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# Effect of “Degendering” and “Multigendering” Strategies on Transphobia: The Role of Identity Threat, Sex–Gender Essentialism, and Political Orientation

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Considering the discrimination that trans people experience, it is necessary to deepen knowledge about interventions to reduce transphobia. Extending previous research, the present study examined the effect of reading about the potential implementation of two strategies that challenge sex–gender binarism, degendering and multigendering, on attitudes toward trans people, via identity threat and sex–gender essentialism. We also explored whether the participants’ political orientation moderates these effects. A total of 578 cisgender participants were randomly assigned to one of the three conditions (degendering, multigendering, and control). The results show that the experimental conditions, compared to the control condition, worsened attitudes toward trans people by increasing identity threat which, in turn, raised support for sex–gender essentialist beliefs. In the degendering condition (vs. control), this effect only occurred for participants with center- and right-wing political orientation. Our findings indicate that learning about these strategies and their potential implementation may have a counterproductive impact. However, they also highlight the underlying mechanisms that should be targeted in interventions to reduce transphobia. They also suggest that the impact of learning about these strategies on attitudes toward trans people could vary depending on political orientation. These results are relevant when planning interventions to reduce transphobia.

## **Public Significance Statement**

The present study shows that brief interventions based on reading about removing sex–gender categories or adding a third sex–gender category (i.e., degendering and multigendering) are ineffective in reducing transphobia. The findings also suggest that effective interventions should aim at reducing identity threat and sex–gender essentialism, as variables involved in this process, and should take into account the participants’ ideology.

*Keywords:* transphobia, degendering and multigendering strategies, identity threat, sex–gender essentialism, political orientation


Despite increasing visibility, trans people still face stigma, discrimination, and violence in all spheres (Morgenroth & Ryan, 2021). This severely impacts their development, education, work life, and both physical and mental health (e.g., Domínguez-Martínez & Robles, 2019; Zwickl et al., 2021). However, research aimed at reducing

negative attitudes toward trans people (i.e., transphobia) is scarce. Most studies have examined the effect of interventions based on intergroup contact (e.g., Bocciafuso et al., 2021; Orellana et al., 2022), educational interventions (e.g., Picaza Gorrotxategi et al., 2020), or a combination of both (e.g., McDermott et al., 2018). These studies yielded mixed results, showing effectiveness on some attitudinal components but not on others (e.g., Case & Stewart, 2013; Flores et al., 2018), no effect (e.g., Sawaya & McCarty, 2023), or even increasing transphobia (e.g., Tompkins et al., 2015). Furthermore, many educational interventions were aimed at health care professionals or students (e.g., Braun et al., 2017). Therefore, more research is needed to identify effective strategies to reduce transphobia in the general population.

## **Degendering and MultiGendering Strategies to Reduce Transphobia**

Different perspectives have addressed the reasons why trans identities face opposition. Some authors posit that trans people denaturalize sex–gender, making evident the culturally learned normative associations between these sociocultural constructions, which are presented as an inner essence (Butler, 1990; Halberstam, 1999;

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Helena Álvarez-Peña, Andreea A. Constantin, and Isabel Cuadrado contributed equally to the conceptualization, data curation, formal analysis, investigation, methodology, software, visualization, writing—original draft, and writing—review and editing.

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Stryker, 2006). Thus, trans people show that gender is performative and is not supported by preexisting biological conditions. That is, sex–gender is constructed through normative repetitions over time of gendered acts and attributes, generating a false illusion of constitutive identity that precedes sex–gender performance. However, there are no biological or ontological differences between the identities that are regarded as natural and “fakes” because they are all gender performances (Butler, 1990; Halberstam, 1999). With regard to the above, literature posits that trans identities are strongly rejected because they threaten sex–gender binarism (e.g., Morgenroth et al., 2024; Rad et al., 2019; van der Toorn et al., 2020), that is, the assumption that sex and gender are binary and that the latter is directly derived from the former (Morgenroth et al., 2021). From this perspective, the two sex–genders are often viewed as opposite but complementary in traits, behaviors, and affective–sexual orientations, with an asymmetry of power between them (Morgenroth et al., 2021). Thus, sex–gender binarism underpins gender roles, cisheterosexism, and the status quo. Accordingly, the literature suggests that interventions to reduce transphobia should focus on dismantling or decreasing the salience of sex–gender binarism (e.g., Charles & Bradley, 2009; Domínguez-Martínez & Robles, 2019; B. A. Jones et al., 2023).

Relatedly, Morgenroth and Ryan (2021) proposed two general frameworks that challenge sex–gender binarism: degendering and multigendering. Degendering removes or reduces the salience and relevance of sex–gender binarism (e.g., removing the sex–gender distinction), whereas multigendering emphasizes the salience and relevance of sex–gender outside of binarism (e.g., including a third sex–gender category). The few studies that have tested interventions based on these (or similar) frames show mixed results. For instance, presenting participants with a video about a fictional society in which the sex–gender distinction is removed (Taracuc & Koch, 2023) or teaching the concept of sex–gender as a continuum rather than a dichotomy in a webinar (Mizock et al., 2017; degendering) improved attitudes toward trans people. In contrast, Morgenroth et al. (2021) found that both degendering and multigendering fictional policies (i.e., removing sex–gender categories or adding a third one in the clothing stores of a company) were perceived as more unfair than the control condition, particularly among the most gender-identified individuals. Furthermore, gender identification was associated with prejudice against nonbinary people. Given these heterogeneous findings, more research is needed on the effects of these strategies and the variables that may be involved in their (in)effectiveness in reducing transphobia.

### Identity Threat, Political Orientation, and Sex–Gender Essentialism

Sex–gender binarism fulfils personal and social purposes (Morgenroth et al., 2024). On one hand, it satisfies psychological needs providing valuable identities for individuals, simplifying and bringing certainty and meaning to reality (Makwana et al., 2018; Outten et al., 2019; van der Toorn et al., 2020). On the other hand, it establishes a hierarchical basis of social organization that privileges some groups over others (Morgenroth et al., 2024). Consequently, challenges to sex–gender binarism could evoke personal (e.g., to masculinity), group-based, identity (e.g., to worldviews), and system (e.g., to the status quo) threats. It is important to emphasize the significance of identity threat when the sex–gender binarism is dismantled, as

questioning sex–gender binarism has the potential to challenge the validity of people’s sex–gender beliefs and the identities constructed around these beliefs. The perceived threat may be particularly pronounced for some people (Morgenroth & Ryan, 2021). In this vein, political orientation could influence the level of threat triggered by the strategies. Thus, it is proposed that rightists are more likely than leftists to feel threatened by sex–gender challenges because of their greater susceptibility to feeling a “loss” of their sex–gender identity (Nagoshi et al., 2019), their greater need for efficient categorization, order and certainty (Stern, 2022; Stern et al., 2015), their greater intolerance of ambiguity (Makwana et al., 2018), and their greater preference for social hierarchies (Morgenroth & Ryan, 2021; Prusaczyk & Hodson, 2020).

