



Reciprocal Humanization: The Impact of Meta-Secondary Emotions on Men's Humanization of Women and Gender Equality Support

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Master Thesis - Applied Social Psychology

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30. June 2025

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Abstract

In a world where gender inequality persists across social, political, and economic spheres, men's active support is essential for lasting change. Yet many remain hesitant or even resistant to engage in pro-equality efforts. This thesis explores a novel mechanism that may shape men's intentions to support gender equality: *meta-secondary emotions* or the perception that women attribute complex emotions to men. Past research shows that believing the outgroup humanizes the ingroup can increase support for the outgroup. This study experimentally tested whether perceiving positive (e.g., compassion) or negative (e.g., guilt) emotional recognition by women influences men's reciprocal humanization of women and their willingness to support gender equality. It was hypothesized that positive meta-secondary emotions would lead to greater reciprocal humanization and higher support for gender equality, compared to negative or control conditions, and that this effect would be mediated by men's attribution of secondary emotions to women. Heterosexual men in the U.S. (N = 398) were randomly assigned to one of three conditions. Supportive of reciprocal humanization, results indicated that both positive and negative meta-secondary emotions significantly increased men's attribution of secondary emotions to women compared to the control. However, no significant effects emerged on men's collective action intentions for gender equality, contrasting with earlier work linking humanization to intergroup support. Nor was there evidence of an indirect effect via reciprocal emotional attribution. These findings suggest that emotional recognition by women increases men's perception of women's emotional complexity regardless of emotional valence, contrary to expectations. Yet reciprocal humanization alone did not motivate pro-equality behavioral intentions. This study extends meta-humanization research by introducing the concept of meta-secondary emotions in gender relations and highlights directions for future research.

Keywords: meta-secondary emotions, meta-humanization, gender equality, intergroup relations, collective action, secondary emotions

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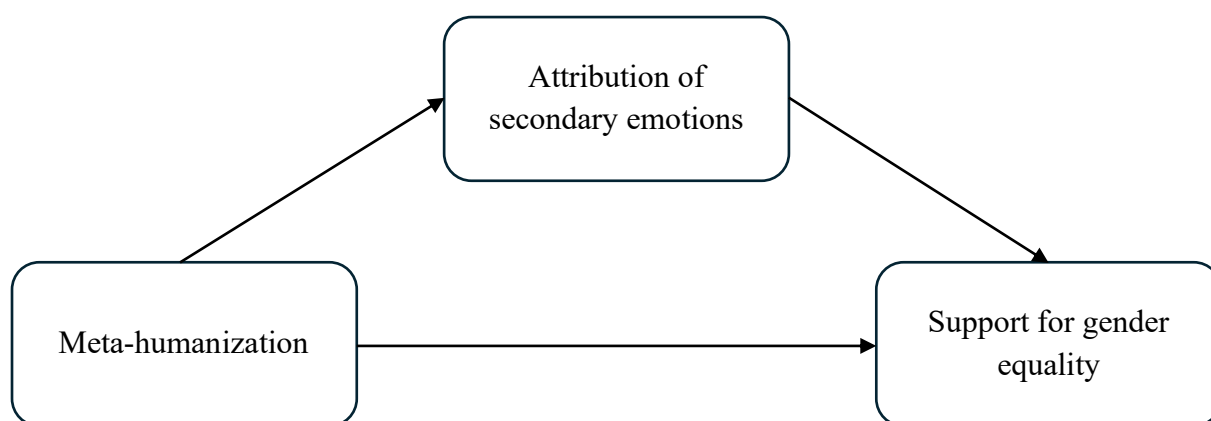
Despite progress, significant gender inequalities persist across economic, political, and social domains (World Economic Forum, 2024). Men's support for gender equality can be a powerful force for change. Yet, while some men actively advocate for gender equity, others remain hesitant or resistant (Van Laar et al., 2024). What explains this variation? Beyond personal values or social norms, one possible factor is how men feel they are perceived by women. When individuals believe they are recognized as capable of experiencing secondary emotions—such as guilt, pride, or compassion—they are being acknowledged as possessing emotions that are uniquely human, cognitively complex, and socially shaped (Leyens et al., 2000; Vaes et al., 2002). These emotions are considered defining markers of humanity, as they set humans apart from animals, who are thought to only experience more basic, primary emotions (Demoulin et al., 2004). The attribution of secondary emotions thus signals a deeper form of recognition: being seen as fully human, rather than as lacking complexity or depth.

This is important because this perception, known as *meta-humanization*, reflects the belief that one's group is viewed as fully human (i.e., emotionally complex and morally capable), can foster a sense of psychological inclusion and recognition (Kteily et al., 2016; Pavetich & Stathi, 2021). Feeling recognized in this way can reduce defensiveness and strengthen openness toward the outgroup, which may in turn encourage more positive attitudes and support for equality (Kteily et al., 2016; Pavetich & Stathi, 2021). When men believe that women view them as capable of experiencing complex emotions, it may shape how they, in turn, perceive women's emotions and influence their willingness to support gender equality. This raises the first key question of this thesis: Does perceiving emotional recognition from women increase men's support for gender equality?

Emerging research suggests that the valence of these emotions—whether positive (e.g., compassion) or negative (e.g., guilt)—can shape intergroup attitudes and behaviors in

distinct ways (Enock et al., 2021). This thesis examines how perceived emotional recognition influences men's reciprocal emotional attributions toward women—and, ultimately, their support for gender equality. The hypothesized mediation model illustrating these relationships is presented in Figure 1.

Figure 1. The conceptual model being tested in the thesis.



Meta-Humanization and Meta-Dehumanization

Scholars have increasingly examined the meta-perceptions underlying humanization processes (Gordijn, 2002; Pavetich & Stathi, 2021). Meta-dehumanization refers to the perception that one's ingroup is seen as *less* human by an outgroup, whereas meta-humanization occurs when individuals believe their ingroup is viewed as *fully* human by the outgroup (Borinca, Van Assche et al., 2024; Kteily et al., 2016).

Meta-dehumanization has been linked to various *negative* consequences, including reduced cooperation, diminished prosocial behavior, and heightened intergroup hostility (Kteily et al., 2016; Tipler & Ruscher, 2014). By contrast, meta-humanization has *positive* consequences such as promoting conciliatory attitudes, reducing perceived outgroup threat and increasing willingness to engage in intergroup contact (Borinca, Van Assche et al., 2024, Borinca et al., 2021). For example, research has shown that when Muslim and non-Muslim individuals in Canada and the UK feel humanized by each other, they develop more positive intergroup relations and friendships (Pavetich & Stathi, 2021). Individuals who perceive their

ingroup as fully human in the eyes of the outgroup are also more likely to attribute prosocial motives to outgroup members, fostering cooperation and reducing prejudice (Borinca et al., 2021).

