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**Thank You for Sharing: Body-Positive and Humour Parody Images Increase Women's
Body Satisfaction and Predict Collective Action Intentions Via Gratitude**

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Abstract

Exposure to idealized body imagery in social media can have a negative impact on women's body satisfaction. Alternative types of imagery, such as body-positive and humorous parody imagery, can instead promote body satisfaction. However, it remains unclear whether body-positive and humorous parody imagery elicit specific emotions and motivates women to engage in collective action intentions to change the proliferation of unrealistic body portrayals. Across two studies, we investigated the impact of body-positive (Study 1a, $N = 126$) and humorous parody imagery (Study 1b, $N = 126$) versus body-ideal imagery on young (18-35) women's body satisfaction, mood, emotions of anger, gratitude, and hope, and collective action intentions. Exposure to body-positive and humorous parody imagery increased body satisfaction, whereas idealized images decreased them. Importantly, imagery criticizing unrealistic body ideals (i.e., body-positive and humorous parody) increased women's gratitude and hope. Moreover, we found an indirect effect of such type of imagery on women's collective action intentions aimed at stopping the widespread use of idealized unrealistic imagery and promoting diverse and realistic representations of women's bodies via gratitude. The research provides an innovative contribution to emotional and collective reactions to criticizing images against idealized bodies on social media.

Keywords: body positive, humorous parody, body satisfaction, collective action, hope, gratitude

**Thank You for Sharing: Body-Positive and Humour Parody Images Increase Women's
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The use of visually-centered social network sites (SNS) among young women is often associated with women's body dissatisfaction and physical anxiety (Marques et al., 2022), which can be triggered by exposure to body-ideal imagery promoting thin and fit unrealistic ideals (see Sherlock & Wagstaff, 2019). There is therefore a need for strategies to counteract these negative effects. One way can be sharing and exposing women to imagery promoting body diversity and realistic standards. So far, literature has identified different types of imagery that function in this way: body-positive images and humorous parodies. Body-positive images challenge unrealistic body ideals by celebrating the diversity and uniqueness of bodies. Body-focused humorous parody images are instead comedic recreations of images featuring models or celebrities. These parodies often exaggerate or mimic the original images to humorously highlight their unrealistic nature. Both body-positive images (Cohen et al., 2019; Di Michele et al., 2023) and humorous parodies (Fasoli et al., 2023; Slater et al., 2019) have been shown to increase women's body satisfaction compared to idealized images. However, it remains unclear whether these types of imagery can elicit women's intentions to participate in online collective action aimed at changing the way women are portrayed in social media.

In real life, evidence that people are willing to act and engage in social change against media portraying unrealistic body ideals exists. For instance, in 2015, an online petition against Protein World's advertisement titled 'Are you beach body ready?' that promoted unrealistic body ideals and weight loss was signed by 70,341 people in the United Kingdom. One of the petition outcomes was that the mayor of London banned body-shaming advertisements on London transport (Baring, 2015). In SNS, action against the proliferation of unrealistic body ideals is also

needed. Movements like body positivity aim to transform body representation and rely on the support of SNS users to succeed. Online collective action (e.g., signing a petition, engaging with activists' accounts) provides a way for women to contribute to reshaping body ideals and representation in SNSs. It is therefore important to understand what motivates them to engage in such action. To this aim, the present research seeks to replicate results concerning the positive impact of body-positive and humorous parody imagery on women's mood and body satisfaction. Extending previous research, it also investigates whether these types of imagery elicit emotional reactions toward the way women are usually portrayed and promote collective action intentions.

Types of Imagery and Their Effects

Many studies have focused on the detrimental effects that being exposed to unrealistic *body-ideal* imagery can have on individual well-being and social perception. SNSs have seen an increase in images that promote thin and fit body ideals (Griffiths & Stefanovski, 2019), with the latter becoming more desirable with the proliferation of 'fitspiration' posts (see Bozsik et al., 2018). Fitspiration images and messages often increase weight stigma and promote potentially unhealthy weight loss (see Alberga et al., 2018; Boepple & Thompson, 2016). Such images often represent unrealistic and unattainable body standards. It is not surprising that exposure to such type of imagery has been found to contribute to body dissatisfaction and weight concerns among young women (see de Valle et al., 2021, and Huang et al., 2021, for reviews). Some of these effects can be explained by an upward appearance comparison (i.e., the tendency to compare with women whose bodies are perceived as more desirable because they match body ideals; see Fardouly et al., 2017; Holland & Tiggemann, 2016).

Body positivity is a movement that has its foundation in critical feminist movements and originated with Black and queer activists opposing anti-fat narratives about Black people and

White thin ideals. It developed further as a critique of media for giving visibility only to certain body types and neglecting intersectionality (see Griffin et al., 2022). With the rise of SNSs, body positivity has become mainstream, consisting of posts (images, captions, messages) aimed at challenging unrealistic and unachievable body ideals that instigate body dissatisfaction and appearance concerns (Cwynar-Horta, 2016; Sastre, 2014). Interestingly, body-positive posts often do not involve a direct critique but instead propose alternative portrayals by promoting a more realistic, diverse, and inclusive representation of women's bodies, with the aim of increasing body appreciation, compassion, and acceptance (see Cohen et al., 2019). Hence, *body-positive* imagery serves the dual purpose of promoting body diversity and realistic representation while simultaneously challenging unrealistic ideals by depicting women of different sizes and shapes, showing their cellulite, stomach rolls, stretch marks, body hair, and skin marks or irregularities (see Cohen et al., 2019, 2021; Rodgers et al., 2021).

Controversially, such types of imagery are often appearance-focused as they depict women with revealing clothing and frequently posing in sexually objectified ways (see Cohen et al., 2021; Lazuka et al., 2020). Nevertheless, body-positive imagery improves body satisfaction (see Rodgers et al., 2021 for a review). Interestingly, such effects on body satisfaction emerge regardless of the level of sexualization involved in the body-positive images (Di Michele et al., 2023). Different explanations account for such positive effects. Body-positive imagery may elicit less appearance comparison (Clayton et al., 2017; Rodgers et al., 2022) or a downward social comparison – women compare themselves with women whose bodies are perceived as less desirable as they do not match body ideals – and, thus, feel better about themselves (see Di Michele et al., 2023). Alternatively, body positivity acts to deconstruct unrealistic societal body

ideals reducing the pressure felt by women to match such ideals, and likewise increasing appreciation of their own bodies (see Andrew et al., 2015; Wood-Barcalow et al., 2010).

Some of the body-positive posts on Instagram seem to involve humor (see Lazuka et al., 2020). Positive humor is associated with body appreciation and compassion and less with body criticism, drive for thinness, and emotional eating (Fasoli et al., 2022). Humorous messages are seen as effective in protecting women from body image concerns, while also being engaging and helping to shift perspectives (Davies et al., 2024). One of the ways humor appears on Instagram is via humorous parodies. For instance, Celeste Barber is a comedian who makes fun of unrealistic images portraying thin and fit models and influencers. Her posts involve the original image side by side with a parody in which she imitates the uncomfortable pose, dresses similarly to the model to make fun of their clothing choices, and complements her picture with parodic features (e.g., funny facial expressions). Also, Celeste represents a woman with a body that does not match thin and fit ideals. The comparison between the two pictures aims to stress the unrealistic and unachievable beauty standards in the same way as posts portraying Instagram versus reality (see Tiggemann & Anderberg, 2020), but in a way that makes people laugh.

Such types of humorous parodies represent an instance of '*subversive humor*' that subverts female beauty standards and challenges the status quo. Indeed, subversive humor is a form of resistance or non-aggressive confrontation to oppression (see Sorensen, 2008; Riquelme et al., 2019) and has been found to challenge sexism and gender norms while promoting gender equality (see Strain et al., 2016; Riquelme et al., 2021); social media users also consider humor messages as a useful tool to protect body image (Davies et al., 2024). Studies on the impact of parodies in the context of body image are scarce, but research has shown that being exposed to body-focused humorous parody (vs. thin-ideal) imagery increased women's positive mood and

body satisfaction (Fasoli et al., 2023; Slater et al., 2019). Interestingly, recent work has shown that humorous parody and body-positive imagery are perceived as similar critiques of unrealistic body ideals and similarly increase body satisfaction (Fasoli et al., 2023). Hence, despite their different nature and type of content, both types of imagery seem to be beneficial for women's body image.

Collective Action and Emotions

SNS can have an instrumental role in raising awareness about social issues and facilitating mobilization by engaging users with its content (see Kende et al., 2016; Harlow & Harp, 2012). Despite this potential, SNS contribution to social change has been rarely studied in the context of body image and the types of imagery it involves. While research has examined individuals' willingness to act to change their own appearance or body (see Ferdousi et al., 2023), no study has explored the willingness to participate in actions aimed at changing beauty standards. Instead, research on sexual objectification provides some insights into how appearance standards and their internalization play a role in collective action. Objectification theory (Fredrickson & Roberts, 1997) suggests that women are being observed and judged for their appearance and considered 'sexual objects.' This external perspective is frequently internalized by women, leading them to view themselves through the objectifying lens of the observer (see Ward et al., 2023). Being treated as objects can influence an individual's willingness to pursue social change (see Zurbriggen, 2013). Indeed, experiencing sexually objectifying behaviors can make women angry and lead them to engage in collective action against sexual objectification (Shepherd & Evans, 2020). Furthermore, portraying women as sexual objects can foster perceptions of unfair treatment, motivating others to challenge such representations. For instance, research demonstrates that the internet facilitates collective protests

against advertisements deemed sexually objectifying (Sayers & Jones, 2014). Additionally, exposure to campaigns criticizing the sexualized portrayal of women on television has been found to increase women's willingness to protest against sexual objectification (Guizzo et al., 2017).