Recent experimental studies have confirmed the effects of degendering and multigendering strategies on threat (De Ruijter, 2022; Zelistra, 2022). Likewise, Mitchell’s (2022) study showed that the exposure to a text stating that trans people do not challenge the sex–gender binary boundaries (vs. stating that they do) was associated with reduced distinctiveness threat only among moderate and high conservatives. To the best of our knowledge, the effect of degendering and multigendering strategies on other different types of threat (e.g., identity threat) has not yet been investigated. Since these strategies alter sex–gender categorization and this could directly affect people’s identity (Morgenroth & Ryan, 2021), as well as their sex–gender worldviews, it would be interesting to specifically study the effect of these strategies on identity threat. There is insufficient evidence to know which strategy is more effective or threatening.

Moreover, people who feel threatened by challenges to sex–gender binarism will attempt to uphold it by reinforcing their sex–gender essentialist beliefs (Brescoll et al., 2013; Morgenroth & Ryan, 2021; Morton et al., 2009). In the existing literature, essentialism has been conceptualized as comprising different elements. Haslam et al. (2000, 2002) grouped nine of the essential elements identified by different authors into two dimensions: naturalness (discreteness, naturalness, immutability, stability, and necessity) and entitativity (uniformity, informativeness, inherence, and exclusivity). Subsequently, they added universality (Haslam & Levy, 2006). Subsequently, they added universality (Haslam & Levy, 2006). Applied to sex–gender, essentialism refers to beliefs that sex biologically determines gender as binary and stable over time, across the lifespan and human history (naturalness dimension), that each sex–gender has a defining “essence” that distinguishes it from the other (entitativity dimension; Morgenroth & Ryan, 2021), and that sex–gender differences are maintained across cultures (universality dimension; Hettinger, 2014). These beliefs both derive from and reinforce sex–gender binarism, leading to transphobia and the maintenance of social systems (Ching & Xu, 2018; Morgenroth & Ryan, 2018; Prusaczyk & Hodson, 2020). In this vein, several studies have shown that negative attitudes toward trans people are positively predicted by sex–gender essentialism (e.g., Hatch et al., 2022; B. A. Jones et al., 2023; Ocasio, 2022; Roberts et al., 2017).

Summarizing, it has been suggested that breaking down sex–gender binarism may improve attitudes toward trans people (e.g., Domínguez-Martínez & Robles, 2019). To this end, Morgenroth and Ryan (2021) proposed the degendering and multigendering frames. However, these strategies can be perceived as threatening (e.g., De Ruijter, 2022) and have counterproductive effects

(e.g., Morgenroth et al., 2021), especially by those with more conservative political views (e.g., Mitchell, 2022). Additionally, the impact of these strategies on identity threat has not been previously analyzed. It has also been shown that the perceived threat from altering sex–gender binarism is positively associated with adherence to sex–gender essentialist beliefs (e.g., Brescoll et al., 2013) and the latter with more negative attitudes toward trans people (e.g., Hatch et al., 2022).

## The Current Research

The present research aims to contribute to the study of reducing transphobia in cis(gender) people by testing the effect of learning about degendering and multigendering strategies on transphobia and exploring the underlying process. Specifically, it is proposed that reading about the possible implementation of these strategies (relative to a control condition) will impact identity threat depending on participants' political orientation, which will affect sex–gender essentialism which, in turn, will affect attitudes toward trans people (see Figure 1). Although this model has been theoretically proposed (Morgenroth & Ryan, 2021) and some of its relations have been independently probed (e.g., Brescoll et al., 2013; B. A. Jones et al., 2023; Mitchell, 2022), the integrated model has not been experimentally tested. Moreover, although it has been suggested that identity threat could be important in this process (e.g., Nagoshi et al., 2019), it has not been previously examined.

Additionally, to verify the consistency of the effects and to strengthen the findings, we used a variety of measures of attitudes toward trans people (attitudes in general, erroneous stereotypical definitions, feelings, behavioral intentions, and support for protrans–gender policies).

**Hypothesis 1 (H1):** We expect that the effects of learning about degendering and multigendering strategies on attitudes toward trans people, compared to the control condition, will be mediated by perceived identity threat and sex–gender essentialism acting as mediators in this order.

**Hypothesis 2 (H2):** Furthermore, political orientation is expected to moderate the relative indirect effects of reading about these strategies.

**Hypothesis 2a (H2a):** Degendering and multigendering conditions (vs. control) will increase identity threat among conservatives, which will elicit negative attitudes toward trans people via a stronger endorsement of sex–gender essentialism.

## Method

### Participants

A total of 715 adults completed the study. We excluded 16 transgender participants and 121 participants who failed the reading and/or attention check. The final sample consisted of 578 participants aged 18–75 years ( $M = 33.30$ ,  $SD = 14.47$ , 55.9% women). Most participants lived in Spain (96%), had Spanish citizenship (93.1%), and had completed university studies (44.6%). The participants self-located around the center-left of the political orientation scale ( $M = 2.77$ ,  $SD = 0.92$ ), ranging from 1 (*extreme left*) to 5 (*extreme right*).

Sensitivity analyses using G\*Power (Faul et al., 2009) for a multiple regression with six predictors, including two tested predictors for the interaction term, indicated that the minimum detectable effect size was  $f^2 = 0.017$ .

### Procedure and Manipulation

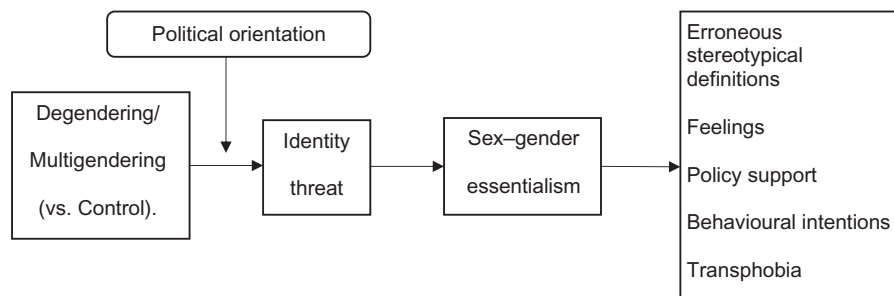
Recruitment was carried out between November and January 2023–2024 using snowball sampling among the relatives and acquaintances of undergraduate Psychology students from the authors' university (who received course credit for their collaboration). The participants completed the study online using Qualtrics. Once they provided their consent to take part voluntarily and anonymously in the study, they were randomly assigned to one of the three experimental conditions: degendering ( $n = 154$ ), multigendering ( $n = 213$ ), and control ( $n = 211$ ). In the degendering condition, participants read the following text:

Recently, studies from different scientific disciplines recommend removing the mention of sex or gender categories (e.g., female/male) on official identification documents (e.g., birth certificates, ID cards, passports, driving licences, health cards). This is because the results of such studies have revealed that people cannot easily be divided into different sex or gender categories. Specifically, the scientific findings show that there is NOT enough evidence to justify differentiating people into sex or gender categories.

In the multigendering condition, participants read the following text:

Recently, studies from different scientific disciplines recommend including more than two sex or gender categories (e.g., woman/man/non-binary person) on official identification documents (e.g., birth certificates, ID cards, passports, driving licences, health cards). This is because the results of such studies have revealed that people cannot easily be divided into only two sex or gender categories. Specifically, the scientific findings show that there is sufficient evidence to justify the differentiation of people into more than two sex or gender categories.

**Figure 1**  
Moderated Mediation Model Predicting Attitudes Toward Trans People



In the control condition, the text stated that studies from various scientific disciplines suggest that the color of the cups used to serve coffee should be taken into account because of its impact on the aroma and flavor experienced by the consumer.