Meta-humanization is typically measured or experimentally manipulated as the extent to which an ingroup believes the outgroup sees them as evolved, civilized, or possessing uniquely human traits (e.g., Borinca et al., 2021). While meta-dehumanization has often been operationalized through the perceived denial of secondary emotions (Albarello & Rubini, 2012; Leyens et al., 2000), research has not directly assessed meta-perceptions based on the attribution of secondary emotions—nor has it experimentally manipulated meta-humanization through recognition of positive and negative emotions. The present thesis addresses this gap by introducing the concept of meta-secondary emotions and experimentally manipulating it: that is, how individuals (i.e., men) perceive that an outgroup (i.e., women) attributes secondary emotions to them, whether positive or negative. This approach moves beyond trait-based conceptions of meta-humanization and instead focuses on *emotional recognition* as a more subtle, yet psychologically powerful, form of humanization. Investigating meta-secondary emotions is especially valuable given that the attribution and denial of such emotions—and perceptions thereof—are more common in everyday interactions than overt forms of dehumanization (Salmen & Dhont, 2021). By directly manipulating these meta-perceptions, this thesis offers a novel and more ecologically valid lens on meta-humanization and its implications for gender dynamics.

The Role of Valence in Meta-Secondary Emotions

A central assumption in (meta-)secondary emotion research is that the valence of these emotions does not matter for humanization to occur (Castano & Giner-Sorolla, 2006; Demoulin et al., 2004; Leyens et al., 2000). According to this view, as long as individuals perceive that others attribute secondary emotions to them, the specific emotional valence—whether positive or negative—does not influence their sense of being humanized. The ability

to experience secondary emotions is seen as a marker of emotional complexity and humanization, independent of whether those emotions are positive or negative (Leyens et al., 2000).

However, recent research challenges this assumption (Enock et al., 2021; Enock & Over, 2022; Over, 2021). This emerging perspective distinguishes between the subjective experience of emotions—whether an emotion feels positive or negative—and how emotions are socially perceived—whether an emotion is considered prosocial or antisocial. For instance, *schadenfreude* (pleasure at another's misfortune) is positive to experience but judged as antisocial, while regret is negative to experience but not socially undesirable (Enock et al., 2021). Findings suggest that individuals are more likely to attribute prosocial secondary emotions to ingroup members, whereas antisocial secondary emotions are more often attributed to outgroup members (Enock et al., 2021).

The present thesis builds on these findings by experimentally investigating the second key question: Does the valence of meta-secondary emotions—whether they are positive or negative— differentially affect men's support for gender equality? If meta-humanization is not just about being attributed secondary emotions but also about which emotions are attributed, then this distinction may have important implications for intergroup relations. For example, being seen as capable of positive emotions like compassion might foster connection and goodwill, while being seen as capable of negative emotions like guilt could evoke defensiveness or a sense of being criticized. By comparing how individuals respond when they feel they are attributed positive versus negative secondary emotions, this study aims to refine our understanding of emotional forms of meta-humanization and its consequences for gender dynamics.

Humanization and Secondary Emotions

Humanization refers to the perception that an individual or an outgroup is regarded as fully human (Pavetich & Stathi, 2021). Certain characteristics distinguish humans from other

species, including intelligence, language, and the ability to experience secondary emotions (Leyens et al., 2000). Secondary emotions, such as love, guilt, and embarrassment, are considered uniquely human because they rely on advanced cognitive processes and are shaped by personal experiences as well as moral and social norms (Leyens et al., 2000; Vaes et al., 2002). Unlike primary emotions—such as fear and, which are shared by humans and animals—secondary emotions are viewed as more complex and nuanced (Demoulin et al., 2004; Vaes et al., 2002). For example, guilt requires an understanding of social rules and the ability to evaluate one's actions in relation to others (Leyens et al., 2000).

Denying another person's capacity to experience secondary emotions effectively renders them less than fully human, a phenomenon known as *infracommunication* (Čehajić et al., 2009; Leyens et al., 2000). Research shows that individuals attribute secondary emotions more readily to their own group than to outgroups, implicitly positioning outgroup members as less human (Demoulin et al., 2004; Leyens et al., 2000, 2001). This denial of secondary emotions in intergroup contexts has significant consequences. It reinforces intergroup bias, fuels discrimination, intensifies conflict, and deepens prejudice, and can help justify or motivate hostile collective action against outgroups (Castano & Giner-Sorolla, 2006; Leyens et al., 2007). Conversely, attributing secondary emotions to outgroup members can foster more positive intergroup relations. It has been linked to greater openness to intergroup contact (Capozza et al., 2017), increased empathy, reduced intergroup anxiety (Borinca, McAuliffe, et al., 2024), and stronger prosocial behaviors toward outgroups, such as helping behavior and reduced prejudice. However, prior research primarily focused on individual-level support, while evidence directly linking secondary emotion attribution to collective action in support of outgroups is more limited (Capozza et al., 2017; Cuddy et al., 2007; Pereira et al., 2009).

While much of the research on humanization focuses on the explicit and intentional attribution of human traits to outgroups (e.g., Borinca et al., 2021, Borinca, McAuliffe, et al., 2024; Kteily et al., 2016), secondary emotions have also been widely used as a central

measure of humanization and infrahumanization (Borinca et al., 2023). The attribution of secondary emotions represents a subtler and more implicit form of humanization (Leyens et al., 2000). Given that secondary emotions are less overt than direct assertions of human traits, they are likely to occur more frequently in daily interactions than blatant forms of humanization (Kteily et al., 2015). Understanding how and when secondary emotions are attributed in intergroup gender contexts is therefore essential to fully grasping the mechanisms of humanization. The present thesis addresses a novel question by investigating how positive and negative meta-secondary emotions influence infrahumanization. Specifically, it examines the third key question: Does the perception of being seen as capable of experiencing positive or negative secondary emotions influence how men reciprocally attribute secondary emotions to women? By exploring this previously unexamined dynamic, the study offers new insights into meta-humanization and its role in shaping intergroup perceptions within gender relations.

