

# Implicit and explicit evaluations of feminist prototypes predict feminist identity and behavior

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## Abstract

Many people who endorse gender equality do not personally identify as feminists. The present research offers a novel explanation for this disconnect by examining people's attitudes toward *feminist prototypes*—the central, representative feminist that comes to mind when they think of feminists as a group. Results from two samples support the hypothesis that both implicit and explicit attitudes toward feminist prototypes predict unique variance in feminist identity beyond gender-equality attitudes. Results from a second study show feminist identity to mediate between implicit prototypes and self-reported willingness to engage in feminist behaviors. Lastly, a third study shows feminist identity to mediate between implicit prototypes and actual feminist behavior. This is the first study to specifically examine the role of implicit attitudes and prototype favorability in understanding feminist identity and behavior, and the results suggest that promoting positive prototypes of feminists may be an effective route to encouraging feminist identity.

## Keywords

attitudes, feminist, implicit, identity, prototypes

A young woman recently told the first author, “of course I believe that men and women are equal, but I’m not a feminist.” Her comment echoes the sentiments of many others who, despite supporting gender equality, do not identify as feminists, and even actively distance themselves from feminist identity (Rich, 2005; Williams & Wittig, 1997; Zucker, 2004). Many factors influence feminist identity, but an important one has been overlooked: feminist prototypes—the central, representative

feminist that comes to mind when they think of feminists as a group. Thus, the purpose of the present research is to examine whether attitudes toward feminist prototypes influence

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the extent to which men and women identify as feminists and are willing to engage in feminist behaviors.

### **What Is Feminist Identity and Why Is It Important?**

Feminist identity is defined as a willingness to call oneself a feminist (Aronson, 2003; Zucker, 2004). People who identify as feminists take on a social identity: they perceive themselves as part of a social group that includes other self-identified feminists (Burn, Aboud, & Moyles, 2000; Leaper & Arias, 2011). This social identity is integrated into their self-concepts (Turner & Oakes, 1986), such that people who identify as feminists incorporate their feminist identity into their personal identity. While past conceptions of feminist identity have conflated it with feminist beliefs (e.g., ideas regarding gender equality; Enns, 1997), consensus is emerging that holding gender-equality beliefs does not necessarily lead to identifying oneself as feminist (Williams & Wittig, 1997; Zucker, 2004; Zucker & Bay-Cheng, 2014).

The current research focuses specifically on predicting feminist identity, which is related to various positive outcomes. For example, women at more advanced stages of feminist development (i.e., with a stronger sense of feminist identity) have a greater sense of psychological well-being, perhaps because they more critically evaluate social influences on their choices (Saunders & Kashubeck-West, 2006). Another study

examined changes in feminist identity during a relevant college course. It showed that the class members who increased their feminist identity the most also experienced the greatest boosts in beliefs about their abilities to complete tasks and achieve goals (i.e., self-efficacy; Eisele & Stake, 2008). Other research links feminist identity to women's improved self-acceptance (Szymanski, 2004), greater willingness to engage in feminist activism (Duncan, 1999; Nelson et al., 2008), and superior health and well-being outcomes, including greater efficacy in condom use (Schick, Zucker, & Bay-Cheng, 2008) and lowered body surveillance and shame (Hurt et al., 2007). A recent meta-analysis further highlights the importance of feminist identification and the distinction between feminist beliefs and feminist identity; results showed that body satisfaction is predicted more strongly by feminist identity than by feminist beliefs (Murnen & Smolak, 2009).

### **Predicting Identification With Feminism**

Much of the literature on feminist identification examines the role of personal beliefs and policy support. Although feminist beliefs cannot be conflated with feminist identity, they are related: people are more likely to identify as feminists to the extent that they support gender equality or related feminist goals (Myakovsky & Wittig, 1992). In addition, exposure to feminist thought (e.g., taking a women's studies course) helps women develop more positive views of feminism and feminist identity (Bargad & Hyde, 1991). Also, those who recognize that discrimination against women

exists (e.g., in economic disparities; Williams & Wittig, 1997), or believe that collective feminist action can influence positive social change (Myakovsky & Wittig, 1992; Nelson et al., 2008; Williams & Wittig, 1997), are more likely to identify as feminist.

The present research question—whether attitudes toward feminist prototypes influence feminist identity—extends beyond earlier literature on personal beliefs and policy support, joining a body of work focused on how perceptions of feminists influence personal identification. Research suggests that people are more likely to identify as feminists to the extent that they have positive attitudes toward feminists or are exposed to positive information about feminists (Houvouras & Carter, 2008; Liss, O'Connor, Morosky, & Crawford, 2001; Myakovsky & Wittig, 1992; Robnett, Anderson, & Hunter, 2012; Roy, Weiburst, & Miller, 2007; Williams & Wittig, 1997). For example, in one study, participants who attributed negative qualities to feminists (e.g., undesirability, plainness) were less likely to identify as feminist as compared to those who attributed positive qualities to them (e.g., desirability, sexiness; Leaper & Arias, 2011). In another study, college women who read negative stereotypes of feminists (e.g., “stubborn,” “angry”) were subsequently less likely to identify as feminist compared to those who read about positive stereotypes of feminists (e.g., “confident,” “independent”; Roy et al., 2007). Similarly, an experiment showed positive portrayals of feminist men to cause greater solidarity and feminist behavioral

intentions among men (Wiley, Srinivasan, Finke, Firnhaber, & Shilinsky, 2013).