Following the manipulation, the participants were asked to summarize the information they had just read and to respond to a reading check item to ensure that they read and understood the information presented in the text. Next, they completed the measures of the study and were thanked and debriefed. Data, codebook, and materials are available on the Open Science Framework and can be found as the additional online materials ([https://osf.io/rk8f3/?view\\_only=32231ec3870646108fdb7163e1877f38](https://osf.io/rk8f3/?view_only=32231ec3870646108fdb7163e1877f38)).

## Variables and Measures

Unless stated otherwise, all measures used a 5-point response scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*) and were presented in the following order.

### Reading Checks

Participants were asked to respond to a question about the text they had just read (“Which of the following statements reflects the information exposed in the text?”) with two alternative answers related to the content of the manipulation.

### Identity Threat

We used three items from Cuadrado et al. (2024) based on Hameiri et al. (2018; e.g., “The information I have just read threatens my worldview”) and one item from Warner et al. (2007; i.e., “The information I have just read threatens my perception of the differences between people of different sexes or genders”) to assess the extent to which the information presented threatened the participants and their worldviews regarding perceived sex–gender differences ( $\alpha = .84^1$ ). Higher scores indicate greater identity threat.

### Sex–Gender Essentialism

We adapted to Spanish the five-item gender essentialism scale from Hettinger (2014), comprising the relevant domains addressed in the literature (naturalness, entitativity, and universality). An example item is: “Personality differences between men and women cannot be changed, because they are caused by biological factors such as genes and hormones” ( $\alpha = .69$ ). The higher the score, the greater the endorsement of sex–gender essentialist beliefs.

### Erroneous Stereotypical Definitions of Trans People

We adapted to Spanish and for our target the seven-item scale from Galinec and Korajlija (2017). The participants were first presented with a brief definition of “trans people” and then they were asked to indicate their level of agreement or disagreement with a set of statements to measure knowledge regarding what it means to be transgender (e.g., “a transient condition,”  $\alpha = .74$ ). A higher score (more agreement) corresponds to greater endorsement of erroneous stereotypical definitions about transgender people.

### Feelings Thermometer

People had to indicate their level of warmth or favorability toward trans people by sliding a bar on a scale from 0° (*colder feelings*) to 100° (*warmer feelings*).

### Policy Support

We created a five-item scale based on previous measures (Axt et al., 2021; Cao & Gurcay, 2022; P. E. Jones et al., 2018; Reiman et al., 2023). An example item is: “Ensure that transgender people have access to sex or gender-segregated settings (e.g., toilets, sports teams, prisons) according to the gender they identify with” ( $\alpha = .82$ ). The higher the score, the more support for favorable trans policies.

### Behavioral Intentions

We adapted to Spanish four items from Glazier et al. (2021). The participants indicated the extent to which they would be willing to carry out a series of favorable behaviors (e.g., maintain a friendship with a trans person), ranging from 1 (*not at all*) to 5 (*very much*) ( $\alpha = .88$ ). Higher scores correspond to more favorable behavioral intentions toward trans people.

### Transphobia

We adapted to Spanish the 20-item Attitudes Toward Transgendered Individuals Scale (ATTI; Walch et al., 2012). An example item is: “Being trans is a sin” ( $\alpha = .92$ ). Higher scores indicate greater transphobia.

### Attention Check

To ensure that participants were paying attention, we included a question (i.e., to select Option 2) among the items of the erroneous stereotypical definitions scale.

### Sociodemographic Variables

We asked for age and gender (women, men, or nonbinary) at the beginning of the questionnaire. At the end, the participants indicated whether they belonged to the trans community or not, their level of education, their nationality, country of residence, the importance of religion in their daily lives, and their political orientation. Political orientation was measured with a single item asking participants to position themselves on a scale from 1 (*extreme left*) to 5 (*extreme right*).

### Gender Identification

We included the three-item centrality subscale of the in-group identification measure (Leach et al., 2008) preceding the manipulation for exploratory purposes. An example item is: “I often think about the fact that I am [gender in-group]” ( $\alpha = .75$ ). The higher the score, the higher the identification with one’s sex–gender.

<sup>1</sup> All the alpha coefficients referenced are those obtained in the present study.

## Data Analyses

To assess the influence of the experimental manipulation on the outcome measures (identity threat, sex–gender essentialism, ATTI, erroneous stereotypical definitions, feelings thermometer, behavioral intentions, and policy support), we conducted a multivariate analysis of variance, considering the experimental condition as independent variable.

To test whether the indirect effects of the manipulation on the outcome variables via identity threat and sex–gender essentialism acting as serial mediators (in this order) were moderated by political orientations, we used model 83 of the macros PROCESS V.4.2 for SPSS V.25 (Hayes, 2022) including the participant's gender as a covariate. The indicator coding system was used to define the relative effects considering the control condition as the reference group. To make inferences about the effects, 5,000 bootstrap samples were used to estimate 95% confidence intervals. The effects are significant if the 95% confidence interval does not include zero.

When presenting and discussing the effects considering participants' political orientation, left refers to estimated effects at 1 *SD* below (i.e., more leftist than) the mean, and right refers to estimated effects at 1 *SD* above (i.e., more rightist than) the mean of the political orientation scale.

## Ethics Approval

The present study was approved by the Bioethics Committee of the researchers' University.

## Results

### Preliminary Analyses: Effects of the Condition on the Studied Variables

The multivariate analysis of variance showed that there were significant differences in the dependent variables across conditions, Wilk's  $\Lambda = .933$ ,  $F(14, 1138) = 2.88$ ,  $p < .001$ ,  $\eta_p^2 = .034$ . We found univariate main effects of the condition on identity threat,  $F(2, 575) = 14.508$ ,  $p < .001$ ,  $\eta_p^2 = .048$ , and on policy support,  $F(2, 575) = 3.384$ ,  $p = .035$ ,  $\eta_p^2 = .012$ . According to the T3 Dunnett post hoc tests, the degendering condition was perceived as more threatening than the multigendering condition ( $p = .004$ ) and the control condition ( $p < .001$ ; see Table 1). There were no differences between the multigendering and the control conditions ( $p = .079$ ). Post hoc tests revealed no statistically significant differences in policy support between the conditions ( $p > .076$ ).

The univariate effects on the remaining outcomes assessed were not significant ( $p > .137$ ).

### Main Analyses: Moderated Mediation Analyses<sup>2</sup>

The analyses revealed that the indirect effects of the degendering condition relative to the control on the dependent variables via identity threat and sex–gender essentialism as mediators in this order were contingent on the political orientation of the participants as indicated by the significant index of mediated moderation (Table 2), in line with H1 and H2. Specifically, the indirect effects were significant only for the participants with a center or a right political orientation (Table 2). As illustrated in Figure 2, participants with a center or right political orientation who read the degendering text expressed greater identity threat than their counterparts in the control condition. In turn, experiencing more identity threat was associated with more endorsement of the sex–gender essentialism, which was related to more negative attitudes and erroneous stereotypical definitions toward trans people, as well as with less policy support, positive behavioral intentions, and favorable feelings toward them (Figure 2) as we expected in our H2a.

A similar pattern of relations was found for the effects of the multigendering relative to the control condition. However, in this case, the nonsignificant index of mediated moderations (Table 2) reveals similar magnitudes of the effects across levels of political orientations, not entirely fulfilling our H2a.