Meta-Secondary Emotions and Men's Support for Gender Equality

Much of the research on meta-humanization and infrahumanization has focused on conflict and post-war intergroup dynamics, particularly in national, ethnic, or regional divisions. Studies have examined contexts such as Serbians and Kosovo-Albanians (Borinca, Van Assche et al., 2024) or indigenous and non-indigenous Chileans (Čehajić et al., 2009). However, comparatively little attention has been given to the role of secondary emotions in gender relations. Existing research suggests that sexual objectification contributes to women's dehumanization (Vaes et al., 2011), reinforcing hostile sexism (Salmen & Dhont, 2021). Women who feel dehumanized (i.e., meta-dehumanization) as a consequence of sexual objectification report increased anger, sadness, and diminished well-being (Chevallereau et al., 2021), and may even internalize these negative perceptions, leading to self-dehumanization (Cervone et al., 2025; McCleary-Gaddy & James, 2024).

Despite these findings, research has yet to explore meta-secondary emotions from men's perspective. Understanding how men perceive the emotions that women attribute to them could offer valuable insights into gender dynamics and the reciprocal nature of humanization. A particularly relevant outcome in this context is men's willingness to support gender equality. Men can play a key role as allies, yet they are often overlooked in gender equality discourse. While prior research has examined emotional motivations for men's support of gender equality, these studies have typically focused on specific emotions rather than meta-perceptions. One well-documented emotional driver is guilt, which can motivate men to advocate for gender equality, whereas fear can deter them from supporting such efforts (Mazzuca et al., 2022). Other emotions, such as group-based anger and sympathy, have been identified as predictors of advantaged group members engaging in collective action for disadvantaged groups (Radke et al., 2020). However, no research has examined whether men's perception of being attributed complex emotions by women, whether positive or negative, shapes their willingness to support gender equality.

Drawing on these insights, perceiving emotional recognition by women may not only enhance men's perceptions of women but also increase their willingness to support gender equality. Feeling acknowledged as emotionally complex and fully human can foster psychological closeness, perceptions of respect and inclusion, and a sense of moral connection to the outgroup. Such feelings are associated with reduced defensiveness and greater openness to social change (Borinca, Van Assche et al., 2024; Kteily et al., 2016; Pavetich & Stathi, 2021; Tipler & Ruscher, 2014). From this perspective, meta-secondary emotions might help convert the perception of being recognized as fully human into broader pro-equality attitudes and behaviors.

Building on this reasoning, the present thesis aims to fill this gap by investigating a novel question: whether the perceived attribution of secondary emotions—both positive and negative—affects men's support for gender equality. This previously unexplored angle offers

a new lens on the emotional dynamics of allyship. Understanding this relationship could offer deeper insights into why some men actively engage in gender equality efforts while others resist. Furthermore, these findings could inform more effective strategies for fostering allyship, identifying potential barriers, and addressing them in ways that encourage constructive engagement rather than resistance.

The Mediating Role of Secondary Emotion Attribution

The perception of being humanized by women through meta-secondary emotions may increase men's willingness to support gender equality. Prior research suggests that meta-humanization fosters intergroup support (Borinca, Van Assche, et al., 2024; Pavetich & Stathi, 2021) and encourages cooperative and altruistic behaviors toward outgroups (Tipler & Ruscher, 2014). In these studies, intergroup support was conceptualized primarily as increased empathy, willingness to help, and openness to positive intergroup contact, rather than specific support for structural equality. Although these outcomes are not equivalent to collective action, they reflect greater willingness to engage constructively and supportively with outgroups.

If men feel recognized in this way, they may be more inclined to engage in pro-equality actions. This effect is likely mediated by men's attribution of secondary emotions to women. Studies indicate that when individuals perceive their ingroup as humanized, they reciprocate by humanizing the outgroup (Kteily et al., 2016; Pavetich & Stathi, 2021). Thus, when men feel that women recognize their emotional complexity, they may, in turn, attribute more secondary emotions to women. This reciprocal recognition can be positively linked to their willingness to engage in pro-equality actions, thereby reinforcing more constructive gender dynamics. Indeed, meta-humanization has been shown to improve attitudes and behaviors toward outgroups through secondary emotion attribution as a key mechanism (Borinca, Van Assche, et al., 2024). Extending this logic, the meta-attribution of secondary emotions may be associated with greater support for gender equality through increased

reciprocal humanization. Therefore, the meta-attribution of secondary emotions should promote gender equality support by increasing reciprocal humanization.

However, the type of secondary emotion attributed may be crucial. This thesis examines whether positive versus negative meta-secondary emotions elicit distinct responses. If men believe that women attribute compassion or admiration (positive emotions) to them, they may feel more validated and humanized. This perception may lead them to attribute more secondary emotions to women—reflecting increased reciprocal humanization—which, in turn, may be associated with greater support for gender equality. This raises a fourth key question: Does the perceived attribution of positive and negative secondary emotions shape men's reciprocal humanization of women differently and, in turn, their support for gender equality? Classical theories suggest that the valence of secondary emotions should not matter for humanization to occur (e.g., Demoulin et al., 2004; Leyens et al., 2000), predicting no significant differences between positive and negative emotions in driving these processes. However, if distinct effects emerge, this would suggest that the type of secondary emotion attributed plays a meaningful role in shaping men's responses—carrying implications for intergroup relations and strategies to foster gender equality. This possibility aligns with recent research showing that whether emotions are seen as positive or negative can shape intergroup perceptions and responses (Enock et al., 2021; Enock & Over, 2022).

Taken together, these four key questions examine whether perceiving positive or negative emotional recognition affects men's support for gender equality, and whether this process is shaped by reciprocal humanization through men's attribution of secondary emotions to women.

The Present Research and Hypotheses

This thesis examines how meta-secondary emotions influence men's attribution of secondary emotions to women and their support for gender equality. It also investigates whether this relationship is mediated by secondary emotion attribution to women.

A central question is whether the valence of these emotions shapes men's responses differently. Building on research demonstrating that specific emotional attributions influence intergroup attitudes (Enock et al., 2021; Enock & Over, 2022), this study moves beyond traditional humanization research by examining meta-humanization through emotional attribution rather than focusing on attributions of human traits.

This study employs a between-person experimental design, manipulating positive and negative meta-secondary emotions. A control condition, in which no information about meta-secondary emotions is provided, serves as a baseline for comparison. This research focuses on heterosexual men in the United States, as this group has been shown to exhibit greater resistance to gender equality efforts compared to other demographic groups (Keiller, 2010; Matsick & Conley, 2016). The U.S. context is particularly relevant, given persistent gender disparities and sociocultural norms that often discourage emotional expression among men while reinforcing traditional gender hierarchies (Vandello & Bosson, 2012). The decision to focus on men, rather than a broader gender-based groups, reflects the fact that men's support is critical for achieving gender equality, yet much of existing research has focused on women's motivations to support gender equality and men's crucial role for change has only received more academic and discursive attention in recent years (Sudkämper et al., 2020; Van Laar et al., 2024). Understanding how perceptions of emotional recognition by women are related to men's attitudes and behaviors can provide insight into why some men actively support gender equality while others resist it.