The present research extends these earlier investigations of attitudes toward feminists: we use both implicit and explicit attitudes toward the prototypical feminist to predict feminist identification, while controlling for belief in gender equality. We also broaden existing research by situating our research within prototype theory, which has shown predictive value in a variety of other domains (Gerrard, Gibbons, Stock, Vande Lune, & Cleveland, 2005; Rosch, 1973).

## **Attitudes Toward Prototypes and Behavior**

A prototype of a category is the most central and representative category member—in measurable terms, it is the category member that most easily and frequently comes to mind when naming individual members (Rosch, 1973). For example, when asked to think of a bird, most people typically recall something more like a robin rather than an ostrich. For the bird category, “robin” has more “birdness” than “ostrich” does; in other words, “robin” is a more prototypical member of the bird category (Rosch, 1973). People also have central, representative prototypes of *social* categories (e.g., smokers, hipsters, sports fanatics): the person (i.e., the smoker, the hipster, the sports fanatic) that comes to mind when people think about that category.

While a robin is the prototypical bird for most people (Rosch, 1973), prototypes of social groups can vary widely between people (Gerrard et al., 2005). For example, though one person may think the

prototypical smoker is cool and fun, another person may think the prototypical smoker is uncool and boring (Gerrard et al., 2005). The traits that are attributed to prototypes are often value-laden; some are more favorable (e.g., cool) and some are less favorable (e.g., boring). As a result, people have a positive or negative attitude toward the prototypical member of a given category.

The prototype–willingness model of behavior (PWM; Gerrard, Gibbons, Houlihan, Stock, & Pomery, 2008) suggests that people’s attitudes toward prototypes predict their willingness to engage in behaviors related to the prototype. Specifically, to the extent that they have a positive attitude toward the prototypical person who engages in a behavior, people are more willing to engage in that behavior. Evidence shows that attitudes toward prototypes do predict relevant behavior. For example, teenagers who rate peer alcohol users positively (e.g., as cool, fun, intelligent) also report being more willing to drink alcohol if it became available, and are subsequently more likely to actually use alcohol (Spijkerman, Larsen, Gibbons, & Engels, 2010). In another study, teenagers’ favorable prototypes of smokers predicted greater willingness to smoke and greater likelihood of future cigarette use (Gerrard et al., 2005). Attitudes toward prototypes also predict additional health behaviors, including drunk driving (Rivis, Abraham, & Snook, 2011), exercise (Oullette, Hessling, Gibbons, ReisBergen, & Gerrard, 2005), and healthy eating (Gerrits, Ridder, De Wit, & Kuijer, 2009).

Despite the predictive power of the prototype–willingness model, it has rarely been applied beyond health behaviors. In the present research, we use the PWM as a framework for understanding how attitudes toward feminist prototypes are related to feminist identification and willingness to engage in feminist behaviors. Consistent with the PWM, we expect that positive attitudes toward the prototypical feminist will be associated with increased identification as feminist and willingness to engage in feminist behaviors.

### **Implicit and Explicit Attitudes Toward Prototypes**

Most research in prototypes and feminist identity assesses attitudes using direct measurement. *Direct measures* of attitudes toward prototypes involve asking participants to self-report the traits they ascribe to prototypical members of social groups (e.g., “how cool is the typical smoker?”). *Indirect measures*, on the other hand, either do not alert participants to what is being measured, or reduce participants’ deliberative control over their responses, even if they are aware of what is being measured (De Houwer, 2006).

Direct measures are useful because they allow participants to deliberate on their responses. However, participants may be unable or unwilling to report some aspects of their attitudes, particularly in socially sensitive domains (Greenwald & Banaji, 1995). For example, people may be unwilling to express prejudice toward a particular group or to endorse a particular unhealthy behavior. They may instead present a more socially acceptable response,

which hinders accurate assessment of their attitudes (De Houwer, 2006). To avoid such self-presentation, researchers use indirect measures. In this manuscript, we refer to *implicit attitudes* as the outcomes of indirect measures of attitudes toward prototypes, and *explicit attitudes* as the outcomes of direct measures of attitudes toward prototypes.

Although people's explicit attitudes account for important variance in behavior (Ajzen, 2011), implicit attitudes often account for additional and unique variance (Greenwald, Poehlman, Uhlmann, & Banaji, 2009). Implicit attitudes surpass explicit attitudes as predictors of some prejudice-based interpersonal behavior (e.g., selection of task partners; Ashburn-Nardo, Knowles, & Monteith, 2003), willingness to engage in some risky health behaviors (Ratliff & Howell, 2015), and some political judgments (Hawkins & Nosek, 2012). For example, despite explicitly denying partisanship, people judge policy vignettes more favorably when proposed by their implicitly preferred party (Hawkins & Nosek, 2012).

Although implicit attitudes offer important explanatory power, they have been overlooked in the feminist identification literature. Scholars typically use only direct measures to predict feminist identity (e.g., Myakovsky & Wittig, 1992; Robnett et al., 2012). Some feminism researchers have measured implicit attitudes toward feminists (Breen & Karpinski, 2008; Jenen, Winqvist, Arkkelin, & Schuster, 2009); their results suggest an implicit preference for college-age "traditionalists" over college-age feminists, for feminist women over nonfeminist women, and for

nonfeminist men over feminist men. However, they did not examine whether these implicit attitudes predicted feminist identification. Research on prototypes has used indirect measures of prototypes to predict health behavior only recently, but with promising results (e.g., Ratliff & Howell, 2015). This research found that implicit attitudes toward prototypes outperformed explicit attitudes in predicting current health behavior and future healthy intentions. In the current research, we hope to expand earlier research on feminist identification by predicting feminist identification with both implicit and explicit attitudes toward the prototypical feminist.