If we consider body image research, it has been found that larger women are willing to engage in collective action against weight-based discrimination, but such intentions vary according to contextual factors (Lindly et al., 2014; Rathbone et al., 2022). It has also been suggested that body positivity can promote social change and influence discourses around body image (Zavattaro, 2021). Indeed, individuals believe that appearance diversity in media could be an effective strategy to change social norms (Paraskeva et al., 2017) and being exposed to campaigns calling individuals to promote body-positive imagery increases concern for body image issues and willingness to discuss them with others (Johnson-Young & Magee, 2014).

Although research concerning collective action in relation to body-focused humorous parodies is not available, evidence suggests that subversive humor can motivate collective action. For instance, exposure to political humor and parody has been linked to increased political participation (Baumgartner & Lockerbie, 2018; Hoffman & Young, 2011). Moreover, subversive humor serves as a tool to challenge authorities and norms (see Holmes & Marra, 2006), raising awareness of inequality and unfairness (see Hartz, 2007), and enhancing perception of group efficacy (Cohen-Chen et al., 2024). Similarly, body-focused humorous parodies likely function in a comparable way, critiquing unrealistic body expectations and highlighting unfair beauty standards (see Fasoli et al., 2023). Importantly, exposure to subversive humor, including vignettes concerning the body (e.g., body hair or control over women's body), has been found to

elicit collective action intentions against sexism and the status quo among individuals who do not strongly identify as feminist (Riquelme et al., 2021; Vizcaíno-Cuenca et al., 2024).

Collective action is motivated by emotional reactions. Emotions differ in valence but also in how they are processed. In this research, we focused on anger and gratitude which are both focused on what has been done (Fox et al., 2015) and can function to generate social pressure (Tooby et al., 2008), and on hope which focuses on the future and triggers perseverance (see Nabi & Myrick, 2019). The most studied emotion in the collective action context is *anger* (see Van Zomeren, 2013). Anger is a reaction to unfairness, inequality, and injustice that leads individuals to act and change the status quo (see Hercus, 1999; Pennekamp et al., 2007). Indeed, women exposed to thin and sexualized models (Cahill & Mussap, 2007) or videos portraying idealized thin and attractive body standards reported more anger than when exposed to a non-appearance and a control video (Cattarin et al., 2000). Also, being exposed to a critique of how women are portrayed in the media elicits anger in women that, in turn, increases their intentions to engage in collective action (Guizzo et al., 2017). Hence, anger requires an appraisal of a given event as well as a realization that women are treated unfairly. In the context of body image, it could be that imagery portraying unrealistic body ideals may trigger anger for the way women are represented in SNSs and, in turn, motivate them to engage in collective action.

Gratitude is an emotion that reflects an appreciation for something that has been done by others (see Emmons & Crumpler, 2000) or that emerges upon reflecting on what an individual has in their life. The latter conceptualization has been studied in relation to body image with studies showing that feeling general or body gratitude (e.g., body aspects that we are grateful for) is associated with body appreciation and reduced body concerns (Dunaev et al., 2018; Homan & Tylka, 2018). However, such research has not considered gratitude toward others' actions, for

instance, women who promote body inclusivity and diversity. Gratitude motivates prosocial behaviors in the form of cooperation and help (Ma et al., 2017; Stellar et al., 2017) and motivates individuals to follow and reinforce the behavior enacted by others (see Delton et al., 2018; Tsang, 2006). Gratitude is also associated with the belief that people need to get together to achieve their goals (Ruberton et al., 2016). Such motivations derive in part from socially oriented negative emotions that emerge with gratitude (Walsh et al., 2022). For instance, gratitude elicits individuals' feelings of indebtedness or guilt for not having done their part, which increases the need to reciprocate (see McCullough et al., 2001; Layous et al., 2017). Feeling gratitude toward others who try to change the system can increase feelings of connectedness with others, prosocial behaviors, and willingness to contribute to society and its changes (Froh et al., 2010; McCullough et al., 2008; Wood et al., 2008). In the context of body imagery, exposure to imagery criticizing unrealistic body ideals and promoting diversity could elicit gratitude that might motivate collective action to reciprocate.

Hope is a future-focused emotion that requires thinking about a goal to achieve in the future (Averill et al., 1990; Lazarus, 1991). As such, hope can function as an emotional 'coping strategy' when a situation is considered undesirable. For instance, a lot of research on hope and body image has been conducted on women with breast cancer. In this population, hope is associated with lower body image concerns and psychological distress (Liu et al., 2017; Todorov et al., 2019) as well as greater resilience (Hsu et al., 2021). Crucially, hope is also associated with support for social change motivated by the desire to achieve a specific goal (Greenaway et al., 2016) that can occur in different contexts (e.g., political protests, climate change, conflict resolution; Cohen-Chen et al., 2014; Wlodarczyk et al., 2017; van Zomeren et al., 2019). When the world is perceived as changing, hope is likely elicited (see Cohen-Chen et al., 2015) and

functions as a motivation for collective action. Indeed, hope is linked to thoughts that a meaningful change can be achieved in the future (van Zomeren et al., 2019) and therefore represents a motivational state related to feelings of agency (see Snyder, 2002). Here, we argue that imagery promoting diverse and inclusive bodies and critiquing idealized body standards can be processed as if the world is changing and, thus, make women hopeful that a social change can be achieved, which could motivate them to engage in collective action.

Overview

This research aimed to examine the impact of Instagram imagery on young women's body image and collective action intentions. In Study 1a, women were exposed to body-positive (vs. body-ideal) imagery while in Study 1b women were exposed to humorous parody (vs. body-ideal) imagery. In both studies, we focused on young women (age range 18-35) as they report stronger body image concerns (Saiphoo & Vahedi, 2019). We also concentrated on Instagram, as 62.3% of its users are young people aged 18–34 (Statista, 2024). We assessed mood and body satisfaction pre- and post-exposure to the imagery. In line with previous literature, we predicted that exposure to body-positive/humorous parody imagery would improve participants' mood and body satisfaction (Hypothesis 1a) while exposure to body-ideal imagery would decrease mood and body satisfaction (Hypothesis 1b).

Moreover, we tested the impact of imagery on three emotions: anger at unrealistic body ideals, gratitude for body diversity promoted by others, and hope for more realistic body ideals in SNS. Building on the emotion literature, we expected that, compared to body-ideal imagery, body-positive and humorous parody imagery would elicit more gratitude and hope (Hypothesis 2a). Participants were also expected to report more anger after being exposed to ideal-body than body-positive or humorous parody imagery (Hypothesis 2b).

Furthermore, we assessed collective action intentions to stop unrealistic body portrayals and collective action intentions to promote realistic and diverse women's body representation on SNS. We assessed these two types of collective actions as they are different in nature. The former is a type of action focusing on the body-ideal imagery that has dominated women's representation in media that women may wish to change. The latter refers to a new type of imagery, which might motivate women's active promotion of these new representations. Women may be likely to engage in both types of action as one does not exclude the other. We hypothesized that exposure to body-positive or humorous parody imagery would elicit more collective action intentions than body-ideal imagery (Hypothesis 3).

Exploratory analyses were also conducted to examine the role of emotions in triggering the two types of collective action intentions. Drawing from the emotion and collective action literature, emotional reactions such as anger may be more likely to play a role in stopping undesirable situations that may represent the 'past' and stress the 'unfairness' beyond body-ideal imagery whereas gratitude and hope could be more prone to support positive changes that represent the 'present and future.' Finally, we compared the effects of body-positive and humorous parody imagery on our variables to assess whether the two types of imagery produced similar effects.

Study 1a – Body-Positive Imagery

Method

Participants

After excluding participants who did not provide consent to data use ($n = 5$), the final sample consisted of 126 British women ($M_{age} = 26.80$, $SD = 4.86$, range 18–35). They were predominantly White ($n = 121$, 96%) and well-educated (higher than a BSc degree, $n = 69$,

54.8%). Half of them believed they weighed more than the average person of the same gender and age ($n = 65$, 51.6%). BMI ranged from 17.71 to 51.31 ($M = 27.47$, $SD = 6.62$) and did not significantly differ across conditions, $t(124) = -1.23$, $p = .22$. Most of the participants reported using Instagram daily between 30 minutes and two hours ($n = 77$, 61.1%).

Sensitivity G*power analyses were performed to check the effect size our sample ($N = 126$) could detect when performing a t -test or a 2 (Time) x 2 (Condition) repeated measures ANOVA ($\alpha = .05$; power $1 - \beta = .80$). Our sample allowed us to detect a medium effect size for the t -test, $d = .50$, and small effect sizes for the repeated-measures ANOVA, $f = .12$.

Stimuli

Ten pictures for each condition were sourced from the Internet and Instagram. Women portrayed in the images appeared to be mostly White, with only a few Latinas depicted. They were all wearing revealing clothes, bikinis, or underwear while posing in a sexy way (e.g., arching back, popping the hip) and were presented either frontally or seated within the Instagram framework but without information such as captions, hashtags, or likes. Pictures for the two conditions were matched for poses. Stimuli are available upon request. The *body positivity* images were sourced by searching for body-positive captions, hashtags, or keywords and selected following the body positivity features identified by Cohen et al. (2019). They portrayed curvy or larger women and what the beauty standards describe as ‘flaws’ (e.g., cellulite, stomach rolls, stretch marks, little makeup, irregular skin). The *body ideal* images were sourced by searching for models and they all portrayed women who met thin and fit appearance ideals (i.e., slim with defined abs, toned glutes and no cellulite, skin without marks or scars, and make-up). The images were evaluated for sexualization, attractiveness, body focus, representation of body

positivity or ideal body types, critique of unrealistic body ideals, funniness, and aversiveness (see Table S1 in the online supplement).

