e.g., repairing a broken household item), while the feminine helping behaviors are more subjective or those that people may be able to perform without expertise. Alternatively, while a simple "how to" search online is possible for either type of helping, the consequences of failure are perhaps more concrete for masculine helping behaviors. These are interesting questions that future research could more systematically address.

Our findings with respect to attitudes and subjective norms also add to the research and theorizing on Social Role Theory (Wood & Eagly, 2010) and the fear of backlash literature (Amanatullah & Morris, 2010; Moss-Racusin & Rudman, 2010; Rudman & Fairchild, 2004). People anticipated more negative outcomes when they imagined helping in gender-inconsistent ways, and this negatively predicted helping intentions. Social Role Theory contends that people use stereotypes to regulate their behavior by forecasting their expectations about the potential outcomes associated with engaging in a social role, particularly in the absence of prior

experience (Brown & Diekman, 2010; Croft et al., 2019). Our results reveal that this process

extends to helping roles, as demonstrated by the result that people anticipated more negative

outcomes if they were to help in gender-inconsistent ways. Additionally, people perceived less

favorable subjective norms toward gender-inconsistent helping, which is congruent with research

on the fear of social backlash. Traditional gender stereotypes are maintained through compliance

with gender roles, and people are hesitant to act in gender-inconsistent ways because they are

motivated to avoid social sanctions (Rudman & Fairchild, 2004). While research on the fear of

backlash has primarily examined the consequences of gender role violations in professional

settings (Rudman & Mescher, 2013; Rudman et al., 2012), our findings suggest that a similar

process operates in helping contexts which may offer a particularly potent test because helping

behaviors and helpers are often viewed positively (Klein et al., 2015).

While the robustness of these results is strengthened by the inclusion of an internal meta-

analysis across studies, it is prudent to address inconsistent patterns across individual studies.

Although we found that people reported less favorable attitudes, subjective norms, and lower

self-efficacy toward gender-inconsistent helping in Study 3, we failed to find consistently

statistically significant results in Studies 1 and 2. Specifically, in Study 1 we did not find

significant differences in subjective norm ratings, and in Study 2 we did not find differences in

ratings of attitudes. There are a few potential explanations for these inconsistencies across

studies. Self-efficacy may simply be the strongest and most reliable barrier to gender-

inconsistent helping. Indeed, across all studies, self-efficacy consistently and most strongly

predicted decreased gender-inconsistent helping intentions, and we speculate this occurred

because of the positive nature of prosociality. Helping others is generally regarded favorably

(Klein et al., 2015; Willer, 2009; Willer et al., 2010) and generous actors reap emotional benefits

(Aknin et al., 2013, 2015; Aknin & Whillans, 2021), so it is possible that these factors may have weakened the negative impacts of gender-inconsistent helping on subjective norms and attitudes.

An alternative explanation for the inconsistent pattern of results for attitudes and subjective norms may stem from our use of different measures across studies. As the project progressed, we refined our measures to better address our constructs of interest by using an existing Theory of Planned Behavior questionnaire (rather than adapting measures not designed to assess the Theory of Planned Behavior constructs), and it is possible that the measures used in Studies 1 and 2 to assess attitudes and subjective norms were not valid or reliable operationalizations. Specifically, the fear of backlash scale used to assess subjective norms in Study 1 may not have been a valid operationalization of this construct because this scale examines concerns about backlash for violating social norms, rather than people's beliefs about what important others think they should or should not do. In subsequent studies, we used an established scale designed to test subjective norms to improve the validity of this measure and found evidence in support of our predictions. It is also important to note that some measures had less than optimal reliability, likely due to the small number of items included in our scales. We also used different operationalizations of attitudes across studies, using an affective-based scale in Study 1 and valence-based scales in Studies 2 and 3.

Not only did the measures vary across studies, but so did the helping scenarios, which may have contributed to the inconsistent results for attitudes and subjective norms across studies. Although we derived the helping stimuli for all studies from our Pretest and originally varied the stimuli and measures in an effort to improve the generalizability of our findings, there were important contextual differences in these scenarios across studies, including the helping target and setting. With respect to subjective norms, it is possible that helping a stranger or assisting

someone in a public setting may increase concerns about the evaluations of others when violating gender roles, compared to helping a friend in a private setting. We found some support for this idea in Study 2 (helping a new neighbor, a stranger) and Study 3 (helping someone by going to a hardware store/mall, a public setting), where significant mean differences emerged between gender-consistent and gender-inconsistent helping on subjective norms. This pattern of mean differences did not emerge in Study 1, when people were asked to imagine helping a friend in a private setting, and perhaps concerns about disapproval were lower as the helping target was familiar and there were fewer potential observers. Future research could address this open question by manipulating the private versus public nature of the helping setting, as well as the familiarity with the helping target to see if these contextual features influence subjective norm ratings.

Limitations and Future Research Directions

Although these findings provide a foundation from which to understand the proximal barriers that restrict gender-inconsistent helping, it is important to note the limitations in this research. As highlighted above, we restricted our examination of helping to contexts where people assisted someone they were already familiar with, which may have shaped expectations surrounding the helping experience. Our findings do indicate that the barriers to gender-inconsistent helping are generalizable to both familiar (a friend) and newer relationships where people may be concerned about forming a positive first impression (a new neighbor), suggesting that a similar pattern could exist with an unknown other. Nonetheless, it will be important for future research to confirm this speculation by examining how the proximal barriers to gender-inconsistent helping operate in public settings with unfamiliar helping targets.

The inclusion of multiple pretested forms of gendered helping behaviors is a notable strength of the present research. While we intended to increase the generalizability of our findings to multiple types of helping, this approach comes at a critical cost to internal validity. In using multiple forms of helping within individual scenarios, it is challenging to parse what features of the scenarios were most influential in shaping people's judgments of the helping opportunity. For example, both providing emotional support and going clothes shopping are stereotypically feminine, but each behavior could theoretically elicit different reactions on its own. Perhaps some participants more strongly reacted to the emotional support component, while others reacted to the clothes shopping component. On a related note, the extent to which the masculine and feminine behaviors were parallel to one another within studies is a notable internal validity consideration. It is plausible that some aspects of the masculine and feminine helping behaviors outside of their gendered nature were systematically different. One might argue that taking a friend clothes shopping and moving furniture necessitates different physical and emotional demands in addition to the gendered nature of these behaviors. Perhaps a participant assigned to imagine helping someone move furniture more strongly considered the physical burden of this behavior in shaping their evaluations rather than the masculine stereotypes attached to it. Future research might remedy these limitations by examining single acts of masculine and feminine helping that are more comparable, like helping a new neighbor with household repairs or bringing that same new neighbor a home-cooked meal. Notably, both behaviors involve helping a new neighbor get settled into their home while better isolating the gendered nature of the helping act.