## **The Present Research**

The purpose of the present research is to examine whether attitudes toward prototypes of feminists—the central, representative feminist that comes to mind when they think of feminists as a group—predict feminist identification. In Study 1, two samples test the hypothesis that both implicit *and* explicit prototypes will predict unique variance in feminist identification beyond gender-equality beliefs. We provide an initial test of our hypotheses, as well as an (almost) exact replication, to establish the reproducibility of the phenomena and to obtain a more stable and precise effect size estimate, as recently recommended for psychological research (e.g., Bonett, 2012; Funder et al., 2014). A second study tests whether feminist self-identification mediates between implicit attitudes toward feminist prototypes and willingness to engage in feminist behaviors. A third and final study tests whether feminist self-identification

mediates between implicit attitudes toward feminist prototypes and feminist behavior.

## Study 1

### *Method*

*Participants.* Participants were United States citizens recruited via the Project Implicit research website (<https://implicit.harvard.edu>). Participants were randomly assigned to this study from a pool of approximately 10 studies running at the time (January 2, 2014 to February 17, 2014). Sample A, the exploratory sample, included 295 participants (73.6% women,  $M$  age = 33.0 years,  $SD$  = 13.2; 83.6% White) and Sample B, the confirmatory/replication sample, included 506 participants (65.4% women,  $M$  age = 31.5 years,  $SD$  = 13.3; 73.0% White). Participants reported their political orientation on a scale ranging from  $-3$  (*strongly Liberal*) to  $+3$  (*strongly Conservative*), with the mid-point indicating neutrality; both samples indicated being slightly more Liberal than Conservative (Sample A:  $M$  =  $-0.54$ ,  $SD$  = 1.71; Sample B:  $M$  =  $-0.67$ ,  $SD$  = 1.66). As soon as participants initiated the study session, they were no longer eligible to be assigned to the study again on subsequent visits to the website.

### *Materials*

*Implicit attitudes toward feminist prototypes.* A Single-Category Implicit Association Test (SC-IAT; Steinman & Karpinski, 2008) assessed associations between the concept category *feminists*, and the evaluative attributes *good* and *bad*, by requiring that participants categorize stimulus items representing the categories as

quickly as possible using two keys of a computer keyboard. The stimuli representing the category *feminists* included the word “feminists” and four pictures representing feminist ideology (e.g., Rosie the Riveter). The stimuli representing the categories *good* and *bad* were the words “good” and “bad,” and four positive and four negative pictures from the International Affective Picture System (IAPS; Lang, Bradley, & Cuthbert, 2008). Stimuli are available upon request.

The Single-Category Implicit Association Test consisted of six blocks of 10 trials. After each block, the category labels switched sides. Analysis (Greenwald, Nosek, & Banaji, 2003) had the following features: response latencies  $< 400$  ms and  $> 10,000$  ms were removed, and trial latencies were calculated from the beginning of the trial until the time of a correct response. A greater positive D-score indicates a stronger association between *feminist* and *good*. The SC-IAT split-half reliability was .60 in both studies. We did not examine data from seven participants (2.4%) in Study 1, Sample A and 14 in Study 1, Sample B (2.8%) because of too-high error rates (greater than 40% in a single block or greater than 30% overall).

*Explicit attitudes toward feminist prototypes.* Consistent with earlier research using implicit and explicit prototype favorability (Ratliff & Howell, 2015), participants reported their attitudes toward feminist prototypes on four traits: (a) How uncool or cool are feminists? (b) How unattractive or attractive are feminists? (c) How unintelligent or intelligent are feminists? (d) How boring or fun are

feminists? Participants responded to each item on a 7-point scale ranging from the low anchor (e.g., 1 = *very uncool*) to the high anchor (e.g., 7 = *very cool*). We chose to assess general traits rather than feminist-specific prototypes or stereotypes to be consistent with earlier prototype–willingness work (e.g., Gerrard et al., 2005; Ratliff & Howell, 2015). Responses to the four items were combined into a single feminist prototype favorability score such that a higher score indicates a more favorable explicit feminist prototype (Sample A:  $\alpha = .86$ , Sample B:  $\alpha = .82$ ).

#### *Gender-equality attitudes.*

Participants responded to a 22-item measure of their gender-equality attitudes (adapted from Prasad & Baron, 1996; Sample A:  $\alpha = .89$ , Sample B:  $\alpha = .90$ ) shown to be cross-culturally predictive of policy support (Prasad & Baron, 1996). Participants responded using a scale that ranged from 1 = *strongly disagree* to 7 = *strongly agree*. Example items include “In heterosexual relationships, the responsibility of taking care of infants should be equally divided between the man and woman” and “Men are better suited for higher education than women are.”

#### *Identification with feminism.*

Participants also completed the Self-Identification as a Feminist Scale (Szymanski, 2004; Sample A:  $\alpha = .92$ , Sample B:  $\alpha = .91$ ), which consisted of four items (“I consider myself a feminist”; “I identify myself as a feminist to other people”; “Feminist values and principles are important to me”; “I support the goals of the

feminist movement”) that are rated on a 5-point scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*).