Measures

Mood

We used the Visual Analogue Scale (VAS; Heinberg & Thompson, 1995) to assess pre- and post-exposure state mood (six items; confident, happy, hopeful, depressed, anxious, and angry). Answers were provided on a scale from 0 (*not at all*) to 100 (*very much*). Ratings for negative emotions were reverse-coded and then all items were averaged to create a positive mood score ($\alpha_{\text{pre}} = .79$ and $\alpha_{\text{post}} = .80$). The higher the score, the more positive the participant's mood.

Body Satisfaction

The Visual Analogue Scale (VAS; Heinberg & Thompson, 1995) was used to assess body satisfaction on three items (i.e., satisfaction with appearance/body weight/body size and shape) pre and post imagery exposure. Answers were provided on a scale from 0 (*not at all*) to 100 (*very much*). Ratings were averaged to create pre- and post-exposure scores and reliability was good ($\alpha_{\text{pre}} = .93$ and $\alpha_{\text{post}} = .95$). The higher the scores, the higher participant body satisfaction.

Emotions

Following previous procedures (see Russell et al., 2023), we assessed participants' emotions via two items for each type of emotion. We measured *anger* (i.e., angry, furious; $\alpha = .93$; $r = .87$, $p < .001$) at the fact that women are portrayed as thin, fit, and perfect in social media, *hope* (i.e., hopeful, optimistic; $\alpha = .88$; $r = .78$, $p < .001$) for the possibility that social media can contribute to changing unrealistic body ideals, and *gratitude* (i.e., grateful, thankful; α

= .92; $r = .85$, $p < .001$) for the diverse and inclusive body portrayals that exist in social media. Answers were provided on a slider from 0 (*not at all*) to 100 (*extremely*). These emotions were only assessed after imagery exposure to avoid influencing participants' imagery processing. Ratings for emotions were averaged. The higher the scores, the stronger the anger, hope, and gratitude felt by participants.

Collective Action Intentions

Two types of collective action intentions were measured using items adapted from existing general collective action intention scales (see Iyer et al., 2007; for factor analyses see S2 in the online supplement). Four items (i.e., signing a petition, sharing an Instagram post, following an Instagram account, convincing a friend to follow an Instagram account against unrealistic portrayals of women's bodies; $\alpha = .92$) assessed participants' willingness to engage in online collective action to stop social media's unrealistic portrayals of women.

Four items (i.e., signing a petition, sharing an Instagram post, following an Instagram account, convincing a friend to follow an Instagram that promotes realistic women's portrayals; $\alpha = .88$) assessed collective action intentions to promote media portrayals of women that are realistic, inclusive, and represent body diversity. The presentation order of the two scales was counterbalanced across participants. Answers were provided on a scale from 1 (*not at all willing*) to 5 (*extremely willing*). Ratings were averaged to create two collective action intention scores. The higher the score, the higher the participants' willingness to engage in each type of online collective action. We also assessed participants' willingness to post a picture of themselves that was not edited and showed their body and skin features (see S4 in the online supplement).

Procedure

Participants were recruited on Prolific (rewarded £1.85) and consented to participate in the online study. They first reported their demographics and a measure of self-objectification (see S5 in the online supplement). Next, completed the imagery pre-exposure mood and body satisfaction scales. Then, they were randomly assigned to see 10 Instagram images determining the experimental condition (body ideal vs. body positive). For each picture, they indicated their willingness to like the post if it appeared on their Instagram feed (see Supplementary Materials S3). Then, they completed the imagery post-exposure measures of mood and body satisfaction, emotions, and collective action intentions. Finally, they were thanked and debriefed.

Results

To assess pre- and post-exposure differences in mood and body satisfaction across conditions, we performed a 2 (time: pre vs. post) x 2 (condition: idealized body vs. body positivity) mixed ANOVA with the first factor as within-participants and the second factor as between-participants. Pairwise comparisons (Bonferroni correction) were performed in case of a significant interaction. To assess differences between conditions on emotions (anger, gratitude, hope) and the two types of collective action intentions, a series of *t*-tests were conducted. The pattern of results presented below remained the same when time spent on social media was entered as a covariate in the analyses.

Mood

A significant interaction between time and condition, $F(1, 124) = 10.23, p = .002, \eta_p^2 = .08$, found that participants in the body-positive condition reported an increase in positive mood from pre- ($M = 68.06, SD = 15.72$) to post-exposure ($M = 70.68, SD = 15.67; p = .010$) while a pattern in the opposite direction occurred in the body-ideal condition ($M_{pre} = 67.20, SD = 16.17$ vs. $M_{post} = 65.20, SD = 16.93; p = .056$). No other significant effects emerged ($F_s < 1.30, p_s > .26$).

Body Satisfaction

A significant interaction between time and condition, $F(1, 124) = 17.90, p < .001, \eta_p^2 = .13$, showed that participants in the body-positive condition reported an increase in body satisfaction from pre ($M = 33.55, SD = 24.35$) to post-imagery exposure ($M = 39.06, SD = 29.19; p = .001$). In contrast, participants in the body-ideal condition reported a decrease in body satisfaction from pre- ($M = 42.69, SD = 26.62$) to post-exposure ($M = 39.06, SD = 29.19; p = .015$). No other significant effects emerged ($F_s < 1.08, p_s > .30$).

Emotions and Collective Action Intentions

Results showed a significant effect of condition on gratitude, $t(124) = -2.14, p = .034, d = -.38$, indicating that participants exposed to body-positive imagery ($M = 71.77, SD = 24.89$) felt more gratitude than those in the body-ideal condition ($M = 62.10, SD = 25.91$). No other significant effects were found ($t_s < 0.95, p_s > .124$; see Table 1 for means).

Exploratory Mediation Analyses

We explored whether condition (body-ideal vs. body-positive imagery) had any indirect effect on the two types of collective action intentions via gratitude, the only emotion affected by condition. Hence, we ran a mediation analysis (PROCESS, model 4) with bootstrapped confidence intervals (5000 samples) used to test indirect effects. We included condition as the independent variable, gratitude as the mediator, and collective action intentions to promote diverse and inclusive women's media portrayals as the outcome. According to Fritz and MacKinnon (2007), our sample ($N = 126$) was in line with the sample size (Bca-CI: $N = 115$) needed to detect small to medium effect sizes when power is .80. Analyses showed that condition predicted gratitude, $b = 9.68, SE = 4.52, t = 2.14, p = .034, 95\% CI [0.72, 18.63]$, and that both condition, $b = -.35, SE = .16, t = -2.19, p = .031, 95\% CI [-0.68, -0.04]$, and gratitude, b

$= .02$, $SE = .003$, $t = 5.97$, $p < .001$, 95% CI $[0.01, 0.02]$, were positively associated with collective action intentions. Importantly, a significant indirect effect emerged, $b = .18$, $SE = .09$, 95% $CI_{Bootstrapped} [0.02, 0.38]$. The effect remained the same when pre-exposure mood was added as a covariate in the analyses.

The same analysis on collective action intentions to stop unrealistic portrayals of women showed a significant effect of condition on gratitude, $b = 9.68$, $SE = 4.52$, $t = 2.14$, $p = .034$, 95% CI $[0.72, 18.63]$, and of gratitude on collective action intentions, $b = 0.01$, $SE = .004$, $t = 2.43$, $p = .016$, 95% CI $[0.002, 0.02]$. No significant direct effect, $b = -0.18$, $SE = .22$, $t = -0.81$, $p = .420$, 95% CI $[-0.61, 0.25]$, but a significant indirect effect of condition via gratitude, $b = 0.10$, $SE = .06$, 95% $CI_{Bootstrapped} [0.002, 0.24]$, was found. The effect remained the same when pre-exposure mood was added as a covariate in the analyses.

To summarize, participants exposed to body-positive (vs. body ideal) imagery felt more gratitude which was associated with higher intentions to promote diversity and inclusion and to stop unrealistic portrayals of women.

Discussion

Study 1a showed that young women exposed to body-positive imagery increased their positive mood and body satisfaction while body-ideal imagery led to a decrease in body satisfaction, in line with Hypothesis 1a and 1b. Moreover, compared to body-ideal imagery, body-positive imagery elicited more feelings of gratitude, partially confirming Hypothesis 2. We did not find the type of imagery to elicit feelings of anger or hope differently nor to directly predict any type of collective action intentions. However, we found that body-positive (vs. body-ideal) imagery on Instagram increased participants' gratitude, which was associated with a

higher likelihood of engaging in collective action aimed at promoting diversity and inclusion in SNS when women's portrayals are concerned.

Study 1b – Humorous Parody Imagery

Study 1b aimed to assess the effects of humorous parody instead of body-positive imagery on the same outcomes. Humorous parody imagery explicitly portrays a comparison between body ideals and reality via humor, which highlights the 'ridiculousness' of idealized portrayals. In doing so, these images may enhance critical thinking (see Fasoli et al., 2023; Slater et al., 2019) in a way that is different from simply portraying women's diversity.