The generalizability of the current research is also limited to instances of direct helping requests. Given that it is difficult for people who are directly asked for help to say no (Bohns &

Flynn, 2015), participants may have been more receptive to helping in a gender-inconsistent way because they were asked to imagine themselves in a scenario where their assistance was requested. Being directly asked for assistance may also signal a boost in self-efficacy or decreased concerns about negative evaluations from the helping target. To illustrate, if asked for emotional support or advice, a person might think the person who asked them for assistance will not judge them negatively (even if the helping violates gender norms), and possibly asked them because they think they are particularly good at providing advice or being a supportive friend. While direct requests for help could increase confidence and perceptions of ability, this feature of the study design was consistent across helping conditions, suggesting that it may have increased these factors overall, but importantly, this does not account for the observed effects. That is, subjective norms and self-efficacy may have increased in both gender-consistent and gender-inconsistent helping scenarios, but we still observe differences in these elements *between* the helping scenarios. It will be important for future research to examine how the proximal barriers to gender-inconsistent helping tested in the current research generalize to instances of unsolicited or proactive forms of helping. To the extent that proactive helping is more deliberate, we would expect that gender-inconsistent helping is less likely because reflection might provide opportunity for the barriers studied here to undermine prosocial action.

It will also be important for future research to clarify the extent to which gender-inconsistent helping intentions predict actual helping behavior. Weaker intentions to help in gender-inconsistent ways were related to less helping engagement, but this effect was not statistically significant. Our ability to detect significant differences in this relationship may have been limited by critical elements of the Study 3 design, particularly the way in which these constructs were measured. Although the helping stimuli used to assess behavioral intentions and

engagement were conceptually similar and derived from the same Pretest, they were not identical

and may have contained additional measurement error due to procedural differences in how they

were measured. We also did not measure helping in real-time, but instead relied on participants

to accurately *recall* or *imagine* performing helping behaviors. Recalled behavioral measures are

susceptible to biases, whether it be socially desirable responding bias, or inaccuracies in recall

(Schwarz, 2007; Tourangeau, 2000), so it is possible that participants consciously or

unconsciously made errors in these reports. The behaviors that were used to measure helping

engagement only represent a sample of possible gender-consistent and gender-inconsistent forms

of helping, and it is certainly possible that these helping opportunities did not arise during the

month-long study period. The average helping engagement across all behaviors was on the lower

end of the scale which offers additional support for this speculation. Future research could

address these limitations by examining actual behavior in real-time, including observational

laboratory studies that eliminate recall bias, or daily diary methods that minimize the amount of

time before recall.

Armed with a greater understanding of the proximal barriers to helping in gender-

inconsistent ways, we see intervention studies as an important next step in shifting attitudes,

subjective norms, and self-efficacy toward these behaviors (see Croft et al., 2020 for a more

detailed discussion of proposed interventions). Research on affective forecasting errors (Wilson

& Gilbert, 2003) could inform strategies to shift negative attitudes toward gender-inconsistent

helping behaviors. Future research could compare how people *expect to feel* after engaging in

gender-inconsistent helping to how they *actually* feel. If people do not *actually* feel bad after

gender-inconsistent helping, an intervention study could make people aware of these forecasting

errors, which may increase receptiveness to engaging in gender-inconsistent helping. Subjective

norms could be shifted by showing people that they may be unrealistically concerned about

negative evaluations from others for performing gender-inconsistent helping. Typically, people

are evaluated negatively when their behavior violates gender stereotypes (e.g., Rudman &

Fairchild, 2004), but this pattern may not hold true in the context of prosocial behavior (e.g.,

Heilman & Chen, 2005; Taynor & Deaux, 1973); indeed, we find in our own recent research that

people *expect* others to evaluate gender-inconsistent helpers negatively, but this backlash does

not actually occur (Atkinson, Sandstrom, & Croft, 2021). Making people aware of the tendency

to overestimate negative evaluations from others could alter their subjective norms and increase

engagement in gender-inconsistent helping.

Increasing self-efficacy around gender-inconsistent helping could prove particularly

fruitful for changing helping behavior given that it consistently and robustly predicted behavioral

intentions across studies. Interventions could be designed to teach prosocial skills to children by

adapting existing educational training workshops (e.g., Schonert-Reichl et al., 2015), potentially

altering self-efficacy beliefs during impactful periods of gender socialization. For adults,

programs designed to increase gender-inconsistent helping could be implemented in the

workplace. Using insights from the lack of fit framework (Heilman & Caleo, 2018),

organizations could reduce people's performance concerns by providing hands-on experience

and training with gender-inconsistent helping opportunities, which will decrease situational

ambiguity and confusion, and incentivize these behaviors, which will increase motivation.

Practice Implications

Together, these studies focus on documenting the proximal barriers to helping and

provide a framework for understanding decision-making in contexts where helping is restricted

by gender stereotypes. Long-term, increased engagement in gender-inconsistent helping has the

potential to change gender stereotypes and norms, which should eventually change behavior, as outlined by Social Role Theory (Wood & Eagly, 2010). Not only will people gain additional experience engaging in gender atypical roles, but repeated observations of men and women engaging in such behaviors can change perceptions of behaviors that are appropriate for men and women, with the potential to shift and decrease the restrictive nature of gender stereotypes in other contexts. While gender roles and stereotypes have changed over time, the rate of change is not the same for men and women (Croft et al., 2015). Women continue to enter traditionally masculine fields at a faster rate than men enter traditionally feminine fields. We reason that changing the expectations surrounding gender-inconsistent prosociality could be an effective way to increase gender equality as a whole, particularly with respect to men's willingness to take on communal roles (Croft et al., 2020). Specifically, prosociality may be an ideal entry point to promote gender equality because helping is rewarding, and therefore people may find engagement in gender-inconsistent experiences to be positive and worth pursuing. Additionally, people may be more willing to violate gender stereotypes in prosocial contexts because doing so does not threaten the existing gender hierarchy, and as a result, the consequences of violating stereotypes are less severe than in other contexts. Finally, gender-inconsistent helping is a malleable skill that can be learned, which should empower people to learn to help in new ways (for a more detailed discussion of these arguments, see Croft et al., 2020).