Building on the four key questions outlined earlier, the present study addresses the following research questions: Does men's perception of being attributed positive versus negative secondary emotions by women increase men's willingness to support gender equality? And is this relationship mediated by men's reciprocal attribution of secondary emotions to women?

Based on these research questions, the following hypotheses are proposed. It is hypothesized that men exposed to positive meta-secondary emotions (vs. negative meta-secondary emotions and control) will attribute more secondary emotions to women (H1a). In addition, men exposed to positive meta-secondary emotions (vs. negative meta-secondary emotions and control) are expected to report greater willingness to engage in collective action supporting gender equality (H1b). Finally, it is predicted that the effect of positive meta-secondary emotions (vs. negative meta-secondary emotions and control) on men's willingness to support gender equality will be mediated by their attribution of secondary emotions to women (H2). The proposed mediation model is shown in Figure 1.

Methods

Participants and Design

An a priori power analysis using G*Power was conducted to determine the required sample size for an ANOVA. Assuming a power level of 0.80, an expected effect size of 0.20 (Cohen's *d*), and a significance level of 0.05 (α), the analysis indicated a minimum required sample size of 416 participants. A total of 466 participants accessed the survey. Participants were heterosexual men, aged 18 years or older, residing in the U.S., and were recruited via Prolific. Of these, 68 participants were excluded from the final analysis for the following reasons: 31 failed a screening item designed to detect inattentive responding, 35 did not pass an attention check, and 2 did not provide consent for their data to be used. This resulted in a final sample of 398 participants ($M_{age} = 44.19$, $SD_{age} = 13.89$, 18 – 86 years old). A sensitivity analysis conducted with G*Power with an alpha of 0.05, power of 0.80, and a sample of 398 indicated that the minimum detectable effect size (Cohen's *f*) was 1.56, corresponding to a small-to-medium effect (Faul et al., 2009).

Procedure

This study was approved by the Ethics Committee of the Faculty of Behavioral and Social Sciences at the University of Groningen (PSY-2425-S-0190). The questionnaire was

created using Qualtrics XM and distributed to U.S. participants via Prolific. Completion time was estimated to be under 10 minutes.

Participants first read an information sheet and provided informed consent. They were informed that the study concerned social situations. Following this, they completed demographic questions (e.g., gender, age, nationality, and sexual orientation)¹. Participants were then randomly assigned to one of three conditions: positive meta-secondary emotions ($N = 140$), negative meta-secondary emotions ($N = 121$), or a control condition ($N = 137$). In all three conditions, participants viewed videos that were specifically created for this study. In the positive condition, men watched a video in which women acknowledged men's capacity to experience compassion, admiration, and gratitude. In the negative condition, the video focused on men's ability to feel guilt, regret, and shame. The control video discussed the relevance of elevators (lifts) in modern architecture and daily life, unrelated to emotional content.

After watching the video, participants completed measures assessing the attribution of secondary emotions and support for gender equality. Before being directed to the debriefing page, they responded to a screening item to detect inattentive responding, a manipulation check, and an attention check. At the end of the study, participants were debriefed and asked whether they consented to their data being used for research purposes.

Independent Variables

Experimental Manipulation

Participants were randomly assigned to one of three experimental conditions. In the two meta-secondary emotion conditions, men watched a short video that purportedly presented the results of a recent U.S.-based study in which women reflected on men's ability to feel and express certain emotions. In the positive meta-secondary emotion condition ($N =$

¹ Participants also filled out an Endorsement of Traditional Masculinity Scale used for a separate thesis.

140), the video depicted women recognizing men's capacity to fully experience positive emotions such as compassion, admiration, and gratitude. In the negative meta-secondary emotion condition ($N = 121$), women described men as capable of experiencing negative emotions such as guilt, regret, and shame. Both videos featured female speakers describing the beliefs of study participants, accompanied by scenes of men expressing the respective emotions. Full transcripts of both videos are provided in Appendix A.

Participants in the control condition ($N = 137$) viewed a video unrelated to emotional content, which focused on the relevance of elevators (lifts) in contemporary architecture and daily life.

Dependent Variables

Attribution of Secondary Emotions. The attribution of secondary emotions to women was assessed through a six-item scale previously used by Borinca, Van Assche, et al. (2024). The scale consists of three positive secondary emotions (compassion, tenderness, hope) and three negative ones (bitterness, contempt, guilt). Men were asked to what extent they believe that women are likely to experience these emotions, through a Likert scale spanning from 1 (*not likely at all*) to 7 (*very likely*). The six items were combined into a composite score ($\alpha = .84$; $M = 5.38$, $SD = 1.11$), with higher scores indicating greater attribution of secondary emotions and therefore increased humanization. The full scale is provided in Appendix B.

Gender Equality Collective Action Intentions. The Gender Equality Collective Action Intentions Scale (GECAI) developed by Besta et al. (2024) was used to assess men's intentions to support gender equality. Participants were asked to indicate how likely they are to engage in six activities to support or advance gender equality, such as participating in a community event that focuses on gender issues or using online platforms to raise awareness about gender equality. Participants rated their intentions to partake in these actions on a Likert scale from 1 (*not likely at all*) to 7 (*very likely*). The six items were combined into an average ($\alpha = .97$, $M = 3.46$, $SD = 1.94$). Full items are presented in Appendix C.

Manipulation and Attention Check. A manipulation and an attention check were presented. In the manipulation check, men were asked, “To what extent do you believe that women, in general, are likely to attribute each of the following emotions to men?”. The answer possibilities consisted of the three emotions featured in the positive (compassion, gratitude, admiration) and the negative (regret, guilt, shame) conditions. The answers were measured on a 7-point Likert scale spanning from “not likely at all” to “very likely”. Higher scores reflect men’s perception that women believe them to experience more secondary emotions ($\alpha = .90$, $M = 4.83$, $SD = 1.16$). Items can be found in Appendix D.

For the attention check, participants were asked to indicate the title of the video they watched in the previous section. The three answer possibilities were “Women Recognize Men's Compassion, Admiration, and Gratitude”, “Women Recognize Men's Guilt, Regret, and Shame”, and “Elevators and How They Function” (see Appendix E).

