PLURALISTIC IGNORANCE WITHIN ATTITUDES TOWARD TRANSGENDER INDIVIDUALS

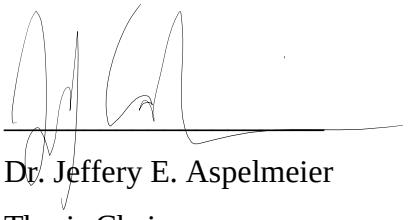
by

Hayley J. Grossman

A thesis submitted to the faculty of Radford University in partial fulfillment of the requirements for the degree of Master of Arts in the Department of Psychology

Thesis Advisor: Dr. Jeff Aspelmeier

May 2021



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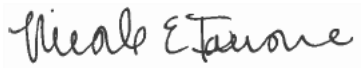
Thesis Chair



4/29/21

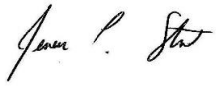
Dr. Nicole Iannone Date

Committee Member

4/29/21

Dr. Tracy Cohn Date

Committee Member



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Dr. Jenessa Steele Date

Committee Member

Abstract

The present study examined whether pluralistic ignorance (PI) occurs within attitudes toward transgender individuals, and whether this PI is moderated by political and religious attitudes. PI occurs when group members erroneously believe their private attitudes differ from the attitudes held by others in their group, creating pressure to conform to the perceived norm, despite holding private attitudes inconsistent with that norm (Miller & Prentice, 1994; O'Gorman, 1986). One hundred and ninety participants from the psychology participant pool were recruited and completed measures of attitudes toward transgender individuals (e.g., Barbir et al., 2017), which were completed with respect to participants' own attitudes (self scores), and the attitudes they believe their peers hold. They also completed measures of religiosity (e.g., Altemeyer & Hunsberger, 1992) and political attitudes (e.g., Sidanius, 1976a) to examine whether they moderate PI within attitudes toward trans people. A series of 2 (target of rating: self vs. other) x 2 (religious/political attitudes: low vs. high) mixed-model factorial ANOVAs revealed a strong PI effect. Individuals reported significantly lower levels of trans prejudice relative to the attitudes they believed their peers hold. Further, political and religious conservatism moderated the PI effect, such that participants low in religious and political conservatism reported significantly less prejudice toward trans people relative to participants high in religiosity and political conservatism. Regardless of their political or religious attitudes, all participants were united in their misinterpretation of the attitudes their peers hold toward trans people.

Keywords: pluralistic ignorance, transgender prejudice, political attitudes, religiosity

Table of Contents

Statement of the Problem

The present study explores whether pluralistic ignorance (PI) within attitudes toward transgender individuals exists, and whether it is moderated by political or religious conservatism. This research area is necessary to investigate due to the high prevalence of violence, discrimination, and prejudice directed toward the transgender community (Norton & Herek, 2013). While there is a consensus in the research that trans people experience elevated levels of violence, the field lacks a survey of the attitudes that individuals hold toward trans people, and attitudes individuals believe others, such as peers, hold. Likewise, research regarding PI has examined self and other attitudes toward lesbians, gays, and bisexuals (LGB; Bowen & Bourgeois, 2001), yet no study has assessed whether PI arises within attitudes toward trans people. Furthermore, no prior study has tested whether religious and political conservatism moderate PI within these attitudes, which is problematic considering the abundant research that investigates political conservatism and religiosity as correlates of other types of prejudice (e.g., cissexism; Bowen & Bourgeois, 2001; Perryman et al., 2018). Thus, the present research is necessary in order to examine whether PI within attitudes toward transgender individuals is moderated by political or religious conservatism.

Chapter 1

Introduction

Although definitions have varied from author to author, pluralistic ignorance (PI) exists when, among a group of individuals, members erroneously believe their own private attitudes are discrepant from the social norm that exists within the group (Lambert et al., 2003; Miller & McFarland, 1991; O'Gorman, 1986). The social norm is inferred from the public behavior of others. However, the shared misperception of the norm leads group members to conform to the perceived norm and results in a mismatch between one's private attitudes and public behaviors and further reinforces the false norm. Put simply, PI occurs when "no one believes, but everyone believes that everyone else believes" (Krech & Crutchfield, 1948, pp. 388-389). Indeed, the false perception of the social norm leads members astray: such a mismatch between private attitudes and their perception of the public norm results in pressure to conform, so that public behavior is consistent with the perceived social norm (Prentice & Miller, 1993), and thus may not truly represent attitudes of the individual. One publicly conforms to the false norm established by the collective without private acceptance in order to avoid feelings of social deviance, embarrassment, and ostracism (Miller & McFarland, 1991). The public misinterpretation of other group members' true attitudes is guided by an erroneous attribution that such fears of social deviance govern one's own behaviors more strongly in the individual than they govern the behaviors of others.

The term "pluralistic ignorance" should be broken down to maximize understanding of the complex phenomenon, as the two terms can be misleading. The term "pluralistic" stems from the notion that this phenomenon only occurs in the case of a "plurality"—PI does not take place in the context of only one person. For PI to arise, there must be two or more members present

(O'Gorman, 1986). The term "ignorance" within PI is sort of a misnomer. It is not that the group is uninformed of the social norm of the plurality. Rather, it is that they are misinformed; the social norm they believe to be correct is actually incorrect. Not only is the individual wrong about the true social norm, but it is also a shared cognitive error (O'Gorman, 1986). In other words, the plurality must be ignorant about the true social norm for PI to arise.

The History of Pluralistic Ignorance

The study of PI began with Floyd H. Allport's publication of his *Social Psychology* textbook in 1924 at Syracuse University. In his textbook, Allport described an underlying phenomenon that constitutes a significant part of PI, called the impression of universality. The impression of universality occurs when individuals overestimate the unanimity of a group (Allport, 1924).

Allport's work with one of his students, Daniel Katz, to further his study of the illusion of universality led to the development of the concept of PI (O'Gorman, 1986). Katz and Allport later published a monograph in 1931 describing a series of studies in Syracuse, NY. It was in this monograph that Katz and Allport coined the term PI. They first investigated attitudes of fraternity members at Syracuse University. Specifically, Katz and Allport intended to shed light on attitudes toward admission of minorities into their fraternity. Interestingly, they concluded that although the fraternity as a whole held the rigid belief that minorities should not be admitted, the individual members were not opposed to minority admission. However, at the individual level, members refrained from publicly voicing their opinions due to the perception of the social norm of the fraternity that no minorities shall be admitted. The members were held back by the potential consequences of acting against the social norm they believed to be true, simply to

preserve the reputation of their fraternity. Katz and Allport (1931, as cited in O'Gorman, 1986), in other words, noticed a mismatch between the members' private attitudes and public behaviors.

Katz and Allport (1931, as cited in O'Gorman, 1986) also noticed a mismatch in Syracuse students' attitudes and behaviors related to academic integrity. When asked about the frequency that they considered other students to cheat, students believed that they personally cheated more than the average other student. Because the students functioned on the social norm that those who cheat lack academic integrity, a resulting mismatch between private attitudes and public behaviors emerged.

Allport worked with an additional student named Richard Schanck beginning in 1928 (O'Gorman, 1986). Schanck examined the behaviors within a small New York community, which he referred to as "Elm Hollow," a pseudonym for the town of Eaton, NY (O'Gorman, 1986). The town of Eaton was of particular interest to Schanck due to its close-knit members. Schanck developed an intimate relationship with his subjects of interest to gain insight into their private behaviors. He noticed that the preacher at the local church engaged in distinct behaviors publicly and privately. For example, whereas the preacher would discourage playing cards in public, Schanck found that the very same preacher privately supported playing cards (Schanck, 1932). In other words, Schanck noticed the very same discrepancy in public attitudes versus private behaviors found by Allport and Katz. He posited that Eaton's community members experienced PI: Individuals publicly acquiesced to behaviors that align with the public norm they believed to be true in order to be seen as a desirable member of Eaton (Miller & Prentice, 1994).

Following the findings from Schanck in 1932, the study of PI virtually ceased—that is, until its resurgence in 1961 (O'Gorman, 1986). The study of PI was not directly pursued by researchers for nearly 30 years. It was not until the publication of an article in 1961 regarding

attitudes toward segregation that the study of PI resumed (Breed & Ktsanes, 1961). Consistent with conclusions drawn by Allport et al., Breed and Ktsanes (1961) reported PI within attitudes toward segregation, such that although individuals privately reported attitudes in favor of desegregation, they assumed the private attitudes of others would contradict their own. In other words, individuals erroneously believed their private attitudes to be discrepant from the attitudes of others. Why might people disregard their true feelings? Breed and Ktsanes (1961) argued that individuals act in accordance with the social norm conveyed by the attitudes from the vocal majority, which discourages them to engage in behaviors publicly that are inconsistent with that conveyed social norm.

Following the publication of Breed and Ktsanes' (1961) article, PI once again went understudied until its second resurgence in the 1980's. Although a few minor studies were published in the 70s and early 80s (e.g., Korte, 1972; O'Gorman, 1980), major interest in PI mostly waned until 1987. Miller and McFarland (1987) published an article in which they examined whether embarrassment operates as a precipitating variable in PI, and considered the consequences of PI. They found support for their claims through a series of three studies. Miller and McFarland (1987) concluded that participants believed their own emotions and feelings of the potential for embarrassment guided their own behavior to a greater extent than the same fear of embarrassment guided the behavior of the average other. In the context of study 2, individuals overestimated the amount that others in the study would seek assistance on a task from the experimenter. Even though participants believed that many people would ask for help, participants were held back by their own embarrassment and believed that they themselves were being held back by embarrassment more than other participants. Participants engaged in identical

behaviors—nobody asked for assistance, thus enforcing the norm of that group to discourage asking for clarification for fear of sticking out and becoming embarrassed.

Several studies and review articles have been published since 1987 that have examined various attitudes within which PI occurs, consequences of PI, and phenomena that underlie PI (e.g., Miller & McFarland, 1991; Miller & Prentice, 1994; Prentice & Schroeder, 1998). Today, PI researchers often focus on PI regarding various contemporary attitudes, such as masculinity (e.g., Munsch et al., 2018), acceptance of same-sex marriage (e.g., Perryman et al., 2018), and climate change (e.g., Geiger & Swim, 2016).

Underlying Phenomena within Pluralistic Ignorance

Pluralistic ignorance represents the confluence of multiple social-psychological processes. Miller and Prentice (1994) identified five main phenomena that are central to the larger phenomenon of PI. Each component is fundamental to the PI process, and no individual component sufficiently represents the phenomenon of PI; rather, these mechanisms work in concert to create the necessary dynamic between the self and the larger collective. One crucial mechanism is the perception of a false norm, or the misperception of the true social norm within the group. PI studies often empirically assess the presence of a false norm by evaluating the discrepancy between attitudes of the self and other members of a defined group. The greater the discrepancy is between reported attitudes for the self and for others, the greater the extent of the false norm is. For instance, in a series of studies, researchers discovered that Princeton students believed the norm for students at Princeton to be that heavy drinking is desirable (Prentice & Miller, 1993). Although the students believed the desirable norm to follow was heavy drinking, students reported that they themselves were not in favor of heavy drinking, thereby illustrating a self-other attitudinal discrepancy.

A second mechanism is the illusion or impression of universality, in which people overestimate the extent that others in their group hold the same opinion, attitude, or belief (Allport, 1924). Many studies, in order to demonstrate the illusion of universality, compare the standard deviation (*SD*) of self-scores versus other-scores. One could argue this illusion takes place when the average *SD* of self-scores is greater than other-scores. In other words, the spread of attitudes participants report for themselves is wider and has more variability than the spread of scores observed within participants' estimates of the attitudes held by other group members. Thus, when the *SD* for self-scores exceeds the *SD* for other-scores, participants demonstrate that they overestimate the amount that others' attitudes are similar. According to Allport (1924), the source of the illusion of universality arises from the lack of public insight into the opinions, attitudes, or beliefs of others, while having sufficient access to one's private thoughts. This lack of knowledge of others' intentions leads to an overgeneralization that virtually every member of the group holds identical beliefs, when in reality there is great variability within the group as a whole (O'Gorman, 1986).

A third underlying phenomenon of PI according to Miller and Prentice (1994) is the false uniqueness effect, sometimes referred to as the illusion of deviance or false deviance. This effect occurs when individuals, in the process of comparing their personal attitudes versus others' attitudes, overestimate the extent that they themselves hold attitudes and beliefs that deviate from the majority of others. This creates a false sense of being in the minority; individuals, although engaging in related behaviors, feel as though they are at odds with their group. This feeling of being distinct from the group has possible consequences to the self, such as feelings of alienation, estrangement, and detachment from the group, regardless of the fact that these illusions are just that: illusory (Miller & McFarland, 1991; Prentice & Miller, 1993). Prentice

and Miller (1993) demonstrated support for the false uniqueness effect and its harmful effects on one's sense of group belonging in a study that examined PI within public versus private attitudes toward the keg ban of 1991 at Princeton University. They found that students who reported feeling at odds from their peers and felt their attitudes were inconsistent with those of the average other Princeton student reported more negative feelings, such as feeling disconnected from the university. These students were less likely to donate money or revisit Princeton for homecoming events in the future, relative to students for which PI did not occur.

A fourth underlying phenomenon of PI is normative social influence. Within the framework of PI, this is the process in which individuals are confident in their own private attitudes and beliefs, but because of the belief that others in the group hold attitudes and beliefs distinct from our own, the individual attempts to conform to the public behavior of others. Put more generally, individuals are motivated to conform to the public behaviors of the group despite misgivings; it represents public compliance with a perceived social norm without private acceptance of the norm. Individuals are motivated to acquiesce to behave in ways they do not truly endorse in order to be liked and accepted by the group or to avoid rejection and punishment from the group.

Miller and Prentice (1994) posed a fifth process that contributes to the cascade of PI. This phenomenon is essentially an attribution error in which individuals mistakenly assume that the motivations behind the behaviors of others differ from the causes of our own. Consider an example in which someone is lying down on a busy sidewalk. Although several people pass this person by, no one decides to take action and help. Based on this fifth phenomenon, people choose not to act even though they may think the person needs help. This is because they want to avoid looking foolish to others if they choose to help and the situation turned out not to be an

actual emergency. While this motivation for an individual's own behaviors is clear to them, individuals believe the motivation for others' behaviors differs from their own. That is, one assumes that others are refraining from intervening because they understand that the situation is not an emergency, rather than inferring that others' behavior could be motivated by the same fear of embarrassment that motivates their own choice not to intervene. The interpretation for the motives of one's own behaviors is decidedly discrepant from the interpretation they make for others' behaviors.

Latane and Darley (1968) empirically demonstrated this process in a bystander intervention experiment. In this study, participants in groups failed to take action to secure their own safety as the research room filled with smoke. Rather, participants opted to create a façade that they were comfortable in their decision to remain seated as the room fills with smoke, just as their confederate peers do. What is puzzling about this situation is that anyone would be willing to risk their own safety just to fit in and be accepted—one would think that there is no possible instance of social influence that would exert so much pressure that participants contently sit as the potential danger steadily increases. Yet, fear of embarrassment exerts great power on behavior. In contrast, people are somehow unable to recognize the potential of social influence to guide the behavior of others. Rather, we arrive at the conclusion that everyone but ourselves is comfortable in the decision not to act in the face of potential danger, and that we are the only ones pretending. The power of PI prohibits the participant from voicing their true feelings, and leaves participants feeling like they alone have noticed the emergency.

Miller and Prentice (1994) offered two competing explanations for why people attribute different motivations to other's behavior than they do to their own behavior. Both explanations imply that individuals hold naïve theories toward the behaviors of others. The first explanation

for these behaviors is the lack of information we have about others. Whereas we have constant and unlimited access to our own cognitions, we are unable to know the true inner feelings of our fellow peers. Since we lack insight into others' thoughts, we must rely on their behavior to draw inferences about their motivations. Whereas we have abundant insight into our own thoughts, the thoughts of others remain a mystery; thus we must infer the attitudes of others from their public behavioral display.

A second explanation for the misinterpretation of the causes of others' behavior as intention rather than conformity suggest that individuals underweigh the role of the fear of embarrassment conveyed by public behaviors of their peers and overweigh other motives that contribute to their behavior. According to this phenomenon, group members' beliefs about the motivations of their own behaviors and the behaviors of their peers function on the principle of motivational inversion. Members hold naïve cultural theories about behaviors that causes members to infer that the fear of embarrassment is not a sufficient explanation for the behaviors of others, yet it is sufficient for explaining their own behaviors. For example, participants in the bystander intervention study believed that they themselves were more motivated to avoid the fear of embarrassment by being the only one to take action relative to the motivation of others, which they believe was not guided by fear of embarrassment but by other motives that contribute to their behavior. Individuals believe that the fear of embarrassment is not a sufficient motivation for others to potentially put their lives in danger, yet the fear of embarrassment was enough to explain their own behaviors.