Conclusion

The present research tested the proximal factors of the GRIP model. Taken together, our findings suggest that a combination of negative attitudes, perceptions of restrictive subjective norms, and especially low self-efficacy act as psychological barriers to gender-inconsistent prosocial behavior. In the future, research should consider interventions that can counteract the

effects of gender stereotypic expectations on helping in order to promote increased engagement

in gender-inconsistent prosociality and, ultimately, cultivate gender equality across contexts.

References

Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes*, *50*, 179–211. https://doi.org/10.1080/08870446.2011.613995

Ajzen, I. (2002). Perceived behavioral control, self- efficacy, locus of control, and the theory of planned behavior. *Journal of Applied Social Psychology*, *32*(4), 665–683. https://doi.org/10.1111/j.1559-1816.2002.tb00236.x

Aknin, L. B., Barrington-Leigh, C. P., Dunn, E. W., Helliwell, J. F., Burns, J., Biswas-Diener, R., Kemeza, I., Nyende, P., Ashton-James, C. E., & Norton, M. I. (2013). Prosocial spending and well-being: Cross-cultural evidence for a psychological universal. *Journal of Personality and Social Psychology*, *104*(4), 635–652. https://doi.org/10.1037/a0031578

Aknin, L. B., Broesch, T., Hamlin, J. K., & Van de Vondervoort, J. W. (2015). Prosocial behavior leads to happiness in a small-scale rural society. *Journal of Experimental Psychology: General*, *144*(4), 788–795. https://doi.org/10.1037/xge0000082

Aknin, L. B., & Whillans, A. V. (2021). Helping and happiness: A review and guide for public policy. *Social Issues and Policy Review, 15*(1), 3-34. https://doi.org/10.1111/sipr.12069

Amanatullah, E. T., & Morris, M. W. (2010). Negotiating gender roles: Gender differences in assertive negotiating are mediated by women's fear of backlash and attenuated when negotiating on behalf of others. *Journal of Personality and Social Psychology*, *98*(2), 256-267. https://doi.org/10.1037/a0017094

Atkinson, C., Sandstrom, G., Croft, C. (2021). A prosociality paradox: People overestimate backlash against helpers who violate gender stereotypes. Unpublished manuscript.

Baron, A. S., Schmader, T., Cvencek, D., & Meltzoff, A. N. (2014). The gendered self-concept:

       How implicit gender stereotypes and attitudes shape self-definition. In P. J. Leman & H.

       R. Tenenbaum (Eds.), *Gender and development* (pp. 109–132). East Sussex: Psychology

       Press. https://doi.org/10.4324/9781315870878

Beaujean, A. A. (2014)*. Latent variable modeling using R: A step-by-step guide.* New York, NY:

       Routledge.

Becker, S. W., & Eagly, A. H. (2004). The heroism of women and men. *American Psychologist*,

       59(3), 163–178. https://doi.org/10.1037/0003-066X.59.3.163

Bohns, V. K., & Flynn, F. J. (2015). Empathy gaps between helpers and help-seekers:

       Implications for cooperation. In R. A. Scott & S. M. Kosslyn (Eds.) *Emerging trends in

       the social and behavioral sciences*. Hoboken, NJ: Wiley.

Bowles, S., & Gintis, H. (2003). Origins of human cooperation. In P. Hammerstein (Ed.).

       Genetic and cultural evolution of cooperation (pp. 429-444). Cambridge, MA: MIT

       Press.

Brown, E. R., & Diekman, A. B. (2010). What will I be? Exploring gender differences in near

       and distant possible selves. *Sex Roles*, 63, 568–579. https://doi.org/10.1007/s11199-010-

       9827-x

Brown, S. L., Smith, D. M., Schulz, R., Kabeto, M. U., Ubel, P. A., Poulin, M., Yi, J., Kim, C.,

       & Langa, K. M. (2009). Caregiving behavior is associated with decreased mortality risk.

       Psychological Science, *20*(4), 488–494. https://doi.org/10.1111/j.1467-

       9280.2009.02323.x

Cejka, M. A., & Eagly, A. H. (1999). Gender-stereotypic images of occupations correspond to

the sex segregation of employment. *Personality and Social Psychological Bulletin, 25*(4),

413-425. https://doi.org/10.1177/0146167299025004002

Cohen, J. (1988). *Statistical power analysis for the behavioral sciences* (2nd ed.). Hillsdale, NJ:

Lawrence Erlbaum Associates.

Croft, A., Schmader, T., & Block, K. (2015). An underexamined inequality: Cultural and

psychological barriers to men's engagement with communal roles. *Personality and Social

Psychology Review*, *19*(4), 343–370. https://doi.org/10.1177/1088868314564789

Croft, A., Schmader, T., & Block, K. (2019). Life in the balance: Are women's possible selves

constrained by men's domestic involvement? *Personality and Social Psychology Bulletin,

45*(5), 808-823. https://doi.org/10.1177/0146167218797294

Croft, A., Atkinson, C., Sandstrom, G., Orbell, S., & Aknin, L. B. (2020). Loosening the GRIP

(gender roles inhibiting prosociality) to promote gender equality. *Personality and Social

Psychology Review, 25*(1), 66-92. https://doi.org/10.1177/1088868320964615

Diekman, A. B., Brown, E. R., Johnston, A. M., & Clark, E. K. (2010). Seeking congruity

between goals and roles: A new look at why women opt out of science, technology,

engineering, and mathematics careers. *Psychological Science*, *21*(8), 1051-1057.

https://doi.org/10.1177/0956797610377342

Diekman, A. B., & Clark, E. K. (2015). Beyond the damsel in distress: Gender differences and

similarities in enacting prosocial behavior. In D. A. Schroeder & W. G. Graziano (Eds.),

Oxford handbook of prosocial behavior (pp. 375–391). Oxford University Press.

https://doi.org/10.1093/oxfordhb/9780195399813.013.028

Diekman, A. B., Clark, E. K., Johnston, A. M., Brown, E. R., & Steinberg, M. (2011).