Results

Assumptions and Preliminary Analyses

Before conducting the standard univariate ANOVAs, assumption checks were performed for each outcome variable. For attribution of secondary emotions, Levene’s test indicated homogeneity of variances ($p = .795$), while the Shapiro-Wilk test revealed a significant deviation from normality ($p < .001$). For GECAI, Levene’s test again showed no violation of the homogeneity of variance assumption ($p = .134$), but the Shapiro-Wilk test was also significant ($p < .001$), indicating non-normality.

Although the assumption of normality was violated for both outcome variables, the group sizes were approximately equal, and the overall sample size was sufficiently large. Moreover, ANOVA is known to be robust to moderate violations of normality, particularly under these conditions (Schmider et al., 2010). Therefore, the planned analyses were carried out as intended.

Main Analyses

To test the effects of the experimental manipulation, a series of one-way ANOVAs were conducted using the Univariate General Linear Model (GLM), with each outcome variable analyzed separately. The experimental condition (coded as 0 = positive meta-secondary emotions, 1 = negative meta-secondary emotions, 2 = control) was entered as a between-subjects factor. Each outcome—attribution of secondary emotions and GECAI—was treated as a separate dependent variable.

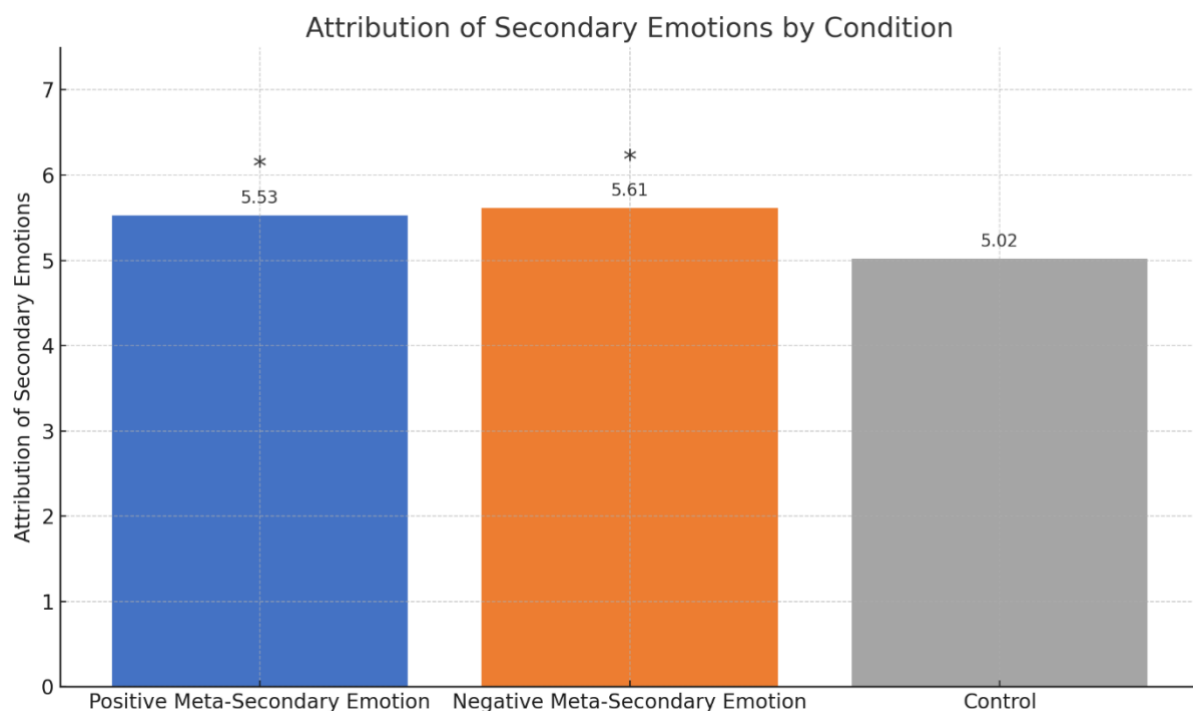
Post hoc comparisons were conducted using the Least Significant Difference (LSD) method to examine pairwise differences between conditions. Descriptive statistics (means and standard deviations) for all outcome measures are presented in Table 1. Descriptive zero-order correlations between the manipulation check, attribution of secondary emotions, and GECAI are presented in Table 2.

Manipulation Check (Perceived Attribution from Women). The ANOVA revealed a significant effect of the experimental manipulation on men's perception of the emotions attributed to them by women, $F(2, 395) = 9.29, p < .001, \eta^2_p = .045$. Post hoc LSD comparisons indicated that men in the negative meta-secondary emotion condition ($M = 5.15, SD = 1.22$) reported greater perceived attribution of secondary emotions by women than those in the positive meta-secondary emotion condition ($M = 4.84, SD = 1.07; p = .029, 95\% \text{ CI } [-.59, -.03]$) and those in the control condition ($M = 4.54, SD = 1.14; p < .001, 95\% \text{ CI } [.33, .89]$). Additionally, men in the positive condition reported significantly higher perceived attribution of secondary emotions than those in the control condition ($p = .028, 95\% \text{ CI } [.03, .57]$).

Attribution of Secondary Emotions. The analysis showed a significant effect of the experimental manipulation on attribution of secondary emotions to women, $F(2, 395) = 11.95, p < .001, \eta^2_p = .057$. Men in both the positive meta-secondary emotion condition ($M = 5.53, SD = 1.02; p < .001, 95\% \text{ CI } [.26, .77]$) and the negative meta-secondary emotion condition

($M = 5.61$, $SD = 1.10$; $p < .001$, 95% CI [.33, .86]) attributed significantly more secondary emotions to women than those in the control condition ($M = 5.02$, $SD = 1.11$). However, contrary to Hypothesis 1a, the difference between the positive and negative meta-secondary emotion conditions was not statistically significant ($p = .560$, 95% CI [−.34, .18]). A histogram comparing scores across the three conditions is presented in Figure 2².

Figure 2. Mean Attribution of Secondary Emotions by Condition.



Note. Asterisks (*) indicate conditions that significantly differ from the control condition ($p < .001$).