## Discussion

Given the discrimination that trans people still face, it is important to investigate the efficacy of strategies aimed at reducing transphobia (e.g., Case & Stewart, 2013). It has been suggested that interventions should focus on challenging sex–gender binarism (e.g., Domínguez-Martínez & Robles, 2019). Morgenroth and Ryan (2021) proposed degendering and multigendering frames for this goal, but their application has shown mixed results in reducing transphobia (Morgenroth et al., 2021; Taracuk & Koch, 2023). This study aimed to deepen the understanding of the effects of reading about the possible implementation of degendering and multigendering strategies on attitudes toward trans people, by considering an integrative model that explored the mediating role of identity threat and sex–gender essentialism, as well as the moderating role of political orientation.

<sup>2</sup> Results are shown with the covariable gender, which did not differ when this covariable was not included.

**Table 1**  
*Descriptive Statistics of the Studied Variables by Condition*

Variable	Degendering		Multigendering		Control	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Identity threat	2.16	1.03	1.82	0.95	1.63	0.84
Sex–gender essentialism	2.58	0.92	2.43	0.93	2.44	0.86
ATTI	1.63	0.65	1.54	0.59	1.58	0.66
Erroneous stereotypical definitions	1.96	0.74	1.90	0.72	1.97	0.73
Feelings thermometer	73.63	24.32	78.60	24.76	76.44	24.80
Behavioral intentions	4.27	0.88	4.45	0.82	4.38	0.84
Policy support	3.74	1.04	3.96	0.88	3.97	0.97

*Note.* ATTI = Attitudes Toward Transgendered Individuals scale.

**Table 2**  
*Relative Direct and Indirect Effects of the Condition on the Dependent Variables Through Identity Threat and Sex–Gender Essentialism as a Function of Political Orientation*

Predictor	Effect	Moderator: political orientation	ATTI:		Erroneous stereotypical definitions:		Feelings thermometer:		Behavioral intentions:		Policy support:						
			<i>B</i>	( <i>SE</i> )	[95% CI]	<i>B</i>	( <i>SE</i> )	[95% CI]	<i>B</i>	( <i>SE</i> )	[95% CI]	<i>B</i>	( <i>SE</i> )	[95% CI]			
X1: degendering (1) vs. control (0)	Direct effect	Left	-0.03	(0.06)	[-0.15, 0.08]	-0.11	(0.07)	[-0.24, 0.03]	0.16	(2.44)	[-4.64, 4.96]	-0.03	(0.08)	[-0.19, 0.14]	-0.11	(0.10)	[-0.30, 0.07]
	Indirect effects	Center	0.06	<b>(0.02)</b>	<b>[0.04, 0.10]</b>	0.02	(0.02)	[-0.01, 0.06]	-0.60	(0.42)	[-1.43, 0.22]	-0.03	(0.02)	[-0.07, 0.01]	-0.03	(0.02)	[-0.06, 0.01]
		Right	0.10	<b>(0.03)</b>	<b>[0.06, 0.16]</b>	0.07	<b>(0.02)</b>	<b>[0.04, 0.10]</b>	-1.61	<b>(0.42)</b>	<b>[-2.53, -0.87]</b>	-0.08	<b>(0.02)</b>	<b>[-0.12, -0.05]</b>	-0.07	<b>(0.02)</b>	<b>[-0.11, -0.04]</b>
X2: multigendering (1) vs. control (0)	IMM	Left	0.04	<b>(0.02)</b>	<b>[0.02, 0.08]</b>	0.11	<b>(0.03)</b>	<b>[0.06, 0.16]</b>	-2.62	<b>(0.70)</b>	<b>[-4.16, -1.40]</b>	-0.13	<b>(0.03)</b>	<b>[-0.19, -0.07]</b>	-0.11	<b>(0.03)</b>	<b>[-0.18, -0.06]</b>
		Center	-0.05	(0.05)	[-0.15, 0.05]	0.05	<b>(0.02)</b>	<b>[0.02, 0.08]</b>	-1.10	<b>(0.43)</b>	<b>[-2.03, -0.37]</b>	-0.05	<b>(0.02)</b>	<b>[-0.09, -0.02]</b>	-0.05	<b>(0.02)</b>	<b>[-0.09, -0.02]</b>
		Right	0.003	(0.01)	[-0.02, 0.03]	-0.09	(0.06)	[-0.21, 0.04]	2.70	(2.19)	[-1.61, 7.01]	0.07	(0.07)	[-0.07, 0.21]	0.01	(0.08)	[-0.15, 0.17]
IMM	Indirect effects	Left	0.02	<b>(0.01)</b>	<b>[0.003, 0.05]</b>	0.003	(0.01)	[-0.03, 0.03]	-0.06	(0.35)	[-0.78, 0.62]	-0.03	(0.02)	[-0.04, 0.03]	-0.003	(0.02)	[-0.03, 0.03]
		Center	0.02	<b>(0.01)</b>	<b>[0.003, 0.05]</b>	0.02	<b>(0.01)</b>	<b>[0.003, 0.05]</b>	-0.58	<b>(0.28)</b>	<b>[-1.17, -0.08]</b>	-0.03	<b>(0.01)</b>	<b>[-0.06, -0.004]</b>	-0.03	<b>(0.01)</b>	<b>[-0.05, -0.004]</b>
		Right	0.04	<b>(0.02)</b>	<b>[0.01, 0.08]</b>	0.05	<b>(0.02)</b>	<b>[0.01, 0.08]</b>	-1.10	<b>(0.45)</b>	<b>[-2.04, -0.32]</b>	-0.05	<b>(0.02)</b>	<b>[-0.10, -0.02]</b>	-0.05	<b>(0.02)</b>	<b>[-0.09, -0.01]</b>
IMM	Indirect effects	Left	0.02	(0.01)	[0.000, 0.05]	0.02	(0.01)	[-0.000, 0.05]	-0.56	(0.31)	[-1.22, 0.01]	-0.03	(0.01)	[-0.06, 0.001]	-0.02	(0.01)	[-0.05, 0.000]

Note. Statistically significant indirect effects are bolded. ATTI = Attitudes Toward Transgendered Individual Scale; *B* = coefficient of the effects; CI = confidence interval; X1, X2 = indicator codes for the multicategorical focal antecedent; IMM = index of moderated mediation.