Malleability in communal goals and beliefs influences attraction to STEM careers:

Evidence for a goal congruity perspective. *Journal of Personality and Social Psychology,*

101(5), 902-918. https://doi.org/10.1037/a0025199

Diekman, A. B., & Eagly, A. H. (2008). Of men, women, and motivation: A role congruity

account. In J. Y. Shah & W. L. Gardner (Eds.), *Handbook of motivation science* (pp. 434-

447). New York, NY: The Guilford Press.

Diekman, A. B., & Goodfriend, W. (2006). Rolling with the changes: A role congruity

perspective on gender norms. *Psychology of Women Quarterly*, *30*, 369–383.

https://doi.org/10.1111/j.1471-6402.2006.00312.x

Eagly, A. H. (2009). The his and hers of prosocial behavior: An examination of the social

psychology of gender. *American Psychologist*, *64*(8), 644–658.

https://doi.org/10.1037/0003- 066X.64.8.644

Eagly, A. H., & Crowley, M. (1986). Gender and helping behavior: A meta-analytic review of

the social psychological literature. *Psychological Bulletin*, *100*(3), 283–308.

https://doi.org/10.1037/0033-2909.100.3.283

Eccles, J. S. (1994). Understanding women's educational and occupational choices: Applying the

Eccles et al. model of achievement-related choices. *Psychology of Women Quarterly, 18,*

585-609. https://doi.org/10.1111/j.1471-6402.1994.tb01049.x

Evans, C. D., & Diekman, A. B. (2009). On motivated role section: Gender beliefs, distant goals,

and career interest. *Psychology of Women Quarterly, 33*, 235-249.

https://doi.org/10.1111/j.1471-6402.2009.01493.x

Fishbein, M., & Ajzen, I. (2010). *Predicting and changing behavior: The reasoned action approach.* Psychology Press.

Giles, M., & Rea, A. (1999). Career self- efficacy: An application of the theory of planned behaviour. *Journal of Occupational and Organizational Psychology*, *72*(3), 393-398. https://doi.org/10.1348/096317999166743

Hayes, A. F. (2017). *Introduction to mediation, moderation, and conditional process analysis: A regression-based approach.* New York, NY: The Guilford Press.

Haynes, M. C., & Heilman, M. E. (2013). It had to be you (not me)!: Women's attributional rationalization of their contribution to successful joint work outcomes. *Personality and Social Psychology Bulletin*, *39*(7), 956-969. https://doi.org/10.1177/0146167213486358

Heilman, M. E. (1983). Sex bias in work settings: The lack of fit model. In B. Staw & L. Cummings (Eds.), *Research in organizational behavior* (Vol. 5, pp. 269–298). JAI Press.

Heilman, M. E., & Caleo, S. (2018). Combatting gender discrimination: A lack of fit framework. *Group Processes & Intergroup Relations*, *21*(5), 725-744. https://doi.org/10.1177/1368430218761587

Heilman, M. E., & Chen, J. J. (2005). Same behavior, different consequences: Reactions to men's and women's altruistic citizenship behavior. *Journal of Applied Psychology*, *90*(3), 431–441. https://doi.org/10.1037/0021-9010.90.3.431

Heilman, M. E., Wallen, A. S., Fuchs, D., & Tamkins, M. M. (2004). Penalties for success: Reactions to women who succeed at male gender-typed tasks. *Journal of Applied Psychology, 89*(3), 416-427. https://doi.org/10.1037/0021-9010.89.3.416.

Hentschel, T., Heilman, M. E., & Peus, C. V. (2019). The multiple dimensions of gender

      stereotypes: A current look at men's and women's characterizations of others and

      themselves. *Frontiers in Psychology*, *10*(11). https://doi.org/10.3389/fpsyg.2019.00011

Hyde, J. S. (2005). The gender similarities hypothesis. *American Psychologist*, *60*(6), 581–592.

      https://doi.org/10.1037/0003-066X.60.6.581

Hyde, J. S. (2014). Gender similarities and differences. *Annual Review of Psychology, 65*, 373-

      398. https://doi.org/10.1146/annurev-psych-010213-115057

Klein, N., Grossmann, I., Uskul, A. K., Kraus, A. A., Epley, N. (2015). It pays to be nice, but not

      really nice: Asymmetric reputations from prosociality across 7 countries. *Judgment and

      Decision Making*, *10*(4), 355-364. https://doi.org/ 2015-54495-006

Kline, R. B. (2015). *Principles and practice of structural equation modeling* (4th ed.). New

      York, NY: The Guilford Press.

Kushlev, K., Heintzelman, S. J., Lutes, L. D., Wirtz, D., Kanippayoor, J. M., Leitner, D., &

      Diener, E. (2020). Does happiness improve health? Evidence from a randomized

      controlled trial. *Psychological Science, 31*(7), 807-821.

      https://doi.org/10.1177/0956797620919673

Latané, B., & Darley, J. M. (1970). *The unresponsive bystander: Why doesn't he help?*.

      Appleton-Century Crofts.

Loewenstein, G., O'Donoghue, T., & Rabin, M. (2003). Projection bias in predicting future

      utility. *The Quarterly Journal of Economics, 118*(4), 1209-1248.

      https://doi.org/10.1162/003355303322552784

Lyubomirsky, S., Sheldon, K. M., & Schkade, D. (2005). Pursuing happiness: The architecture

of sustainable change. *Review of General Psychology*, *9*(2), 111–131.

https://doi.org/10.1037/1089-2680.9.2.111

McDonald, R. P., & Ho, M.-H. R. (2002). Principles and practice in reporting structural equation

modeling. *Psychological Methods, 7*(1), 64-82. https://doi.org/10.1037/1082-989X.7.1.64

Mellers, B. A., & McGraw, A. P. (2001). Anticipated emotions as guides to choice. *Current*

Directions in Psychological Science, 10(6), 210-214. https://doi.org/10.1111/1467-

8721.00151

Moss-Racusin, C. A., Phelan, J. E., & Rudman, L. A. (2010). When men break the gender rules:

Status incongruity and backlash against modest men. *Psychology of Men & Masculinity*,

11(2), 140–151. https://doi.org/10.1037/a0018093

Moss-Racusin, C. A., & Rudman, L. A. (2010). Disruptions in women's self-promotion: The

backlash avoidance model. *Psychology of Women Quarterly, 34*, 186-202.

https://doi.org/10.1111/j.1471-6402.2010.01561.x

Piliavin, J. A., Dovidio, J. F., Gaertner, S. L., & Clark, R. D. (1981). *Emergency intervention*.