Gender Equality Collective Action Intentions (GECAI). The analysis revealed no significant effect of the experimental manipulation on GECAI scores, $F(2, 395) = 0.42$, $p = .656$, $\eta^2_p = .002$. Men in the positive meta-secondary emotion condition ($M = 3.50$, $SD = 2.03$), the negative condition ($M = 3.55$, $SD = 1.92$), and the control condition ($M = 3.34$, $SD = 1.88$) did not differ significantly from one another. Specifically, the difference between the

² It is worth noting that results remained the same even when we analyzed separately for both positive and negative secondary emotions.

positive and negative conditions was not significant ($p = .854$, 95% CI $[-.52, .43]$), nor was the difference between the positive and control conditions ($p = .483$, 95% CI $[-.30, .62]$), or between the negative and control conditions ($p = .391$, 95% CI $[-.69, .27]$). These results do not support Hypothesis 1b concerning GECAI³.

Table 1. Means and Standard Deviations (in Parentheses) for Manipulation Checks and Dependent Variables (Attribution of Secondary Emotions and GECAI) by Condition.

Variable	Conditions		
	Positive Meta-Secondary Emotions	Negative Meta-Secondary Emotions	Control
Manipulation Check			
(Perceived Attribution from Women)	4.84 (1.07) ^b	5.15 (1.22) ^a	4.54 (1.14) ^c
Attribution of Secondary Emotions	5.53 (1.02) ^a	5.61 (1.10) ^a	5.02 (1.11) ^b
GECAI	3.50 (2.03) ^a	3.55 (1.92) ^a	3.34 (1.88) ^a

Note. Means that do not share a subscript letter differ significantly at $p < .05$ based on LSD post hoc comparisons.

Mediation Analysis. A mediation analysis was run to test whether the experimental manipulation (i.e., 0 = positive meta-secondary emotions vs. 1 = negative meta-secondary emotions vs. 2 = control) predicted an indirect effect on GECAI through the attribution of secondary emotions to women. The analysis was conducted using PROCESS Macro Model 4 for SPSS (Hayes, 2018) with 5,000 bootstrap samples. The independent variable was dummy coded, with the positive meta-secondary emotion condition serving as the reference group. X1 compared the negative meta-secondary emotion condition to the positive condition, while X2 compared the control condition to the positive condition.

³ As an exploratory analysis, the experimental manipulation's effect on men's support for specific outgroups (i.e., gays, lesbians, bisexuals, transgender people, and women) was also examined through a one-way ANOVA. However, no significant differences between conditions for any of these groups were found. Additionally, the effect of the experimental manipulation on ingroup inhumanization was explored. Though the results for both experimental conditions were significant, they are not central to this thesis.

The analysis revealed that neither the direct nor the indirect effects of the experimental manipulation on GECAI were statistically significant. Specifically, the indirect effect of the negative meta-secondary emotion condition (X1) on GECAI via the attribution of secondary emotions was not significant, $b = -.02$, 95% CI $[-.05, .02]$, nor was the indirect effect of the control condition (X2), $b = .01$, 95% CI $[-.09, .12]$. These findings indicate that the attribution of secondary emotions to women did not mediate the relationship between meta-secondary emotions and GECAI, which is not consistent with the predictions of Hypothesis 2. However, this lack of mediation is unsurprising given the absence of a significant or consistent effect of the manipulation on GECAI.

Table 2. Zero-Order Correlations Between Manipulation Check and Dependent Variables (Attribution of Secondary Emotions and GECAI).

Variable	1	2	3
Manipulation Check (Perceived Attribution from Women)	—		
Attribution of Secondary Emotions	.60***	—	
GECAI	.11*	-.01	—

Note. Pearson correlation coefficients are shown. $p < .05$. $p < .01$. $p < .001$.

Discussion

This thesis investigated whether men's perception of being attributed positive versus negative secondary emotions by women influences their willingness to support gender equality. Additionally, it examined whether this relationship was mediated by men's reciprocal attribution of secondary emotions to women. Hypothesis 1a was partially supported: men in both the positive and negative meta-secondary emotions conditions attributed significantly more secondary emotions to women than those in the control condition, suggesting a general effect of meta-secondary emotions on reciprocal

humanization. However, no significant difference emerged between the negative and positive conditions, indicating that the valence of the attributed emotions did not play a differentiating role. Hypothesis 1b was not supported, as exposure to positive meta-secondary emotions had no significant effect on men's support for gender equality compared to the negative or control conditions, and participants in all three conditions reported similar levels of support.

Hypothesis 2 was also not supported, as the mediation analysis revealed no evidence that meta-secondary emotions influenced men's support for gender equality through their reciprocal attribution of secondary emotions to women. Overall, these findings suggest that while both positive and negative meta-secondary emotions enhance men's attribution of emotional complexity of women, this is not associated with an increased willingness to support gender equality actions.

Theoretical Implications

Our findings have at least four implications. First, the present study extends the construct of meta-humanization by examining it through the attribution of secondary emotions, introducing the concept of meta-secondary emotions. While previous research has predominantly operationalized meta-humanization through explicit beliefs about a group's possession of human traits (e.g., Borinca et al., 2021; Pavetich & Stathi, 2021), this study instead focuses on perceived attribution of secondary emotions as a more subtle form compared to blatant humanization. Additionally, the current thesis examined the previously unaddressed question whether positive and negative meta-secondary emotions influence the attribution of secondary emotions to the outgroup differently in a gender context. By studying meta-secondary emotions from men's perspective, our work importantly extends meta-humanization research by examining how perceived humanization shapes men's subsequent attribution of secondary emotions to women and their behavioral intentions. A first implication is that focusing on secondary emotions offers a more ecologically valid

perspective on meta-humanization, as such subtle perceptions likely occur more often in everyday interactions than explicit beliefs about humanness.

Second, men attributed more secondary emotions to women when they themselves felt perceived as being capable of experiencing secondary emotions. This finding aligns with previous research supporting the notion of reciprocal humanization (e.g., Borinca, Van Assche, et al., 2024; Kteily et al., 2016; Pavetich & Stathi, 2021). Importantly, this effect occurred independently of the valence of the attributed emotions—both positive and negative meta-secondary emotions yielded similar increases in outgroup humanization. This supports the notion that the core mechanism of humanization lies in the recognition of emotional depth rather than the specific type of emotion (Leyens et al., 2000). As such, these results are in line with most existing research on reciprocal humanization (Borinca et al., 2023; Castano & Giner-Sorolla, 2006; Demoulin et al., 2004; Kteily et al., 2016; Leyens et al., 2000) and stand in contrast to Enock and Over's recent work (Enock et al., 2021; Enock & Over, 2022; Over, 2021), which suggests that the valence of emotions plays a critical role in intergroup emotion attribution. This implies that simply recognizing outgroup members' capacity for emotional complexity—regardless of valence—can reliably foster reciprocal humanization.