Types of Pluralistic Ignorance

Miller and Prentice (1994) suggested PI emerges differently depending on the context at hand. The source of the false norm differs depending on the context. The first type of PI is

situational ambiguity, in which false norms created by a group arise in a limited context, confined to that situation. When people are presented with an ambiguous situation, where social norms are not readily obvious, they must rely on the public behaviors of others to gather insight into what they believe the social norm to be. Upon identifying the norm, individuals act in accordance with the perceived norm, reflecting a process of informational social influence. However, if everyone misinterprets the norm, PI may arise. Once the group disbands, PI dissipates, and the power of that social norm to shape behavior and attitudes ends. A classic example of PI arising from situational ambiguity takes place in the classroom (Miller & McFarland, 1987). In this setting, the lecturer completes a lesson on a complex topic and asks students if they have any questions. The students turn to their peers to gather information on how they should feel about the new material and quickly discover that because their peers front composure, each student feels alone in their confusion. The silence posed by students suggests that everyone comprehended the material, resulting in a misinterpretation of the social norm at hand within the classroom. While this behavior among students is characteristic of PI, the uncertainty in the air does not linger—as soon as class ends, PI is resolved.

However, not all types of PI are as fleeting as the situational type—the other types unfold over time and may have lasting effects on the collective. For instance, the second case of PI is minority-enforced social norms (Miller & Prentice, 1994). This type of PI occurs when the attitudes or beliefs held by a small but vocal and influential minority are misconstrued to be that of the majority. Individuals misestimate the social norm emerging from their group because a small group of people who voice their opinions in such an influential manner that it causes individuals to mistakenly assume that the majority of others support those beliefs as well. Schanck's (1932) Elm Hollow study provided evidence of this type of PI. The case of minority

social influence occurred in this study because a group of people within the community actively voiced their opinions against behaviors such as drinking, playing cards, and smoking. This numerical minority governed the social norm taking place in this community. Based on the opinions of the vocal minority, people believed that virtually every member of Eaton also supported the espoused norm, thus leading people to publicly reinforce a social norm that the majority of members did not privately support. Members of this group felt uncomfortable publically deviating from the false norm due to fear of exclusion and disapproval of the greater community, though their private behavior was a different matter.

Miller and Prentice (1994) also identified a third type of PI known as conservative lag, or cultural lag. This type of PI occurs when public norms that once had widespread public support are perceived to persist, despite having actually lost private support among the majority. In other words, although individual private attitudes have progressed and changed, members incorrectly assume that, based on public behaviors and opinions of others, the attitude is still privately supported by the majority. Thus, despite lacking an authentic belief in the outdated attitude, individuals acquiesce to a public display of behaviors they believe are consistent with the outdated, incorrect attitude. For example, Breed and Ktsanes (1961) investigated attitudes toward segregation. Individual members of the community incorrectly assumed that their fellow community members were opposed to integration of their churches and schools, whereas the majority of individuals held private attitudes in favor of integration. Miller and Prentice (1994) argued that cultural lag inhibits social change. Members continue to conform to behaviors and beliefs despite having actually lost majority support due to a failure to consider the fact that they themselves are not alone in this attitude change—it is actually shared by other members of the group.

The fourth type of PI is known as prototypical or idealized group identity (Miller & Prentice, 1994). This case of PI occurs when the social identity of a group is grounded in idealized, but unrepresentative, beliefs and values. The idealized social norm reflects the social identity of the collective and the prototypical values separate the collective from other groups. However, in the case of PI these values are actually not endorsed by the majority of the group. For example, students at Princeton University consider the traditional drinking practices to be a core part of their identity as a student of the university (Prentice & Miller, 1993). This idealized social norm results in individuals behaving in line with the pro-drinking norms at Princeton, despite private attitudes being considerably less pro-drinking. As with other types of PI, these false norms led individuals to behave in ways they believed would garner acceptance from their peers at Princeton.

Conclusions from Prentice and Miller (1993) demonstrate the power PI exerts over attitudes, yet lack insight into actual behaviors among participants. Miller and McFarland (1987) provided empirical evidence that pluralistic ignorance also impacts behaviors and not attitudes alone. Taken in a classroom context across a series of studies, the researchers found that participants overestimated the number of peers (i.e., other participants) who would seek clarification regarding study subject matter by asking questions. In fact, no one sought assistance. These studies empirically substantiate the behaviors typically seen in authentic classrooms (i.e., where students are clearly confused about the material), but no one attempts to seek clarification. Miller and McFarland (1987) provided a behavioral account of PI. Even though the individuals themselves are puzzled, they not only behave identically from their peers who very well might also be confused, but they also interpret the coolness of others to reflect the situational social norm at hand; it is unacceptable to exhibit confusion. The researchers argue

that PI is likely to result when the social norm at hand, whether authentic or false, communicates to individuals that deviating from the norm will result in feelings of shame and embarrassment. Additionally, individuals believe that, although they behave identically as their peers, they themselves are being controlled by the fear of embarrassment to a greater extent. Thus, Miller and McFarland (1987) provided evidence that behavioral outcomes can arise when PI occurs, and that PI becomes perpetuated when individuals fear being embarrassed from the possibility of breaking the social norm and behaving in ways consistent with our private endorsements.

Correlates of Pluralistic Ignorance

Pluralistic ignorance has been shown to have an influence on both behavior and attitudes. Prentice and Miller (1993) suggested internalization of the false norm can occur. Over time, male students shifted their attitudes toward drinking in the direction of the perceived norm that heavy drinking is a desirable behavior. This suggests that deviating from that norm creates a sense of being at odds with peers, which creates pressure to restore balance between one's own attitudes and the attitudes that one believes their peers support. The tendency for men to internalize the norm further illustrates the power exerted by an unsupported social norm and the PI it generates. Interestingly, the act of internalizing the norm resolved PI among the male participants—no longer were men's private attitudes toward drinking inconsistent with that of their peers. Men's subsequent attitudes toward drinking became more closely aligned with the once false norm within the collective (i.e., heavy drinking became more favorable to men over time), representing an antecedent to and outcome of PI.

Prentice and Miller (1993) demonstrated an additional outcome of PI involving feelings of alienation. When PI within attitudes toward drinking emerged, men over time internalized the false norm. Conversely, women's attitudes did not change. This prompted researchers to ask

whether there may be alternative routes to managing pressures created by PI. In a follow-up study, Prentice and Miller (1993) pursued this question by assessing whether PI increases alienation. They concluded high levels of PI were associated with reduced future commitment and decreased identification with their university, as suggested by lack of interest in attending homecomings.

It is clear that PI can have powerful effects on the individual. When PI emerges, it comes with consequences. Depending on the attitudes being examined, PI can also be impacted by variables that make it more likely to occur. One variable that can predict the occurrence of PI is gender. For instance, researchers examined PI within attitudes toward hookups among male and female college students (Lambert et al., 2003). What they concluded was that the observed discrepancies between participants' own attitudes and the attitudes they believe their peers hold varied by gender. Women mistakenly believed that other women are more comfortable with hooking up than they are themselves, while men mistakenly believed that women are more comfortable with hookups than they truly are, although the discrepancy between self and other attitudes was greater among women than men. Similarly, PI within attitudes toward drinking also vary by gender (Hines et al., 2002; Prentice & Miller, 1993).

Fear of embarrassment may also determine whether PI occurs (Miller & McFarland, 1987). Individuals are highly motivated to act in accordance with the behaviors of their peers. Once individuals feel as though they have a grasp on the social norm at hand, they feel it unacceptable to behave in ways inconsistent with that norm, regardless of whether the norm is false or true. For instance, in one of the series of studies by Miller and McFarland (1987), participants were provided with an extremely difficult essay and were tasked with having to discuss the article with their peers (other participants). When participants in this study had the

option to ask questions, they felt at odds with the group due to the possibility of being embarrassed by asking a question of the experimenter. Conversely, participants in another condition were explicitly told they were not allowed to ask questions. Because the social norm in the classroom was addressed and made clear, the participants did not have an opportunity to feel at odds with their group. Thus, Miller and McFarland (1987) provided support for the notion that the fear of embarrassment is a necessary condition that determines whether PI will arise in a situation.

History of Transgender Prejudice as a Psychological Construct

Consistent with an increased interest in attention toward gender identity, interest in the scientific community in attitudes toward transgender people has increased in recent years (Anderson, 2018). As knowledge and visibility of the transgender issues increases, attitudes toward transgender individuals have become increasingly polarized (Norton & Herek, 2013). There is abundant evidence that transgender individuals experience high levels of prejudice, discrimination, violence, and harassment (e.g., James et al., 2016; Kolp et al., 2019; Lombardi et al., 2001). Additionally, the scientific attention transgender prejudice has received in recent years is likely a response to the generous amount of research centered on the lesbian, gay, and bisexual (LGB) community and individual attitudes toward LGB individuals. Considering the problematic nature of violence toward trans people, it is troubling that investigation of these issues has not progressed further. Likewise, researchers argue that the “T” in LGBT is often forgotten in studies of sexual minorities (Barbir et al., 2017; TenBrook, 2018).

The term transgender is often considered an umbrella term that covers individuals whose gender identity differs from what was assigned at birth, who exhibit variance in gender characteristics, or whose gender expression deviates from culturally defined norms associated

with a specific gender (APA, 2011; Buck, 2016; Simons et al., 2014). Likewise, transgender prejudice can simply be defined as prejudicial and negative attitudes toward transgender people (Anderson, 2018). Although the term *transphobia* is often used to capture prejudice toward transgender people, *transphobia* is considered a less desirable term as it implies that prejudice individuals are victims of irrational fear, and ignores the active role that individuals have in maintaining their prejudice. Indeed, transphobia is defined as the irrational fear of, or an emotional disgust toward, people who do not conform to traditional societal gender expectations (Hill & Willoughby, 2005). In contrast, transgender prejudice focuses less on the negative impact of transgender people on gender-conforming or cisgender individuals and more on the negative impact of gender-confirming or cisgender individuals on transgender people. Whereas transphobia suggests fear of trans people, transgender prejudice focuses on negative attitudes and opinions toward trans people.

Because research interest in transgender individuals and attitudes toward transgender individuals has garnered greater attention, many measures of attitudes toward transgender people have been published within the past 15 years (e.g., Billard, 2018; Hill & Willoughby, 2005). Early measures of trans attitudes were either single-item measures or lacked sound psychometric properties (e.g., Franzini & Casinelli, 1986; Green et al., 1966). The first measure of attitudes toward transgender individuals to demonstrate strong psychometric characteristics is the Genderism and Transphobia measure (Hill & Willoughby, 2005). Subsequently, many scales designed measuring transgender prejudice have emerged, which vary in their psychometric quality (Morrison et al., 2017).

Hill and Willoughby's (2005) initial measure of attitudes toward transgender people was grounded in a broader framework for interpreting transgender prejudice (Hill, 2002). Three

primary concepts are proposed to underlie prejudiced attitudes toward transgender people: transphobia, genderism, and gender-bashing, which represent both causes and outcomes associated with transgender prejudice. In this framework, transphobia represents feelings of revulsion for people who defy traditional gender norms. Hill (2002) noted that transphobia in this model is not intended to represent irrational fear or clinical phobic reactions. Genderism is a cultural ideology, which punishes individuals who engage in gender nonconformity or self-identify with a gender different from the gender they were assigned at birth. Gender-bashing captures the violence experienced by transgender persons and includes harassment and physical assault experienced by transgender people (Wilchins, 1997), which is consistent with research finding widespread existence of the antipathy and discrimination experienced by transgender individuals (Lombardi et al., 2001). The gender-bashing component within the framework is also consistent with the fact that transgender people are extremely prone to sexual assault, even from a young age, relative to cisgender individuals (Clements-Noelle et al., 2006; Garofalo et al., 2006; Kenagy, 2005b; Stozer, 2009; Xavier et al., 2007). Indeed, being trans leads other people to target them and inflict sexual violence. However, not all trans people are targeted equally. People who have transitioned from male to female, also known as MTF trans people, are even more prone to both sexual and physical assault. Motivation for sexual violence among perpetrators is centered around their deeply ingrained hatred and prejudice of trans people (Stozer, 2009). Such perpetrators are often not strangers to the victim; instead, they are acquainted with the victim, and many are the victim's own family (FORGE, 2005). Taking all three components within the framework (Hill, 2002), it is vital to investigate possible predictors and outcomes of transgender prejudice.

Correlates of Transgender Prejudice

Several variables are related to prejudicial attitudes toward transgender individuals. For instance, high levels of transgender prejudice are associated with violence and discrimination toward trans people (Hughto et al., 2015). Relative to individuals with low levels of trans prejudice, people with high levels are more likely to commit violent acts against trans people. This violence includes high rates of sexual assault and physical violence (Kolp et al., 2019; Xavier et al., 2007), as well as harassment and verbal abuse (Stozer, 2009). In other words, the greater the extent of one's prejudice is toward trans people, the more likely they are to engage in such violent behaviors (Anderson, 2018; Tebbe & Moradi, 2012). Self-report data from surveys assessing attitudes toward transgender people and the extent of one's trans prejudice show that higher levels of trans prejudice are associated with more violent manifestations of one's prejudice (e.g., Anderson, 2018; McCullough et al., 2019).

Although it is clear that transgender individuals are targets of sexual and physical violence, trans prejudice has consequences that arise from high levels of prejudice within transgender people. Internalized transgender prejudice results when trans people hold highly prejudiced attitudes toward trans people as a whole and is characterized by an internalization of gender roles and societal expectations. Internalized prejudice is associated with a tendency for trans people to feel at odds with their identity as trans people (Bockting et al., 2020). Internalization of trans prejudice is also associated with feelings of shame toward one's own gender identity and being transgender. Feelings of shame may lead transgender people to conform to gender role expectations that align with the gender they were assigned at birth (Hill, 2002). Additionally, internalization of trans prejudice is associated with a detachment from identifying and belonging to their community of trans individuals and feeling alienated from the

group (Bockting et al., 2020). Further, internalized trans prejudice is associated with lower levels of self-esteem and well-being (Austin & Goodman, 2017), which is also associated with attempts to conceal one's true identity and avoid expressing one's gender identity.

The transgender community is a highly stigmatized group, which has consequences for mental and physical health among trans people (Garofalo et al., 2006). Because transgender individuals experience high levels of prejudice, violence, and discrimination, transgender people experience negative outcomes like developing depression and depressive symptoms, as well as elevated rates of suicide and suicidal ideation (Clements-Noelle et al., 2006; Witcomb et al., 2018). Second, there is evidence that because health professions like nurses and doctors do not receive sufficient education about transgender people (Acker, 2017; O'Neil, 2008), they may not be able to provide them with expert care. Furthermore, trans people are often denied healthcare (mental and physical), predisposing them with problems from HIV/AIDS and suicide (Kenagy, 2005). Indeed, such stigma limits available resources to trans people, further decreasing their mental and physical well-being (Hughto et al., 2015).

Although being the target of transgender prejudice as well as internalizing trans prejudice predicts an array of negative outcomes, several factors are known to predict high levels of transgender prejudice. Consistent with evidence that political conservatism is associated with many forms of prejudice such as cissexism (Prusaczyk & Hodson, 2020), high levels of political conservatism (relative to political liberalism) are known to be a significant predictor of negative attitudes and prejudice toward transgender people (Cragun & Sumerau, 2015; Makwana et al., 2017; McCullough et al., 2019). Right-wing authoritarianism (RWA), characterized by aggression toward outgroups and support for traditional values (Altemeyer, 1981; Whitley, 1999), along with social-dominance orientation, concerned with maintaining dominance over

others (Pratto et al., 1994), are both predictors of trans prejudice (Makwana et al., 2017). RWA in itself is correlated with several other predictors of trans prejudice, which is fueled by the need for people who endorse RWA to uphold traditional values. Transgender people, who often blur the lines of gender-role conformity and challenge the gender binary, are met with additional antagonism by people high in RWA, as trans and gender-nonconforming people violate such deeply ingrained social, traditional values (Tebbe & Moradi, 2012; Tee & Hegarty, 2006).