*Procedure.* Volunteers registered for the research pool at the Project Implicit website. After being randomly assigned to this study from a pool of studies, participants completed the implicit and explicit prototype favorability in counterbalanced order. Participants in Sample A then completed the gender attitudes measure, followed by the Identification with Feminism Scale. Participants in Sample B then completed the gender attitudes measure and Identification with Feminism Scale in counterbalanced order.<sup>1</sup>

#### *Results*

##### *Implicit and explicit attitudes toward feminist prototypes*

*Sample A.* Participants had slightly positive implicit,  $M = 0.27$ ,  $SD = 0.31$ , one-sample  $t(287) = 14.78$ ,  $p < .0001$ , Cohen’s  $d = 0.87$ , and explicit,  $M = 4.64$ ,  $SD = 1.07$ , attitudes toward feminist prototypes. The correlation between implicit and explicit attitudes was moderate,  $r(285) = .33$ ,  $p < .001$ . Participants also generally endorsed gender equality,  $M = 5.85$  on a 7-point scale,  $SD = 0.84$ , and identified as feminists,  $M = 3.30$  on a 5-point scale,  $SD = 1.04$ .

*Sample B.* As in Sample A, participants had slightly positive implicit,  $M = 0.26$ ,  $SD = 0.31$ , one-sample  $t(491) = 18.13$ ,  $p < .001$ , Cohen’s  $d = 0.84$ , and explicit,  $M = 4.55$ ,  $SD = 1.21$ , attitudes toward feminist prototypes. The correlation between implicit and explicit attitudes was

moderate,  $r(487) = .42, p < .001$ . Participants also generally endorsed gender equality,  $M = 5.85$  on a 7-point scale,  $SD = 0.86$ , and identified as feminists,  $M = 3.29$  on a 5-point scale,  $SD = 1.00$ .<sup>2</sup>

*Predicting identification with feminism from implicit and explicit attitudes toward feminist prototypes*

*Sample A.* We used a three-step hierarchical regression to examine whether implicit prototype attitudes explained additional variance in feminist self-identification beyond that explained by gender equality and explicit prototype attitudes. In the first step, only gender-equality attitudes were entered into the model. As expected, those who believed most in gender equality also identified more strongly as feminist,  $b = 0.56, \beta = .45, SE = 0.07, p < .001$ , model  $R^2 = .20$ . In the second step, explicit prototype attitudes were entered into the model. Explicit prototype attitudes significantly predicted identification with feminism,  $b = 0.50, \beta = .51, SE = 0.05, p < .001$ , as did gender-equality attitudes,  $b = 0.39, \beta = .31, SE = 0.06, p < .001$ , model  $R^2 = .45$ . The increase in model  $R^2$  suggests that explicit attitudes explained approximately 24.2% additional variance (30.4% of the previously unexplained variance) in feminist identification beyond gender-equality attitudes,  $\Delta R^2 = .24, \Delta F = 123.82, p < .001$ . In the third step, implicit prototype attitudes were entered as an additional predictor. Implicit prototype attitudes,  $b = 0.78, \beta = .23, SE = 0.16, p < .001$ , explained additional variance in feminist identification beyond both explicit prototype attitudes,  $b = 0.44, \beta = .45, SE = 0.05, p < .001$ , and gender-equality attitudes,  $b = 0.32, \beta = .26, SE = 0.06, p < .001$ , model  $R^2 = .49$ . The increase in model  $R^2$  suggests that implicit attitudes explained approximately 4.5% additional variance (8.1% of the previously

unexplained variance) in feminist identification beyond gender-equality attitudes and explicit prototypes,  $\Delta R^2 = .05, \Delta F = 23.24, p < .001$ . All predictors continued to significantly predict feminist identification even after controlling for participant gender and political orientation ( $p < .001$ ). *Sample B.* Sample B replicated Sample A in that gender-equality attitudes,  $b = 0.38, \beta = .32, SE = 0.04, p < .001$ , as well as explicit prototype attitudes,  $b = 0.35, \beta = .43, SE = 0.03, p < .001$ , and implicit prototype attitudes,  $b = 0.63, \beta = .20, SE = 0.11, p < .001$ , all predicted feminist identification in the additive steps and in the final model. As in Sample A, the change in  $R^2$  from the first model (gender-equality attitudes only;  $R^2 = .34$ ) to the second model (gender-equality attitudes and explicit prototypes;  $R^2 = .54$ ) was significant,  $\Delta R^2 = .20, \Delta F = 194.44, p < .001$ , and suggested that adding explicit prototypes explained 19.8% additional variance (29.8% of previously unexplained variance). Similarly, the change in  $R^2$  from the second model (gender-equality and explicit prototypes;  $R^2 = .54$ ) to the third model (gender-equality attitudes, explicit prototypes, and implicit prototypes;  $R^2 = .56$ ) was also significant,  $\Delta R^2 = .03, \Delta F = 32.40, p < .001$ , and suggested that adding explicit prototypes explained 3.1% additional variance in feminist identification (7.1% of previously unexplained variance).<sup>3, 4</sup> As in Sample A, all predictors continued to significantly predict feminist identification even after controlling for participant gender and political orientation ( $p$  s  $< .001$ ).