Method

Participants

After excluding participants who did not provide consent to data use ($n = 8$), the final sample consisted of 126 British women (range 18-35, $M_{age} = 26.72$, $SD = 4.53$). They were predominantly White ($n = 121$, 96%) and well-educated (higher than a BSc degree, $n = 66$, 52.4%). Half of them believed they weighed more than the average person of the same gender and age ($n = 67$, 53.2%). BMI ranged from 15.47 to 63.25 ($M = 28.53$, $SD = 8.38$) and did not significantly differ across conditions, $t(124) = -0.12$, $p = .90$. Most participants reported daily use of Instagram between 30 minutes and 2 hours ($n = 90$, 71.5%). The sample size ($N = 126$) was the same as in Study 1b, allowing us to detect small-to-medium effect sizes (t -test: $d = .50$; ANOVA: $f = .12$).

Stimuli

Ten pictures for each condition were sourced from the Internet and Instagram by searching for Celeste Barber's parodies. Stimuli are available upon request. The *humorous parody* images portrayed two pictures side by side. One picture depicted a model or influencer

who was thin and fit with a couple being slim-thick (i.e., abs were evident, glutes were toned). They were mostly White, but a few were Latinas. These women were portrayed in bikinis or underwear and in a range of postures that showed their bodies often in an unrealistic way (e.g., lying on a fence or a car, with fruits or glasses of wine covering their breasts). The other picture depicted the parody created by the comedian Celeste Barber who shows her average body (e.g., with stomach rolls) while making fun of the unrealistic poses and clothing choices. The *body ideal* images consisted of only the models'/influencers' images involved in the parodies. All pictures were evaluated on the same dimensions as for Study 1a (see Table S1 in the online supplement) and presented within the Instagram framework but without captions, hashtags, or likes.

Materials and Procedure

Participants who completed Study 1a were prevented from taking part in this second study. The recruitment and procedure were the same as in Study 1a. First, participants reported their demographic information, completed a self-objectification measure (see S5 in the online supplement) and pre-exposure measures of mood ($\alpha = .76$) and body satisfaction ($\alpha = .92$). Next, they were randomly assigned to see body-ideal or humorous parody images and report their willingness to like them (see S2 in the online supplement). After being exposed to the images, participants were assessed on post-exposure mood ($\alpha = .78$) and body satisfaction ($\alpha = .96$), emotions of anger ($\alpha = .89$; $r = .81$, $p < .001$), gratitude ($\alpha = .92$; $r = .80$, $p < .001$), and hope ($\alpha = .88$; $r = .85$, $p < .001$), collective action intentions against unrealistic portrays ($\alpha = .88$), and collective action intentions promoting realistic portrayals ($\alpha = .83$). Finally, participants were thanked and debriefed.

Results

The same analyses as in Study 1a were performed: A 2 (time: pre vs. post) x 2 (condition: body-ideal vs. humorous parody) mixed ANOVA for mood and body satisfaction, and *t*-tests for the other variables. The pattern of results presented below remained the same when time spent on social media was entered as a covariate in the analyses.

Mood

A significant interaction between time and condition, $F(1, 124) = 10.38, p = .002, \eta_p^2 = .08$, showed that in the body-ideal condition participants' positive mood decreased from pre- ($M = 65.36, SD = 15.18$) to post-exposure ($M = 61.61, SD = 18.45; p = .001$) while no difference occurred in the humorous parody condition ($M_{pre} = 67.07, SD = 14.67$ vs. $M_{post} = 68.13, SD = 14.72; p = .32$). No other significant effects were found ($F_s < 3.28, p_s > .073$).

Body Satisfaction

A significant interaction between time and condition, $F(1, 124) = 22.20, p < .001, \eta_p^2 = .15$, showed that participants' body satisfaction decreased from pre ($M = 34.56, SD = 25.09$) to post-exposure ($M = 30.87, SD = 26.23$) when the images involved body ideals ($p = .001$). On the contrary, participants' body satisfaction increased after being exposed to humorous parody imagery ($M_{pre} = 34.72, SD = 23.67$ vs. $M_{post} = 38.08, SD = 26.65; p = .002$). No other significant effects were found ($F_s < 0.67, p_s > .412$).

Emotions and Collective Action Intentions

Results showed a significant effect of condition on hope, $t(124) = -2.16, p = .033, d = -.38$, indicating that participants felt more hope in the humorous parody ($M = 52.32, SD = 27.33$) than in the body-ideal imagery condition ($M = 42.18, SD = 25.35$). However, the effect of condition on anger and gratitude was not significant ($t_s < -0.50, p_s > .077$). A non-significant trend was also observed for collective action intentions against women's body idealization,

$t(124) = -1.96, p = .052, d = -.35$, and no effect on collective action intentions promoting body diversity, $t(124) = -0.69, p = .491, d = -.12$ (for means see Table 1).

Exploratory Mediation Analyses

We explored whether condition (body-ideal vs. humorous parody imagery) had any indirect effect on the two types of collective action intentions via hope. Hence, we ran a mediation analysis (PROCESS, Model 4) with bootstrapped confidence intervals (5000 samples) used to test indirect effects. We included condition as the independent variable, hope as the mediator, and collective action intentions to *promote* diverse and inclusive women's media portrayals as the outcome. Analyses showed that condition predicted hope, $b = 10.14, SE = 4.70, t = 2.16, p = .033, 95\% CI [0.84, 19.45]$, and that hope was positively associated with collective action intentions, $b = 0.01, SE = .003, t = 4.14, p < .001, 95\% CI [0.07, 0.02]$. No significant direct effect of condition emerged, $b = -0.01, SE = .18, t = -0.06, p = .947, 95\% CI [-0.36, 0.34]$, but a significant indirect effect via hope was found, $b = 0.14, SE = .08, 95\% CI_{Bootstrapped} [0.01, 0.32]$. Participants exposed to humorous parody (vs. body ideal) imagery felt more hope, which was, in turn, associated with a higher willingness to engage in collective action to promote diversity and inclusion. The effect remained the same when pre-exposure mood was added as a covariate in the analyses.

The same analysis on collective action to *stop* unrealistic portrayals of women showed only a main effect of condition on hope, $b = 10.14, SE = 4.70, t = 2.16, p = .033, 95\% CI [0.83, 19.45]$. No significant effects of condition, $b = 0.36, SE = .22, t = 1.62, p = .108, 95\% CI [-0.08, 0.79]$, and hope, $b = 0.007, SE = .004, t = 1.71, p = .090, 95\% CI [-0.001, 0.01]$, on this type of collective action intentions or significant indirect effect of condition via hope was found, $b =$

0.07, $SE = .06$, 95% $CI_{Bootstrapped}$ [-0.02, 0.20]. The effects remained non-significant when pre-exposure mood was added as a covariate in the analyses.

Discussion

Study 1b showed that exposure to humorous parody imagery increased women's body satisfaction, partially supporting Hypothesis 1a, while body-ideal imagery decreased women's mood and body satisfaction, supporting Hypothesis 1b. Also, in line with Hypothesis 2, participants exposed to humorous parody imagery reported greater hope and this, in turn, increased collective action intention to promote diverse women's body representation on SNS.

Analyses in Aggregate

Recent work (Fasoli et al., 2023) has shown that both body-positive and humorous parody imagery are perceived as critiques of unrealistic body ideals, with similar effects on mood and body satisfaction. Indeed, these two types of imagery can both be conceptualized as examples of body positivity. It is therefore important to understand whether these different types of imagery have comparable effects on emotions and collective action intentions. Body-positive images portray inclusive, realistic bodies and implicitly critique unrealistic body ideals by offering alternatives, while body-focused parodies use subversive humor to deliver an explicit critique through laughter. Humorous parody imagery can therefore be perceived as more explicit in their critique. As parody imagery may be perceived as more explicit, comparing their effects helps assess which is more effective. Hence, we conducted aggregate analyses to compare the results of the two studies.

We merged Study 1a and 1b samples ($N = 252$) and computed a new condition variable with two levels, namely body-ideal vs. critique imagery (i.e., body-positive and humor parody altogether), and added Study (Study 1a: body positive vs. Study 1b: humorous parody) as a

factor. According to G*Power sensitivity analyses, our sample ($N = 252$) allowed us to detect a small effect size ($f = .10$) for mixed ANOVAs with four groups and two repeated measures, and a medium effect size ($f = .32$) for a one-way ANOVA with four groups, when $\alpha = .05$ and power $1 - \beta = .80$.

Mood and Body Satisfaction

A 2 (condition: body ideal vs. critique) x 2 (study: Study 1a - body-positive vs. Study 1b - humorous parody) x 2 (time: pre- vs. post-exposure) mixed ANOVA was conducted on mood and body satisfaction separately. See Table 1 for means. A significant condition by time interaction on positive mood, $F(1, 248) = 20.61, p < .001, \eta_p^2 = .08$, emerged. No other significant main effects or interactions were found ($F_s < 3.47, p_s > .063$). The analysis on body satisfaction yielded a significant condition by time interaction, $F(1, 248) = 38.37, p < .001, \eta_p^2 = .13$, but no other significant main effect or interaction ($F_s < 1.74, p_s > .188$). The results confirmed that exposure to body-ideal imagery reduced, and critique imagery (i.e., body-positive and humorous parody) increased, positive mood and body satisfaction between pre and post measures.