New York, NY: Academic Press.

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*(4), 269–281. https://doi.org/10.1111/1471-6402.t01-

1-00066

Prentice, D. A., & Miller, D. T. (2006). Essentializing differences between women and men.

Psychological Science, 17(2), 128-135. https://doi.org/10.1111/j.1467-

9280.2006.01675.x

Rand, D. G., & Nowak, M. A., (2013). Human cooperation. *Trends in Cognitive Sciences*, *17*(8), 413-425. https://doi.org/10.1016/j.tics.2013.06.003

Rankin, L. E., & Eagly, A. H. (2008). Is his heroism hailed and hers hidden? Women, men and the social construction of heroism. *Psychology of Women Quarterly*, *32*, 414–422. https://doi.org/10.1111/j.1471-6402.2008.00455.x

Richard, F. D., Bond Jr, C. F., & Stokes-Zoota, J. J. (2003). One hundred years of social psychology quantitatively described. *Review of General Psychology*, *7*(4), 331-363. https://doi.org/10.1037/1089-2680.7.4.331

Rosseel, Y. (2012). lavaan: An R package for structural equation modeling. *Journal of Statistical Software*, *48*(2), 1-36. https://doi.org/10.18637/jss.v048.i02

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*(3), 629-645. https://doi.org/10.1037/0022-3514.74.3.629

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*(2), 157–176. https://doi.org/10.1037/0022-3514.87.2.157

Rudman, L. A., & Glick, P. (2001). Prescriptive gender stereotypes and backlash toward agentic women. *Journal of Social Issues*, *57*(4), 743–762. https://doi.org/10.1111/0022-4537.00239

Rudman, L. A., & Mescher, K. (2013). Penalizing men who request a family leave: Is flexibility stigma a femininity stigma? *Journal of Social Issues*, *69*(2), 322–340. https://doi.org/10.1111/josi.12017

Rudman, L. A., Moss-Racusin, C. A., Phelan, J. A., & Nauts, S. (2012). Status incongruity and

backlash effects: Defending the gender hierarchy motivates prejudice against female

leaders. *Journal of Experimental Social Psychology*, *48*, 165–179.

https://doi.org/10.1016/j.jesp.2011.10.008

Satorra, A., & Bentler, P. M. (1994). Corrections to test statistics and standard errors on

covariance structure analysis. In A. von Eye & C. C. Clogg (Eds.), *Latent variables*

analysis: Applications for developmental research (pp. 399-419). Thousand Oaks, CA:

Sage.

Schonert-Reichl, K. A., Oberle, E., Lawlor, M. S., Abbott, D., Thomson, K., Oberlander, T. F.,

& Diamond, A. (2015). Enhancing cognitive and social-emotional development through a

simple-to-administer mindfulness-based school program for elementary school children:

A randomized controlled trial. *Developmental Psychology*, *51*(1), 52–66.

https://doi.org/10.1037/a0038454

Schwarz, N. (2007). Retrospective and concurrent self-reports: The rationale for real-time data

capture. In A. S. Stone, S. Shiffman, A. A. Atienza, & L. Nebeling (Eds.), *The science of*

real-time data capture (pp. 11–26). New York: Oxford University Press.

Taynor, J., & Deaux, K. (1973). When women are more deserving than men: Equity, attribution,

and perceived sex differences. *Journal of Personality and Social Psychology*, *28*(3), 360–

367. https://doi.org/10.1037/h0035118

Tourangeau, R. (2000). Remembering what happens: Memory errors and survey reports. In A. A.

Stone, J. S. Turkkan, C. A. Bachrach, J. B. Jobe, H. S. Kurtzman, & V. S. Cain (Eds.),

The science of self-report: Implications for research and practice (pp. 29–47). Mahwah,

NJ: Erlbaum.

van der Linden, S. (2011). Charitable intent: A moral or social construct? A revised theory of

    planned behavior model. *Current Psychology*, *30*, 355-374.

    https://doi.org/10.1007/s12144-011-9122-1

Van Tongeren, D. R., Green, J. D., Davis, D. E., Hook, J. N., & Hulsey, T. L. (2016).

    Prosociality enhances meaning in life. *Journal of Positive Psychology*, *11*(3), 225–236.

    https://doi.org/10.1080/17439760.2015.1048814

Warburton, J., & Terry, D. J. (2000). Volunteer decision making by older people: A test of a

    revised theory of planned behavior. *Basic and Applied Social Psychology*, *22*(3), 245-257

    https://doi.org/10.1207/S15324834BASP2203_11

Watson, D., Clark, L. A., Tellegen, A. (1988). Development and validation of brief measures of

    positive and negative affect: The PANAS scales. *Journal of Personality and Social*

    Psychology, 54(6), 1063-1070. https://doi.org/10.1037/0022-3514.54.6.1063

Whillans, A. V, Dunn, E. W., Sandstrom, G. M., Dickerson, S. S., & Madden, K. M. (2016). Is

    spending money on others good for your heart? *Health Psychology*, *35*(6), 574–583.

    https://doi.org/10.1016/j.fusengdes.2010.04.022

Willer, R. (2009). Groups reward individual sacrifice: The status solution to the collective action

    problem. *American Sociological Review*, *74*, 23–43.

    https://doi.org/10.1177/000312240907400102

Willer, R., Feinberg, M., Irwin, K., Schultz, M., & Simpson, B. (2010). The trouble with

    invisible men: How reputational concerns motivate generosity. In S. Hitlin & S. Vaisey

    (Eds.), *Handbook of the sociology of morality* (pp. 315–330). New York, NY: Springer.

    https://doi.org/10.1007/978-1-4419-6896-8_17

Wilson, T. D., & Gilbert, D. T. (2003). Affective forecasting. In P. Zanna & M. A. Olson (Eds.),

   Advances in experimental social psychology (Vol. 35, pp. 345–411). Amsterdam:

   Academic Press.

Wood, W., & Eagly, A. H. (2010). Gender identity. In M. R. Leary & R. H. Hoyle (Eds.),

   Handbook of individual differences in social behavior (pp. 109-125). NY: Guilford Press.