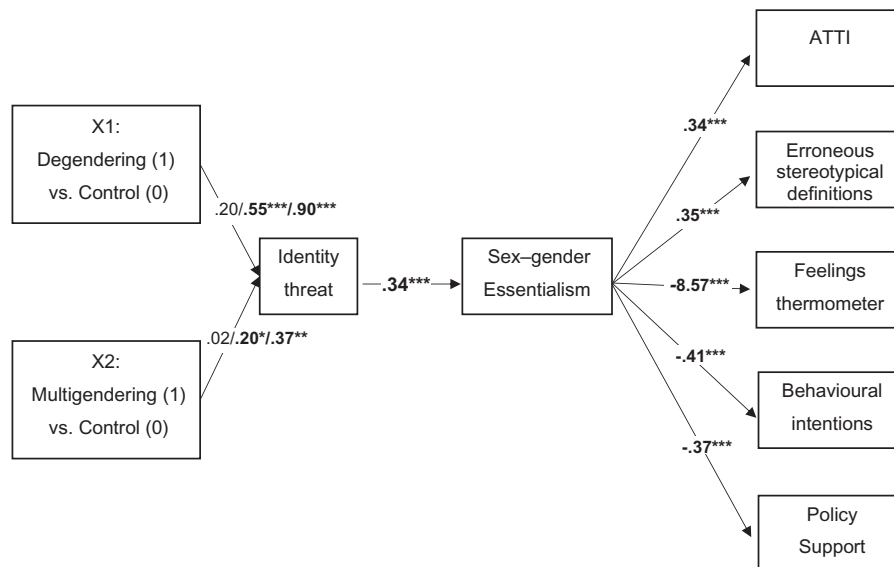
Our findings show that, compared to a control condition, reading about the potential implementation of either a degendering or a multigendering strategy indirectly increased negative attitudes and endorsement of erroneous stereotypical definitions of transgender people and decreased warm feelings, favorable behavioral intentions, and policy support toward trans people by raising identity threat and sex–gender essentialism. Thus, it shows that challenging the sex–gender binary categorization can evoke identity threat, leading to efforts to reinforce this categorization through sex–gender essentialism which, in turn, results in negative evaluations and attitudes toward trans people. This confirms H1, and it is consistent with several studies that have tested some of these relationships separately (e.g., Brescoll et al., 2013; Mitchell, 2022; Morton et al., 2009; Prusaczyk & Hodson, 2020). Our work also provides experimental support for the integrated model proposed by Morgenroth and Ryan (2021), which has never been tested before. Additionally, we considered a type of threat, previously unexplored with these frames, confirming the relevance of identity threat in this process.

We also found that the political orientation of the participants modulated the effect of the degendering condition (vs. control) but not the effect of the multigendering condition (vs. control), partially fulfilling H2. This suggests that different sex–gender challenges are not equally threatening for people with different political orientations. Specifically, we show that reading about the implementation of the degendering strategy is particularly threatening for centrist and rightist individuals, while reading about the implementation of the multigendering strategy is equally threatening across the political spectrum, partially fulfilling our H2a. There are several potential explanations for these results.

The degendering strategy (and not the multigendering) may be especially threatening for people from the center and right because removing sex–gender boundaries impedes sex–gender categorization, which is highly valued by conservatives (e.g., Stern, 2022), as well as hierarchical organization (e.g., Prusaczyk & Hodson, 2020), order and certainty (Makwana et al., 2018), that is directly affected in the absence of categories. Advocating that sex–gender differences are insignificant may also be particularly threatening to individuals close to the right because of their vulnerability to feeling that sex–gender challenges “erase” their own sex–gender identity (Nagoshi et al., 2019). In contrast, the introduction of a third sex–gender category (multigendering) does not suppress the categorization nor does it necessarily change the main meaning of the two recognized sex–gender categories (Morgenroth et al., 2021). It is, therefore, possible to establish a hierarchical organization and structure of the world based on three, rather than two, sexes and genders. Likewise, it would not affect (as much as degendering) people’s self–sex–gender identity because sex–gender categorization remains.

Our findings are relevant because they show that reading about challenges to the traditional sex–gender categories may not be effective in reducing transphobia and may have counterproductive effects. This is particularly evident in the case of the degendering strategy for individuals with a center-right political orientation, one of the most traditionally transphobic groups and, therefore, most in need of change (e.g., Hatch et al., 2022). These results suggest that the effect of reading about different strategies challenging sex–gender binarism, such as degendering and multigendering, on transphobia may vary across distinct populations. This knowledge is useful when planning interventions, as it allows taking into account the characteristics of the target population to increase their

**Figure 2**  
*Indirect Effects of the Condition on the Dependent Variables via Identity Threat and Sex–Gender Essentialism Moderated by Political Orientation*



*Note.* Levels of the moderator (political orientation): left ( $-1$  SD)/center (mean)/right ( $+1$  SD). Unstandardized coefficients are presented. Bolded coefficients are statistically significant. The indirect effects of multigendering (vs. control) were not moderated by political orientation (see IMM; Table 2) although both paths were significant. ATTI = Attitudes toward Transgendered Individual Scale; IMM = index of mediated moderation. X1, X2 = indicator codes for the multicategorical focal antecedent.  
 $* p < .05$ .  $** p < .01$ .  $*** p < .001$ .

effectiveness. It is also relevant in professional fields such as psychology, where the absence of explicit inclusion of sexual diversity content contributes to the persistence of discriminatory attitudes that impair the competence to conduct any kind of intervention or psychological counseling (López-Sáez et al., 2020). In addition, it could be valuable to examine the moderating role of other relevant constructs such as the need for cognitive closure or social dominance orientation (in line with Makwana et al., 2018; Morgenroth & Ryan, 2021). Moreover, it would be advisable to assess whether variables such as sexual orientation could act as a “protective factor” against the adverse effects of right-wing political orientation on attitudes toward trans people, as the findings of López-Sáez et al. (2020) suggest.

Furthermore, this research reveals the role of identity threat and sex–gender essentialism as underlying mechanisms of the examined process. It contributes to understanding why some trans-inclusive policies have generated rejection in the general public (e.g., trans-inclusive bathroom bills; Parent & Silva, 2018). In addition, it suggests that future research could examine the effect of interventions aimed at reducing identity threat and/or support for sex–gender essentialism to reduce transphobia. Other strategies based on social categorization could also be employed to ascertain the extent to which they are effective in reducing transphobia as has been traditionally proposed in the context of intergroup prejudice. Moreover, the efficacy of interpersonal contact in enhancing attitudes toward trans people has also been proved (e.g., Orellana et al., 2022). Therefore, it could be beneficial to combine degendering and multigendering strategies with interpersonal contact in future research.

Finally, this study contributes to the limited research on the effect of degendering and multigendering strategies on identity threat, a type of threat not previously considered, and on transphobia, measured by general and specific attitudinal measures, which strengthens our findings.

### Limitations

Despite its contributions, the current study also identifies some limitations that could be addressed by subsequent studies.

First, the conclusions of the present work are based on the findings of a single study. Accordingly, to enhance the credibility and validity of the findings, it is essential to replicate the study (National Academies of Sciences, Engineering, and Medicine, 2019). In this regard, both the study materials and the data are accessible in an open access repository, thus facilitating future replications to assess the consistency and reproducibility of the results obtained.

Second, the findings presented are derived from a cross-sectional study. Consequently, the long-term effects of our manipulations cannot be determined nor can they be generalized to other sociocultural contexts, given that there may be cross-cultural variation in some sex–gender beliefs (e.g., Wood & Eagly, 2012). Therefore, it would be interesting to conduct a cross-cultural study to investigate whether there are differences in the effect and underlying mechanisms of these frames in different contexts.