Emotions and Collective Action Intentions

A 2 (condition: body ideal vs. critique) x 2 (study: Study 1a - body-positive vs. Study 1b - humorous parody) ANOVA was conducted on each emotion and types of collective action intentions. We only found main effects of condition on hope and gratitude, indicating that the critique imagery (body positive and humor parody) elicited more hope, $F(1, 248) = 6.84, p = .009, \eta_p^2 = .03$, and gratitude, $F(1, 248) = 7.59, p = .006, \eta_p^2 = .03$, than idealized body imagery (see Table 1). No significant main effects of condition were found on anger, collective action

intentions to stop unrealistic body ideals or to promote body diversity, or any significant interactions with study across variables ($F_s < 2.67$, $ps > .103$).

Mediation Analyses

In line with Study 1a and Study 1b, no direct effect of condition was found on the two types of collective action intentions. We proceeded to examine whether indirect effects of condition on collective action intentions occurred via experienced gratitude and hope, the two emotions that were influenced by imagery criticizing unrealistic body ideals. We conducted two mediation analyses (PROCESS, model 4) with bootstrapped confidence intervals (5000 samples) used to test indirect effects. Condition was entered as the independent variable, hope and gratitude as parallel mediators, and the two types of collective action as the dependent variable one at a time. The study variable (body-ideal vs. humorous parody) was entered as a covariate. According to Fritz and MacKinnon (2007), our sample ($N = 225$) exceeded the sample size (Bca-CI: $N = 148$) needed to detect small to medium effect sizes when power is .80.

For collective action intentions against unrealistic body ideals, we found an indirect effect via gratitude ($b = 0.09$, $SE = .04$, 95% $CI_{Bootstrapped}$ [0.02, 0.19]) but not via hope ($b = 0.01$, $SE = .03$, 95% $CI_{Bootstrapped}$ [-0.06, 0.07]). Similarly, for collective action intentions promoting body diversity, a significant indirect effect via gratitude ($b = 0.14$, $SE = .06$, 95% $CI_{Bootstrapped}$ [0.04, 0.28]), but not via hope, emerged ($b = 0.04$, $SE = .03$, 95% $CI_{Bootstrapped}$ [-0.004, 0.10]). All coefficients are reported in Figure 1. Participants who were exposed to imagery critiquing idealized bodies felt gratitude toward those posting these kinds of images, which was associated with a stronger willingness to engage in social media collective action intentions to both fight idealized body ideals and promote diversity.

General Discussion

The current studies investigated the impact of body-positive/humorous parody imagery on women's body satisfaction, mood, emotions, and collective action intentions. Consistent with predictions, we found that body-positive (Study 1a) and humorous parody (Study 1b) imagery increased participants' body satisfaction, and exposure to body-ideal imagery decreased body satisfaction. These findings confirmed previous studies showing the negative impact of exposure to body-ideal imagery on mood and body satisfaction (see Fioravanti et al., 2022, for a recent review). They are also largely consistent with previous work showing that body-positive imagery (see Rodgers et al., 2021, for a review) and humorous parody (Fasoli et al., 2023; Slater et al., 2019) promote greater body satisfaction.

For mood, the pattern was less consistent across studies – exposure to body-positive (Study 1a), but not parody imagery (Study 1b), increased positive mood, and body-ideal decreased positive mood across studies. Despite humorous parodies being perceived as funny, they did not affect mood, confirming the findings by Slater et al. (2019) who found that humorous parodies did not impact mood. This result may not be surprising considering that positive emotional states such as happiness are different from amusement (see Herring et al., 2011). Further, we found that body-positive imagery (Study 1a) increased feelings of gratitude for diverse and inclusive body portrayals on social media, and humorous parody (Study 1b) increased hope that social media can help change unrealistic body ideals. Finally, gratitude (Study 1a) and hope (Study 1b) showed indirect effects on collective action intentions to promote diversity.

We then compared the effects of the two types of imagery: body-positive images, which offer an implicit critique aligned with the body positivity movement while aiming to promote body diversity, and humorous parody images, which use subversive humor to critique and

highlight unfair women's representation through laughter. Replicating Fasoli et al. (2023), we found the two types of imagery have a similar impact on mood and body satisfaction. Both types of imagery are perceived as critiques of idealized body standards (Fasoli et al., 2023) but the underlying processes leading to an increase in body satisfaction may be different. Body positive imagery seems to elicit downward body comparison (Di Michele et al., 2023) suggesting that the increase in body satisfaction can be linked to a perception of having more 'desirable' bodies (e.g., thinner) than the women representing body positivity. Instead, body-focus parodies are instances of subversive humor that aim to create awareness of social issues and involve non-aggressive confrontation (see Riquelme et al., 2019). Also, humorous parody imagery may specifically elicit critical thinking similar to media literacy interventions that focus on realism/skepticism highlighting how body ideals are an artefact of edited and unrealistic portrayals (see McLean et al., 2016; Rodgers et al., 2021).

The aggregate analyses also show that critique imagery elicited more gratitude and hope than idealized body imagery. Compared to previous work that focused on how women's feeling of gratitude in general or toward their bodies impacted their body image (Dunaev et al., 2018; Homan & Tylka, 2018), here, gratitude was directed toward other women who intentionally promoted a critique of body ideals by putting themselves forward (i.e., portraying their bodies). Imagery positing a critique of unrealistic standards elicits gratitude, but the effect may be stronger for body-positive imagery. Body-positive imagery exposed participants to different women and more diverse bodies, which included what are commonly conceived as 'flaws' (e.g., with cellulite, body rolls, etc.). Instead, in the humorous parody imagery condition, women were only exposed to the "average" body of a female comedian who mocks models. This type of humor may be perceived in negative terms by some as it targets other women. Thus, the women

depicted in body-positive images might have been perceived as deserving more gratitude, a speculation that warrants further investigation.

In terms of hope, while previous work tested hope in relation to body image concerns and hope to be seen as matching body ideals (Hsu et al., 2021; Liu et al., 2017; McComb & Mills, 2022; Todorov et al., 2019), here we focus on hope for a societal change. Our results are consistent with research showing feelings of hope are elicited when people perceive social norms or structures to be unstable and undergoing changes (Cohen-Chen et al., 2015). Critique imagery creates such ‘instability’ and questions beauty standards. The aggregate analyses, relying on a larger sample, yielded an effect of critique imagery on hope, while results from individual studies showed hope only to matter when humorous parody imagery was involved (Study 1b). It is possible that body-positive imagery triggered hope but to a lesser extent that failed to reach conventional statistical significance levels in Study 1a. Body-positive imagery mostly focuses on broadening the limits of what is an acceptable way for women’s bodies to be presented (see Cohen et al., 2021) while parody imagery provides a direct challenge and comparison between realistic and idealized body portrayals that may be particularly effective in making the need for a change more explicit.

We did not find any effects on anger. Previous work showed that exposure to beauty-ideal images (e.g., thin women in bikini) increases anger in women (Cahill & Mussap, 2007; Cattarin et al., 2000). However, women have also been found to get angry when a critique of the sexualized representation of their group in media is advanced (Guizzo et al., 2017). Women in our studies may have experienced similar levels of anger across conditions but for different reasons: body-ideal imagery may have elicited anger toward the unrealistic body ideals those images perpetuate, whereas body-positive and humorous parody imagery may have triggered

anger because of the critique they convey about women's beauty standards (see Fasoli et al., 2023).

Finally, the present research examined women's collective action intentions in the context of body image and SNSs. Our research expands on literature examining the effect of subversive humor on collective action for gender equality, which involved vignettes related to the body (e.g., body hair) but has not specifically focused on body image nor considered collective action concerning body representations (Riquelme et al., 2019). It also expands work on critiques of sexual objectification (Guizzo et al., 2017) and considers different emotions triggering collective action intentions. We found that viewing critique (vs. body-ideal) imagery increased feelings of gratitude, which was associated with a greater willingness to take action to both *stop* unrealistic portrayals of women on social media and *promote* more inclusivity and diversity in such portrayals. This result extends the literature linking gratitude to prosocial behaviors as a form of reciprocation for being grateful (McCullough et al., 2001) or feeling in debt to the benefactor (Layous et al., 2017).

Moreover, these findings provide evidence that, beyond hope and self-transcendence (Cohen-Chen et al., 2015; Ma et al., 2017), positive past-oriented emotions such as gratitude can predict action tendencies. It is possible that imagery alone is not sufficient to elicit behavioral intentions but that it can kick-start other psychological processes, which are known to affect action. Emotions are, indeed, one of the core motivations to undertake collective action (van Zomeren, 2013). Although anger is the main emotion associated with collective action (Carver & Harmon-Jones, 2009), here we found that gratitude was the emotion that explained the willingness to engage in collective action in our aggregate analyses. Gratitude is associated with prosocial behavior that supports individuals (Ma et al., 2017; Stellar et al., 2017) or social causes

and political actions (see van Zomeren, 2021). Feelings of gratitude have been linked to greater advocacy behaviors (i.e., promoting a company to friends/family; Romani et al., 2013), the feeling of following others' behavior (see Delton et al., 2018; Tsang, 2006), and to a sense of moral obligation inducing individuals to believe that taking action is the right thing to do (Ayanian et al., 2021; Vilas & Sabucedo, 2012). This literature can explain why gratitude emerged as the main emotion involved in collective action intentions. That gratitude did not emerge as a mediator in Study 1b could be explained by the fact that the sample was smaller and the effect was not strong or reliable. When the sample was bigger and multiple mediators were considered, gratitude was predominant and explained more of the variance.