*Discussion*

The results from two samples—one exploratory and one replication—support the hypothesis that people's implicit and explicit attitudes toward feminist prototypes predict their identification as feminist beyond their

gender-equality attitudes. As far as we are aware, this is the first research to show that prototype theory can guide research on feminist identification. However, while predicting feminist identification is in itself valuable, a more stringent test of the prototype–willingness model (Gerrard et al., 2005) would test whether feminist self-identification predicts willingness to engage in feminist behaviors. Thus, we designed a second study to test whether feminist self-identification mediates between implicit attitudes toward feminist prototypes and willingness to engage in feminist behaviors.

## Study 2

### *Method*

*Participants.* Participants were 772 United States citizens recruited via the Project Implicit research website (<https://implicit.harvard.edu>; 69.0% women,  $M$  age = 38.5 years,  $SD$  = 14.3; 75.5% White). Participants reported their political orientation on a scale ranging from  $-3$  (strongly Conservative) to  $3$  (strongly Liberal), with the mid-point indicating neutrality. The sample indicated being slightly more Liberal than Conservative ( $M$  =  $0.91$ ,  $SD$  =  $1.67$ ). As soon as participants initiated the study session, they were no longer eligible to be assigned to the study again on subsequent visits to the website.

*Materials, measures, and procedure.* Implicit attitudes toward feminist prototypes, explicit attitudes toward feminist prototypes ( $\alpha$  =  $.84$ ), gender-equality attitudes ( $\alpha$  =  $.65$ ), and identification with feminism ( $\alpha$  =  $.91$ ) were measured exactly as in Study 1. We measured willingness to engage in feminist behaviors ( $\alpha$  =  $.96$ ) using 11 items such as “How willing would you be to bring up feminist issues in conversation with someone you know well?” and “Imagine a feminist organization has

contacted you to ask you to add your name to their membership list. How willing would you be to do so?” (see Appendix A). After random assignment to this study from the Project Implicit research pool, participants completed the implicit and explicit prototype favorability in randomized order. Participants then completed the gender-equality attitudes measure, Identification with Feminism Scale, and measure of willingness to engage in feminist behaviors, in randomized order.

### *Results*

We used a mediation model to test whether feminist self-identification mediated the effect of implicit feminist prototypes on willingness to engage in feminist behaviors, with gender-equality attitudes and explicit feminist prototypes as covariates. We used the bootstrapped indirect effects approach recommended by Preacher and Hayes (2008). We used PROCESS, Hayes and Preacher’s bootstrapping macro for SPSS. The macro uses thousands of random resamples of the data to generate an empirical sampling distribution, from which it estimates effects.

Implicit prototypes significantly predicted feminist identification,  $b$  =  $0.45$ , 95% CI [ $0.32$ ,  $0.59$ ],  $SE$  =  $0.07$ ,  $p$  <  $.001$ , and feminist identification significantly predicted willingness to engage in feminist behaviors,  $b$  =  $0.97$ , 95% CI [ $0.88$ ,  $1.07$ ],  $SE$  =  $0.05$ ,  $p$  <  $.001$ . The significant relationship between implicit prototypes and willingness to engage in feminist behaviors,  $b$  =  $0.73$ , 95% CI [ $0.51$ ,  $0.95$ ],  $SE$  =  $0.11$ ,  $p$  <  $.001$ , remained significant when feminist identification entered into the model,  $b$  =  $0.29$ , 95% CI [ $0.11$ ,  $0.47$ ],  $SE$  =  $0.09$ ,  $p$  <  $.001$ . The 1,000-sample bootstrapped estimate of the indirect effect was  $b$  =  $0.44$ ,  $SE$  =  $0.07$ , and the 95% confidence interval [ $0.31$ ,  $0.59$ ] indicated a significant indirect effect.

Feminist identification mediated the relationship between implicit prototypes and willingness to engage in feminist behaviors; as expected, more positive implicit prototypes led to greater feminist identification, which in turn contributed to greater willingness to engage in feminist behaviors.

### *Discussion*

This study was designed to test a prediction of the prototype–willingness model: that attitudes toward prototypes should predict identification, and that identification should in turn predict behavioral willingness. As expected, we found feminist self-identification to mediate between implicit feminist prototypes and willingness to engage in feminist behaviors. More positive implicit prototypes led to greater feminist identification, which in turn contributed to greater willingness to engage in feminist behaviors.

Despite supporting our predictions, our measure of willingness relied on self-report. An alternative approach to measuring willingness is to actually offer participants an opportunity to engage in feminist behavior. Thus, we designed a third study to test whether our predictions hold under this alternative approach: whether feminist self-identification mediates between implicit feminist prototypes and engagement in feminist behavior.

## **Study 3**

### *Method*

*Participants.* Participants were 735 United States citizens recruited via the Project Implicit research website (<https://implicit.harvard.edu>), who completed the allocation task. Total  $N$  was reduced to 534 after removing 94 participants (13%) who skipped the allocation task, and 107 participants (17%) who did not allocate exactly five

votes during the allocation task (64.6% women,  $M$  age = 37.9 years,  $SD$  = 14.2; 76.4% White). Participants reported their political orientation on a scale ranging from  $-3$  (strongly Conservative) to  $3$  (strongly Liberal), with the mid-point indicating neutrality. The sample indicated being slightly more Liberal than Conservative ( $M$  = 0.87,  $SD$  = 1.66). As soon as participants initiated the study session, they were no longer eligible to be assigned to the study again on subsequent visits to the website.