Third, it should be noted that the degendering and multigendering manipulations were short texts containing strong claims about sex–gender that can be shocking, without the possibility of providing

more information to justify them. These frames may have less harmful or even positive effects if they are embedded in a broader educational intervention, with more information, sources, a two-way interaction, and a space for doubts resolution, as some interventions of this nature have shown (e.g., Mizock et al., 2017). Additionally, in our manipulations, we informed participants about potential alterations to traditional sex–gender categories (i.e., removing specific references to sex–gender or adding a third category) challenging sex–gender binarism. However, such changes may be unnoticed in real-world settings if they are not the focal point of attention (e.g., a bar with a single bathroom without any reference to sex–gender) as there is a difference between learning about the implementation of a (de)multigendering policy and experiencing (de)multigendering contexts. In other words, if the world were less binary (e.g., no segregated spaces, degendered languages), people would probably adopt less binary views. Instead, the presentation of these strategies as a learning task may elicit negative effects in the short term since they are threatening. Nevertheless, they could still have the potential to enhance attitudes toward trans people in the long term, as their implementation in real-world settings could reduce the sex–gender binarism salience. Future research should adopt a longitudinal design to test the long-term effect of these strategies. In sum, the format in which these strategies were implemented (i.e., a short text learning task) may have affected their efficacy. However, our results do not invalidate the theoretical foundations of these strategies, nor are they necessarily extrapolable to other modalities and domains of implementation.

Finally, in light of a growing body of research warning about the misuse of mediation analyses (e.g., Tate, 2015), we advise caution regarding the inferential limitations of the findings presented. Mediation analyses may confound mediators, fail to uncover unique causal mediators, and do not allow for the distinction between alternative causal models (Fiedler et al., 2011, 2018; Lemmer & Gollwitzer, 2017; Thoemmes, 2015). Furthermore, cross-sectional designs complicate causal inferences (Kline, 2015). Consequently, mediation analyses are a necessary but not a sufficient condition for testing a causal model (Fiedler et al., 2011). Replicating the mediation effect through different designs, strategies and operationalizations could aid in finding out the “true” indirect effect (Lemmer & Gollwitzer, 2017). Therefore, the relationships found in our model do not necessarily imply causality, and alternative mediators and causal models should not be excluded.

## Conclusions

Although challenging the sex–gender binarism has been proposed as a potential way to reduce transphobia, our findings reveal that reading about degendering and multigendering strategies has the opposite effect. It is particularly concerning that reading about the implementation of the degendering strategy especially affects individuals with centrist and rightist political views, as this demographic group has traditionally displayed transphobic attitudes toward trans people. It is important to emphasize the relevant role of identity threat in this process leading to the reinforcement of essentialist sex–gender beliefs which, in turn, increases transphobia. Consequently, our findings indicate a potential route for intervening transphobia, as well as emphasizing the importance of investigating the influence of ideological variables in this process.

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## Resumen

Considerando la discriminación que experimentan las personas trans, es necesario aumentar el conocimiento acerca de las intervenciones destinadas a reducir la transfobia. Basándose en la literatura previa, el presente estudio examina el efecto de leer acerca de la posible implementación de dos estrategias que desafían el binarismo de sexo-género (degendering y multigendering) sobre las actitudes hacia las personas trans, a través de la amenaza a la identidad y el esencialismo de sexo-género. Además, explora si la orientación política modera estos efectos. Un total de 578 participantes cisgénero fue asignado aleatoriamente a una de las tres condiciones del estudio (degendering, multigendering y control). Los resultados muestran que las condiciones experimentales, comparadas con la condición control, empeoraron las actitudes hacia las personas trans a través de un incremento de la amenaza a la identidad que, a su vez, aumentó el apoyo a las creencias esencialistas de sexo-género. En la condición de-gendering, comparada con la control, este efecto solo se produjo entre las personas con orientación política de centro y de derecha. Nuestros hallazgos indican que leer acerca de estas estrategias y su potencial implementación podría tener un impacto contraproducente. Sin embargo, también ponen de relieve los mecanismos subyacentes a los que deberían dirigirse las intervenciones para reducir la transfobia. Asimismo, sugieren que el efecto de distintas estrategias sobre las actitudes hacia las personas trans podría variar en función de la orientación política. Estos resultados son relevantes a la hora de planificar intervenciones eficaces que reduzcan la transfobia.

*Palabras clave:* transfobia, estrategias de degendering y multigendering, amenaza a la identidad, esencialismo de sexo-género, orientación política

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## References

- Álvarez-Peña, H., Constantin, A. A., & Cuadrado, I. (2024). *Effect of de-gendering and multi-gendering strategies on transphobia*. <https://doi.org/10.17605/OSF.IO/RK8F3>
- Axt, J. R., Conway, M. A., Westgate, E. C., & Buttrick, N. R. (2021). Implicit transgender attitudes independently predict beliefs about gender and transgender people. *Personality & Social Psychology Bulletin*, 47(2), 257–274. <https://doi.org/10.1177/0146167220921065>
- Boccanfuso, E., White, F. A., & Maunder, R. D. (2021). Reducing transgender stigma via an E-contact intervention. *Sex Roles*, 84(5–6), 326–336. <https://doi.org/10.1007/s11199-020-01171-9>
- Braun, H. M., García-Grossman, I. R., Quiñones-Rivera, A., & Deutsch, M. B. (2017). Outcome and impact evaluation of a transgender health course for health profession students. *LGBT Health*, 4(1), 55–61. <https://doi.org/10.1089/lgbt.2016.0119>
- Brescoll, V. L., Uhlmann, E. L., & Newman, G. E. (2013). The effects of system-justifying motivations on endorsement of essentialist explanations for gender differences. *Journal of Personality and Social Psychology*, 105(6), 891–908. <https://doi.org/10.1037/a0034701>
- Butler, J. (1990). *Gender trouble: Feminism and the subversion of identity*. Routledge.
- Cao, X., & Gurcay, A. (2022). The anxiety factor: Moral traditionalism, interpersonal contact diversity and support for transgender candidates and rights. *Journal of Homosexuality*, 69(13), 2209–2232. <https://doi.org/10.1080/00918369.2021.1935622>