To our knowledge, the present research is the first to test the link between gratitude and online collective action tendencies (i.e., signing petitions, posting on social media, and speaking with friends about social issues). Our findings suggest that models of collective action should consider this emotion. Yet, other important factors necessary for collective action need to be incorporated into our model. The leading explanatory model of collective action (i.e., social identity model of collective action – SIMCA; van Zomeren et al., 2008) suggests that collective identity is necessary for action and has both a direct and indirect influence via emotions on behaviors. Previous research on gender equality-based actions shows that both identification with women in general and specifically feminism are important predictors (Becker & Wagner, 2009; Hopkins-Doyle et al., 2024). Moreover, subversive humor is particularly effective in motivating collective actions among women who do not strongly identify as feminist (Riquelme et al., 2021; Vizcaíno-Cuenca et al., 2024). Hence, future research should examine the potential influence of collective and feminist identity on actions along with the role of gratitude in the context of critique imagery and body image.

Limitations and Future Research Directions

First, our findings were limited by the characteristics of the samples, which predominantly involved White and young women. It would be important to recruit a more diverse sample to compare the effects of critique imagery on different groups. For example, body ideals and reactions to women's portrayals vary depending on women's ethnicities (see Overstreet et al., 2010; Schooler et al., 2004). Research has also shown that older women report body dissatisfaction as a consequence of social media use (Quittkat et al., 2019). Future studies should therefore involve more age-diverse samples. Also, we did not assess participants' familiarity with the women portrayed in the images, particularly more famous individuals like Celeste Barber who was the only comedian involved in the humorous-parody imagery. Being familiar with her or the other women in the images may have influenced how the images are processed as a critique and, thus, should be controlled for in future studies.

Second, we did not assess whether our participants were intensive Instagram users or engaged in problematic SNS use. Previous work has shown that Instagram addiction is associated with body image issues such as appearance comparison, drive for thinness, and eating disorders (Fioravanti et al., 2022; Lee, 2022). Moreover, problematic Instagram use plays a role in women's reactions to appearance-focused images (Guizzo et al., 2021) as well as moderates the effects of body-positive imagery on body satisfaction (Di Michele et al., 2023). Future studies should therefore test whether the effects observed in our studies are moderated by problematic Instagram use.

Third, we only focused on Instagram imagery limiting the ability to generalize our results to other stimuli. Young people are frequent users of TikTok, and research has shown that fitspiration TikToks elicit body comparison (Pryde & Prichard, 2022) while exposure to body-

positive TikTok videos increases body satisfaction (Di Michele et al., 2023). Body-positive videos, distinctly from mere imagery, often include messages (see Harriger et al., 2023). Hence, it is important to assess whether different types of content elicit similar effects.

Finally, some of our choices for measures and design limited our inferences. For example, we only considered state measures of body satisfaction. Hence, we were only able to assess momentary changes while there has been a call for studies focusing on the long-term effects of body-positive and other types of imagery (see Cohen et al., 2019). Future studies should expand the examination to long-term effects on broader body image issues. Likewise, our findings concerned a comparison between the body-ideal and critique imagery, but we missed a control condition where participants were not exposed to any women's portrayals. The lack of a control condition may make it difficult to see if there was a difference in emotions from a baseline level. Finally, we only assessed online collective action intentions but not actual behaviors (see van Zomeren, 2008). Research suggests that intentions are a proxy of actual behaviors (see Kelly & Breinlinger, 1995) and online activism can translate into offline activism because social media posts or other online activities function as motivators for other types of action (see Greijdanus et al., 2020). Hence, future studies should examine actual behaviors along with intentions.

Practical Implications

Our findings have important implications for various professionals. Therapists and educators should consider that exposure to imagery critiquing body ideals, such as body-positive and humorous parody imagery, may be beneficial for women experiencing body image concerns. Encouraging clients and students to follow accounts that promote such content could help improve their mood and body satisfaction, while also facilitating media literacy. The results also

support recommendations from the UK Parliament's 2020 inquiry on body image, which emphasized the need to combat unrealistic beauty standards and promote diverse representations of women's bodies. Our work demonstrated that this type of content improves body satisfaction at an individual level, but also fosters collective engagement necessary for social change. This evidence can inform policymakers in developing strategies and guidelines for social media, for example partnering with platforms to promote body diversity in social media advertisements and initiate discussions about changes in how algorithms prioritize content to increase diversity of representations (see Harriger et al., 2023; Tylka et al., 2023).

Moreover, activists should note that gratitude emerged as a key emotion motivating women to engage in online collective action. This suggests that they could develop campaigns highlighting gratitude toward women who challenge idealized body ideals. As our research suggests, by recognizing others' efforts, gratitude can mobilize women to contribute to reshaping how women are represented on social media.

Conclusion

To conclude, our research contributes in a novel way to the emerging literature on the use of critique-based imagery to counteract the negative impact of the prevalent, unrealistic, and idealized portrayals of women's bodies on SNS. The findings suggest that both body-positive and humorous parody imagery can increase young women's body satisfaction and positive mood. Importantly, they may also increase their collective action intentions to stop unrealistic body portrayals and promote body diversity via an enhanced feeling of gratitude toward women criticizing and trying to change body ideals. These types of imagery, despite their differences, can have positive ripple effects on both women's body image and their social activism aimed at changing women's portrayals.

Declaration Statements**Ethics**

This research has received ethical favorable opinion by the University of Surrey ethics committee [FHMS 20-21 049 amendment 1].

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Data availability

Data can be found on Open Science Framework: <https://osf.io/7qd2w/>

Supplementary Materials

A document is available on Open Science Framework: <https://osf.io/zncmg>

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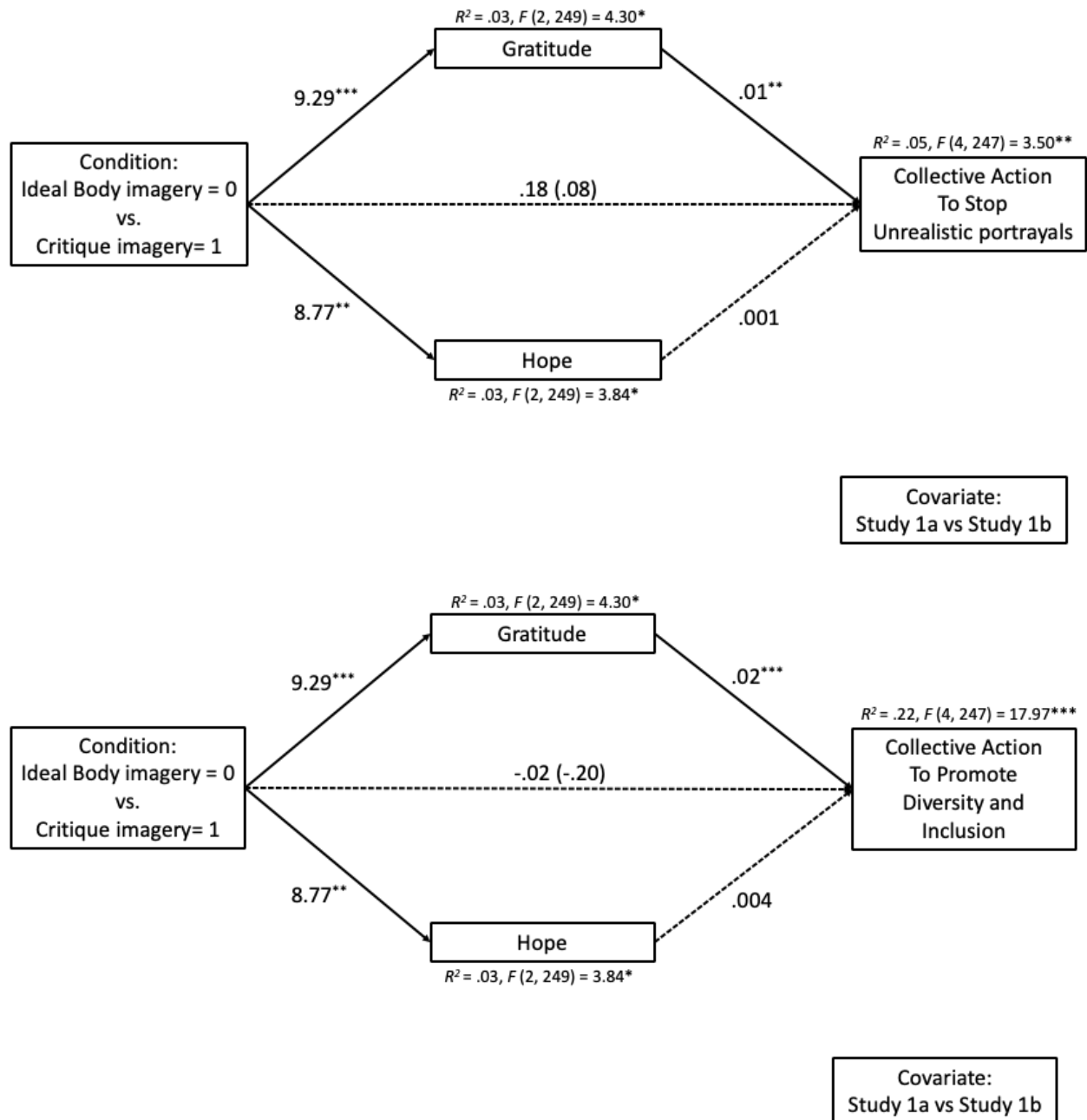
Table 1*Means and Standard Deviations (In Parentheses) Across Variables and Conditions for Study 1a and 1b*

