

BEING PUSHED AND PULLED IN DIFFERENT DIRECTIONS:
EXAMINING PEOPLE'S AMBIVALENCE TOWARD
TRANSGENDER-SPECIFIC POLICIES

Muhammad Fazuan Bin Abdul Karim

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Doctoral Committee

Jane Williams, PhD, Chair

Leslie Ashburn-Nardo, PhD

December 14, 2022

Michelle Salyers, PhD

Margaret (Peggy) Stockdale

Jamie Levine Daniel, PhD

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DEDICATION

I dedicate this document to those who feel they do not truly belong to any particular group, and to those who courageously fight every day just to be heard. I see you, I hear you, and I feel you. You are not alone.

I also dedicate this work to my husband, whose unwavering support has continuously expanded my view of the world. I cherish all the memories we have created and excitedly anticipate those yet to come. Thank you for being my husband, my best friend, my advocate, my inspiration, and my pillar of strength. This world is a better place with you in it.

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Objectives: This work examines the dynamic relationships between people's ambivalence and support for specific transgender policies, namely the bathroom bill and the transgender sports participation policy. Even though attitude ambivalence has been studied extensively in the social psychological research, our current understanding of this topic as it relates to attitudes toward transgender policies remains scant. **Method:** In Study 1, cisgender participants were surveyed about their values, ambivalence, likelihood of seeking new information, and attitudes toward transgender policies. In Study 2 and Study 3, cisgender participants were asked to report their ambivalence (distinguishing between potential and felt ambivalence), likelihood of seeking new information, and attitude toward the bathroom bill. In Study 4, cisgender participants were randomly assigned to reflect on either one-sided arguments or two-sided arguments of the transgender sports participation policy. Lastly, Study 5 investigated the extent to which cisgender participants' endorsement of the transgender sports participation policy was a function of social norms. **Results:** Studies 1-3 revealed that there exist relationships among potential ambivalence, felt ambivalence, likelihood of seeking new information, and attitudes toward the bathroom bill, and these relationships were consistent with the extant literature. Study 4 demonstrated that when asked to reflect on both sides of the transgender sports participation policy, participants reported greater ambivalence than when they were asked to reflect on only one side of the policy arguments. Study 5 revealed that regardless of ambivalence levels, participants' attitudes toward the

transgender sports participation policy changed in accordance with social norms.

Conclusion: This body of work allows us to understand the impact of attitudinal ambivalence in predicting support for specific transgender policies. The current work documents how ambivalence could be leveraged to mobilize support for transgender policies but may be less influential compared to social norms, especially in the context of bathroom bill and transgender sports participation policies.

Jane Williams, PhD, Chair

Leslie Ashburn-Nardo, PhD

Michelle Salyers, PhD

Margaret (Peggy) Stockdale, PhD

Jamie Levine Daniel, PhD

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CHAPTER 1

Problem Statement and Introduction

Lesbian, gay, bisexual, and transgender (LGBT) individuals are witnessing significant progress in general public attitudes when it comes to integration, acceptance, and equality. Various lines of research from political science, sociology, and psychology have shown that public support for LGBT people has doubled over the past three decades (Flores, 2014) and that there is a decrease in negative attitudes toward these individuals, especially after the legalization of same-sex marriage in the US on June 26, 2015 (Flores & Barclay, 2016; Bishin, Hayes, Incantalupo, & Smith, 2016). Generally, people in the United States are becoming more accepting of LGBT individuals, especially in recognizing the importance of giving them the same treatment when it comes to employment, housing, education, healthcare, jury services, and credit. Specifically, in a survey by the Public Religion Research Institute (PRRI) it was found that over 70 percent of Americans supported equality rights of LGBT people, irrespective of their political parties (Human Rights Campaign, 2019).

Although the U.S. is making steady strides toward equality in the LGBT community, the rate in which progress is made differs significantly among the LGBT subgroups. Acceptance from the general public of transgender individuals is moving abysmally slower than the acceptance of lesbian, gay, and bisexual individuals. As an example, a survey conducted by the Pew Research Center in May 2022 stated that, in the United States, 72 percent of people reported that homosexuality should be accepted by society, suggesting a greater acceptance toward people with diverse sexual orientations. On the contrary, in the same study, 38 percent of the US adults claimed that our society

has gone too far in accepting people who identify as transgender, implying that we have done more than needed to accept people of varying gender identities and expressions. The reality shows that transgender individuals tend to fare worse in society than lesbian, gay, and bisexual individuals. For instance, transgender individuals are more likely to attempt suicide (41 percent prevalence), exceeding the US population average of 4.6 percent and the lesbian, gay, and bisexual population average of 10-20 percent. Transgender individuals are more likely to experience prejudice and discrimination by health care professionals and even their own friends, particularly those who identify as cisgender and heterosexual (Galupo, Henise, & Davis, 2014; Hagen & Galupo, 2014; Reisner, Pardo, Gamarel, Hughto, Pardee, & Keo-Meier, 2015).