In addition to political conservatism being a powerful predictor of trans prejudice, conservative religious attitudes and traditions are also known to be strong antecedents of transgender prejudice (Nagoshi et al., 2008). Abundant evidence exists that verifies the fact that religiosity is a predictor of prejudice. The stronger one's affiliation with religion is, the more negative attitudes are held toward trans people, relative to non-religious people (Campbell et al., 2019). Certain religious attitudes incline people to be more likely to engage in prejudice and discrimination toward trans people. One such attitude is religious fundamentalism, or the belief that religious texts are to be interpreted literally and without nuance (Emerson & Hartman, 2006). Individuals high in religious fundamentalism exhibit more prejudicial attitudes relative to those low in religious fundamentalism (Hunsberger, 1995). Further, there is evidence that evangelical Christians, who are typically high in religious conservatism, are significantly more prejudiced than non-religious people (Kanamori et al., 2017). However, it may not be one's specific religious traditions that incline followers to be more prejudiced. Rather, the extent of one's following of religious traditions and religiosity as a whole may be better predictors of trans prejudice (Campbell et al., 2017).

It is clear that political and religious conservatism are predictors of prejudice against transgender persons. Additionally, many anti-trans attitudes vary by gender. Women, relative to

men, tend to hold attitudes more in favor of trans people (Nagoshi et al., 2008; Tebbe & Moradi, 2012). Heterosexual males in particular are frequent perpetrators of violence toward trans people, relative to gay and bisexual males (Anderson, 2018). Gay and bisexual men commit fewer instances of violence and discrimination toward trans people, likely due to a lesser extent of gender conformity and belonging to the greater LGBTQ+ community. Conversely, heterosexual males may be markedly higher in levels of trans prejudice due to a strong identification with the male identity and masculinity, known as gender self-esteem. The more a male identifies with his gender identity, the more likely he is to exhibit trans prejudice (Anderson, 2018). Furthermore, heterosexual men may find a trans woman (i.e., male to female) attractive, which violates the very principles consistent with the male identity. Violence from heterosexual men is motivated by their attraction toward trans women—once they find out the woman is trans, they are likely to engage in violence, perhaps as a compensation mechanism to overcome attraction to someone who was once male (Anderson, 2018).

Overall, trans prejudice predicts several factors such as shame, alienation, and decreased self-esteem, while things like masculinity, religiosity, and political conservatism are known antecedents that lead to trans prejudice. Thus, it is necessary to examine true attitudes toward trans people held by individuals, and attitudes individuals believe their peers to hold, in order to determine whether a discrepancy exists between self and other attitudes.

The Present Study

The present study investigates whether PI within attitudes toward transgender persons exists, in addition to whether this type of PI is moderated by religious or political conservatism. Although studies have been conducted examining attitudes toward other sexual minorities and whether PI emerges in self versus other attitudes (i.e., gays, lesbians, and bisexuals; Bowen &

Bourgeois, 2001), no prior study has examined the case of PI within attitudes toward transgender individuals, despite widespread evidence that trans people are often subjected to violence and prejudice (White & Goldberg, 2006). Thus, providing an explanation of others' attitudes, in addition to individual attitudes, is crucial in order to determine whether PI exists within attitudes toward trans people.

The primary goal of the present study is to evaluate self-report attitudes toward transgender individuals (Barbir et al., 2017; Tebbe et al., 2014), both individuals' own attitudes and attitudes individuals believe others hold. Also being assessed is the extent that one holds religious and political conservative beliefs (Altemeyer & Hunsberger, 1992; Everett, 2013; Gorsuch & McPherson, 1989; Sidanius, 1976a; Stellaway, 1973). Self-report political and religious conservatism measures are utilized in order to determine whether they moderate PI within trans attitudes. Taking these variables into account, the present study features a mixed-model factorial design, characterized by a within-subjects independent variable of target of rating (self vs. other), with a between-subjects quasi-experimental independent variable of political and religious conservatism (high vs. low). Finally, the present study poses two main hypotheses:.

Hypothesis 1. PI within attitudes about trans people will be moderated by political attitudes.

Hypothesis 1a. A main effect for target of rating (self vs. average Radford student) is expected. Participants' self-reported attitudes toward trans people are expected to be more positive (less prejudiced) than the ratings participants make for their peer's attitudes. This pattern of results represents a significant PI effect.

Hypothesis 1b. A main effect for political attitudes is also expected. Politically conservative participants are expected have more negative overall attitudes (self ratings and

average Radford student ratings combined) toward trans people, compared to politically liberal participants.

Hypothesis 1c. The interaction between target of rating (self vs. average Radford student) and political attitudes is expected to be significant. Liberal participants are expected to show a pattern of PI where self ratings are significantly more pro-trans (less prejudicial) than ratings made for the average Radford student. In contrast, conservative participants are expected to have self and average Radford student ratings that are equally prejudicial. Also, conservative participants' average student ratings are not expected to significantly differ from the average Radford student ratings made by liberal participants.

Hypothesis 2. PI within attitudes about trans people will be moderated by religious attitudes.

Hypothesis 2a. A main effect of target rating (self vs. average Radford student) is expected, such that participants' self-reported attitudes toward trans people are expected to be more positive (less prejudiced) than the ratings for their peers' attitudes. This pattern of results represents a significant PI effect.

Hypothesis 2b. A main effect for religious attitudes is also expected. Participants who identify closely with their religion and hold more conservative religious beliefs are expected to report more negative overall attitudes (self vs. average Radford student ratings combined) toward trans people, relative to participants who do not closely identify with a religion and hold liberal religious beliefs.

Hypothesis 2c. The interaction between target rating (self vs. average Radford student) and religious attitudes is expected to be significant, such that participants who do not identify closely with their religion and hold liberal religious beliefs are expected to show a pattern of PI,

where self-ratings toward trans people are more positive (less prejudicial) relative to ratings made for the average Radford student. Conversely, participants who identify closely with their religion and hold conservative religious beliefs are expected to report equally prejudicial self and average Radford student ratings toward trans people.

Chapter 2

Method

Participants

The initial sample consisted of 226 participants. After data screening (see Data Analysis Plan below), 36 participants were excluded from analyses. The final sample size consisted of 190 undergraduate college students enrolled in psychology courses at a medium-sized university in the Southeastern United States. Participants ranged in age from 17 to 27, with a mean of 18.93 (*SD* = 1.65). The majority of participants were female (84.2%), and 14.7% were male. Participants were also given the option to choose to specify an Additional Gender Identity and to not disclose their gender identity; only 1% identified as an additional gender identity or preferred not to disclose their gender. Participants were also asked whether they identify as transgender: The majority identified as cisgender (97.4%), with 2.6% identifying as transgender. In addition, the majority of participants were Caucasian (71.1%), with 19.5% African-American, 0.5% East-/Southeast-Asian Americans, 1.1% Middle-Eastern/North-African-American, 3.7% Hispanic, Latino/a, Chicano/a American, 3.2% multi-ethnic, and 1.1% reported an "other" ethnicity. The majority of participants identified their religious traditions as Christianity (67.9%), 0.5% Judaism, 0.5% Islam, 11.1% Nothing in particular, 10.5% Agnosticism, 5.8% Atheism, and 3.7 indicated Other for their religious traditions. Additionally, the majority of participants identified their sexual orientation as Heterosexual/Straight (73.7%), 0.5% identified as Gay, 2.1% Lesbian, 15.8% Bisexual, 4.2% Additional sexual identity, 1.1% Queer, and 2.6% did not disclose their sexual orientation.

Measures

Trans-prejudice

Two measures were used to assess participants' trans-prejudice. The Revised Short Form of the Genderism and Transphobia Scale (GTS-R-SF; Tebbe et al., 2014) assessed severe expressions of prejudicial attitudes toward transgender people. The GTS-R-SF consists of two subscales—Gender-bashing and Genderism and Transphobia. The present study only utilized the Genderism and Transphobia subscale. Participants rated the extent that they agreed with eight items on a 7-point numerical rating scale for both their own attitudes, and the attitudes they believe the average student from their university holds, from 1 (*strongly disagree*) to 7 (*strongly agree*). An example item that assessed "self" attitudes included "If I found out that my best friend was changing their sex, I would freak out," and an example item that assessed "other" attitudes included "If the average student found out that their best friend was changing their sex, the average student would freak out." See Appendix A for a complete list of GTS-R-SF scale items. Appropriate items are reverse-scored, and scale scores are created by averaging item ratings, such that higher scores on the GTS-R-SF indicate greater anti-trans prejudice. In the present study, the GTS-R-SF had a high level of internal consistency, with a Cronbach's alpha for the self-scores of .95, and an alpha for other-scores of .89.

An additional measure of transphobia was obtained using the Negative Intentions and Negative Attitudes subscales of the Assessment of Attitudes, Beliefs, and Behavioral Intentions toward Transgender Individuals (Barbir et al., 2017). Participants rated the extent that they agreed with statements on a 6-point numerical rating scale for both their own attitudes and the attitudes they believed the average student from their university holds, from 1 (*strongly disagree*) to 6 (*strongly agree*). An example item from the 11-item Negative Intentions subscale that assesses "self" intentions included "If a friend of mine came out as transgendered, I would stop talking to them," whereas an item that assessed "other" intentions included "The average

university student would stop talking to a friend if the friend came out as transgendered." An example of the nine item Negative Attitudes scale that assessed "self" attitudes included "Transgendered people should not be able to adopt," whereas an item that assessed "other" attitudes included "The average university student thinks that transgendered people should not be able to adopt." See Appendix B for the complete list of items. Appropriate items were reverse coded, and scale scores were created by averaging item ratings, such that higher scores on the Negative Intentions and Negative Attitudes subscales indicate greater transphobia and discrimination toward trans people. In the present study, these measures had high levels of internal consistency, with a Cronbach's alpha of .94 for the Negative Intentions subscale self, an alpha of .94 for the Negative Intentions subscale other, an alpha of .96 for the Negative Attitudes subscale self, and an alpha of .95 for the Negative Attitudes subscale other.

Religiosity

Four measures were used to assess religiosity: the Christian Conservatism Scale (Stellaway, 1973), the Christian Liberalism Scale (Stellaway, 1973), the Religious Fundamentalism Scale (Altemeyer & Hunsberger, 1992), and the Religious Orientation Scale (Gorsuch & McPherson, 1989). The seven-item Christian Conservatism Scale (Stellaway, 1973) and the six-item Christian Liberalism Scale (Stellaway, 1973) assessed participant's personal commitment to the theological, anthropological, and epistemological assumptions of conservative or liberal Christianity, respectively. Participants rated each item on a 5-point numerical rating scale, from 1 (*strongly disagree*) to 5 (*strongly agree*). Example items from the Christian Conservatism Scale and the Christian Liberalism Scale included "All Biblical miracles happened just as the Bible says they did," and "Science and religion are both equally good ways to find truth," respectively. See Appendix C for the complete list of the Christian Conservatism

Scale and see Appendix D for the complete list of the Christian Liberalism Scale. Scale scores were created by averaging the scores, such that a higher score on the Christian Conservatism Scale indicated higher levels of conservative Christianity, and a higher score on the Christian Liberalism Scale indicated higher levels of liberal Christianity. In the present study, Cronbach's alphas for the Christian Conservatism Scale and the Christian Liberalism Scale were .93 and .79, respectively.

The third religiosity measure was the Religious Fundamentalism Scale (Altemeyer & Hunsberger, 1992), which assessed a "fundamentalist" way of holding and expressing one's religious beliefs, not limited to Christianity. Participants rated 20 items on a 9-point numerical rating scale as to how much they agreed with each statement, from -4 (*very strongly disagree*) to +4 (*very strongly agree*), with a rating of 0 indicating neutrality. Example items included "God has given mankind a complete, unfailing guide to happiness and salvation, which must be totally followed," and "Parents should encourage their children to study all religions without bias, then make up their own minds about what to believe." See Appendix E for a complete list of items in the Religious Fundamentalism Scale. Appropriate items were reverse coded, and scale scores were created by averaging the scores, such that a higher score indicated a stronger belief in religious fundamentalism. In the present study, this measure had high levels of internal consistency, with a Cronbach's alpha of .95.

Finally, the fourth religiosity measure was the Religious Orientation Scale – Revised (Gorsuch & McPherson, 1989), which assessed both the intrinsic and extrinsic religious orientation originally posited by Gordon Allport (1950). Participants rated 14 items on a 5-point numerical rating scale as to the extent they agreed with the statement, from 1 (*strongly disagree*) to 3 (*I'm not* sure) to 5 (*strongly agree*). Example items included "I enjoy reading about my

religion," and "What religion offers me most is comfort in times of trouble and sorrow." See Appendix F for a complete list of items in the Religious Orientation Scale – Revised. Appropriate items were reverse coded, and scale scores were created by averaging the scores, such that a higher score indicated strong religious beliefs. A previous study (Gorsuch & McPherson, 1989) divided this measure into three subscales (intrinsicness, socially oriented extrinsicness, and personally oriented extrinsicness), in which Cronbach's alphas have ranged from .57 to .65. The present study utilizes the total scale score and the Cronbach's alpha for the entire scale was .88.

Political attitudes

Two measures were used to assess political attitudes in participants. The Social and Economic Conservatism Scale (SocECon; Everett, 2013) assessed conservatism as a general approach to political issues, regardless of party affiliation or underlying personality type. Participants rated how positive or negative they feel about 12 items using a feelings thermometer from 0 – 100, where 0 represented a very negative attitude and 100 represented a very positive attitude. Example items included "Abortion" and "Traditional marriage." See Appendix G for a complete list of items in the SocECon. Appropriate items were reverse coded, and scale scores were created by averaging the scores, such that higher scores for each item indicated a more positive attitude. In the present study, this measure had a high level of internal consistency, with a Cronbach's alpha of .80.

The second measure that assessed political attitudes was the Political Conservatism Scale (Sidanius, 1976a), which measured sociopolitical attitudes, specifically areas such as punitiveness, racism, political-economic conservatism, and social conservatism. Participants rated how negatively or positively they feel toward 36 statements on a numeric rating scale, from

1 (*very negative*) to 7 (*very positive*). Example items included “Eliminate affirmative action” and “Socialism.” Three of the 36 items were modified to refer to more modern political events and issues. The first item that was modified originally stated “Improved relations with Vietnam,” but has been modified to “Improved relations with Iran.” The second item that was modified originally stated “American military intervention in Latin America,” but has been modified to “American military intervention in the Middle East.” Finally, the third item that was modified originally stated “White superiority,” but has been modified to “White supremacy.” See Appendix H for a complete set of items. Appropriate items were reversed scored, and scale scores were created by averaging scores, such that higher scores indicated a higher degree of conservatism. In the present study, this measure had high levels of internal consistency, with a Cronbach’s alpha of .90.

Additionally, political party was assessed. Participants were provided with a single-item measure included in the demographics section that asked, “Which political party do you most identify with?” with options of Republican, Democratic, Independent, or other, in which they can specify (see Appendix I). Finally, participants indicated whether they view themselves as more politically liberal or politically conservative in a single-item measure, with response options on a 7-point numerical rating scale ranging from 1 (*Very conservative*) to 7 (*Very liberal*).

Procedure

Participants were recruited from the Psychology Department Research Participant Pool. Participants logged into SONA (Sona Systems Ltd., Tallin, Estonia) and signed up to participate in an online questionnaire. Upon signing up via SONA, participants followed a link to a questionnaire administered via Qualtrics (Qualtrics Inc., Provo, UT). Participants first completed an informed consent form (see Appendix J). After, participants completed a brief demographics

questionnaire (see Appendix I). Participants then completed a pre-test measure of Need Satisfaction and Mood as part of larger investigation not reported here. Next, participants completed both self and other measures of trans prejudice in a nested randomized order. Specifically, participants completed two blocks (self rating block and average Radford student rating block) of measures that each contained the three measures of trans prejudice, the GTS-R-SF and the Negative Attitudes and Negative Intentions subscales of the Assessment of Attitudes, Beliefs, and Behavioral Intentions Toward Transgendered Individuals. The order of the self-rating block and average-student-rating block were randomized. Further, within the self and average student blocks, the order of the three measures was randomized.

Again as part of a larger study not reported here, participants completed a manipulation check to emphasize the salience of PI within trans prejudice, by reinforcing the discrepancy between participants' own attitudes and the attitudes they believed the average student at their university holds. Participants then completed a post-measure of Needs Satisfaction and Mood.

Next, in a nested randomized order, participants completed a block of measures of religiosity and political attitudes. Participants completed either the religiosity block of measures first, or the political attitudes block of measures first. Within each block, the order in which participants complete the individual measures of religiosity and political attitudes was also randomized. Upon completion of all measures, participants were thanked for participation, compensated with course credit, and debriefed (see Appendix K).