- Case, K. A., & Stewart, B. (2013). Intervention effectiveness in reducing prejudice against transsexuals. *Journal of LGBT Youth, 10*(1–2), 140–158. <https://doi.org/10.1080/19361653.2012.718549>
- Charles, M., & Bradley, K. (2009). Indulging our gendered selves? Sex segregation by field of study in 44 countries. *American Journal of Sociology, 114*(4), 924–976. <https://doi.org/10.1086/595942>
- Ching, B. H. H., & Xu, J. T. (2018). The effects of gender neuroessentialism on transprejudice: An experimental study. *Sex Roles, 78*(3–4), 228–241. <https://doi.org/10.1007/s11199-017-0786-3>
- Cuadrado, I., Constantin, A. A., López-Rodríguez, L., & Estevan-Reina, L. (2024). Achieving equality or persisting inequality: Effects of framing of equality on attitudes toward women and gender equality through identity threat and cognitive unfreezing. *Sex Roles, 90*(1), 126–150. <https://doi.org/10.1007/s11199-023-01432-3>
- De Ruijter, A. A. (2022). *Gender trouble: Threat reactions towards gender-inclusive initiatives and the role of gender identity salience and gender identification* [Master Thesis, Utrecht University]. <https://studenttheses.uu.nl/handle/20.500.12932/42111>
- Domínguez-Martínez, T., & Robles, R. (2019). Preventing transphobic bullying and promoting inclusive educational environments: Literature review and implementing recommendations. *Archives of Medical Research, 50*(8), 543–555. <https://doi.org/10.1016/j.arcmed.2019.10.009>
- Fault, F., Erdfelder, E., Buchner, A., & Lang, A. G. (2009). Statistical power analyses using G\*Power 3.1: Tests for correlation and regression analyses. *Behavior Research Methods, 41*(4), 1149–1160. <https://doi.org/10.3758/BRM.41.4.1149>
- Fiedler, K., Harris, C., & Schott, M. (2018). Unwarranted inferences from statistical mediation tests—An analysis of articles published in 2015. *Journal of Experimental Social Psychology, 75*(4), 95–102. <https://doi.org/10.1016/j.jesp.2017.11.008>
- Fiedler, K., Schott, M., & Meiser, T. (2011). What mediation analysis can (not) do. *Journal of Experimental Social Psychology, 47*(6), 1231–1236. <https://doi.org/10.1016/j.jesp.2011.05.007>
- Flores, A. R., Haider-Markel, D. P., Lewis, D. C., Miller, P. R., Tadlock, B. L., & Taylor, J. K. (2018). Challenged expectations: Mere exposure effects on attitudes about transgender people and rights. *Political Psychology, 39*(1), 197–216. <https://doi.org/10.1111/pops.12402>
- Galínez, M., & Korajlija, A. L. (2017). The effect of different ways of providing information about transsexualism on student attitudes. *Psychology & Sexuality, 8*(4), 280–290. <https://doi.org/10.1080/19419899.2017.1383932>
- Glazier, J. J., Gomez, E. M., & Olson, K. R. (2021). The association between prejudice toward and essentialist beliefs about transgender people. *Collabra: Psychology, 7*(1), Article 25528. <https://doi.org/10.1525/collabra.25528>
- Halberstam, J. (1999). F2M: The making of female masculinity. In J. Price & M. Shildrick (Eds.), *Feminist theory and the body: A reader* (pp. 125–133). Edinburgh University Press. <https://doi.org/10.1515/9781474471770>
- Hameiri, B., Nabet, E., Bar-Tal, D., & Halperin, E. (2018). Paradoxical thinking as a conflict-resolution intervention: Comparison to alternative interventions and examination of psychological mechanisms. *Personality and Social Psychology Bulletin, 44*(1), 122–139. <https://doi.org/10.1177/0146167217736048>
- Haslam, N., & Levy, S. R. (2006). Essentialist beliefs about homosexuality: Structure and implications for prejudice. *Personality & Social Psychology Bulletin, 32*(4), 471–485. <https://doi.org/10.1177/0146167205276516>
- Haslam, N., Rothschild, L., & Ernst, D. (2000). Essentialist beliefs about social categories. *British Journal of Social Psychology, 39*(1), 113–127. <https://doi.org/10.1348/014466600164363>
- Haslam, N., Rothschild, L., & Ernst, D. (2002). Are essentialist beliefs associated with prejudice? *British Journal of Social Psychology, 41*(1), 87–100. <https://doi.org/10.1348/014466602165072>
- Hatch, H. A., Warner, R. H., Broussard, K. A., & Harton, H. C. (2022). Predictors of transgender prejudice: A meta-analysis. *Sex Roles, 87*(11–12), 583–602. <https://doi.org/10.1007/s11199-022-01338-6>
- Hayes, A. F. (2022). *Introduction to mediation, moderation, and conditional process analysis: A regression-based approach* (3rd ed.). Guilford Press.
- Hettinger, V. (2014). *Reconceptualizing the role of essentialism in attitudes toward gays and lesbians: The intersection of gender and sexual orientation* [Doctoral thesis, University of South Florida]. <https://digitalcommons.usf.edu/etd/5040>
- Jones, B. A., Cahill, L., & McDermott, D. T. (2023). Gender, traditional gender ideology, gender essentialist beliefs, and masculinity threat as determinants of attitudes toward trans and gender diverse people in a U.K. sample. *Psychology of Sexual Orientation and Gender Diversity*. Advance online publication. <https://doi.org/10.1037/sgd0000658>
- Jones, P. E., Brewer, P. R., Young, D. G., Lambe, J. L., & Hoffman, L. H. (2018). Explaining public opinion toward transgender people, rights, and candidates. *Public Opinion Quarterly, 82*(2), 252–278. <https://doi.org/10.1093/poq/nfy009>
- Kline, R. B. (2015). The mediation myth. *Basic and Applied Social Psychology, 37*(4), 202–213. <https://doi.org/10.1080/01973533.2015.1049349>
- Leach, C. W., van Zomeren, M., Zebel, S., Vliek, M. L. W., Pennekamp, S. F., Doosje, B., Ouwerkerk, J. W., & Spears, R. (2008). Group-level self-definition and self-investment: A hierarchical (multicomponent) model of in-group identification. *Journal of Personality and Social Psychology, 95*(1), 144–165. <https://doi.org/10.1037/0022-3514.95.1.144>
- Lemmer, G., & Gollwitzer, M. (2017). The “true” indirect effect won’t (always) stand up: When and why reverse mediation testing fails. *Journal of Experimental Social Psychology, 69*, 144–149. <https://doi.org/10.1016/j.jesp.2016.05.002>
- López-Sáez, M. Á., García-Dauder, D., & Montero, I. (2020). Correlate attitudes toward LGBT and sexism in Spanish psychology students. *Frontiers in Psychology, 11*, Article 2063. <https://doi.org/10.3389/fpsyg.2020.02063>
- Makwana, A. P., Dhont, K., De keersmaecker, J., Akhlaghi-Ghaffarokh, P., Masure, M., & Roets, A. (2018). The motivated cognitive basis of transphobia: The roles of right-wing ideologies and gender role beliefs. *Sex Roles, 79*(3–4), 206–217. <https://doi.org/10.1007/s11199-017-0860-x>
- McDermott, D. T., Brooks, A. S., Rohleder, P., Blair, K., Hoskin, R. A., & McDonagh, L. K. (2018). Ameliorating transnegativity: Assessing the immediate and extended efficacy of a pedagogic prejudice reduction intervention. *Psychology & Sexuality, 9*(1), 69–85. <https://doi.org/10.1080/19419899.2018.1429487>
- Mitchell, L. (2022). *Defending gender: Transprejudice as gender system maintenance* (Order 29215567). ProQuest Dissertations & Theses Global (2774786181). <https://www.proquest.com/dissertations-theses/defending-gender-transprejudice-as-system/docview/2774786181/se-2>
- Mizock, L., Hopwood, R., Casey, H., Duhamel, E., Herrick, A., Puerto, G., & Stelmach, J. (2017). The transgender awareness webinar: Reducing transphobia among undergraduates and mental health providers. *Journal of Gay & Lesbian Mental Health, 21*(4), 292–315. <https://doi.org/10.1080/19359705.2017.1320696>
- Morgenroth, T., & Ryan, M. K. (2018). Gender trouble in social psychology: How can Butler’s work inform experimental social psychologists’ conceptualization of gender? *Frontiers in Psychology, 9*, Article 1320. <https://doi.org/10.3389/fpsyg.2018.01320>
- Morgenroth, T., & Ryan, M. K. (2021). The effects of gender trouble: An integrative theoretical framework of the perpetuation and disruption of the gender/sex binary. *Perspectives on Psychological Science: A Journal of the Association for Psychological Science, 16*(6), 1113–1142. <https://doi.org/10.1177/1745691620902442>
- Morgenroth, T., Sendén, M. G., Lindqvist, A., Renström, E. A., Ryan, M. K., & Morton, T. A. (2021). Defending the sex/gender binary: The role of gender identification and need for closure. *Social Psychological and Personality Science, 12*(5), 731–740. <https://doi.org/10.1177/1948550620937188>
- Morgenroth, T., van der Toorn, J., Pliskin, R., & McMahon, C. E. (2024). Gender nonconformity leads to identity denial for cisgender and