		Study 1a		Study 1b		Aggregate	
Variable		Body-ideal	Body-positive	Body-ideal	Parody	Body-ideal	Critique
Mood	Pre-exposure	67.20 (16.17)	68.06 (15.72)	65.36 (15.81)	67.07 (14.67)	66.28 (15.95)	67.57 (15.15)
	Post-exposure	65.20 (16.93)	70.68 (15.67)	61.61 (18.45)	68.13 (14.72)	63.39 (17.73)	69.41 (15.20)
Body satisfaction	Pre-exposure	42.68 (26.62)	33.55 (24.35)	35.55 (25.09)	34.72 (23.67)	38.59 (26.08)	34.14 (23.93)
	Post-exposure	39.06 (29.18)	38.61 (25.60)	30.87 (26.23)	38.07 (26.65)	34.93 (27.92)	38.35 (26.02)
Emotions	Anger	41.36 (26.81)	49.05 (28.82)	46.18 (27.12)	48.62 (27.31)	43.79 (26.97)	48.84 (27.97)
	Gratitude	62.10 (25.91)	71.77 (24.89)	59.25 (26.62)	68.16 (29.39)	60.66 (26.20)	69.98 (27.17)
	Hope	46.56 (28.19)	53.96 (25.52)	42.18 (25.35)	52.32 (27.33)	44.35 (26.78)	53.14 (26.35)
Collective action	Action to stop unrealistic body ideals	2.93 (1.17)	2.86 (1.28)	2.79 (1.20)	3.22 (1.24)	2.86 (1.18)	3.04 (1.27)
	Action to promote body diversity	3.67 (0.95)	3.50 (1.07)	3.39 (0.87)	3.41 (1.02)	3.40 (0.95)	3.37 (.97)

Figure 1

Mediation Analyses on Merged Data for Collective Action to Stop Unrealistic Beauty Standards

(Upper) and Collective Action to Promote Diverse and Inclusive Body Representation (Lower)



Note. Coefficients represent unstandardized b . $^*p < .05$, $^{**}p < .01$, $^{***}p < .001$.

Online supplement for Fasoli, F., Hopkins-Doyle, A., & Guizzo, F. (2025). Thank You for Sharing: Body-Positive and Humour Parody Images Increase Women's Body Satisfaction and Predict Collective Action Intentions Via Gratitude. *Sex Roles*. Fabio Fasoli, University of Surrey. Email: f.fasoli@surrey.ac.uk

S1. Stimuli

Stimuli were assessed twice. First, we assessed perceived sexual objectification. The women depicted in the pictures of both Study 1a and Study 1b were rated according to the Hatton and Trautner's (2011) coding scheme that involved several categories by two raters. We excluded three categories that refer to text, sexual acts, and roles as they were not relevant to our stimuli. We retained the following categories: nudity (0 = *dressed* - 5 = *full nudity*), touch (0 = *no touching* - 3 = *sensual touching*), pose (0 = *neutral pose* - 2 = *sexual pose*), mouth (0 = *closed or smiling mouth* - 2 = *sensual mouth*), breast (0 = *not visible* - 2 = *very emphasized*), genitals (0 = *not visible* - 2 = *very emphasized*), and buttocks (0 = *not visible* - 2 = *very emphasized*). A score was computed by summing the ratings for each category, ranging from 0 to 16.

In Study 1a, the interclass correlation coefficient calculated (Cicchetti, 1994) for the sexualization index was good (ICC = .74). The two sets of images were rated similarly in terms of sexualization (body positivity: $M = 7.85$, $SD = 1.29$ vs. body-ideal: $M = 8.00$, $SD = 1.20$; $t(18) = -0.27$, $p = .79$). They both depicted moderated levels of sexualization. In Study 1b, the interclass correlation for the sexualization index was good (ICC = .70). Moderate levels of sexualization were found with no difference between the body-ideal ($M = 9.15$, $SD = 1.93$) and humorous parody condition ($M = 8.29$, $SD = 1.40$), $t(18) = 1.79$, $p = .09$. We also compared the sexualization index for body-ideal imagery across Study 1a and 1b, $t(18) = 1.60$, $p = .13$, and

between the body-positive and humorous parody imagery used in the two studies, $t(18) = 1.60$, $p = .13$, and found no differences.

In Study 1b, we also assessed how funny the picture was perceived to be (1 = *not at all*, 7 = *very much*; ICC = .94). The humorous parody images ($M = 4.10$, $SD = .84$) were rated as funnier than the body-ideal ones ($M = 1.45$, $SD = .60$), $t(18) = 8.10$, $p < .001$.

Second, a post-test was performed on the stimuli. We recruited 50 participants to assess how the two sets of stimuli were perceived in terms of a) body ideal and body positivity, b) critique of unrealistic body ideals, c) appearance-focus and attractiveness, and d) funniness and aversiveness. After removing a participant who identified as a man, the final sample consisted of 49 young women (19-35, $M_{\text{age}} = 29.35$, $SD = 4.22$; mostly British $n = 36$, 73.5%). Participants saw different images depicting women in Instagram posts. They were initially provided with a definition of idealized body (i.e., '*idealized images refer to images of attractive women with thin and toned bodies. Instagram posts of idealized individuals tend to depict them as showing their 'perfect' bodies*') and body positivity ('*body positive*' refers to rejecting unrealistic body ideals and encouraging women to accept and love their bodies in any shape and size. Body-positive Instagram posts tend to depict individuals proudly posting their unique bodies') adapted from Cohen et al. (2019). For each post, they indicated the extent to which they believed the image reflected the definition of thin and fit ideals and body-positivity. They also indicated whether the image represented a critique of idealized beauty standards. Answers to these three items were provided on a slider from 0 (*Not at all*) to 100 (*To a great extent*). Participants also rated whether the image focused on the person's appearance and how attractive the person was. In the case of humorous parody images, participants were asked to rate both women depicted in the image.

Answers to these three items were provided on a slider from 0 (*Not at all*) to 100 (*Very much*).

Finally, we told participants that images can elicit different reactions and, following Riquelme et al. (2019), we assessed the extent the image was perceived as funny and aversive on a scale from 0 (*Not at all*) to 100 (*Very much*). Means and standard deviations are reported in Table S1 in the online supplement.

When comparing idealized body and body-positive imagery used in Study 1a, we found that participants recognized the ideal-body images as reflecting the idealized images more than body-positive images, $t(47) = 8.04, p < .001, d = 2.31$, and vice versa body-positive images were perceived as better representing body positivity, $t(47) = -4.72, p < .001, d = -1.35$. Body-positive images were also perceived as representing a critique of appearance ideals more than ideal-body imagery, $t(47) = -2.47, p = .017, d = -0.71$, and, surprisingly, were also perceived as slightly funnier, $t(47) = -2.04, p = .047, d = -0.59$. Ratings on funniness were however at the low end of the scale indicating that all the stimuli were not perceived as funny. No other significant differences were found suggesting that the two types of images were perceived as similarly focusing on appearance, the women as similarly attractive, and the post as similarly (not) aversive.

When comparing ideal-body and humorous parody imagery stimuli used in Study 1b, the body-ideal images were rated as representing idealized standards more than the humorous parody images, $t(47) = -4.60, p < .001, d = 1.32$. On the contrary, the humorous parody images were more likely to be perceived to be instances of body-positive posts, $t(47) = -4.09, p < .001, d = -1.18$, and critiques of body standards, $t(47) = -5.21, p < .001, d = -1.50$, than ideal-body images. Interestingly, we found the ideal-body images to be perceived as focusing more on appearance

than the humorous parody images, $t(47) = 2.60, p = .012, d = 0.74$. In terms of attractiveness, despite being the exact same women, the models were perceived as more attractive when presented alone (ideal-body imagery) than when presented together with the comedian (humorous parody imagery), $t(47) = 4.63, p < .001, d = 1.33$, possibly because the parody makes the critique to ideal body standard evident. Indeed, in the humorous parody images, the comedian was rated as more attractive than the model, $t(21) = -5.63, p < .001, d = 1.20$. Finally, in line with the first test, the humorous parody images were perceived as funnier than the ideal-body images, $t(47) = 6.47, p < .001, d = 1.85$, but no difference emerged in aversiveness, $t(47) = -0.31, p = .76, d = -0.08$.

We also ran some comparisons across the stimuli of the two studies. We were interested in comparing the two types of ideal-body images as well as the body-positive and humorous parody images. No differences emerged between the body-ideal images used across studies on the assessed variables ($ts < 0.94, ps > .350$) except for funniness and aversiveness where we found the images used for body-ideal imagery in Study 1a to be perceived as less funny, $t(47) = -2.02, p = .049, d = -0.58$, and aversive, $t(47) = -2.05, p = .046, d = -0.59$, than those used in Study 1b.

Body-positive and humorous parody images were perceived as similarly representing body-positivity posts, $t(47) = 1.21, p = .23, d = 0.37$. However, the humorous parody images were perceived as more strongly critiquing the ideal beauty standards, $t(47) = -2.95, p = .002, d = -0.65$, and were rated as funnier, $t(42) = -2.34, p = .024, d = -0.70$, than body-positive images.