Data analysis plan

In Step 1, data were screened based on completeness, speed, and response variability. Only participants who completed 60% or more of the survey were included, and participants who spent less than 10 minutes on the survey were omitted. For response variability, participants were

excluded if they met at least one of the four following criteria: completion of all measures of trans attitudes (self and other) with no variability, data missing from any of the six critical trans attitudes measures, data missing from more than 10 measures in general, or no variability on scales that feature items requiring reverse scoring. In Step 2, data reduction using exploratory principal components analysis (factor analysis) was completed. Step 3 included a test of potential covariates, which compare demographic variables (age, gender, trans identity, ethnicity, religious tradition, sexual orientation, highest education status of respondent's mother and father, urbanity, household income, and political party) with main variables of interest (transgender prejudice, religious conservatism, religious orientation, religious fundamentalism, social and economic conservatism). Step 4 tested hypotheses 1 and 2 using a mixed-model repeated measures factorial ANOVA.

Chapter 3

Results

Data Reduction Analyses

In order to test whether related scales could be collapsed into a single variable, a series of factor analyses were conducted using exploratory principle components analysis with varimax rotation. With regard to transgender attitudes self scores, items from three measures were included: the Negative Intentions and the Negative Attitudes subscales from the Assessment of attitudes, beliefs (Barbir et al., 2017), and behavioral intentions toward transgender individuals scale, as well as the Genderism and Transphobia – Revised – Short form scale (GTS-R-SF; Tebbe et al., 2014). The factor analysis identified two factors with eigenvalues greater than one. The first factor accounted for 66.09% of the variability in scores, with an eigenvalue of 18.51. The second factor accounted for an additional 5.60% of the variance, with an eigenvalue of 1.57. Visual inspection of the scree plot inflection point suggests one predominant factor. With this in mind, one composite variable was created, accounting for participant self attitudes toward trans people.

With regard to transgender attitudes other scores, items from three scales were included: the “other” versions of the GTS-R-SF, the Negative Intentions subscale, and the Negative Attitudes subscale. The factor analysis identified three factors with eigenvalues greater than one. The first factor accounted for 58.31% of variability, with an eigenvalue of 16.33. The second factor accounted for an additional 5.64% of variability, with an eigenvalue of 1.58. Finally, the third factor contributed an additional 4.03% of variability, with an eigenvalue of 1.13. Visual inspection of the scree plot inflection point suggests one predominant factor. Thus, scores were collapsed into one single factor. It should be noted that although factor analysis identified more

factors than what was used, both composite measures of transgender attitudes (self and other) nonetheless had high internal consistency, with an alpha of .97 for self and .98 for other.

Factor analyses were also conducted to examine whether scores for variables measuring religiosity could be combined into a single composite variable. After adding all items that measured religiosity, results identified five factors. The factor with the largest eigenvalue of 19.18 only accounted for 46.48% of variability. Visual inspection of the scree plot inflection point did not suggest a single predominant factor. Thus, the most efficient way to measure religiosity was to keep each of the four measures (Christian liberalism, Christian conservatism, Religious orientation, and Religious fundamentalism) separate. Additionally, factor analysis was conducted on the two measures of political attitudes, the Social and Economic Conservatism scale and the Political Conservatism scale. Factor analysis revealed 12 factors with eigenvalues greater than one. The factor contributing the most variability only accounted for 24.69%, with an eigenvalue of 12.34. Visual inspection of the scree plot inflection point did not suggest one predominant factor. Thus, the most efficient way to measure political attitudes was to keep the four measures separate. No coherent composite variable was able to account for more variability than individual measures.

Descriptive Analyses

Descriptive statistics are presented in Table 1 in Appendix L, which presents descriptive data (*n*, mean, and standard deviation) and reliability for the main variables of interest. Reliabilities were adequate for all measures. Table 1 also reports bivariate zero-order correlations between all the main variables of interest.

Demographic Analyses

A series of preliminary analyses tested associations between demographic variables (transgender identity, gender, religious traditions, sexual orientation, and ethnicity) and the main variables of interest (transgender attitudes self, transgender attitudes other, political conservatism, social and economic conservatism, Christian conservatism, Christian liberalism, religious fundamentalism, religious orientation, and one's rating of conservatism to liberalism) in order to identify potential covariates for the main analyses. Before conducting these analyses, a number of categorical variables were recoded to combine groups with limited representation. Participants' political party originally included four categories: Republican, Democratic, Independent, and Other. The original categories of Independent and Other party were recoded to form a single group, referred to as Independents or Other. Final group percentages were 23.7% Republican, 37.4% Democrat, and 34.7% Independents or Other. For gender, initial options included Male, Female, Additional Gender Identity, and Prefer not to disclose. Because only three participants specified a gender different from male or female, they were excluded from demographic analyses. Thus, only male and female participants were included in these analyses. The majority of participants were female (84.2%), and 14.7% were male.

Further, Initial ethnicity options included 11 categories: Caucasian, African American, East/Southeast Asian American, Pacific Islander American, South-Asian American, Middle-Eastern/North-African American, Hispanic, Latino/a, Chicano/a American, Caribbean American, American Indian/Native American, Multi-Ethnic, and Other. Because multiple ethnic categories lacked any representation and other categories only contained a few participants, ethnicity was collapsed into three categories: Caucasian/European America, African American, and those who

identified as an additional ethnicity. The majority of participants were Caucasian (71.1%), 19.5% were African American, and 9.5% identified as an additional ethnicity.

With respect to sexual orientation, the initial coding included seven options: Heterosexual (Straight), Gay, Lesbian, Bisexual, Additional sexual identity, Queer, and Prefer not to disclose. Because the majority of participants identified as heterosexual, and only 52 participants identified as one of the remaining sexual orientation categories (0.5% Gay, 2.1% Lesbian, 15.8% Bisexual, 4.2% Additional sexual identity, 1.1% Queer, and 2.6% did not disclose their sexual orientation), the remaining categories were collapsed to form a single group. In the final coding, the majority of participants identified their sexual orientation as heterosexual (73.7%), and 26.3% identified as Gay, Lesbian, Bisexual, Queer, Additional sexual identity, or preferred not to disclose their sexual identity.

Initial coding for participant Religious Traditions included 11 options: Christianity, Mormonism, Judaism, Islam, Hinduism, Buddhism, Unitarian Universalism, Nothing in particular, Agnosticism, Atheism, and Other. Because most participants identified as Christian, Nothing in particular, Agnostic, or Atheist and because additional options were un- or under-represented, four main categories of religious traditions were created. These include Christian, Nothing in particular, both Atheists and Agnostics (because of their similar philosophies), and Other Traditions. Within these four categories, the majority of participants identified as Christian (67.9%), with 11.1% identifying as nothing in particular, 16.3% identifying as either agnostic or atheist, and 4.7% identified as having another religious tradition.

Demographic analyses involving gender (see Table 2 in Appendix L) indicate that males reported significantly higher scores for self and other reports of trans prejudice, relative to

females. Conversely, females reported significantly higher levels of Christian conservatism, Christian liberalism, religious fundamentalism, and religious orientation.

Demographic analyses involving ethnicity revealed significant differences in participants' level of conservatism/liberalism, $F(2, 177) = 3.43$, $p = .04$, $\eta^2 = .04$. Fisher's LSD post hoc analyses indicate that Caucasians/European Americans reported being significantly less liberal (more conservative; $M = 2.05$, $SD = .83$) than African Americans ($M = 2.44$, $SD = .66$). The political attitudes of participants who identified as Other for ethnicity did not differ from either Caucasian or African-American participants ($M = 2.23$, $SD = .56$). A significant association was also found between ethnicity and political party, $\chi^2(4, N = 182) = 37.28$, $p = < 001$, $\Phi = .45$. See Table 3 in Appendix L for crosstabulations. Specifically, African Americans were significantly underrepresented among participants identifying as republican, whereas Caucasians/European Americans were significantly overrepresented among republicans. African Americans, and others were overrepresented among Democrats, and Caucasians/European Americans were underrepresented.

Table 4 in Appendix L reports associations between sexual orientation and the continuous main variables of interest. Heterosexuals reported being significantly more prejudiced toward transgender people, politically conservative, socially and economically conservative, religiously fundamentalist, and religiously oriented, compared to participants who identified with additional sexual orientations. In contrast, heterosexual participants reported being significantly less liberal than participants who identify with additional sexual orientations. Furthermore, there was a significant association between sexual orientation and political party, $\chi^2(2, N = 182) = 15.01$ $p = < 001$, $\Phi = .29$. See Table 5 in Appendix L for crosstabulations. Republicans were overrepresented among heterosexuals, while participants who identified as an additional sexual

orientation were underrepresented. Democrats were over-represented among participants who identified as an additional sexual orientation, and underrepresented among heterosexuals.

Table 6 in Appendix L reports significant associations between religious traditions and the main variables. Christians reported the highest levels of transgender prejudice, political conservatism, social and economic conservatism, Christian liberalism, and Christian conservatism. Christians also reported the highest levels of religious fundamentalism, and were most oriented toward religion. Atheist and Agnostic participants reported the highest levels of political liberalism. Conversely, Atheists and Agnostics reported the lowest levels of trans prejudice, social and economic conservatism, Christian conservatism, and Christian liberalism, and were the least oriented toward religion and held the lowest levels of religious fundamentalism. There was also a significant association between religious traditions and political party, χ^2 (6, N = 182) = 24.64, p = < 001, Φ = .37. See Table 7 in Appendix L for crosstabulations. Among Republicans, Christians were overrepresented, while those who identified as nothing in particular, agnostic or atheist were underrepresented. Finally, among independents and other political ideologies, Christians were underrepresented.

Main Analyses

To test the hypotheses that PI occurs within prejudice toward trans people and this PI is moderated by either political attitudes or religious attitudes, a series of mixed model factorial ANOVAs were conducted. Conservatism, social and economic conservatism, Christian conservatism, Christian liberalism, religious orientation, and religious fundamentalism were dichotomized using median split values. In these cases, 2 (Target of rating: self vs. other; within subjects) x 2 (Political/Religious attitudes: high vs. low; between subjects) mixed model ANOVAs were used. The single item liberal versus conservative continuum rating underwent a

tertial split, and reflects Highly Conservative (half a standard deviation below the mean or lower), Intermediate, and Highly Liberal (half a standard deviation above the mean or higher) political attitudes. Additionally, the three-category recoded version of political party (Republican, Democrat, and Independent or Other) was utilized. In these latter analyses, 2 x 3 mixed model factorial ANOVAs were conducted.

For hypothesis 1, it was expected that PI within attitudes toward transgender individuals would be moderated by political attitudes. Hypothesis 1 was tested across four variables examining political attitudes: social and economic conservatism, political conservatism, the single-item measure of participant political party, and the single item measures of liberalism versus conservatism rating. With respect to analyses involving social and economic conservatism, a significant main effect of target was revealed, $F(1,179) = 168.24$, $p < .001$, $\eta_p^2 = .49$. Participants reported being less prejudiced toward trans people ($M = 1.88$, $SD = 1.04$) than they believed their peers are ($M = 3.01$, $SD = .97$). A significant main effect of social and economic conservatism was also found, $F(1, 179) = 9.95$, $p = .002$, $\eta_p^2 = .05$. Politically liberal participants ($M = 2.26$, $SE = .08$) reported significantly lower overall ratings toward trans people (self and other ratings combined) than politically conservative participants ($M = 2.62$, $SE = .08$). Finally, the interaction was significant, $F(1, 179) = 20.39$, $p < .001$, $\eta_p^2 = .10$. Analysis of simple effects (see Table 8 in Appendix L) revealed that liberal participants reported being significantly less prejudiced toward trans people than they believed their peers were. Conservatives also reported being less prejudiced toward trans people than they believed their peers were. However, conservative participants reported holding more negative attitudes about trans people than liberal participants. Finally, it is important to note that conservatives and liberals did not differ in their

estimates of their peers' attitudes toward trans people. This pattern of results provides support for hypothesis 1.

With respect to analyses involving political conservatism, a significant main effect of target was observed, $F(1, 178) = 192.06$, $p < .001$, $\eta_p^2 = .52$. Participants reported being less trans prejudiced ($M = 1.85$, $SD = 1.03$) than they believed their peers are ($M = 3.02$, $SD = .96$). A significant main effect of political conservatism was also found, $F(1, 178) = 18.26$, $p < .001$, $\eta_p^2 = .08$. Liberal participants reported significantly lower levels of transgender prejudice (the self and other ratings combined; $M = 2.66$, $SE = .08$) relative to conservative participants ($M = 2.21$, $SE = .08$). Finally, the interaction was significant, $F(1, 178) = 27.19$, $p < .001$, $\eta_p^2 = .13$. Analysis of simple effects (see Table 8 in Appendix L) revealed that liberal participants reported self attitudes toward trans people that were significantly less prejudiced than the ratings made for the average other Radford student. Conservative participants also reported significantly less prejudice for themselves than for their peers. However, liberals were significantly less prejudiced relative to conservatives. Finally, ratings made for their peers by both liberal and conservative participants were equally prejudicial. These patterns of results provide support for hypothesis 1.

With respect to political party coded with three categories, the main effect of target was significant, $F(1, 179) = 152.58$, $p < .001$, $\eta_p^2 = .46$. Participants reported being significantly less prejudiced toward trans people ($M = 1.86$, $SD = 1.04$) than they believe their peers are ($M = 2.01$, $SD = .96$). A significant main effect of political party was also found, $F(2, 179) = 16.15$, $p < .001$, $\eta_p^2 = .15$. Fisher's LSD post hoc analysis revealed that Republicans had significantly higher overall (self and other ratings combined) levels of trans prejudice ($M = 2.85$, $SE = .11$) than Democrats ($M = 2.26$, $SE = .09$) and independents/others ($M = 2.35$, $SE = .09$), ps $< .001$. Democrats and Independents/Others did not significantly differ, $p = .09$. Finally, the interaction

was significant, $F(2, 179) = 16.15$, $p < .001$, $\eta_p^2 = .15$. Analyses of simple effects (see Table 10) indicated that all groups (Democrats, Republicans, and Independents and Others) reported significantly lower levels of trans prejudice for themselves compared to ratings made for their peers. Democrats reported the strongest PI effect, such that the discrepancy between self and other reports had the highest discrepancy, followed by Independents and others, and then Republicans. No reports of prejudice made for the average other Radford student significantly differed across the three political party affiliations.

Finally, with respect to analyses involving the tertial split of liberalism/conservatism continuum, a significant main effect was observed, $F(1, 177) = 176.15$, $p < .001$, $\eta_p^2 = .50$. Participants were significantly less prejudiced toward trans people ($M = 1.86$, $SD = 1.05$) than they believed their peers are ($M = 3.01$, $SD = .97$). A significant main effect of liberalism/conservatism was also found, $F(2, 177) = 7.58$, $p < .001$, $\eta_p^2 = .08$. Means from all three groups were significantly different from one another: Highly liberal participants ($M = 2.27$, $SE = .11$) reported the lowest overall (self and other ratings combined) levels of trans prejudice, followed by participants with intermediate political attitudes ($M = 2.33$, $SE = .08$), followed by highly conservative participants ($M = 2.82$, $SE = .12$). Finally, the interaction was significant, $F(2, 177) = 27.04$, $p < .001$, $\eta_p^2 = .23$. Analysis of simple effects (see Table 9) revealed that only highly liberal participants and participants with intermediate political attitudes reported significantly less prejudice for themselves than the ratings made for their peers, but not highly conservative participants, whose self and other reports did not significantly differ. The mean levels of trans prejudice significantly differed across all three groups: Highly liberal participants reported the lowest levels of trans prejudice, followed by participants with intermediate political

attitudes and highly conservative participants. These patterns of results provide additional support for hypothesis 1.

Additionally, hypothesis 2 was examined. According to hypothesis 2, PI within attitudes toward transgender people was expected to be moderated by religious attitudes. Hypothesis 2 is examined with four potential moderating variables: religious orientation, Christian conservatism, Christian liberalism, and religious fundamentalism. With respect to analyses involving religious orientation (high religious orientation vs. low religious orientation), analyses revealed a significant main effect of target, $F(1, 188) = 177.44$, $p < .01$, $\eta_p^2 = .49$, such that participants rated themselves to be less prejudiced toward trans people ($M = 1.85$, $SD = 1.03$) than the ratings made for their peers ($M = 3.01$, $SD = .96$). A main effect of religious orientation was also found, $F(1, 188) = 15.30$, $p < .001$, $\eta_p^2 = .08$. Participants with a stronger religious orientation provided significantly higher overall ratings (self and other ratings combined) of prejudice toward trans people ($M = 2.21$, $SE = .08$) relative to participants who are less religiously oriented ($M = 2.64$, $SE = .08$). Finally, a significant interaction was revealed, $F(1, 188) = 9.43$, $p = .002$, $\eta_p^2 = .05$. Analysis of simple effects (see Table 8 in Appendix L) revealed that participants who are less religiously oriented were less trans prejudiced than they believed their peers were. Participants who were more religiously oriented also reported being less trans prejudiced then they believed their peers are, but were significantly more prejudiced than less religiously oriented participants. Finally, participants with high and low religious orientations did not differ in their perceptions of their peers' trans prejudice.