Third, while perceiving emotional recognition from women led men to attribute more secondary emotions to women, this did not result in greater willingness to engage in collective action, nor was this effect mediated by emotional attribution to women. This challenges previous findings suggesting that meta-humanization fosters intergroup support (Borinca, Van Assche, et al., 2024; Pavetich & Stathi, 2021) and encourages cooperative and altruistic behaviors toward outgroups (Tipler & Ruscher, 2014).

There are multiple possible explanations for this finding. One possibility is that in comparison to past research on meta-humanization (e.g., Borinca, Van Assche, et al., 2024; Pavetich & Stathi, 2021), this study examined specific and high-commitment actions to

support gender equality (e.g. volunteering, political involvement). While feeling humanized might lead men to perceive women as emotionally complex in return, it may not be sufficient to influence their willingness to engage in active support for effortful actions for gender equality. It could be, that meta-secondary emotions might even increase men's *belief* in gender equality, but their willingness to engage in meaningful *actions* might not be as easily influenced by emotional perceptions. This seems particularly plausible given that men already attributed high levels of secondary emotions to women—with all conditions exceeding average ratings of 5 on a 7-point scale—suggesting a potential ceiling effect. This restricted variability may have limited the impact of the manipulation to produce measurable differences in GECAI scores.

A further explanation is that support for gender equality often requires challenging traditional gender norms and confronting one's own societal position (Sudkämper et al., 2020; Van Laar et al., 2024). Prior work has shown that such challenges can elicit threat or discomfort (Kosakowska-Berezecka et al., 2016; Van Laar et al., 2024), which might inhibit the translation of feeling humanized by women into active support for pro-equality actions even when reciprocal humanization is high. Relatedly, the irony of harmony framework suggests that positive and validating intergroup experiences can paradoxically decrease advantaged group member's motivation to pursue structural change by reducing perceptions of injustice and the need for collective action (Saguy et al., 2009). From this perspective, feeling recognized and emotionally validated by women might have created a sense of relational harmony that diminished the urgency to engage in collective actions to challenge existing inequalities. This pattern reflects a broader dynamic observed across different intergroup contexts, where positive contact can inadvertently reduce individuals' motivation to challenge existing inequalities (Becker & Wright, 2011; Saguy & Chernyak-Hai, 2012; Tropp et al., 2012).

Fourth, while previous research suggested that meta-humanization improves attitudes and supportive behaviors toward the outgroup through the mediating role of secondary emotion attribution to the outgroup (Borinca, Van Assche, et al., 2024), our findings are inconsistent with this pathway. The lack of increased gender equality support following reciprocal humanization calls into question whether emotional recognition alone is sufficient to drive collective action intentions. The possible reasons for this finding are the same as for the absence of a main effect of meta-secondary emotions on support for gender equality. One possibility is that, although feeling humanized leads men to perceive women as emotionally complex in return, it may not be sufficient to influence their willingness to engage in effortful actions supporting gender equality. Another possibility is that men's general beliefs about gender equality likely outweigh the effect that meta-secondary emotions and reciprocal attribution of secondary emotions to women has on their willingness to support gender equality actions.

Taken together, all these results imply that while reciprocal attribution of secondary emotions fosters humanization, it may not be sufficient to promote collective action intentions. It is also important to note that intentions are not the same as actual behavior, though they tend to be more predictive of action than general attitudes (Ajzen, 1991). This demonstrates the need to investigate additional mediatory variables that are likely to play a key role in translating perceptions of emotional attribution into stronger intentions—and ultimately behavior—in support of gender equality. For instance, recognizing women as fully human may not be sufficient to prompt action if underlying beliefs or norms justify women's differential treatment. Prior research has identified several such factors that influence men's support for gender equality. A central factor is men's perception of (in)justice of existing gender relations (Sudkämper et al., 2020; Van Zomeren et al., 2008). For example, when men perceive gender inequality as a violation of their moral convictions, they are more likely to engage in collective action (Van Zomeren et al., 2011). Conversely, strong system

justification beliefs (Jost & Kay, 2005; Sudkämper et al., 2020) and high levels of social dominance orientation—reflecting support for maintaining hierarchical gender relations—are associated with reduced support for gender equality (Sudkämper et al., 2020). Additionally, resistance may also stem from zero-sum beliefs, where men perceive advances in gender equality as a threat to their status or privileges (Kehn & Ruthig, 2013; Kuchynka et al., 2018; Mikołajczak et al., 2025). Endorsement of traditional gender roles also predicts lower support for gender equality (Van Laar et al., 2024), while positive cross-gender contact has been shown to increase it (Mikołajczak et al., 2025; Van Laar et al., 2024). Future research would benefit from including such factors to better understand the conditions under which meta-secondary emotions might foster men’s support for gender equality.

In summary we obtained strong evidence that men’s perception of being viewed as fully human by women leads them to fully humanize women in return. However, this reciprocal humanization did not translate into increased willingness to support gender equality, highlighting the need to consider additional factors—such as perceived injustice, social norms, and zero-sum beliefs—that may be essential to motivate collective action.

Practical Implications

At a practical level, our study emphasizes that meta-secondary emotions can be relevant not only for groups with highly tense relations, such as post-war groups, but also in more everyday intergroup contexts like gender dynamics. This relevance is especially highlighted through measuring meta-humanization through the perceived attribution of secondary emotions instead of explicit human traits, making it a subtle and ecologically valid approach (Kteily et al., 2016). Indeed, in light of recent political developments threatening advancements in gender equality—such as cuts to diversity, equity and inclusion initiatives in the U.S. (Ng et al., 2025) or the growing gender gap in political orientation, with men consistently representing more right-wing views than women, particularly among younger

generations (Brenan, 2024; Grasso & Shorrocks, 2024)—understanding what motivates men to support gender equality is especially pressing. Given that gender issues are often emotionally charged, research targeting emotional and perceptual mechanisms is especially valuable. Meta-humanization has been identified as an effective intervention in decreasing the dehumanization of outgroups and improving intergroup attitudes (Borinca, Van Assche, et al., 2024; Kteily et al., 2016) and may similarly help improve gender relations. One possible way to apply these insights, could be for gender equality campaigns to incorporate emotionally validating messages that acknowledge men’s emotional complexity, potentially fostering more constructive engagement and greater openness for gender-related issues.