Table 1

Full List of Helping Behaviors Tested in the Pretest

Behavior	Gender Stereotypicality	Behavioral Engagement	
	Total	Men	Women
	M (*SD*)	*M* (*SD*)	*M* (*SD*)
Doing yard work or household repairs for someone else.	**2.30 (1.12)**	**3.33 (1.95)**	**2.38 (1.85)**
Helping someone jump-start a car.	**2.06 (1.05)**	**2.51 (1.69)**	**1.95 (1.49)**
Helping someone carry groceries, a heavy box, etc.	**2.36 (1.02)**	**3.62 (2.10)**	**2.97 (2.07)**
Helping someone move into a new place.	**2.46 (1.01)**	**3.12 (2.05)**	**2.46 (1.64)**
Teaching someone how to use their new electronic device/appliance/tool.	**2.51 (0.97)**	**3.43 (2.02)**	**2.89 (1.94)**
Helping someone figure out an issue with their computer/electronic device.	2.57 (0.83)	3.77 (1.79)	3.36 (1.99)
Helping someone cross a busy intersection.	2.82 (0.87)	2.34 (1.74)	2.03 (1.48)
Giving directions to someone who looks lost.	2.87 (0.78)	3.36 (2.06)	2.86 (1.92)
Lending someone a large sum of money.	2.87 (0.74)	1.88 (1.35)	1.81 (1.05)
Giving up your seat on the bus to someone who needs it.	2.77 (0.85)	2.64 (1.86)	2.49 (1.88)
Holding a door open for someone.	2.46 (0.99)	4.46 (1.84)	4.35 (1.96)
Helping out in your neighborhood.	3.03 (0.88)	2.39 (1.83)	2.16 (1.59)
Picking up an item someone has dropped.	2.98 (0.76)	3.64 (2.11)	3.41 (2.02)
Paying the tab for the person behind you in the line.	3.10 (0.70)	2.12 (1.75)	1.84 (1.42)
Leaving an extra generous tip.	2.99 (0.80)	3.18 (1.95)	2.89 (2.02)
Giving someone a ride somewhere new.	2.98 (0.77)	2.94 (2.08)	2.92 (2.09)
Offering to proofread someone's resume/CV.	3.27 (0.74)	2.45 (1.91)	2.43 (1.83)
Spotting someone small change.	3.04 (0.72)	3.36 (1.87)	3.43 (2.03)
Volunteering to mentor children.	3.37 (1.00)	2.09 (1.77)	2.19 (1.81)
Listening and/or giving advice to someone about a personal problem.	3.64 (0.88)	4.17 (1.87)	4.30 (1.94)
Visiting folks at a retirement home or hospital.	**3.52 (0.82)**	**2.39 (1.86)**	**2.70 (1.87)**
Keeping someone company during a doctor's appointment.	**3.58 (0.88)**	**2.75 (1.87)**	**2.68 (1.96)**
Calling someone who seems like they need to be cheered up.	**3.76 (0.81)**	**3.03 (2.15)**	**3.11 (1.95)**
Taking a home-cooked meal to a sick friend/neighbor.	**3.83 (1.00)**	**2.06 (1.67)**	**2.43 (1.71)**
Helping someone choose what to wear.	**3.93 (0.96)**	**2.52 (1.94)**	**2.68 (1.97)**

Note. Items in bold are those selected as stimuli in the Pretest. Masculine helping behaviors bolded at the top of the table and feminine helping behaviors are bolded at the bottom of the table. Higher gender stereotypicality scores indicate that the behavior was judged as more

female-stereotypic. The gender stereotypicality of each helping behavior was rated on a 5-point Likert scale (1 = extremely masculine, 3 = neutral, 5 = extremely feminine) and behavioral engagement was rated on a 6-point Likert scale (1 = never, 2 = 1 time, 3 = 2 times, 4 = 3 times, 5 = 4 times, 6 = five times or more).

Table 2

Mean Differences by Helping Condition in Studies 1-3

	Study 1		Study 2		Study 3	
	Gender Consistent	Gender Inconsistent	Gender Consistent	Gender Inconsistent	Gender Consistent	Gender Inconsistent
	M (*SD*)	*M* (*SD*)	*M* (*SD*)	*M* (*SD*)	*M* (*SD*)	*M* (*SD*)
Attitudes	-		5.72 (1.02)	5.52 (1.28)	5.86 (1.22)	5.54 (1.32)
Positive affect	40.03 (8.57)	36.73 (8.63)	-	-	-	-
Negative affect	13.41 (4.19)	13.24 (3.95)	-	-	-	-
Subjective norms	1.47 (0.47)	1.48 (0.49)	5.22 (1.12)	4.97 (1.32)	5.84 (1.11)	5.51 (1.39)
Self-efficacy	5.90 (0.88)	5.19 (1.13)	5.78 (1.02)	5.28 (1.21)	5.64 (1.25)	5.19 (1.50)
Intentions	-	-	5.69 (1.27)	5.44 (1.58)	5.31 (1.45)	5.00 (1.56)

Note. Study 1 (gender-consistent $N = 206$, gender-inconsistent $N = 206$). Study 2 (gender-consistent $N = 245$, gender-inconsistent $N = 185$); Study 3 (gender-consistent $N = 256$, gender-inconsistent $N = 257$). In Study 1, attitudes (positive and negative affect) were rated on 5-point Likert scales (1 = very slightly o not at all, 5 = extremely), subjective norms were rated on a 5-point Liker scale (1 = not at all, 5 = very much), and self-efficacy beliefs were rated on a 7-point Likert scale (1 = not at all certain, 7 = extremely certain). In Studies 2 and 3, attitudes, subjective norms, self-efficacy beliefs, and behavioral intentions were rated on 7-point Likert scales.

Table 3

Results from Participant Gender x Help Type ANOVAs in Study 1

	M (SD)				F (η_p^2)		
	Male		Female		Main effects		Interaction
	Masculine	Feminine	Masculine	Feminine	Gender	Help type	Gender x Help type
Positive affect	34.64 (8.87)	37.39 (9.22)	36.50 (8.43)	42.05 (7.54)	12.45 (.03) ***	20.17 (.05) ***	2.30 (.01)
Negative affect	12.13 (3.05)	13.19 (3.91)	13.26 (3.97)	13.89 (4.46)	4.17 (.01) *	3.55 (.01)	0.22 (.001)
Subjective norms	1.45 (0.47)	1.58 (0.48)	1.45 (0.49)	1.47 (0.47)	1.11 (.003)	2.04 (.01)	0.89 (.002)
Self-efficacy	5.97 (0.80)	5.10 (1.26)	5.23 (1.08)	5.87 (0.91)	0.02 (<.001)	.99 (.002)	45.01 (.10) ***

*Note. * $p < .05$. ** $p < .01$. *** $p < .001$.