- transgender individuals. *Social Psychological and Personality Science*, 15(1), 46–59. <https://doi.org/10.1177/19485506221144148>
- Morton, T. A., Postmes, T., Haslam, S. A., & Hornsey, M. J. (2009). Theorizing gender in the face of social change: Is there anything essential about essentialism? *Journal of Personality and Social Psychology*, 96(3), 653–664. <https://doi.org/10.1037/a0012966>
- Nagoshi, C. T., Cloud, J. R., Lindley, L. M., Nagoshi, J. L., & Lothamer, L. J. (2019). A test of the three-component model of gender-based prejudices: Homophobia and transphobia are affected by raters' and targets' assigned sex at birth. *Sex Roles: A Journal of Research*, 80(3–4), 137–146. <https://doi.org/10.1007/s11199-018-0919-3>
- National Academies of Sciences, Engineering, and Medicine. (2019). *Reproducibility and replicability in science*. The National Academies Press. <https://doi.org/10.17226/25303>
- Ocasio, T. (2022). *Essentialism predicts attitudes toward gender non-binary people* (No. 29168333) [Master thesis, University of Albany]. ProQuest Dissertations & Theses Global.
- Orellana, L., Totterdell, P., & Iyer, A. (2022). The association between transgender-related fiction and transnegativity: Transportation and intergroup anxiety as mediators. *Psychology & Sexuality*, 13(2), 228–239. <https://doi.org/10.1080/19419899.2020.1759677>
- Outten, H. R., Lee, T., & Lawrence, M. E. (2019). Heterosexual women's support for trans-inclusive bathroom legislation depends on the degree to which they perceive trans women as a threat. *Group Processes & Intergroup Relations*, 22(8), 1094–1108. <https://doi.org/10.1177/1368430218812660>
- Parent, M. C., & Silva, K. (2018). Critical consciousness moderates the relationship between transphobia and “bathroom bill” voting. *Journal of Counseling Psychology*, 65(4), 403–412. <https://doi.org/10.1037/cou0000270>
- Picaza Gorrotxategi, M., Ozamiz-Etxebarria, N., Jiménez-Etxebarria, E., & Cornelius-White, J. H. D. (2020). Improvement in gender and transgender knowledge in university students through the creative factory methodology. *Frontiers in Psychology*, 11, Article 367. <https://doi.org/10.3389/fpsyg.2020.00367>
- Prusaczyk, E., & Hodson, G. (2020). The roles of political conservatism and binary gender beliefs in predicting prejudices toward gay men and people who are transgender. *Sex Roles*, 82(7–8), 438–446. <https://doi.org/10.1007/s11199-019-01069-1>
- Rad, M. S., Shackelford, C., Lee, K. A., Jassin, K., & Ginges, J. (2019). Folk theories of gender and anti-transgender attitudes: Gender differences and policy preferences. *PloS One*, 14(12), Article e0226967. <https://doi.org/10.1371/journal.pone.0226967>
- Reiman, A. K., Ocasio, T. S., & Mezzapelle, J. L. (2023). How cisgender people define “transgender” is associated with attitudes toward transgender people. *Archives of Sexual Behavior*, 52(3), 991–1007. <https://doi.org/10.1007/s10508-022-02454-w>
- Roberts, S. O., Ho, A. K., Rhodes, M., & Gelman, S. A. (2017). Making boundaries great again: Essentialism and support for boundary-enhancing initiatives. *Personality and Social Psychology Bulletin*, 43(12), 1643–1658. <https://doi.org/10.1177/0146167217724801>
- Sawaya, A. T., & McCarty, M. (2023). The impact of a brief humanizing intervention on prejudice towards transgender individuals. *Graduate Student Journal of Psychology*, 20(1), 127–152. <https://doi.org/10.52214/gsjp.v20i1.10781>
- Stern, C. (2022). Political ideology and social categorization. In B. Gawronski (Ed.), *Advances in experimental social psychology* (Vol. 65, pp. 167–233). Academic Press. <https://doi.org/10.1016/bs.aesp.2021.11.003>
- Stern, C., West, T. V., & Rule, N. O. (2015). Conservatives negatively evaluate counterstereotypical people to maintain a sense of certainty. *PNAS*, 112(50), 15337–15342. <https://doi.org/10.1073/pnas.1517662112>
- Stryker, S. (2006). (De)subjugated knowledges: An introduction to transgender studies. In S. Stryker & S. Whittle (Eds.), *The transgender studies reader* (pp. 1–18). Routledge.
- Taracuk, M. D., & Koch, J. M. (2023). Use of a media intervention to increase positive attitudes toward transgender and gender diverse individuals. *International Journal of Transgender Health*, 24(1), 86–98. <https://doi.org/10.1080/26895269.2021.1878479>
- Tate, C. U. (2015). On the overuse and misuse of mediation analysis: It may be a matter of timing. *Basic and Applied Social Psychology*, 37(4), 235–246. <https://doi.org/10.1080/01973533.2015.1062380>
- Thoemmes, F. (2015). Reversing arrows in mediation models does not distinguish plausible models. *Basic and Applied Social Psychology*, 37(4), 226–234. <https://doi.org/10.1080/01973533.2015.1049351>
- Tompkins, T. L., Shields, C. N., Hillman, K. M., & White, K. (2015). Reducing stigma toward the transgender community: An evaluation of a humanizing and perspective-taking intervention. *Psychology of Sexual Orientation and Gender Diversity*, 2(1), 34–42. <https://doi.org/10.1037/sgd0000088>
- van der Toorn, J., Pliskin, R., & Morgenroth, T. (2020). Not quite over the rainbow: The unrelenting and insidious nature of heteronormative ideology. *Current Opinion in Behavioral Sciences*, 34, 160–165. <https://doi.org/10.1016/j.cobeha.2020.03.001>
- Walch, S. E., Ngamake, S. T., Francisco, J., Stitt, R. L., & Shingler, K. A. (2012). The attitudes toward transgendered individuals scale: Psychometric properties. *Archives of Sexual Behavior*, 41(5), 1283–1291. <https://doi.org/10.1007/s10508-012-9995-6>
- Warner, R., Hornsey, M. J., & Jetten, J. (2007). Why minority group members resent impostors. *European Journal of Social Psychology*, 37(1), 1–17. <https://doi.org/10.1002/ejsp.332>
- Wood, W., & Eagly, A. H. (2012). Biosocial construction of sex differences and similarities in behaviour. *Advances in Experimental Social Psychology*, 46, 55–123. <https://doi.org/10.1016/B978-0-12-394281-4.00002-7>
- Zelista, D. (2022). *Gender trouble: Threat and challenge reactions towards gender-inclusive initiatives* [Master Thesis, Utrecht University]. <https://studenttheses.uu.nl/handle/20.500.12932/42111>
- Zwickl, S., Wong, A. F. Q., Dowers, E., Leemaqz, S. Y., Bretherton, I., Cook, T., Zajac, J. D., Yip, P. S. F., & Cheung, A. S. (2021). Factors associated with suicide attempts among Australian transgender adults. *BMC Psychiatry*, 21(1), Article 81. <https://doi.org/10.1186/s12888-021-03084-7>

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