Strengths, Limitations and Future Directions

This study contributes novel conceptual and methodological insights. To my knowledge, it is the first study to examine meta-secondary emotions as a part of meta-perceptions and to examine their effects within the context of gender dynamics. By measuring meta-humanization through the attribution of secondary emotions instead of abstract human traits, the study provides a subtle, ecologically valid approach to understanding emotional perceptions. Methodologically, the study employed a well-powered randomized controlled design. Another strength lies in the development of the experimental videos, which were designed to manipulate men’s perceived emotional attribution by women, serving as an externally valid manipulation. Additionally, the use of validated measures for emotional attribution and collective action intentions enhances the internal validity and replicability of the results.

However, this study had at least four limitations. First, the Gender Equality Collective Action Intentions (GECAI) scale may not be ideal for assessing men’s support for gender equality. The GECAI scale includes items that require relatively high levels of commitment, such as becoming involved with a group or political party focused on gender issues (Besta et

al., 2024). It was chosen because tangible and active public support by men is crucial to advance gender equality (Sudkämper et al., 2020). However, such high-commitment items may not reflect men's overall support for gender equality, as they might deter individuals who support gender equality in principle but are only willing to engage in moderate or passive forms of support for gender equality. This could potentially lead to an underestimation of men's support levels. Future research should consider utilizing measures such as the Support for Gender Equality among Men Scale (Sudkämper et al., 2020), which captures attitudes as well as behavioral intentions to support gender equality in the public and the private sphere and was specifically developed for heterosexual men.

Second, though the experimental manipulation effectively influenced men's perceived emotional attribution and their secondary emotion attribution to women, it may not have been strong enough to impact men's intentions to engage in gender equality actions. Additionally, men's high baseline humanization scores may have limited the potential for further change. Future research could address this ceiling effect by including samples with more variation in baseline humanization levels, though it remains an open question whether such differences are associated with greater malleability, as other factors such as gender norms may hinder responsiveness. Alternatively, future research could refine the measurement of emotional attribution by including a broader and more diverse range of secondary emotions, using more sensitive response formats, or incorporating indirect methods to reduce social desirability bias.

Third, although no significant differences were found in collective action intentions, the descriptive pattern was in the predicted direction with slightly higher scores in the positive and negative meta-secondary emotion conditions compared to the control. This raises the possibility that the study may have been underpowered to detect small effects. Future research

with larger samples and refined measures could help clarify whether meta-secondary emotions subtly influence men's willingness to support pro-equality actions.

Fourth, the study did not examine how contextual or identity-related factors such as those outlined in the Theoretical Implications section (e.g., traditional gender role beliefs; Van Laar et al., 2024)—might influence men's willingness to support gender equality. These factors likely serve as important moderators in future research to better understand when and how meta-secondary emotions influence behavioral intentions in gender contexts.

Conclusion

This thesis provides novel insights into the impact of meta-secondary emotions on gender dynamics. The results demonstrate that fostering a sense of meta-humanization through the perceived attribution of both positive and negative secondary emotions by women enhances men's attribution of secondary emotions to women. However, this enhanced reciprocal humanization did not translate into increased support for gender equality, which underscores the complexity of the link between humanization and collective action intentions. Gender equality cannot be achieved without men as allies (Van Laar et al., 2024). Identifying factors that explain men's support for gender equality (or a lack thereof) represent an important first step for encouraging their support, which is why understanding the conditions under which meta-secondary emotions can foster allyship remains a critical avenue for future research.

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Appendix A

Video Texts of Both Experimental Conditions

Positive Meta-Secondary Emotions

In many parts of the US, women recognize men's ability to feel and express emotions. A recent study found that many women believe men experience compassion, admiration, and gratitude, just as deeply as women do. Jennifer, a 31-year-old from Nebraska, shared: "From my experience, men express compassion in meaningful ways. They empathize with others and often show it through their actions." Brenda, a 46-year-old from California, observed: "I often see men openly admiring others. They're raised to be supportive, which helps them appreciate people's strengths." Ashley, a 52-year-old from New Jersey, remarked: "Men experience gratitude just as much as women. When they receive help, they acknowledge it in their own way—whether through words or gestures."

Negative Meta-Secondary Emotions

In many parts of the US, women recognize men's ability to feel and express emotions. A recent study found that many women believe men experience guilt, regret, and shame, just as deeply as women do. Jennifer, a 31-year-old from Nebraska, shared: "From my experience, men express guilt in meaningful ways. They acknowledge when they've made a mistake and often work to make things right." Brenda, a 46-year-old from California, observed: "I often see men experiencing regret. They may not always verbalize it, but they reflect on their actions and take steps to change." Ashley, a 52-year-old from New Jersey, remarked: "Men feel shame just as much as women. When they believe they've done something wrong, you can see it in their body language, their tone, or how they seek to repair relationships."

Appendix B

Attribution of Secondary Emotions Scale

The following scale was administered to assess participant's attribution of secondary emotions to women. Participants rated to what extent they believe that women, in general, are likely to experience each of the following emotions on a scale from 1 (*not likely at all*) to 7 (*very likely*).

1. Compassion
2. Tenderness
3. Hope
4. Bitterness
5. Contempt
6. Guilt

Note. Items from Borinca, Van Assche, et al. (2024).

Appendix C

Gender Equality Collective Action Intentions Scale

The following scale was used to assess participant's intentions to support gender equality. Participants indicated how likely they are to engage in the following activities to support or advance gender equality on a scale from 1 (*not likely at all*) to 7 (*very likely*).

1. ... become involved with a group (or political party) focused on gender issues/gender equality (e.g., volunteer, summer job, etc.)
2. ... consciously make time to work on gender issues/gender equality (e.g., working part-time for an organization, contributing to raise awareness about gender issues, choosing activities focused on gender issues over other leisure activities)
3. ... participate in a community event which focuses on gender issues
4. ... use online tools (e.g., Instagram, YouTube, Facebook, Wikipedia, Blogs) to raise awareness about gender issues/gender equality
5. ... participate in an educational event (e.g., workshop) related to gender issues/gender equality
6. ... spend time working with a group/organization that deals with the connection of gender issues/gender equality to other societal issues such as injustice or inequality

Note. Items from Besta et al. (2024).

Appendix D

Manipulation Check

The following scale was used as a manipulation check. Participants indicated to what extent they believe that women, in general, are likely to attribute each of the following emotions to men on a scale from 1 (*not likely at all*) to 7 (*very likely*).

1. Compassion
2. Gratitude
3. Admiration
4. Regret
5. Guilt
6. Shame

Appendix E

Attention Check

The following question was administered as an attention check. Participants were asked to indicate the title of the video they watched in the previous section among the following three answer possibilities:

1. Women Recognize Men's Compassion, Admiration, and Gratitude
2. Women Recognize Men's Guilt, Regret, and Shame
3. Elevators and How They Function