Table 4

Results from Participant Gender x Help Type ANOVAs in Study 2

| | M (SD) | | | | $F(\eta_p^2)$ | | |
| | Male | | Female | | Main effects | | Interaction |
	Masculine	Feminine	Masculine	Feminine	Gender	Help type	Gender x Help type
Attitudes	5.56 (1.05)	5.44 (1.02)	5.56 (1.37)	5.82 (1.00)	2.70 (.01)	0.40 (.001)	2.66 (.01)
Subjective norms	5.19 (1.17)	5.07 (1.21)	4.92 (1.38)	5.24 (1.09)	0.15 (< .001)	0.67 (.002)	3.27 (.01)
Self-efficacy	5.48 (1.09)	5.44 (1.09)	5.20 (1.27)	5.96 (0.92)	1.09 (.003)	10.76 (.03) **	13.37 (.03) ***
Intentions	5.38 (1.41)	5.41 (1.41)	5.45 (1.66)	5.88 (1.13)	3.76 (.01)	2.55 (.01)	1.97 (.01)

*Note. * p < .05. ** p < .01. *** p < .001.*

Table 5

Results from Participant Gender x Help Type ANOVAs in Study 3

	M (SD)				F (η_p^2)		
	Male		Female		Main effects		Interaction
	Masculine	Feminine	Masculine	Feminine	Gender	Help type	Gender x Help type
Attitudes	5.54 (1.24)	5.77 (1.20)	5.43 (1.37)	6.04 (1.18)	0.54 (.001)	12.75 (.02) ***	2.60 (.01)
Subjective norms	5.55 (1.22)	5.69 (1.21)	5.42 (1.46)	6.00 (1.02)	0.58 (.001)	9.75 (.02) *	3.64 (.01)
Self-efficacy	5.26 (1.32)	5.65 (1.14)	4.97 (1.60)	5.85 (1.15)	0.13 (< .001)	25.37 (.05) ***	3.92 (.01) *
Intentions	5.13 (1.50)	5.22 (1.32)	4.89 (1.66)	5.41 (1.42)	0.03 (<.001)	4.69 (.01) *	2.37 (.01)

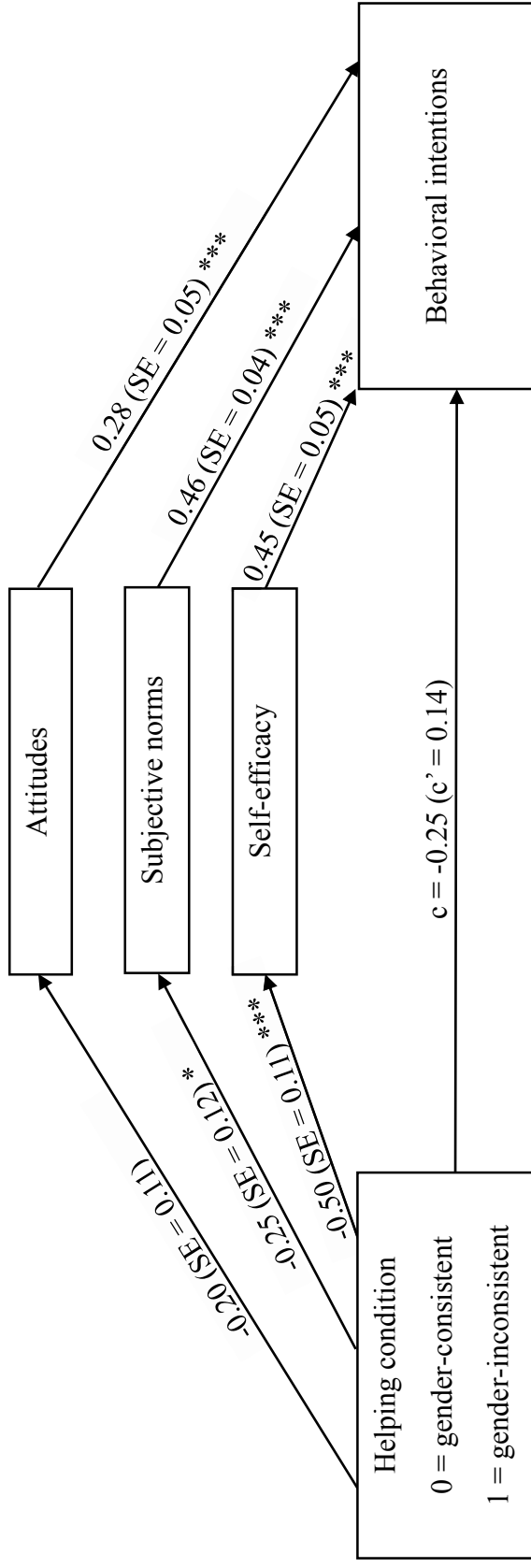*Note.* * $p < .05$. ** $p < .01$. *** $p < .001$.