### *Materials, measures, and procedure*

Implicit attitudes toward feminist prototypes, explicit attitudes toward feminist prototypes ( $\alpha$  = .84), gender-equality attitudes ( $\alpha$  = .63), and identification with feminism ( $\alpha$  = .91) were measured exactly as in Studies 1 and 2. We measured feminist behavior using an allocation task. Participants were informed that the research team would split \$50.00 between four charities on behalf of the study participants, and that participants would decide how to allocate the money. Participants were instructed to allocate a total of exactly five votes to any or all of four charities (the Cancer Research Institute, the Children's Aid Society, the Feminist Majority Foundation, or the Environmental Defense Fund; see Appendix B). Their votes were tallied at the bottom of the screen as they were allocated.

After random assignment to this study from the Project Implicit research pool, participants completed the implicit and explicit prototype favorability in randomized order. Participants then completed the gender attitudes measure, Identification with Feminism Scale, and measure of willingness to engage in feminist behaviors, in randomized order.

### *Results*

We used a mediation model to test whether

feminist self-identification mediated the effect of implicit feminist prototypes on allocation to the feminist charity, with gender-equality attitudes and explicit feminist prototypes as covariates. As in Study 2, we used PROCESS, Preacher & Hayes's (2008) bootstrapping macro for SPSS.

Implicit prototypes significantly predicted feminist identification,  $b = 0.51$ , 95% CI [0.32, 0.71],  $SE = 0.10$ ,  $p < .001$ , and feminist identification significantly predicted allocation of votes to the feminist charity,  $b = 0.24$ , 95% CI [0.11, 0.37],  $SE = 0.07$ ,  $p < .001$ . The significant relationship between implicit prototypes and allocation to feminist charity,  $b = 0.31$ , 95% CI [0.07, 0.55],  $SE = 0.12$ ,  $p < .001$ , was no longer significant when feminist identification entered into the model,  $b = 0.19$ , 95% CI [-0.06, 0.43],  $SE = 0.13$ ,  $p = .13$ . The 1,000-sample bootstrapped estimate of the indirect effect was  $b = 0.12$ ,  $SE = 0.05$ , and the 95% confidence interval [0.05, 0.23] indicated a significant indirect effect. Feminist identification mediated the relationship between implicit prototypes and allocation to feminist charity; as expected, more positive implicit prototypes led to greater feminist identification, which in turn contributed to greater allocation to feminist charity.

### *Discussion*

This study was designed to test the hypothesis that implicit attitudes toward feminist prototypes predict feminist identification, and that feminist identification would in turn predict feminist behavior. As expected, we found feminist self-identification to mediate between implicit prototypes and willingness to engage in feminist behaviors: more positive implicit prototypes led to greater feminist identification, which in turn contributed to greater feminist behavior.

## **General Discussion**

Consistent with the prototype-willingness model (Gerrard et al., 2005) and with our hypotheses, participants with more favorable attitudes toward feminist prototypes reported more strongly as feminist and were more willing to engage in feminist behavior. These findings are consistent with other research showing that more favorable perceptions of feminists are associated with greater feminist identity (Leaper & Arias, 2011; Roy, Weiburst, & Miller, 2007). While implicit measures have already been shown to improve behavior prediction (e.g., Greenwald et al., 2009), these findings are some of the first to show their use within the prototype framework. The current research joins a methodological shift toward using both implicit and explicit attitudes toward prototypes to predict behavior (e.g., Ratliff & Howell, 2015), and also shows the usefulness of prototype theory for sociopolitical research.

### *Change in Attitudes Toward Prototypes*

Because this research is primarily correlational, we cannot assess the direction of causal influence between attitudes toward prototypes and feminist identity. However, the data support the prototype willingness model (Gerrard et al., 2005), according to which attitudes toward prototypes causally contribute to behavioral willingness. In addition, earlier research suggests that attitudes toward feminists causally influence feminist self-identification.

For example, in one study, participants who read positive information about feminists reported greater feminist identity than those who read negative information (Moradi, Martin, & Brewster, 2012; Roy et al., 2007). In addition, it is developmentally likely that attitudes precede identification: people often learn at least some information about feminism and feminists before adopting a

feminist identity. Lastly, the prototypes-to-identity path is most useful for interventions: attitudes toward prototypes are probably easier to manipulate than personal identity. Thus, the current research suggests that improving people's attitudes toward feminists may be an effective route to promoting feminist identity, and interventionists interested in encouraging feminist identity may wish to consider how attitudes toward prototypes can change.

Recent research suggests that the most effective strategies for long-term implicit attitude change are approach-avoidance training (Kawakami, Phillips, Steele, & Dovidio, 2007), evaluative conditioning (Olson & Fazio, 2006), and exposing participants to counterstereotypical exemplars (Dasgupta & Asgari, 2004; Dasgupta & Greenwald, 2001; Lai, Hoffman, & Nosek, 2013). During approach-avoidance training, participants pair category member stimuli with physical movements that represent approach (e.g., pulling a lever toward the body; Kawakami et al., 2007). Importantly, research suggests that such physical movement may improve implicit attitudes toward a variety of targets (e.g., emotional faces, Woud, Becker, Lange & Rinck, 2013; but see Huijding et al., 2009). As such, researchers might prompt people to pull a lever toward them when they see feminist-related stimuli to improve attitudes toward feminist prototypes. Evaluative conditioning involves many repeated pairings of category members with good or bad stimuli, training participants to associate positivity or negativity with the category (Olson & Fazio, 2006). Interventionists who want to use evaluative conditioning to improve attitudes toward feminist prototypes could repeatedly expose people to feminist-related stimuli while pairing those stimuli with positive pictures and concepts.