Hypothesis 2 was also examined within levels of Christian conservatism (High conservatism vs. Low Conservatism). Analyses revealed a significant main effect of target, $F(1, 188) = 186.77$, $p < .001$, $\eta_p^2 = .50$, such that participants rated themselves to be less prejudiced

toward trans people (M = 1.85, SD = 1.03) than the ratings made for their peers (M = 3.01, SD = .96). A main effect of religiosity was also found, $F(1, 188) = 3.01$, $p < .001$, $\eta_p^2 = .02$. Participants low in Christian conservatism had significantly lower overall ratings (self and other ratings combined) of prejudice (M = 2.33, SE = .08) than participants high in Christian conservatism (M = 2.53, SE = .08). Finally, there was a significant interaction, $F(1, 188) = 18.45$, $p < .001$, $\eta_p^2 = .09$. Analysis of simple effects (see Table 8 in Appendix L) revealed that participants high in Christian conservatism reported their own attitudes to be less prejudiced than ratings made for their peers. Participants low in Christian conservatism also reported less trans prejudice than they believed their peers had. Participants who were more conservative reported greater trans prejudice that participants who were less conservative. Furthermore, both participants low and high in Christian conservatism reported equally prejudicial attitudes for the average Radford student.

Hypothesis 2 was also examined with respect to the Christian liberalism (High liberalism vs. Low liberalism). A significant main effect of target was revealed, $F(1, 186)$, $p < .001$, $\eta_p^2 = .47$, such that participants reported significantly lower ratings of trans prejudice for themselves (M = 1.85, SD = 1.03) relative to the ratings made for their peers (M = 3.01, SD = .97). The main effect of religiosity was nonsignificant, $F(1, 186) = 1.76$, $p = .19$, $\eta_p^2 = .009$. Participants did not significantly differ in their overall pattern of ratings (self and other combined) toward trans prejudice regardless of whether they were high (M = 2.36, SE = .08) or low on Christian liberalism (M = 2.51, SE = .08). Additionally, the interaction was nonsignificant, $F(1, 186) = 0.04$, $p = .84$, $\eta_p^2 = .00$. The self and other discrepancy in trans prejudice among participants low in Christian liberalism did not differ from the self and other discrepancy observed among participants high in Christian liberalism.

Finally, hypothesis 2 was examined with regard to religious fundamentalism (High vs. Low fundamentalism). The main effect of target was significant, $F(1, 187) = 190.68$, $p < .001$, $\eta_p^2 = .51$. Participants were less prejudiced toward trans people ($M = 1.85$, $SD = 1.03$) than they believed their peers were ($M = 3.01$, $SD = .97$). A significant main effect of religious fundamentalism was also found, $F(1, 187) = 25.51$, $p < .001$, $\eta_p^2 = .12$. Participants who reported low levels of religious fundamentalism had significantly lower overall ratings (self and other ratings combined) of trans prejudice ($M = 2.28$, $SE = .08$) relative to participants high in religious fundamentalism ($M = 2.58$, $SE = .08$). Finally, the interaction was significant, $F(1, 187) = 25.51$, $p < .001$, $\eta_p^2 = .12$. Analysis of simple effects (see Table 7 in Appendix L) revealed that participants low in religious fundamentalism were less prejudiced than they believed their peers were. Participants high in religious fundamentalism were also less prejudiced than they believed their peers were, but more fundamentalist participants were significantly more prejudiced than less fundamentalist participants. Participants low and high in religious fundamentalism did not significantly differ between ratings made for their peers.

Covariate Analyses

Preliminary analyses revealed that the main variables of interest were consistently influenced by gender, sexual identity, transgender identity, and age, which represent potential covariates that should be included in the main analyses. To examine the influence of these covariates within the main analyses, a series of ANCOVAs were conducted. Adding the covariates to the model substantively changed the results for only one analysis, that involving the Religious Orientation Scale. When testing whether religious orientation moderated PI within trans prejudice, including covariates reduced the size and significance of the interaction between target of rating and religious orientation from highly significant, $p = .002$, to marginally

significant, $p = .06$. In all the remaining tests of moderation, including the covariates partially reduced the strength of the interactions, but if they were significant without covariates, they remained significant after including the covariates. See Table 11 in Appendix L for changes in interaction effect sizes prior to and after adding covariates to the model. The Christian Liberalism Scale was the only measure where the interaction was not significant prior to adding covariates, and remained non-significant after adding covariates.

Thus, adding covariates to the model only eliminated the interaction of the Religious Orientation Scale, and the interaction terms in all the other tests of moderation that were significant without the covariates remained significant when the covariates were included. Furthermore, while the sizes of the interactions decreased upon adding covariates to the model, the overall patterns of results were generally the same. This suggests that for all analyses except the Religious Orientation Scale, the covariates do not account for the observed patterns of results.

Chapter 4

Discussion

The present study examined PI to determine whether PI occurs within attitudes toward transgender individuals. Present results revealed support for PI within attitudes toward trans people, such that participants rated themselves as less prejudiced toward trans people than they believed their peers are. Additionally, two main hypotheses were tested. Hypothesis 1 investigated whether political attitudes moderate PI within attitudes toward transgender individuals. Results support hypothesis 1. Participants, regardless of their political attitudes, all estimated the attitudes of their peers to be more prejudiced than their own. However, politically liberal participants were less trans prejudiced relative to conservative participants. Furthermore, both highly conservative and less conservative participants were unified in their estimates of the attitudes of their peers.

Hypothesis 2 investigated whether religious attitudes moderated PI within trans prejudice. Results support hypothesis 2. Participants, regardless of their attitudes toward religious fundamentalism, orientation, or conservatism, all estimated the attitudes of their peers to be more prejudiced than their own. Participants higher in religious fundamentalism, conservatism, and orientation were more prejudiced toward trans people than participants low in respective religious attitudes. Additionally, all participants, regardless of religious attitudes, were also unified in their erroneous estimates of their peers' attitudes.

The patterns of results of the current study align closely with previous research examining PI. No known studies examine PI within attitudes toward transgender individuals, but several examine similar prejudicial attitudes. For example, PI has been found within attitudes toward sexism (Do et al., 2013), attitudes toward segregation (Breed & Ktsanes, 1961), attitudes

toward lesbians, gays, and bisexuals (Bowen & Bourgeois, 2001), and attitudes toward same-sex marriage (Perryman et al., 2018). These studies all found similar results: Individuals believed themselves to hold attitudes that are lower in prejudice compared to others, who are believed to hold more prejudicial attitudes. More specifically, military cadets believed members of their group held high levels of sexism, whereas individuals reported low levels of sexism (Do et al., 2013). People privately accepted integration, yet mistakenly believed their peers endorsed segregation (Breed & Ktsanes, 1961). Individuals endorsed attitudes in favor of lesbians, gays, and bisexuals, but erroneously believed their peers were more prejudiced (Bowen & Bourgeois, 2001). Finally, whereas group members hold attitudes in favor of same-sex marriage, they believed others to be more prejudiced (Perryman et al., 2018). Similarly, the present study found the same pattern, in which individuals believed themselves to be lower in transgender prejudice than their peers, providing evidence that PI exists within attitudes toward transgender individuals.

With regard to the present study's findings about transgender prejudice, the patterns found are similar to previous studies, which conclude that less conservative participants are less prejudiced toward transgender people. This should not be surprising, considering the general consensus within research on prejudice is that conservatism is related to higher levels of general prejudice (Brandt, 2017; Graham et al., 2009; Sidanius & Pratto, 2001) and to higher levels of transgender prejudice (Elischberger et al., 2018; Lopez-Saez, 2020; Prusaczyk & Hodson, 2019). The findings of the present study are consistent with these studies, further contributing to the field of prejudice toward trans people.

Similar to conclusions made about political conservatism and transgender prejudice, the present study found results similar to several studies that examined associations between

religiosity and transgender prejudice. This current study found that participants who are less religiously conservative, fundamentalist, and oriented are less prejudiced toward trans people. Other studies also find that people high in religious conservatism, especially high in religious fundamentalism, are more likely to hold prejudiced attitudes relative to people low in religious fundamentalism (Laythe et al., 2002). People high in religious fundamentalism firmly endorse beliefs that argue for one essential set of religious teachings (Altemeyer & Hunsberger, 2004). Fundamentalists also believe that their religious teachings contain the truth about humanity, and that only those who explicitly adhere to such religious tenets have a special relationship with the religion's deity (Hunsberger, 1995). In a review of studies examining levels of ethnic prejudice among Christians, participants with non-fundamentalist views toward Christianity reported more tolerant attitudes toward ethnic minorities (Gorsuch & Aleshire, 1974). With that being said, findings of the present study are not surprising considering the abundant research providing evidence of such associations between religiosity (particularly religious fundamentalism) and higher general levels of prejudice (Hunsberger, 1995; Rowatt, 2018) and higher levels of transgender prejudice (Campbell et al., 2019; Nagoshi et al., 2008). This study provides evidence consistent with previous research, contributing to the consensus in the field.

Furthermore, this study provides an expansion of previous research examining religious beliefs and prejudice because of the various dimensions of religiosity measured. Levels of Christian conservatism, Christian Liberalism, religious fundamentalism, and religious orientation were assessed, providing broad coverage of multiple facets of participant religiosity. Significant positive associations were found between self-scores for trans prejudice and measures of Christian conservatism, religious orientation, and religious fundamentalism, but not Christian liberalism, suggesting that not all dimensions of religiosity can account for high levels of

prejudice. It is also possible that a non-significant interaction was obtained for Christian liberalism due to the nature of the items in this measure, which includes a mixture of items that less religious individuals would agree with and items they would disagree with.

With respect to the different types of PI (i.e., situational ambiguity, minority-enforced norms, prototypical group identity, and cultural lag), the PI found in the present study is most consistent with cultural lag, in which the source of the false norm stems from norms that once had wide support from the public majority but have since lost support among individual group members. Individuals mistakenly believe that norm is still endorsed by the majority. In recent years, attitudes toward trans people have become more progressive (James et al., 2016), marking a shift in the social norm. However, not all individuals recognize this progression. Rather, although individuals personally and privately support this attitude progression, they may fail to recognize that others privately support the change in attitudes possibly due to a lack of clear public behavior reflecting positive attitudes toward trans people. Further, individuals' own silence on the matter, bred out of fear that theirs is a minority position, may further reinforce misestimation of the social norms for others. This pattern essentially creates a perpetual misrepresentation of the true norm, resulting in a hinderance of the majority publicly voicing their attitudes in favor of trans people.

Another type of PI that may contribute to patterns of present results is minority-enforced social norms, in which a small but influential group distorts individuals' perceptions of the majority (Miller & Prentice, 1994). For example, transgender individuals have been experiencing very public and vitriolic backlash against schools, businesses, and legislation granting bathroom rights to transgender individuals (Philips, 2017). PI stemming from minority-enforced social norms may play a role in PI within trans prejudice, because of the vocal minority's public and

influential insistence that people must use the bathroom consistent with the biological sex assigned at birth. This may have a disproportionate influence on the general public's estimates of the collective's broader attitudes regarding transgender people. Objections to transgender rights do tend to be held more often and more strongly among religious and conservative people (Todd et al., 2020). Thus, individuals may have garnered that their peers may hold attitudes consistent with that vocal minority, providing another possible mechanism through which individuals develop perceptions of others that are more prejudiced than themselves.

Multiple phenomena that underlie PI likely play a role within PI for trans prejudice. One critical phenomenon, the presence of a false norm, is supported by the fact that students in the present study reported a self-other attitudinal discrepancy, where they mistakenly believed their peers are higher in trans prejudice than reality suggests. Another phenomenon is the illusion of universality, in which individuals overestimate the extent that people in their group hold the same or similar opinions. The presence of this phenomenon is often demonstrated by testing differences between standard deviations of self and other scores—when the standard deviation of self-scores significantly exceeds the standard deviation of other-scores, the illusion of universality is assumed. In the present study, the spread of self-scores (SD = 1.03) was not significantly higher than the spread of other scores (SD = .96). This study failed to find evidence for the illusion of universality. However, it is questionable as to whether testing differences between standard deviations is an effective demonstration of the illusion of universality. Unanimity among individual participants about perceptions of group standards is not the same as individuals perceiving the group to be unanimous. More direct tests of how united the participants believe the group is may reveal evidence of the illusion of university within perceptions of the collective's attitudes toward transprejudice.

Another phenomenon is the false uniqueness effect, characterized by an overestimation of the extent to which individuals are actually alone or in the minority opinion. While this effect is important, the present study does not directly assess the degree to which participants believed their attitudes were discrepant from their peers. This study only measured the perception of the attitude of the average other. Another key phenomenon within PI is normative social influence, which occurs when individuals conform to behaviors of others in order to be seen as a valuable group member and be liked by others. However, actual public behavior was not measured in the present study. In the future, researchers examining PI should include an assessment of the extent to which participants believe their support for trans people represents a minority position, in addition to measures of actual public behaviors.

With respect to strengths of the present study, one strength of this study is the high degree of internal consistency across all measures. Reliability analyses indicated exceptional levels, with alphas of .75 or higher. An additional strength is that the within-subjects variable, the target of rating, was experimentally manipulated. That is, the order of rating self and other attitudes was randomized, and no order effects were found, which maximizes the internal validity of the finding regarding the over PI effect within attitudes about transgender participants.

The present study also has notable limitations. The present sample was comprised mostly of Caucasian/European American, heterosexual, cisgender, and Christian participants. Likewise, only psychology undergraduate students were included. The lack of diversity in the sample, as well as utilizing a convenience sample, limits the generalizability of present results. The findings from such a homogenous sample may not extend to different age groups, different colleges, or even other college age participants. Different cities, states, and counties may not find the same patterns of results either, which may be in part due to varying political attitudes and prevailing

social norms according to one's location. A college student sample additionally may not generalize to people with different age groups, especially because of the recent strides made for transgender rights. Older adults likely hold more prejudicial attitudes toward trans people than a young college sample. Future research examining PI within trans attitudes should attempt to maximize external validity by using random sampling of a known diverse population instead of sampling from college students.

Another limitation is the correlational nature of the moderators used in this study, political and religious attitudes. Because no manipulations were made, it is impossible to conclude that, for instance, being higher in political conservatism *caused* people to be higher in prejudice. Therefore, the internal validity of the present findings regarding political and religious attitudes is limited.

Another limitation is social desirability. It is not clear whether individuals' self-reports of their own attitudes toward trans people was motivated by social desirability. Participants may have adjusted their responses in order to be perceived as a valuable member of society—they are aware that it is considered more acceptable (based on present social norms) to be in favor of trans people, so their true attitudes may be more prejudiced than what was reported. Also, participants may have deceived themselves regarding their own beliefs about trans people in order to feel good about themselves. Future studies should incorporate a measure of social desirability in order to gauge the extent that it accounted for results.

Moreover, prejudice in general includes implicit and explicit components and the components do not always match (Greenwald et al., 1998). People can have positive explicit attitudes toward a social group, and negative implicit attitudes that they may not even be aware of. Further, there is some evidence that people may appear to have negative explicit attitudes due

to values and ideological beliefs and positive implicit attitudes about the group (Hing et al., 2008). The present study only focused on explicit reports and does not capture any of the implicit components of attitudes. As a consequence, the present study cannot distinguish between the objections that politically and religiously conservative participants have to transgender people that are driven by ideological and value concerns and those that are driven by a genuine antipathy toward transgender people. Further, the study cannot rule out that politically and religiously liberal participants may hold implicit prejudices toward transgender people that are not assessed. No known studies have assessed PI within an implicit attitudes framework, but it represents a possible avenue for future investigations.