When it comes to arguing about LGBT-related rights and policies, people tend to bifurcate into two streams of arguments (McClosky & Zaller, 1984; Wilcox & Wolpert, 1996, 2000): on one side people argue for the need to advance equality (egalitarian perspective), and on the other side people argue for the need to maintain the status quo and traditional social arrangements (moral traditionalist perspective). People with egalitarian views believe that different groups of people should be treated the same regardless of their social identities (Stanford Encyclopedia of Philosophy, 2013). People with this perspective believe that LGBT people should receive the same treatment as their non-LGBT counterparts, and that their sexuality or gender identity should not be used against them. Brewer (2003) analyzed data from the American National Election Studies survey in 1992 and 1996 and found that participants who endorsed egalitarian ideals were more likely to support gay rights regardless of their knowledge of political mechanisms. In the context of transgender rights, Flores, Haider-Markel, Lewis, Miller, Tadlock, and

Taylor (2020) found that people who endorsed egalitarianism ideals were more likely than people with traditionalist ideals to support transgender sports participation. On the other side of the spectrum are people with a traditionalist perspective who believe that LGBT individuals violate important values pertaining to their respective gender roles (Henry & Reyna, 2007; Reyna, Wetherell, Yantis, & Brandt, 2014). Even though perceptions of being LGBT as innate or biologically driven have become more visible in the public discourse over the past two decades (Bailey & Pillard, 1991; Garretson & Suhay, 2016; LeVay, 1991; Wilcox, 2003), people with traditionalist views tend to negate these findings and adhere to their respective belief systems. As a result of that, people who hold these views tend to argue that being an LGB person is a choice, and as such are less likely to express support for LGB causes (Jayaratne, Ybarra, Sheldon, Brown, Feldbaum, Pfeffer, & Petty, 2006; Wood & Bartkowski, 2004). Empirical findings seem to support this notion too. Specifically, Haider-Markel and Joslyn (2008) showed that participants were more likely to have negative attitudes toward homosexuality and were less likely to support lesbian- and gay-friendly policies when homosexuality was framed as controllable (learned or individual choice) as opposed to uncontrollable (biological or innate). People who endorse moral traditionalism have lower tendency to support transgender rights, and they especially oppose transgender candidates who are running for office (Cao & Gurcay, 2022).

Even though typical arguments regarding LGBT rights tend to focus on egalitarianism and moral traditionalism, these two values alone are often incomplete. Current literature suggests that perhaps people use other values (or foundations of morality) when arguing such policies. One value that is salient when arguing for or

against transgender sports participation policies is the value of fairness. Some would argue that allowing transgender women to compete in women's sports is unfair due to the various biological and physiological differences between male and female anatomy (Abrams, 2010) that would benefit transgender women athletes. Specifically, these opponents of allowing transgender women to compete in women's sports would argue that transgender women have higher levels of endogenous testosterone that will afford them with physical advantages (Hill & Willoughby, 2005).

The debate on who gets to compete in women's sports became more prominent in recent years when a transgender woman swimmer from the University of Pennsylvania, Lia Thomas, won the Division 1 national championship (Barnes, 2022). After finishing her 200-yard freestyle at the Ocasek Natatorium in Akron, Ohio, with a record time of 1:41.93, spectators began to take sides – some people were clearly celebrating while others were upset about Thomas's win. In just a day, Indiana and Arizona started considering legislation that would challenge the ability of transgender girls to compete in girls' sports (Barnes, 2022). It is important to note, however, some theorists argue that egalitarianism is an umbrella principle that includes tangible values such as fairness and respect (Wolff, 2010, 1998). Even though an argument can be made to suggest that one cannot fully recognize the importance of providing equal opportunities across different groups of people without also acknowledging the importance of fairness, this document will treat egalitarianism and fairness as two separate – albeit related – values. This is because people tend to apply specific types of arguments depending on the stance they are taking. As an example, opponents of transgender sports participation policies tend to demonstrate arguments that are consistent with fairness values; the supporters tend to

claim that such policies go beyond fairness and are attempts at furthering the stigma surrounding transgender athletes (Gleaves & Lehrback, 2016).