Finally, exposure to counter-

stereotypical exemplars involves repeatedly exposing people to positive group exemplars (Dasgupta & Asgari, 2004; Dasgupta & Greenwald, 2001; Lai et al., 2013). To increase positive attitudes toward feminists, interventionists might repeatedly expose participants to well-liked self-identified feminist celebrities (e.g., comedian Tina Fey, pop/r&b star Beyonce, pop/hip-hop star Pharrell Williams).

This strategy may be especially promising outside the lab. Indeed, it has been recently employed in the Feminist Majority Foundation campaign that encourages supporters (including celebrities and other well-liked public figures) to wear shirts and pins that say, "This is what a feminist looks like" (Goldhill, 2011). Through repeated experience with positive exemplars, a person's prototype—the central, representative category member (Rosch, 1973)—may become more positive.

#### *Open Questions and Future Directions*

The current research is a promising first step toward understanding attitudes toward prototypes and feminist identification and behavior, but some questions remain open. In the present studies, implicit prototype attitudes diverged somewhat from both explicit prototype attitudes and gender-equality attitudes. This divergence suggests that people may be unwilling or unable to fully report their attitudes toward feminist prototypes. It could be that the indirect measure circumvents self-presentation concerns, allowing us to more fully describe people's attitudes, or that people are simply unaware of their negative attitudes (De Houwer, 2006; Greenwald & Banaji, 1995). Future research is necessary to understand when and why implicit and explicit attitudes toward feminist prototypes differ.

A second remaining question involves the extent to which we measured personal explicit prototype attitudes. We

asked participants to indicate the extent to which they believed feminists were “cool,” “intelligent,” “attractive,” and “fun.” While this comprised a standard prototype–willingness measure (e.g., Gerrard et al., 2005; Ratliff & Howell, 2015) and is designed to tap attitudes toward feminist prototypes, we can see how some participants may have interpreted it differently. That is, some participants might have indicated how “cool” or “attractive” feminists are to most people, rather than to themselves. We highly doubt this is the case for two reasons. First, there was a moderate correlation between implicit and explicit attitudes that is similar to the correlation observed in studies that clearly measure only personal attitudes (Hofmann, Gawronski, Gschwendner, Le, & Schmitt, 2005). Second, variability was quite high across respondents, which we suspect would be minimized if people were indicating attitudes at a societal level. In addition, participants were initially instructed to answer questions about their own attitudes and beliefs. Nevertheless, future studies should ask participants to indicate their personal attitudes more specifically (e.g., “How cool or uncool do you personally find feminists?”).

Another open question concerns our definition of feminist identity. Researchers have defined feminism in a variety of ways, noting that there may be important differences between self-labeling, public labeling, beliefs, and behaviors (e.g., Fitz, Zucker, & Bay-Cheng, 2012; Yoder, Snell, & Tobias, 2012; Yoder, Tobias, & Snell, 2011). Although a reanalysis of the present effects suggests that gender equality attitudes and implicit and explicit attitudes toward prototypes similarly predict each of the items in the outcome measure (“I consider myself a feminist”—self-identification; “I identify myself as a feminist to other people”—public identification; “Feminist

values and principles are important to me”—a belief; “I support the goals of the feminist movement”—a belief; Szymanski, 2004), future studies might consider using measures that assess a variety of forms of identification with several items (see Fitz et al., 2012).

In the same vein, future studies could examine implicit feminist identity. In the current studies, we measured attitudes toward prototypes both directly and indirectly. However, we measured feminist identity only directly, as is the prevailing practice in the literature on feminist identity (Burn et al., 2000; Eisele & Stake, 2008; Hurt et al., 2007; Leaper & Arias, 2011; Saunders & Kashubeck-West, 2006; Szymanski, 2004). Nevertheless, research suggests that people may implicitly identify with certain groups, even if they do not explicitly (Farnham, Greenwald, & Banaji, 1999; Greenwald et al., 2002; Hawkins & Nosek, 2012). As such, future research is necessary to understand whether implicit and explicit attitudes toward prototypes similarly predict implicit feminist self-identification.

Similarly, future research can examine how implicit and explicit attitudes and identification predict a variety of feminist-related behaviors. Given research suggesting that implicit attitudes can outperform explicit attitudes in predicting behavior (Frieze, Smith, Plischke, Bluemke, & Nosek, 2012), particularly nonverbal behavior (de Lemus, Spears, & Moya, 2012; Dovidio, Kawakami, & Gaertner, 2002), it is important to include measures of implicit attitudes and identification when attempting to predict a variety of feminist-related behaviors.