An additional limitation is that participants within the present sample may not have a high amount of personal interaction with transgender people (as suggested by Barbir et al., 2017). Interaction with transgender people was not directly assessed, but the sheer lack of transgender respondents in the present study suggests that it is unlikely that students in the sample have many opportunities to knowingly interact with transgender people on campus. Only five out of 190 participants identified as transgender. It is more likely that the knowledge of and attitudes toward trans people stems from the representation trans people have in mass media. For instance, just recently Elliot Page publicly came forward about his transitioning process. Trans people also appear in television and movies, such as Netflix shows *Pose*, *Orange is the New Black*, and *Sense8*. Thus, because of limited interactions individuals have with trans people, students' attitudes may not be fully developed.

In conclusion, the results of the present study are vital in understanding not only how individuals feel toward trans people, but also how individuals believe others feel toward trans people. This study suggests that individuals believe others are more prejudiced than themselves.

Because of the major limitation of social desirability, future researchers could examine PI and whether reports differ according to whether they were made publicly or privately. Previous researchers found behavioral discrepancies when they manipulated whether one submits responses publicly (i.e., handing it to an experimenter) versus privately (i.e., placing responses in a sealed envelope; Miller & McFarland, 1987). It is possible that participants would feel less socially inhibited and less subject to social desirability constraints if they submitted their responses in such a way that they are sure they could avoid judgment, revealing their authentic attitudes. This may decrease the self-other discrepancy, making it unclear whether the pattern of results reflects PI or social desirability.

Further discussion, centered around the perception of the norms toward trans people, provides crucial knowledge to the field. The studies that examine transgender prejudice and discrimination are numerous, and generally conclude that trans people experience widespread violence (Stozer, 2009). Because PI inhibits social change, its occurrence slows progress society could achieve in transgender rights. By educating others about the true attitudes individuals hold toward trans people, and how the majority of people actually hold attitudes in favor of them, society could experience a shift in norms, likely resulting in policy changes and a general progression for rights for transgender people. Further, this study adds to existing literature on the influence of religiosity and political attitudes on trans prejudice, and confirms prior studies suggesting people higher in religiosity and conservatism are more prejudiced. This study has the potential to help cisgender individuals develop an appreciation for trans people and the difficulty trans people face in multiple domains of life. For example, trans people encounter problems when seeking medical care, possibly due to the lack of information provided to medical health professionals about trans people and their unique medical needs (e.g., top/bottom surgery,

hormone treatment; Elliott et al., 2014; Garofalo et al., 2006). It is possible that discussing trans attitudes could make medical professionals (e.g., doctors, professors, nurses) more comfortable to employ transgender health training or to incorporate it into requirements to obtain a medical degree, eliminating institutional erasure of trans people, thereby increasing the extent of appropriate care in trans people and ultimately improving health among them. It could also be comforting to trans people knowing that most people support them, and could encourage gender-non-conforming people and those who are questioning their gender identity to come out, ultimately having a positive impact on their lives.

References

Acker, G. M. (2017). Transphobia among students majoring in the helping professions. *Journal of Homosexuality, 64*(14), 2011-2029. https://doi.org/10.1080/00918369.2017.1293404

Allport, F. H. (1924). *Social psychology*. Houghton Mifflin.

Altemeyer, B. (1981). *Right-wing authoritarianism*. University of Manitoba Press. https://doi.org/10.1016/S0065-2601(08)60382-2

Altemeyer, B., & Hunsberger, B. (1992). Authoritarianism, religious fundamentalism, quest, and prejudice. *The International Journal for the Psychology of Religion, 2*, 113-133.

Altemeyer, B., & Hunsberger, B. (2004). A revised religious fundamentalism scale: The short and sweet of it. *The International Journal for the Psychology of Religion, 14*(1), 47-54. https://doi.org/10.1207/s15327582ijpr1401_4

American Psychological Association. (2011). *Answers to your questions about transgender people, gender identity, and gender expression.* http://www.apa.org/topics/lgbt/transgender.aspx

Anderson, V. N. (2018). Cisgender men and trans prejudice: Relationships with sexual orientation and gender self-esteem. *Psychology of Men & Masculinity, 19*(3), 373-384. https://doi.org/10.1037/men0000125

Austin, A., & Goodman, R. (2017). The impact of social connectedness and internalized transphobic stigma on self-esteem among transgender and gender non-conforming adults. *Journal of Homosexuality, 64*(6), 825-841. https://doi.org/10.1080/00918369.2016.1236587

Barbir, L. A., Vandevender, A. W., & Cohn, T. J. (2017). Friendship, attitudes, and behavioral intentions of cisgender heterosexuals toward transgender individuals. *Journal of Gay & Lesbian Mental Health*, *21*(2), 154-170. https://doi.org/10.1080/19359705.2016.1273157

Billard, T. J. (2018). Attitudes toward transgender men and women: Development and validation of a new measure. *Frontiers in Psychology*, *9*, 1-11. https://doi.org/10.3389/fpsyg.2018.00387

Bockting, W. O., Miner, M. H., Swinburne, R. E., Dolezal, C., Robinson, B. E., Rosser, S., & Coleman, E. (2020). The transgender identity survey: A measure of internalized transphobia. *LGBT Health*, *7*(1), 15-27. https://doi.org/10.1089/lgbt.2018.0265

Bowen, A. M., & Bourgeois, M. J. (2001). Attitudes toward lesbian, gay, and bisexual college students: The contribution of pluralistic ignorance, dynamic social impact, and contact theories. *Journal of American College Health*, *50*(2), 91-96. https://doi.org/10.1080/07448480109596012

Brandt, M. J. (2017). Predicting ideological prejudice. *Psychological Science*, *28*(6), 713-722. https://doi.org/10.1177/0956797617693004

Breed, W., & Ktsanes, T. (1961). Pluralistic ignorance in the process of opinion formation. *The Public Opinion Quarterly*, *25*(3), 382-392.

Buck, D. M. (2016). Defining transgender: What do lay definitions say about prejudice? *Psychology of Sexual Orientation and Gender Diversity*, *3*(4), 465-472. https://doi.org/10.1037/sgd0000191

Campbell, M., Hinton, J. D. X., & Anderson, J. R. (2019). A systematic review of the relationship between religion and attitudes toward transgender and gender-variant people.

International Journal of Transgenderism, *20*(1), 21-38. https://doi.org/10.1080/15532739.2018.1545149

Clements-Noelle, K., Marx, R., & Katz, M. (2006). Attempted suicide among transgender persons: The influence of gender-based discrimination and victimization. *Journal of Homosexuality*, *51*(3), 53-69. https://doi.org/10.1300/J082v51n03_04

Cragun, R. T., & Sumerau, E. (2015). The last bastion of sexual and gender prejudice? Sexualities, race, gender, religiosity, and spirituality in the examination of prejudice toward sexual and gender minorities. *The Journal of Sex Research*, *52*(7), 821-834. https://doi.org/10.1080/00224499.2014.925534

Do, J. J., Samuels, S. M., Adkins, D. J., Clinard, M. E., & Koveleskie, A. J. (2013). Gender bias and pluralistic ignorance in perceptions of fitness assessments. *Military Psychology*, *25*(1), 23-35. https://doi.org/10.1037/h0094754

Elischberger, H. B., Glazier, J. J., Hill, E. D., & Veduzco-Baker, L. (2018). Attitudes toward and beliefs about transgender youth: A cross-cultural comparison between the United States and India. *Sex Roles, 78,* 142-160. https://doi.org/10.1007/s11199-017-0778-3

Elliott, M. N., Kanouse, D. E., Burkhard, Q., Abel, G. A., Lyratzopoulos, G., Beckett, M. K., Schuster, M. A., & Roland, M. (2014). Sexual minorities in England have poorer health and worse health care experiences: A national survey. *Journal of General Internal Medicine*, *30*, 9-16. https://doi.org/10.1007/s11606-014-2905-y

Emerson, M. O., & Hartman, D. (2006). The rise of religious fundamentalism. *Annual Review of Sociology*, *32*(1), 127-144. https://doi.org/10.1146/annurev.soc.32.061604.123141

Everett, J. A. C. (2013). The 12-item social and economic conservatism scale (SECS). *PLOS ONE*, *8*(12). https://doi.org/10.1371/journal.pone.0082131

For Ourselves: Reworking Gender Expression (FORGE). (2005). *Transgender Sexual Violence Project*. https://ovc.ojp.gov/sites/g/files/xyckuh226/files/pubs/forge/printerFriendlyPDF/sexual-assault.pdf

Franzini, L. R., & Casinelli, D. L. (1986). Health professionals' factual knowledge and changing attitudes toward transsexuals. *Social Science Medicine*, *22*(5), 535-539.

Garofalo, R., Deleon, J., Osmer, E., Doll, M., & Harper, G. W. (2006). Overlooked, misunderstood and at-risk: Exploring the lives and HIV risk of ethnic minority male-to-female transgender youth. *Journal of Adolescent Health*, *38*, 230-236. https://doi.org/10.1016/j.jadohealth.2005.03.023

Geiger, N., & Swim, J. K. (2016). Climate of silence: Pluralistic ignorance as a barrier to climate change. *Journal of Environmental Psychology*, *47*, 79-90. https://doi.org/10.1016/j.jenvp.2016.05.002

Gorsuch, R. L., & Aleshire, D. (1974). Christian faith and ethnic prejudice: A review and interpretation of research. *Journal for the Scientific Study of Religion*, *13*(3), 281-307. https://doi.org/10.2307/1384759

Gorsuch, R. L., & McPherson, S. E. (1989). Intrinsic/extrinsic measurement: I/E revised and single-item scales. *Journal for the Scientific Study of Religion*, *28*(3), 348-354.

Graham, J., Haidt, J., & Nosek, B. A. (2009). Liberals and conservatives rely on different sets of moral foundations. *Journal of Personality and Social Psychology*, *96*, 1029-1046. https://doi.org/10.1037/a0015141

Green, R., Stoller, R. J., & MacAndrew, C. (1966). Attitudes toward sex transformation procedures. *Archives of General Psychiatry*, *15*(2), 178-182. https://doi.org/10.1001/archpsyc.1966.01730140066011

Greenwald, A. G., McGhee, D. E., & Schwartz, J. L. K. (1998). Measuring individual differences in implicit cognition: The implicit association test. *Journal of Personality and Social Psychology*, *74*(6), 1464-1480. https://doi.org/10.1037/0022-3514.74.6.1464

Hill, D. B. (2002). Genderism, transphobia, and gender bashing: A framework for interpreting anti-transgender violence. In B. Wallace & R. Carter (Eds.), *Understanding and dealing with violence: A multicultural approach* (pp. 113-136). Sage.

Hill, D. B., & Willoughby, B. L. B. (2005). The development and validation of the genderism and transphobia scale. *Sex Roles*, *53*(7/8), 531-544. https://doi.org/10.1007/s11199-005-7140-x

Hines, D., Saris, R. N., & Throckmorton-Belzer, L. (2002). Pluralistic ignorance and health risk behaviors: Do college students misperceive social approval for risk behaviors on campus and in media? *Journal of Applied Social Psychology*, *32*(12), 2621-2640.

Hughto, J. M., Reisner, S. L., & Pachankis, J. E. (2015). Transgender stigma and health: A critical review of stigma determinants, mechanisms, and interventions. *Social Science Medicine*, *147*, 222-231. https://doi.org/10.1016/j.socscimed.2015.11.010

James, S. E., Herman, J. L., Rankin, S., Keisling, M., Mottet, L., & Anafi, M. (2016). *Executive Summary of the Report of the 2015 U.S. Transgender Survey*. National Center for Transgender Equality.

Kanamori, Y., Cornelius-White, J. H. D., Pegors, T. K., Daniel, T., & Hulgus, J. (2017). Development and validation of the transgender attitudes and beliefs scale. *Archives of Sexual Behavior*, *46*, 1503-1515. https://doi.org/10.1007/s10508-016-0840-1

Katz, D., & Allport, F. H. (1931). *Student attitudes*. The Craftsman Press.

Kenagy, G. P. (2005). Transgender health findings from two needs assessment studies in Philadelphia. *Health and Social Work*, *30*(1), 19-26.

Kolp, H., Wilder, S., Andersen, C., Johnson, E., Horvath, S., Gidycz, C. A., & Shorey, R. (2019). Gender minority stress, sleep disturbance, and sexual victimization in transgender and gender noncomforming adults. *Journal of Clinical Psychology*, *76*, 688-698. https://doi.org/10.1002/jclp.22880

Korte, C. (1972). Pluralistic ignorance about student radicalism. *Sociometry*, *35*(5), 576-587.

Krech, D., & Crutchfield, R. S. (1948). The structure and function of social groups. In D. Krech & R. S. Crutchfield, *Theory and problems of social psychology* (p. 366-403). McGraw-Hill. https://doi.org/10.1037/10024-010

Lambert, T. A., Kahn, A. S., & Apple, K. J. (2003). Pluralistic ignorance and hooking up. *The Journal of Sex Research*, *40*(2), 129-133.

Latane, B., & Darley, J. (1968). Group inhibition of bystander intervention in emergencies. *Journal of Personality and Social Psychology*, *10*(3), 215-221. https://doi.org/10.1037/h0026570

Laythe, B., Finkel, D. G., Bringle, R. G., & Kirkpatric, L. A. (2002). Religious fundamentalism as a predictor of prejudice: A two-component model. *Journal for the Scientific Study of Religion*, *41*(4), 623-635. https://doi.org/10.1111/1468-5906.00142

Lombardi, E. L., Wilchins, R. A., Priesing, D., & Malouf, D. (2001). Transgender experiences with violence and discrimination. *Journal of Homosexuality*, *42*(1), 89-101. https://doi.org/10.1300/J082v42n01_05

Lopez-Saez, M. A., Garcia-Dauder, D., & Montero, I. (2020). Correlate attitudes toward LGBT and sexism in Spanish psychology students. *Frontiers in Psychology*, *11*, 2063. https://doi.org/10.3389/fpsyg.2020.02063

Makwana, A. P., Dhont, K., De keersmaecker, J., Aklaghi-Ghaffarokh, P., Masure, M., & Roets, A. (2017). The motivated cognitive basis of transphobia: The role of right-wing ideologies and gender role beliefs. *Sex Roles*, *79*, 206-217. https://doi.org/10.1007/s11199-017-0860-x

McCullough, R., Dispenza, F., Chang, C. Y., & Zeligman, M. R. (2019). Correlates and predictors of anti-transgender prejudice. *Psychology of Sexual Orientation and Gender Diversity*, *6*(3), 359-368. https://doi.org/10.1037/sgd0000334

Miller, D. T., & McFarland, C. (1987). Pluralistic ignorance: When similarity is interpreted as dissimilarity. *Journal of Personality and Social Psychology, 53*(2), 298-305.

Miller, D. T., & McFarland, C. (1991). When social comparison goes awry: The case of pluralistic ignorance. *Social Comparison: Contemporary Theory and Research*, 287-313.

Miller, D. T., & Prentice, D. A. (1994). Collective errors and errors about the collective. *Personality and Social Psychology Bulletin, 20*(5), 541-550.

Morrison, M. A., Bishop, C., Gazzola, S. B., McCutcheon, J. M., Parker, K., & Morrison, T. G. (2017). Systematic review of the psychometric properties of transphobia scales. *International Journal of Transgenderism, 18*(4), 395-410. https://doi.org/10.1080/15532739.2017.1332535

Munsch, C. L., Weaver, J. B., Bosson, J. K., & O'Connor, L. T. (2018). Everybody but me: Pluralistic ignorance and the masculinity contest. *Journal of Social Issues, 74*(3), 551-578. https://doi.org/10.1111/josi.12282

Nagoshi, J. L., Adams, K. A., Terrell, H. K., Hill, E. D., Brzuzy, S., & Nagoshi, C. T. (2008). Gender differences in correlates of homophobia and transphobia. *Sex Roles, 59*(7-8), 521-531. https://doi.org/10.1007/s11199-008-9458-7

Norton, A. T., & Herek, G. M. (2013). Heterosexuals' attitudes toward transgender people: Findings from a national probability sample of U.S. adults. *Sex Roles, 68,* 738-753. https://doi.org/10.1007/s11199-011-0110-6

O'Gorman, H. J. (1986). The discovery of pluralistic ignorance: An ironic lesson. *Journal of the History of the Behavioral Sciences, 22,* 333-347.