Table S1. Means and Standard Deviations of Ratings across Imageries

	Study 1a		Study 1b	
	<i>Body-ideal</i>	<i>Body-positive</i>	<i>Body-ideal</i>	<i>Humorous parody</i>
Idealized body definition	72.99 (18.50)	23.40 (23.58)	77.76 (24.70)	48.37 (18.78)
Body positive definition	45.76 (29.05)	77.77 (18.09)	39.54 (28.95)	70.67 (23.03)
Critique	36.84 (30.59)	55.48 (22.18)	33.32 (31.31)	73.34 (19.63)
Appearance focus	75.29 (19.86)	71.12 (17.98)	76.80 (16.78)	62.67 (21.20)
Model attractiveness	64.05 (21.04)	64.52 (16.51)	69.14 (16.94)	42.94 (22.62)
Comedian attractiveness	-	-	-	74.69 (21.46)
Funniness	9.86 (11.63)	19.74 (20.07)	18.74 (17.67)	59.40 (26.18)
Aversiveness	16.38 (16.48)	16.47 (20.68)	28.88 (24.36)	31.10 (25.59)

S2. Factor Analyses

Since the measures of collective action intentions and emotions (anger, hope, gratitude) were adapted, we conducted a confirmatory factor analysis for each measure to ensure that they capture the constructs. In Study 1a, the analyses showed a single-factor solution that explained most of the variance (anger: 93.37%, hope: 89.20%, gratitude: 92.72%, collective action against unrealistic body ideals: 81.40%; collective action to promote body diversity: 73.34%). Similarly, in Study 1b, the analyses showed a single-factor solution that explained most of the variance (anger: 90.45%, hope: 89.90%, gratitude: 92.62%, collective action against unrealistic body ideals: 74.23%; collective action to promote body diversity: 67.07%).

Table S2. Factor loading for collective action intention across studies

	Study 1a		Study 1b	
	Collective Action against unrealistic body ideals	Collective action to promote body diversity	Collective Action against unrealistic body ideals	Collective action to promote body diversity
Item 1	.88	.79	.74	.71
Item 2	.92	.89	.90	.83
Item 3	.90	.88	.89	.86
Item 4	.90	.85	.90	.86

S3. Likes

We examined the extent to which participants would be likely to like the images they were exposed to. Likes are indicative of social media engagement and post appreciation and can be used as a way to establish ‘norms’ and ‘trends’ (Baker et al., 2019; Thompson & Stice, 2001; Kim, 2021). Indeed, they represent a proxy of collective opinion (see Zillich & Reismeyer, 2021). Previous work (Fasoli et al., 2023; Fasoli & Constantinou, 2024) has shown that women are more likely to like body-positive and humorous parody images than body-ideal images. In both studies, we asked participants to indicate their willingness to like the Instagram posts they were exposed to if they appeared on their Instagram feed on a scale from 1 (*extremely unlikely*) to 5 (*extremely likely*). Ratings for the 10 images were averaged (Study 1a: $\alpha = .94$; Study 1b: $\alpha = .96$). A higher score indicated a higher willingness to like the picture.

In Study 1a, a significant t -test on willingness to like the images, $t(124) = -5.19, p < .001, d = .92$, showed that participants were more willing to like body positive ($M = 3.59, SD = 0.88$) than idealized body images ($M = 2.77, SD = 0.91$). Similarly, in Study 1b, participants liked humorous parody ($M = 3.44, SD = 1.10$) more than body-ideal images ($M = 2.11, SD = 0.76$), $t(124) = -7.87, p < .001, d = 1.41$.

S4. Willingness to post an unedited picture of the self

A 2 (condition: body-ideal vs. body-positive) ANOVA was performed on participants' willingness to post a picture of themselves that was not edited nor showed imperfections (1 = *not at all willing* - 5 = *extremely willing*). In both Study 1a, $F(1, 124) = 0.51, p = .48, \eta_p^2 = .004$, and Study 1b, $F(1, 124) = 2.77, p = .10, \eta_p^2 = .02$, the effect of condition was not significant indicating that the exposure to body positive or humorous parody imagery did not affect participants' intentions to post an unedited picture of themselves showing their imperfections. In both studies, the willingness to do so was low (Study 1a: $M = 2.73, SD = 1.36$, t -test against the scale midpoint: $t(125) = -2.22, p = .01, d = -.20$ and Study 1b: $M = 2.69, SD = 1.42$, t -test against the scale midpoint: $t(125) = -2.44, p = .02, d = -.22$).

S5. Moderations

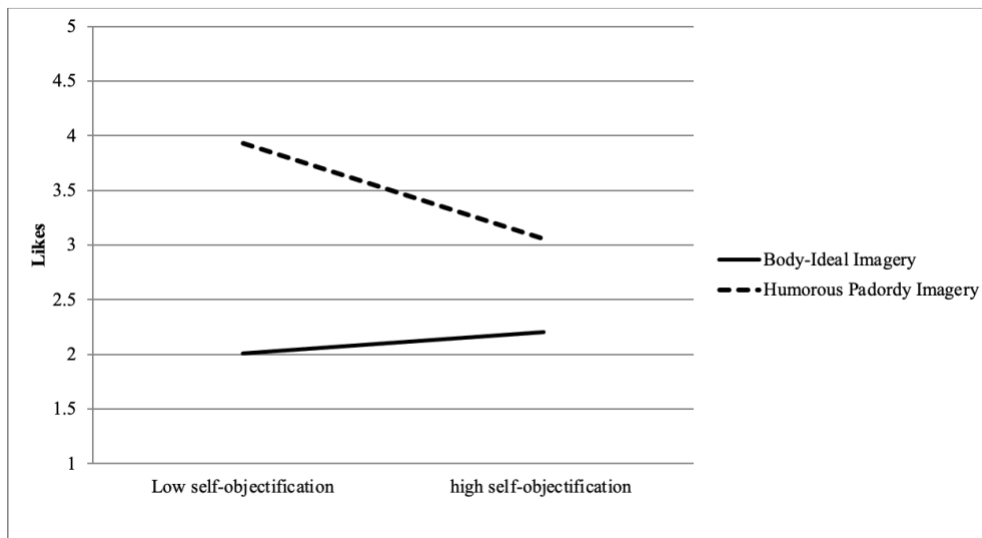
Self-objectification is associated with body monitoring and body dissatisfaction (Tiggemann & Slater, 2001) and is negatively related to feminist identity (see Hurt et al., 2007). Self-objectification can be considered an individual difference that could play a role in how women react to different types of imagery. Indeed, young women who report high self-

objectification are more likely to post self-objectifying images, that usually match with idealized photo-edited images (see Bell et al., 2018). Also, self-objectification has been tested as a potential moderator in the context of sexualized idealized images (Prichard et al., 2023). Hence, we assessed whether women's self-objectification played a role in engagement with the images (likes), mood, body satisfaction, emotions, and collective action intentions as a function of different types of imagery. We assessed self-objectification with the self-objectification questionnaire by Noll and Fredrickson (1998). Participants ranked 10 body attributes from the least to the most important. Five attributes referred to competence (e.g., strength) and five to appearance (e.g., physical attractiveness). A difference score was calculated by subtracting the competence from the appearance attribution (score ranging from -25 to 25). Then, we conducted exploratory moderation to see if self-objectification (Study 1a: $M = 0.67$, $SD = 12.99$ and Study 1b: $M = 2.21$, $SD = 12.88$) moderated the effects of condition on likes, mood, body satisfaction, emotions, and collective action. PROCESS macro (Model 1, 5000 bootstrap samples) was used to run the analyses. Condition was included as the independent variable, self-objectification as the moderator and each variable as the dependent variable one at a time. For mood and body satisfaction, pre-exposure mood and body satisfaction were added as a covariate in the model.

In Study 1a, self-objectification did not interact with condition showing no moderation effects ($b < 0.02$, $p > .22$). In Study 1b, self-objectification did not interact with condition showing no moderation effects ($b < 0.69$, $p > .06$) except for the following variables.

For likes, a significant interaction ($b = -0.04$, $SE = .02$, $t = -2.95$, $p = .004$, 95% CI $[-0.06, -0.01]$) emerged. In the humorous parody imagery condition, the higher the self-objectification the lower the willingness to like the images ($b = -0.03$, $SE = .01$, $t = -3.29$, $p = .001$, 95% CI $[-$

0.05, - 0.01]). Such an effect did not emerge when participants were exposed to body-ideal imagery ($b = 0.007$, $SE = .01$, $t = 0.78$, $p = .44$, 95% CI [-0.01, 0.02]). Looking at the data from a different perspective, the tendency to like humorous parody more than body-ideal imagery was much bigger when participants reported low ($b = 1.92$, $SE = .25$, $t = 7.54$, $p < .001$, 95% CI [1.41, 2.44]) rather than high ($b = 0.86$, $SE = .23$, $t = 3.72$, $p < .001$, 95% CI [0.40, 1.32]) self-objectification.



For collective action to promote diversity, inclusion, and realistic body ideals we found a significant interaction ($b = -0.03$, $SE = .01$, $t = -2.41$, $p = .02$, 95% CI [-0.06, -0.006]) indicating that for participants low in self-objectification the willingness to engage in collective action was higher in the humorous parody than idealized body imagery condition ($b = 0.66$, $SE = .28$, $t = 2.33$, $p = .02$, 95% CI [0.09, 1.22]). Such an effect did not emerge for participants with moderate ($b = 0.08$, $SE = .18$, $t = 0.42$, $p = .68$, 95% CI [-0.29, 0.44]) or high levels of self-objectification ($b = -0.30$, $SE = .26$, $t = 1.17$, $p = .24$, 95% CI [-0.81, 0.21]). Looking at the data from the other point of view, while in the body-ideal imagery condition self-objectification was not associated with collective action intentions ($b = 0.005$, $SE = .01$, $t = 0.51$, $p = .61$, 95% CI [-0.01, 0.02]), in

the humorous parody imagery condition an increase in self-objectification was associated with a lower likelihood to engage in collective action ($b = -0.03$, $SE = .01$, $t = -2.80$, $p = .006$, 95% CI [-0.05, -0.01]).