Figure 1

The Gender Roles Inhibiting Prosociality (GRIP) Model
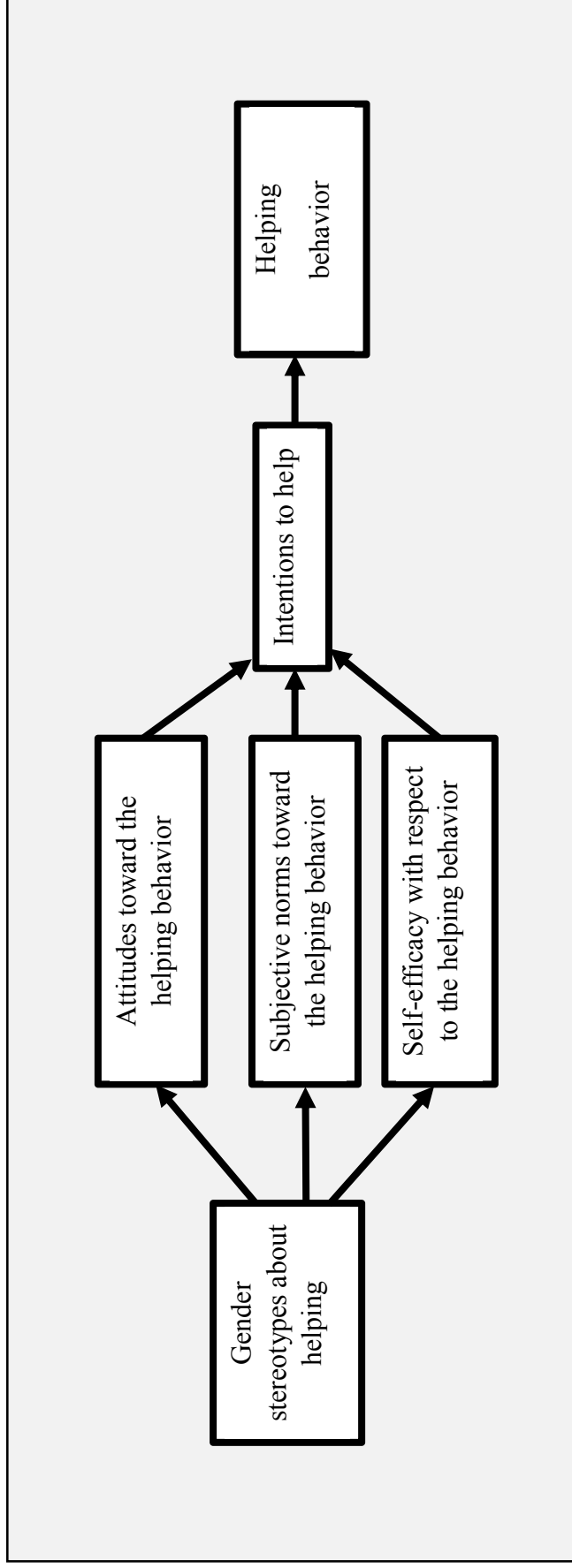
Note. A theoretical framework integrating the Social Role Theory of Helping (Eagly & Crowley, 1986) with the Theory of Planned Behavior (Ajzen, 1999) to predict engagement in gender-inconsistent helping.

Figure 2

Mediation Results for Behavioral Intentions in Study 2.

Attitudes

Subjective norms

Self-efficacy

Behavioral intentions

Helping condition

0 = gender-consistent

1 = gender-inconsistent

0.28 (SE = 0.05) ***

0.46 (SE = 0.04) ***

0.45 (SE = 0.05) ***

-0.02 (SE = 0.11)

-0.25 (SE = 0.12) *

-0.50 (SE = 0.11) ***

c = -0.25 (c' = 0.14)

Note. Unstandardized coefficients are presented and standard errors for each path are in parentheses. The indirect effects of subjective

norms and self-efficacy were statistically significant. *Note.* *$p < .05$. **$p < .01$. ***$p < .001$.

Figure 3

Full Test of Proximal Components of the Gender Roles Inhibiting Prosociality (GRIP) Model in Study 3.
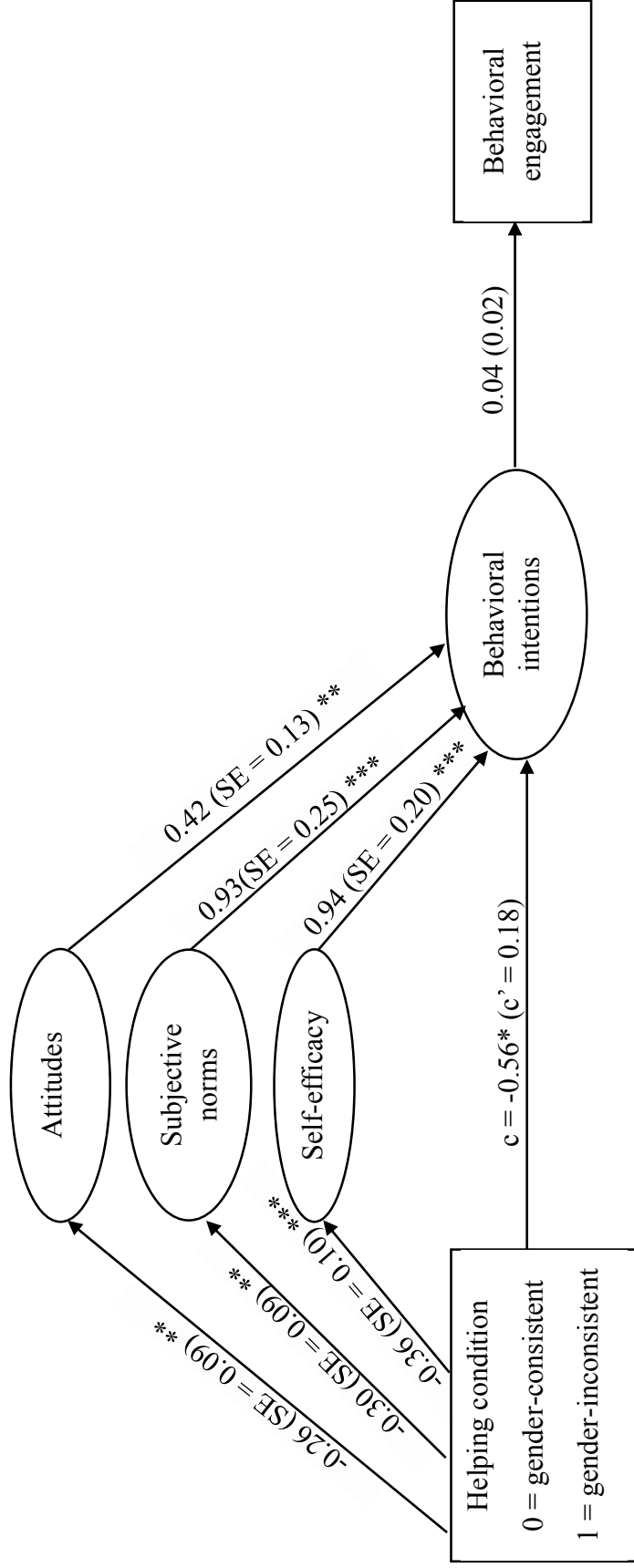
Note. Unstandardized coefficients are presented and standard errors for each path are in parentheses. The indirect effects of attitudes, subjective norms, and self-efficacy in the relationship between helping condition and behavioral intentions were statistically significant. *Note.* Indicators for latent variables are omitted for presentation clarity. Latent variables are represented with ovals. *$p <$ .05. **$p <$ .01. ***$p <$ .001.

Figure 4

Average Estimated Effect Size for Attitudes, Subjective Norms, Self-efficacy, and Intentions as a Function of Helping Condition.