Finally, future studies should investigate whether the present results generalize using different operationalization of implicit and explicit attitudes toward prototypes. For instance, recent research has

detected implicit attitudes toward prototypes using speeded self-reports (a time-pressured self-report response format; e.g., Ratliff & Howell, 2015). Matching implicit and explicit measures' response scales could reduce method-variance confounds, allowing a better test of the unique contribution of each type of attitude. Research investigating attitudes toward feminist prototypes might benefit from such an approach. Similarly, future research can investigate whether feminist-specific stereotypes (e.g., "confident", "independent"; Roy et al., 2007) and the general prototypes measured here (e.g., "intelligent", "good"), have similar influences on feminist self-labeling. Such methodological variations may improve the explanatory power of both implicit and explicit attitudes toward prototypes and reveal the generalizability of the present findings.

## Conclusion

The current research supports the hypothesis that, beyond gender-equality attitudes, feminist identity and behavior are predicted by positive implicit and explicit attitudes toward prototypes of feminists—the central, representative feminist that comes to mind when one thinks of feminists. By revealing the influence of both implicit and explicit attitudes toward prototypes, the present study expands knowledge of feminist identity and behavior and advances prototype-based models. The findings also suggest that improving attitudes toward feminist prototypes may be an effective route to promoting feminist identity and behavior. Like the woman in the introduction who says "I'm not a feminist, but. . ." people who support gender equality may nonetheless distance themselves from feminism due to their negative attitudes toward its prototypical members.

## Author's Note

Data and materials are publicly available at the Open Science Framework (<https://osf.io/nus6p/>).

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## Notes

1. These data were collected as part of a large data collection that included a different version of the implicit measure that was not analyzed for this manuscript. The full version of the study can be viewed at <https://osf.io/nus6p/>.

2. In Samples A and B, stronger Liberal orientation was associated with more positive implicit and explicit prototypes and with higher identification with feminism ( $ps < .001$ ), even when controlling for participant gender. In Sample A, women's implicit prototypes ( $M = 0.33$ ,  $SD = 0.30$ ) were more favorable than men's ( $M = 0.14$ ,  $SD = 0.30$ ),  $t(286) = 4.73$ ,  $p < .001$ , but there was no difference between women's ( $M = 4.67$ ,  $SD = 1.03$ ) and men's ( $M = 4.58$ ,  $SD = 1.17$ ) explicit prototypes,  $t(284) = 0.51$ ,  $p = .51$ . In Sample B, women's implicit prototypes ( $M = 0.31$ ,  $SD = 0.28$ ) were more favorable than men's ( $M = 0.15$ ,  $SD = 0.34$ ),  $t(490) = 5.53$ ,  $p < .001$ . In both samples, women's implicit prototypes were more favorable than men's even when controlling for political orientation ( $ps < .001$ ). In Sample B, women's explicit prototypes ( $M = 4.77$ ,  $SD = 1.21$ ) were also more favorable than men's ( $M = 4.15$ ,  $SD = 1.10$ ),  $t(485) = 5.53$ ,  $p < .001$ , but not when controlling for political orientation ( $p = .95$ ). Further, in both studies, women identified more strongly with feminism than did men, with and without controlling for political

orientation,  $ps < .01$ .

3. Another way to examine the data from these studies would be to simultaneously enter gender-equality attitudes and implicit and explicit prototype attitudes into a model predicting identification with feminism.

This analysis strategy yields the same results as the hierarchical analysis; entered simultaneously, all variables predict identification with feminism when controlling for the others,  $ps < .001$ .

4. In neither sample was there a significant interaction between implicit and explicit prototype attitudes,  $ps > .34$ .

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## **Appendix A**

### *Self-Reported Willingness to Engage in Feminist Behaviors*

Imagine you were reading an Internet post supporting feminist ideas. How willing would you be to share the post with a friend?

Imagine you were reading an Internet post supporting feminist ideas. How willing would you be to add a supportive comment?

Imagine you were reading an Internet post supporting feminist ideas. How willing would you be to like/upvote the post?

Imagine you were reading an Internet post supporting feminist ideas. How willing would you be to like/upvote others' comments on the post?

Imagine you were reading an Internet post supporting feminist ideas. How willing would you be to post the link on your account/wall?

Imagine you were asked to sign a petition to indicate that you support feminism. How willing would you be to sign it?

Imagine a feminist organization has contacted you to ask you to add your name to their membership list. How willing would you be to do so?

If you were given a free button or pin that said, "I am a feminist," how willing would you be to wear it or put it on your bag?

Imagine you were asked to join a feminist rally. If you had time, how willing would you be to join in?

Imagine that someone you know well wanted to talk about their support for feminist ideas. How willing would you be to listen?

How willing would you be to bring up feminist issues in conversation with someone you know well?

## Appendix B

### *Charity Allocation Task*

#### **This study is for charity!**

When the study ends, the research team will split \$50 between four charities on behalf of the study participants.

**You get to decide where the money goes!** Each participant has 5 votes. You may choose to donate them all to one charity, or split the credits between charities. Please use only whole numbers (i.e., 1, 2, 3, 4 and 5). At the end of the study, we will donate a portion of the \$50 to each charity based on what everyone decides.

The charities are:

**Cancer Research Institute:** funds research to develop immunologically-based treatments for cancer.

**The Children's Aid Society:** provides foster care, health services, and educational and advocacy services.

**Feminist Majority Foundation:** dedicated to women's equality, health, economic development and non-violence.

**Environmental Defense Fund:** works on issues including global warming, ecosystem restoration, oceans, and advocacy.

Cancer Research Institute:

Children's Aid Society:

Feminist Majority:

Environmental Defense Fund:

Total (Should equal 5): 0

[Continue](#)