Perryman, M. R., Davis, C. R., & Shawnika, J. H. (2018). Perceived community acceptance of same-sex marriage: Persuasive press, projection, and pluralistic ignorance. *International Journal of Public Opinion Research, 30*(2), 307-315. https://doi.org/10.1093/ijpor/edx003

Philips, R. R. (2017). The battle over bathrooms: Schools, courts, and transgender rights. *Theory in Action, 10*(4), 100-117. https://doi.org/10.3798/tia.1937-0237.1729

Pratto, F., Sidanius, J., Stallworth, L. M., & Malle, B. F. (1994). Social dominance orientation: A personality variable predicting social and political attitudes. *Journal of Personality and Social Psychology, 67,* 741-763. https://doi.org/10.1037/0022-3514.67.4.741

Prentice, D. A., & Miller, D. T. (1993). Pluralistic ignorance and alcohol use on campus: Some consequences of misperceiving the social norm. *Journal of Personality and Social Psychology, 64*(2), 243-256.

saczyk, 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*, 438-446. https://doi.org/10.1007/s11199-019-01069-1

Rowatt, W. C. (2018). Associations between religiosity, political ideology, and attitudes toward immigrants: A mediation path-analytic approach. *Psychology of Religion and Spirituality*, *11*(4), 368-381. https://doi.org/10.1037/rel0000206

Schanck, R. L. (1932). A study of a community and its groups and institutions conceived of as behaviors of individuals. *Psychological Monographs*, *43*(2), i-133. https://doi.org/10.1037/h0093296

Sidanius, J. (1976a). *A Swedish scale of conservatism* (Rep. No. 465). Department of Psychology, University of Stockholm.

Sidanius, J., & Pratto, F. (2001). *Social dominance: An intergroup theory of social hierarchy and oppression.* Cambridge University Press.

Simons, L. K., Leibowitz, S. F., & Hidalgo, M. A. (2014). Understanding gender variance in children and adolescents. *Pediatric Annals, 43*(6), e126–e131. https://doi.org/10.3928/00904481-20140522-07

Son Hing, L. S., Chung-Yan, G. A., Hamilton, L. K., & Zanna, M. P. (2008). A two-dimensional model that employs explicit and implicit attitudes to characterize prejudice. *Journal of Personality and Social Psychology*, *94*(6), 971-987. https://doi.org/10.1037/0022-3514.94.6.971

Stellaway, R. J. (1973). The correspondence between religious orientation and sociopolitical liberalism and conservatism. *Sociological Quarterly*, *14*, 430-439.

Stozer, R. L. (2009). Violence against transgender people: A review of United States data. *Aggression and Violent Behavior*, *14*, 170-179. https://doi.org/10.1016/j.avb.2009.01.006

Tebbe, E. A., Moradi, B., & Ege, E. (2014). Revised and abbreviated forms of the genderism and transphobia scale: Tools for assessing anti-trans* prejudice. *Journal of Counseling Psychology*, *61*(4), 592-592. https://doi.org/10.1037/cou0000043

Tebbe, E. N., & Moradi, B. (2012). Anti-transgender prejudice: A structural equation model of associated constructs. *Journal of Counseling Psychology*, *59*(2), 251-261. https://doi.org/10.1037/a0O26990

TenBrook, E. M. (2018). The acronym's forgotten letter: Beliefs about transgender men and women. *Graduate Theses and Dissertations*, 17580.

Todd, N. R., Yi, J., Blevins, E. J., McConnell, E. A., Mekawi, Y., & Bergmann, B. A. (2020). Christian and political conservatism predict opposition to sexual and gender minority rights through support for Christian hegemony. *American Journal for Community Psychology*, *66*, 24-38. https://doi.org/10.1002/ajcp.12420

White, C., & Goldberg, J. (2006). Expanding our understanding of gendered violence: Violence against trans people and their loved ones. *Canadian Woman Studies*, *25*(1-2), 124-127.

Whitley, B. E., Jr. (1999). Right-wing authoritarianism, social dominance orientation, and prejudice. *Journal of Personality and Social Psychology*, *77*(1), 126-134.

Wilchins, R. A. (1997). *Read my lips: Sexual subversion and the end of gender*. Firebrand Books.

Williams, K. D. (2009). Ostracism: A temporal need threat model. *Advances in Experimental Social Psychology*, *41*, 275-314. https://doi.org/10.1016/S0065-2601(08)00406-1

Xavier, J., Honnold, J. A., & Bradford, J. B. (2007). The health, health-related needs, and lifecourse experiences of transgender Virginians. *Richmond: Division of Disease Prevention through the Centers of Disease Control and Prevention.* https://www.vdh.virginia.gov/content/uploads/sites/10/2016/01/THISFINALREPORTVol1.pdf

Appendix A

Genderism & Transphobia – Revised – Short Form (Tebbe et al., 2014)

Self items

1. If I found out that my best friend was changing their sex, I would freak out.
2. If a friend wanted to have his penis removed in order to become a woman, I would openly support him. (R)
3. Men who cross-dress for sexual pleasure disgust me.
4. Women who see themselves as men are abnormal.
5. I would avoid talking to a woman if I knew she had a surgically created penis and testicles.
6. A man who dresses as a woman is a pervert.
7. Sex change operations are morally wrong.
8. It is morally wrong for a woman to present herself as a man in public.

Other items

1. If the average RU student found out that their best friend was changing their sex, the average student would freak out.
2. If a friend wanted to have his penis removed in order to become a woman, the average RU student would openly support him. (R)
3. Men who cross-dress for sexual pleasure disgust the average RU student.
4. The average RU student thinks that women who see themselves as men are abnormal.
5. The average RU student would avoid talking to a woman if they knew she had a surgically created penis and testicles.
6. The average RU student thinks that a man who dresses as a woman is a pervert.
7. The average RU student thinks that sex change operations are morally wrong.
8. The average RU student thinks that it is morally wrong for a woman to present herself as a man in public.

Appendix B

Negative Attitudes & Negative Intentions Subscales (Barbir et al., 2017)

Negative intentions – Self items

1. If a friend of mine came out as transgender, I would stop talking to them.
2. I would not want to live in the same neighborhood as a person who was transgender.
3. If someone who is transgender enters the room, I would excuse myself.
4. I would refuse to engage in conversations with someone who identifies as transgender.
5. I would not want to join a sports team that has a transgender member.
6. I would not sit next to someone who is transgender on the bus.
7. If I had a choice, I would not take a class where the professor identifies as transgender.
8. If a friend of mine came out as transgender, I would stop hanging out with them.
9. I would not use a locker room with a transgender person.
10. I refuse to befriend someone who identifies as transgender.
11. If the topic of the transgender lifestyle came up in conversation, I would change the topic.

Negative intentions – Other items

1. The average RU student would stop talking to a friend if the friend came out as transgender.
2. The average RU student would not want to live in the same neighborhood as a person who was transgender.
3. The average RU student would excuse themselves if someone who is transgender entered the room.
4. The average RU student would refuse to engage in conversations with someone who identifies as transgender.
5. The average RU student would not want to join a sports team that has a transgender member.
6. The average RU student would not sit next to someone who is transgender on the bus.
7. If they had a choice, the average RU student would not take a class where the professor identifies as transgender.
8. The average RU student would stop hanging out with a friend if the friend came out as transgender.
9. The average RU student would not use a locker room with a transgender person.
10. The average RU student would refuse to befriend someone who identifies as transgender.
11. If the topic of the transgender lifestyle came up in conversation, the average RU student would change the topic.

Negative attitudes – Self items

1. Transgender people should not be able to adopt.
2. Being transgender is wrong.
3. Transgender individuals are more promiscuous than heterosexual men.

4. Being a transgender person is disgusting.
5. Transgender people are given too much attention in today's society.
6. Transgender individuals need psychological counseling.
7. There is something wrong with a person who dresses up as the opposite sex.
8. Transgender people need to keep their lifestyles hidden.
9. I feel uncomfortable around people I know are transgender.

Negative attitudes – Other items

1. The average RU student thinks that transgender people should not be able to adopt.
2. The average RU student thinks that being transgender is wrong.
3. The average RU student thinks that transgender individuals are more promiscuous than heterosexual men.
4. The average RU student thinks that being a transgender person is disgusting.
5. The average RU student thinks that transgender people are given too much attention in today's society.
6. The average RU student thinks that transgender individuals need psychological counseling.
7. The average RU student thinks that there is something wrong with a person who dresses up as the opposite sex.
8. The average RU student thinks that transgender people need to keep their lifestyles hidden.
9. The average RU student feels uncomfortable around people they know are transgender.

Appendix C

Christian Conservatism Scale (Stellaway, 1973)

1. All Biblical miracles happened just as the Bible says they did.
2. A man must seek God's forgiveness to enjoy fellowship with Him.
3. Jesus was more than a great prophet; he was God's only son.
4. Biblical miracles did not happen as the Bible says they did but have been used as examples. (R)
5. If they stay true to God, people who suffer in this life are sure to be rewarded in the next.
6. Religious truth is higher than any other form of truth.
7. The Bible is God's message to man and all that it says is true.

Appendix D

Christian Liberalism Scale (Stellaway, 1973)

1. Science and religion are both equally good ways to find truth.
2. Biblical miracles did not happen as the Bible says they did but have been used as examples.
3. “God” and “Nature” are in some ways the same thing.
4. It is more important that we believe that Jesus was a great prophet than that he was God’s only son.
5. Some Biblical miracles really happened as the Bible says they did but others can be explained by natural causes.
6. If a man does good for others, he will enjoy fellowship with God.

Appendix E

Religious Fundamentalism Scale (Altemeyer & Hunsberger, 1992)

1. God has given mankind a complete, unfailing guide to happiness and salvation, which must totally be followed.
2. *All* of the religions in the world have flaws and wrong teachings. (R)
3. Of all the people on this earth, one group has a special relationship with God because it believes the most in his revealed truths and tries the hardest to follow his laws.
4. The long-established traditions in religion show the best way to honour and serve God, and should never be compromised.
5. Religion must admit all its past failing and adapt to modern life if it is to benefit humanity (R)
6. When you get right down to it, there are only two kinds of people in the world: the Righteous, who will be rewarded by God, and the rest, who will not.
7. Different religions and philosophies have different versions of the truth and may be equally right in their own way. (R)
8. The basic cause of evil in this world is Satan, who is still constantly and ferociously fighting against god.
9. It is more important to be a good person than to believe in god and the right religion (R)
10. No one religion is especially close to God, nor does god favor any particular group of believers (R)
11. God will punish most severely those who abandon his true religion.
12. No single book of religious writings contains all the important truths about life (R)
13. It is silly to think people can be divided into “the Good” and “the Evil.” Everyone does some good, and some bad, things. (R)
14. God’s true followers must remember that he requires them to *constantly* fight Satan and Satan’s allies on this earth.
15. Parents should encourage their children to study all religions without bias, then make up their own minds about what to believe. (R)
16. There *is* a religion on this earth that teaches, without error, god’s truth.
17. “Satan” is just the name people give to their own bad impulses. There really is *no such thing* as a diabolical “Prince of Darkness” who tempts us. (R)
18. Whenever science and sacred scripture conflict, science must be wrong
19. There is *no* body of teachings, or set of scriptures, which is completely without error (R)
20. To lead the best, most meaningful life, one must belong to the one, true religion.

Appendix F

Religious Orientation Scale (Gorsuch & McPherson, 1989)

1. (I) I enjoy reading about my religion.
2. (Es) I go to church because it helps me to make friends.
3. (I) It doesn't much matter what I believe so long as I am good. (R)
4. (I) It is important to me to spend time in private thought and prayer.
5. (I) I have often had a strong sense of God's presence.
6. (Ep) I pray mainly to gain relief and protection.
7. (I) I try hard to live my life according to my religious beliefs.
8. (Ep)* What religion offers me most is comfort in times of trouble and sorrow
9. (Ep) Prayer is for peace and happiness.
10. (I) Although I am religious, I don't let it affect my daily life. (R)
11. (Es) I go to church mostly to spend time with my friends.
12. (I) My whole approach to life is based on my religion.
13. (Es)* I go to church mainly because I enjoy seeing people I know there.
14. (I) Although I believe in my religion, many other things are more important in life. (R)

Appendix G

Social and Economic Conservatism Scale (Everett, 2013)

1. Abortion
2. Religion
3. Gun ownership
4. Traditional marriage
5. Traditional values
6. The family unit
7. Patriotism
8. Military and national security
9. Limited government
10. Fiscal responsibility
11. Business
12. Welfare benefits (R)

Appendix H

Conservatism Scale (Sidanius, 1976a)

Note: Items 5, 7, and 9 have been modified to be consistent with current political events.

1. Tougher measures against criminals
2. Eliminate affirmative action
3. Belief in authority
4. Increased taxation of the rich (R)
5. Improved relations with Iran (R)
6. Increased support of the military
7. American military intervention in the Middle East
8. Socialism (R)
9. White-supremacy
10. Increased aid to the poor (R)
11. Castration of rapists
12. Racial equality (R)
13. Religion
14. Greater equality in salaries (R)
15. Jesse Helms
16. Privately owned prisons
17. Government supported, national health care (R)
18. Interracial marriage (R)
19. The death penalty
20. Lower minimum wage
21. Increased equality (R)
22. Increased religions instruction in schools
23. Capitalism
24. Racially integrated neighborhoods (R)
25. Decreased weapons development (R)
26. A black president of the USA (R)
27. Nationalization of private companies (R)
28. Longer prison sentences
29. Social equality (R)
30. Employee ownership of corporations (R)
31. Law and order
32. Increased democracy on the job (R)
33. Lower taxes on corporations
34. Religious faith
35. A woman president of the USA (R)
36. Better medical care for the poor (R)

Appendix I

Demographics Questionnaire

1. Do you identify as transgender?
    a. Yes
    b. No

2. Which gender do you most closely identify with?
    a. Male
    b. Female
    c. Additional gender identity
    d. Prefer not to disclose

3. What best described your sexual orientation?
    a. Heterosexual (Straight)
    b. Gay
    c. Lesbian
    d. Bisexual
    e. Additional sexual identity
    f. Queer
    g. Prefer not to disclose

4. What is your current age (in years)?

5. What is your ethnicity?
    a. Caucasian/European American/White
    b. African American
    c. East-/Southeast-Asian American
    d. Pacific-Islander American
    e. South-Asian American (e.g., from India, Pakistan, Burma, Nepal, etc.)
    f. Middle-Eastern/North-African American
    g. Hispanic, Latino/a, Chicano/a American
    h. Caribbean American
    i. American Indian/ Native American
    j. Multi-Ethnic
    k. Other

6. Which of the following religious traditions do you primarily identity with?
    a. Christianity
    b. Mormonism
    c. Judaism
    d. Islam

e. Hinduism
f. Buddhism
g. Unitarian Universalism
h. Nothing in particular
i. Agnosticism
j. Atheism
k. Other

7. Please indicate the educational status of your mother.
    a. Did not complete High School
    b. Completed High School
    c. Attended a 2 year College (community college) but did not graduate
    d. Completed a 2 year College Degree (Associate's Degree)
    e. Attended a 4 year College but did not graduate
    f. Completed a 4 year Graduate Degree (Bachelor's Degree)
    g. Earned a Post Graduate Degree (e.g., master's or doctoral degree)
    h. I do not know

8. Please indicate the educational status of your father.
    a. Did not complete High School
    b. Completed High School
    c. Attended a 2 year College (community college) but did not graduate
    d. Completed a 2 year College Degree (Associate's Degree)
    e. Attended a 4 year College but did not graduate
    f. Completed a 4 year Graduate Degree (Bachelor's Degree)
    g. Earned a Post Graduate Degree (e.g., master's or doctoral degree)
    h. I do not know

9. Which best described the type of place you lived while growing up?
    a. A large city (population over 300,000)
    b. A small city (population about 100,000 to 300,000)
    c. A suburb, small town, or rural area
    d. Military

10. While growing up, what was your highest household income?
    a. Less than 29,000/year
    b. 30,000 – 49,000/year
    c. 50,000-69,000/year
    d. 70,000 or more/year
    e. I do not know

11. Which political party do you most identify with?
    a. Republican Party

b. Democratic Party
c. Independent
d. Other (can specify)

12. Use the following numerical scale to indicate whether you view yourself as more politically liberal or more politically conservative.
    a. (1) Very conservative
    b. (2) Conservative
    c. (3) Somewhat conservative
    d. (4) Neutral
    e. (5) Somewhat liberal
    f. (6) Liberal
    g. (7) Very liberal

Appendix J

Informed Consent Form

RADFORD UNIVERSITY

Department of Psychology

Radford University Cover Letter for Internet Research

Title of Research: Transgender Attitudes Project
Researcher(s): Jeff Aspelmeier and Hayley Grossman

We ask you to be part of a research study designed to assess attitudes about transgender or gender non-conforming individuals. We will be asking you about your own attitudes and your perceptions of other people's attitudes. The goal of this study is to determine whether there are relationships between you own transgender attitudes, the transgender attitudes of others, your current mood and feelings, and your beliefs regarding politics and spirituality. If you agree to participate you will be asked to complete
a set of questions about your social attitudes, spiritual beliefs, political attitudes, and current mood/feelings as well as some questions about your personal background. Your participation will take between 30 and 45 minutes. You are being recruited because you are 17 years of age or older and enrolled in undergraduate courses at Radford University. We are recruiting approximately 300 participants for this project.

This project has no more risk than you may find in daily life.

There are no direct benefits to you for being in the project.

There are no costs to you for being in this project. You will receive 2 research credits in the Psychology Department's SONA system for participating in this project, which may be used as course credit or extra credit in a psychology course. The type and amount of credit will be determined by your psychology instructor.

That data that you provide are anonymous. We will not ask for your name or any other identifying information. No computer/device IP addresses will be recorded. The research team will work to protect your data to the extent permitted by technology. It is possible, although unlikely, that an unauthorized individual could gain access to your responses because you are responding online. This risk is similar to your everyday use of the internet.

Your participation in this survey is voluntary. You can choose not to be in this project. If you decide to be in this project, you may choose not to answer certain questions or quit answering questions at any time without penalty or loss of SONA credits. If you wish to withdraw from the

study or have any questions, contact Dr. Jeff Aspelmeier, Box 6946, Department of Psychology, Radford University, Radford, VA 24142. jaspelme@radford.edu, (540)831-5520.

If you choose not to participate or decide to withdraw, there will be no impact on your current or future relationship with Radford University.

If you have any questions about the study at this time or later, you may contact Dr. Jeff Aspelmeier, Box 6946, Department of Psychology, Radford University, Radford, VA 24142. jaspelme@radford.edu, (540)831-5520.

This study was approved by the Radford University Committee for the Review of Human Subjects Research. If you have questions or concerns about your rights as a research subject or have complaints about this study, you should contact Ben Caldwell, Institutional Official and Dean of the College of Graduate Studies and Research, bcaldwell13@radford.edu, (540)831-5724.

Please print off a copy of this page for your records before proceeding.

You may also contact the researcher (jaspelme@radford.edu) for a copy of this form. This will serve as your proof of participating in the class project in the event you have questions about obtaining your SONA credits.

If you would like to take part in this study, please click the "Yes" button at the bottom of this screen indicating your agreement for participation. This will direct you to our survey. If you decide not to be in this study, please click the "No" button. This will direct you to back to the SONA homepage

- Yes, I have read the Informed Consent form and I would like to participate in this study. (1)
- No, I would not like to participate in this study at this time. (2)

Appendix K

Debrief Form

Transgender Attitudes Project

Thank you for participating in our study. As a reminder, this project investigated attitudes about transgender and gender non-conforming individuals. Specifically, we were interested in the degree to which the attitudes you hold about transgender individuals and the attitudes you believe your peers (other students at Radford University) have about transgender individuals were related. Previous research has shown that people are often quite inaccurate about their peers' attitudes. The present study tested the degree to which differences between your own and your perceptions of your peers' attitudes are associated with attitudes about other personal beliefs and whether your feelings about yourself and current mood changed as a result of feeling in tune (as opposed to out of step) with others.

If you have any questions, concerns, complaints about your participation or if you would like to hear more about the results when the study is complete, you may contact Dr. Jeff Aspelmeier, Box 6946, Department of Psychology, Radford University, Radford, VA 24142. jaspelme@radford.edu, (540)831-5520.

If you have questions or concerns about your rights as a research subject or have complaints about this study, you should contact Ben Caldwell, Institutional Official and Dean of the College of Graduate Studies and Research, bcaldwell13@radford.edu, (540)831-5724.

Again, thank you for your participation.

Please print this page for your records.

Return to SONA

Appendix L

Tables

Table 1

Zero Order Correlations and Descriptive Data for Main Variables

	1	2	3	4	5	6	7	8	9
1. TAS	**.98**								
2. TAO	.24***	**.97**							
3. ROS	.35***	-.02	**.88**						
4. RFS	.44***	-.05	.77***	**.95**					
5. CLS	-.04	-.05	.33***	.20**	**.75**				
6. CCS	.34***	-.11	.82***	.87***	.39***	**.93**			
7. SocECon	.51***	.03	.46***	.49***	.18*	.49***	**.80**		
8. Pcon	.60***	.04	.54***	.62***	.22**	.55***	.63***	**.90**	
9. Lib-Con	-.51***	.09	-.42***	-.53***	-.24***	-.51***	-.59***	-.76***	--
Mean	1.85	3.01	2.85	4.24	3.05	3.16	59.58	3.22	4.32
SD	1.03	.96	.76	1.70	.85	1.08	15.67	.67	1.56
n	190	190	190	189	188	190	181	180	180

Note. *= $p \leq .05$, **= $p \leq .01$, ***= $p \leq .001$. Degrees of freedom range between 179 and 189. Cronbach's Alpha appear on the diagonal. TAS = Transgender Attitudes Self, TAO = Transgender Attitudes Other, ROS = Religious Orientation Scale, RFS = Religious Fundamentalism Scale, CLS = Christian Liberalism Scale, CCS = Christian Conservatism Scale, SocECon = Social and Economic Conservatism Scale, Pcon = Political Conservatism Scale, Lib-Con = Level of conservatism to liberalism. For Lib-Con, high scores indicate a high degree of political liberalism.

Table 2

Gender Differences with Main Study Variables

Variable	Gender				
	Male (n = 28)	Female (n = 160)	t	df	d
TAS	2.36 (1.25)	1.77 (.96)	2.89*	186	.59
TAO	3.39 (1.12)	2.94 (.93)	2.31*	186	.47
CCS	2.53 (1.22)	3.29 (1.01)	-3.56***	186	-.73
CLS	2.62 (.96)	3.13 (.79)	-3.05**	184	-.62
RFS	3.66 (1.89)	4.37 (1.64)	-2.08*	185	-.42
ROS	2.45 (.81)	2.93 (.73)	-3.19**	186	-.65

Note. * = $p \leq .05$, ** = $p \leq .01$, *** = $p \leq .001$. TAS = Transgender Attitudes Self, TAO = Transgender Attitudes Other, CCS = Christian Conservatism Scale, CLS = Christian Liberalism Scale, RFS = Religious Fundamentalism Scale, ROS = Religious Orientation Scale. Standard deviations appear in parentheses below the mean.

Table 3

Crosstabulations of Political Party and Ethnicity

	Ethnicity					
Classification	Caucasian	African American	Other	χ^2	*df*	Φ
Republican	24.2%	0%	0.5%	37.28***	4	.45
	(4.5)	(-3.8)	(-1.9)			
Democrat	18.7%	13.2%	7.1%			
	(-5.6)	(4.0)	(3.3)			
Independent	28.6%	6.0%	1.6%			
and Other	(1.7)	(-.7)	(-1.7)			

Note. *** = $p \leq .001$. Standardized Adjusted Residuals appear in parentheses below percentages. $N = 182$

Table 4

Associations between Sexual Orientation and Main Study Variables

Variable	Sexual Orientation				
	Heterosexual (n = 140)	Other (n = 50)	t	df	d
TAS	2.05 (1.09)	1.30 (.49)	4.65***	188	.77
Pcon	3.39 (.59)	2.73 (.65)	6.42***	178	1.09
SocECon	63.29 (14.61)	49.00 (13.79)	5.85***	179	.99
CCS	3.38 (1.03)	2.56 (1.01)	4.85***	188	.80
RFS	4.62 (1.57)	3.19 (1.60)	5.50***	187	.91
ROS	3.00 (.75)	2.44 (.63)	4.72***	188	.78
Lib-Con	1.98 (.79)	2.60 (.61)	-5.00***	178	-.96

Note. * = $p \leq .05$, ** = $p \leq .01$, *** = $p \leq .001$. TAS = Transgender Attitudes Self, Pcon = Political Conservatism Scale, SocECon = Social and Economic Conservatism Scale, CCS = Christian Conservatism Scale, RFS = Religious Fundamentalism Scale, ROS = Religious Orientation Scale, Con-Lib Recode = Level of conservatism to liberalism. For Lib-Con, high scores indicate a high degree of political liberalism. Standard deviations appear in parentheses below the mean.

Table 5

Crosstabulations of Political Party and Sexual Orientation

	Sexual Orientation				
Classification	Heterosexual	Other	χ^2	*df*	Φ
Republican	23.7%	1.1%	15.01***	2	.29
	(3.8)	(-3.8)			
Democrat	25.3%	13.7%			
	(-2.2)	(2.2)			
Independent	24.7%	11.5%			
and Other	(-1.3)	(1.3)			

Note. *** = $p \leq .001$. Standardized Adjusted Residuals appear in parentheses below percentages. $N = 182$

Table 6

Associations between Religious Traditions and Main Study Variables

	Religious Tradition						
Variable	Christianity (n = 129)	Nothing in Particular (n = 21)	Agnosticism /Atheism (n = 31)	Other (n = 9)	F	df	η^2
TAS	2.04_{b}	1.53_{a}	1.33_{a}	1.48_{ab}	5.14^{**}	3, 186	.08
	(1.09)	(.88)	(.63)	(.71)			
Pcon	3.42_{c}	2.91_{ab}	2.62_{a}	3.21_{bc}	14.21^{***}	3, 176	.22
	(.54)	(.68)	(.69)	(.83)			
SocECon	63.83_{c}	56.46_{b}	45.33_{a}	55.52_{abc}	14.33^{***}	3, 177	.20
	(14.96)	(9.89)	(12.74)	(15.62)			
Lib-Con	3.83_{a}	5.00_{bc}	5.73_{c}	4.32_{b}	17.42^{***}	3, 176	.23
	(1.42)	(1.45)	(1.23)	(1.56)			
CCS	3.67_{c}	2.38_{b}	1.76_{a}	2.59_{b}	50.46^{***}	3, 186	.49
	(.81)	(.72)	(.67)	(.82)			
CLS	3.27_{c}	2.80_{b}	2.34_{a}	2.98_{bc}	13.00^{***}	3, 184	.17
	(.70)	(.87)	(.95)	(.88)			
RFS	4.95_{d}	3.13_{bc}	2.25_{a}	3.62_{c}	41.0^{***}	3, 185	.40
	(1.35)	(1.48)	(1.03)	(1.51)			
ROS	3.14_{c}	2.45_{b}	2.03_{a}	2.49_{ab}	30.21^{***}	3, 186	.33
	(.66)	(.53)	(.50)	(.74)			

Note. ** = $p \leq .01$, *** = $p \leq .001$. TAS = Transgender Attitudes Self, Pcon = Political Conservatism Scale, SocECon = Social and Economic Conservatism Scale, CCS = Christian Conservatism Scale, CLS = Christian Liberalism Scale, RFS = Religious Fundamentalism Scale, ROS = Religious Orientation Scale, Lib-Con = Level of liberalism to conservatism. For Lib-Con, high scores indicate a high degree of political liberalism. Standard deviations appear in parentheses below the mean. Within each row, means with differing subscripts are significantly different at the .05 level, using LSD post hoc analyses.

Table 7

Crosstabulations of Political Party and Religious Traditions

	Religious Tradition						
Classification	Christianity	Nothing in Particular	Agnostic/ Atheist	Other	χ^2	*df*	Φ
Republican	23.6% (4.7)	0.5% (-2.3)	0.5% (-3.0)	0% (-1.8)	24.64***	6	.37
Democrat	23.1% (-1.8)	6.6% (1.8)	7.7% (.9)	1.6% (-.4)			
Independent and Other	20.3% (-2.4)	4.4% (0.2)	8.2% (1.7)	3.3% (1.9)			

Note. *** = $p \leq .001$. Standardized Adjusted Residuals appear in parentheses below percentages.
$N = 182$

Table 8

Mixed-Model Factorial ANOVAs for Main variables by Moderator Comparison Groups

		Moderator Comparison Groups			
Moderator	Target of Rating	Low	High	*F* (*df*)	η^2
SocECon	Self	1.49 (.67)	2.41 (1.21)	42.54*** (1, 179)	.19
	Other	2.97 (.95)	3.07 (.99)	0.50 (1, 179)	.003
	F (*df*)	212.22*** (1, 104)	18.62*** (1, 75)		
	η_p^2	.67	.20		
Pcon	Self	1.45 (.59)	2.41 (1.25)	46.96*** (1, 178)	.21
	Other	3.03 (.96)	3.01 (.96)	0.02 (1, 178)	.0001
	F (*df*)	242.51*** (1, 105)	18.87*** (1, 73)		
	η_p^2	.70	.21		
ROS	Self	1.53 (.71)	2.21 (1.20)	23.54*** (1, 188)	.11
	Other	2.91 (.95)	3.11 (.97)	2.08 (1, 188)	.01
	F (*df*)	168.99*** (1, 99)	40.96*** (1, 89)		
	η_p^2	.63	.32		
CCS	Self	1.61 (.88)	2.15 (1.12)	13.57*** (1, 188)	.07
	Other	3.12 (.98)	2.87 (.92)	3.25† (1, 188)	.02
	F (*df*)	195.57*** (1, 105)	28.75*** (1, 83)		
	η_p^2	.65	.26		
CLS	Self	1.92 (1.10)	1.78 (.96)	0.80 (1, 186)	.004
	Other	3.10 (1.00)	2.93 (.93)	1.46 (1, 186)	.008
	F (*df*)	72.08*** (1, 90)	99.27*** (1, 96)		
	η_p^2	.45	.51		
RFS	Self	1.51 (.67)	2.26 (1.22)	28.03*** (1, 187)	.13
	Other	3.04	2.97	0.29	.002

	(.91)	(1.03)	(1, 187)
F	246.30***	24.29***	
(*df*)	(1, 102)	(1, 85)	
η_p^2	.71	.22	

Note. † = marginal effect, *** = $p \leq .001$. Standard deviations appear in parentheses below means. ROS = Religious Orientation Scale, CCS = Christian Conservatism Scale, CLS = Christian Liberalism Scale. RFS = Religious Fundamentalism Scale, SocECon = Social and Economic Conservatism Scale, Pcon = Political Conservatism Scale.

Table 9

Liberalism to Conservatism Level and Transgender Prejudice Descriptive Statistics

	Liberal vs. Conservative Continuum: Tertile Split				
Target of Rating	Highly Conservative (.5 SD Below the Mean)	Intermediate Political Attitudes	Highly Liberal (.5 SD Above the Mean)	*F* (*df*)	η^2
Self	2.69_c (1.32)	1.74_b (.85)	1.33_a (.50)	27.75^{***} (2, 177)	.24
Other	2.95_a (.95)	2.92_a (.92)	3.21_a (1.07)	1.46 (2, 177)	.02
F(*df*)	1.96 (1, 44)	116.38^{***} (1, 84)	165.15^{***} (1, 49)		
η_p^2	.04	.58	.77		

Note. *** = $p \leq .001$. Standard deviations appear in parentheses below means. Within each row, means with differing subscripts are significantly different at the .05 level, using LSD post hoc analyses.

Table 10

Political Party and Transgender Prejudice Descriptive Statistics.

Target of Rating	Political Party			F (df)	η^2
	Republican	Democrat	Independent and Other		
Self	2.66_{c}	1.47_{ab}	1.74_{b}	23.44^{***}	.21
	(1.22)	(.62)	(.99)	(2, 179)	
Other	3.03_{a}	3.05_{a}	2.96_{a}	.154	.002
	(.80)	(1.07)	(.96)	(2, 179)	
F	3.61^{***}	155.84^{***}	84.71^{***}		
(df)	(1, 44)	(1, 70)	(1, 65)		
η_p^2	.08	.69	.57		

Note. *** = $p \leq .001$. Standard deviations appear in parentheses below means. Within each row, means with differing subscripts are significantly different at the .05 level, using LSD post hoc analyses.

Table 11

Interaction Effect Sizes Prior to and After Adding Covariates to the Model

Variable	η_p^2 Prior to Adding CVs	η_p^2 After Adding CVs
ROS	.05**	.02†
CCS	.09***	.06**
RFS	.12***	.08***
SocECon	.10***	.05**
Pcon	.13***	.08***
Political Party – 3 categories	.15***	.10***
Lib-Con – tertial split	.23***	.16***

Note. ** = $p \leq .01$, *** = $p \leq .001$, † = marginal effect. CVs = Covariates. Covariates added were: gender, sexual identity, transgender identity, and age. ROS = Religious Orientation Scale, CCS = Christian Conservatism Scale, RFS = Religious Fundamentalism Scale, SocECon = Social and Economic Conservatism Scale, Pcon = Political Conservatism Scale, Lib-Con = Level of political liberalism to conservatism.