Given different views that people hold in regard to LGBT-related issues, it is not surprising that politicians are gathering votes from their constituents by implementing assorted strategies that would appeal to people's varying preferences (Mucciaroni, 2011). When in positions of power, opponents of transgender-related policies may use religious or moral arguments to mobilize their more conservative followers in pressuring politicians to impose barriers to transgender progress. Perhaps, strategically, these people could craft persuasive messages that evoke people's sense of disgust and authoritarianism, which have been shown to lower people's support for transgender rights (Miller, Flores, Haider-Markel, Lewis, Tadlock, & Taylor, 2017). However, these same opponents may use other types of framing when trying to persuade individuals who do not have such strong negative attitudes toward transgender individuals.

All of the messages we hear on a day-to-day basis can either be supportive or against transgender-related policies. Because of this, one could argue that people's attitudes toward some transgender-related policies are marked with the state of ambivalence, such that people either have a mix of positive and negative emotions or have various competing (and therefore conflicting) values that they need to propel forward. Unfortunately, there is dearth of research in literature connecting attitudinal ambivalence and transgender-specific policies. The most germane example of this notion can be found on the Florida statewide telephone survey conducted by Craig, Martinez, Kane, and Gainous (2005). The researchers found that respondents' attitudes toward lesbian and gay rights were marked with ambivalence. Specifically, participants were

more likely to express their ambivalence toward policies that would support lesbian and gay individuals when there was a conflict between their egalitarianism and moral traditionalism values.

While these programs of research are an indication of a tremendous progress in helping us understand how we can increase support for members of the LGBT community, most of the work has focused specifically on the LGB (sexual orientation), leaving the T (gender identity) in the LGBT community behind. The only exception can be seen in the research projects conducted by Jones, Brewer, Young, Lambe, and Hoffman (2018), as well as Cao and Gurcay (2021). Both of these papers highlight the importance of core beliefs, especially moral traditionalism, in predicting lower support for transgender people, rights, and political candidates. Although not supported by Jones et al. (2018), Cao and Gurcay (2021) demonstrated that having diverse interpersonal contacts with transgender individuals weakened the relationship between moral traditionalism and support for transgender rights.

Transgender individuals go through debates about their rights in a similar fashion to their LGB counterparts. Unlike LGBT issues prior to the 1990s, where the legislative victory usually came from the pressure of various LGBT interest groups, LGBT issues nowadays are more prominent in the public discourse (Haider-Markel & Meier, 2003). Since then, more arguments are being put forth that resonate with people's values and belief systems, and these issues are now considered morality politics (Haider-Markel & Meier, 1996; Mooney, 2001) or culture wars (Fiorina, Abrams, & Pope, 2005). In light of these seemingly contradictory findings whereby, on one hand, attitudes toward LGBT individuals are improving, and, on the other hand, transgender individuals are

experiencing substantial discrimination, it is very important for researchers and practitioners who are interested in this topic to dive deep into the literature of values and value conflict (the literature will be summarized in the next section). In this paper, I will demonstrate how we can use attitudinal ambivalence literature to understand people's attitudes toward transgender policies. The goal of this paper is to build upon the work of Craig, Martinez, Kane, and Gainous (2005) on ambivalence in examining people's attitudes toward lesbian and gay rights. It is important to ascertain the relationships between ambivalence, likelihood of seeking new information, and attitudes toward transgender-specific policies. Ultimately, this paper will utilize ambivalence and persuasion literatures to leverage people's ambivalence in ways that are supportive of transgender policies.

What is Meant by Attitudinal Ambivalence?

Before diving deeper into the conceptualization and operationalization of attitudinal ambivalence, it is important to note that this concept has been widely studied in the racism and sexism literature. For example, Katz and his collaborators in their research on racial attitudes have found evidence of ambivalence as well. To start with, they found that pro-Black and anti-Black attitudes are independent from one another (Katz & Hass, 1988). According to their lines of research, people could hold a mix of positive and negative feelings toward Blacks – these people might hold negative emotions toward Blacks and still support social programs that will help reduce discrimination toward them. Conceptually, Katz and his collaborators argued that racial attitudinal ambivalence, as it relates to similarity and extremity of the measures, would be greatest for those who have similar pro-Black and anti-Black attitudes (Hass, Katz,

Rizzo, Bailey, & Eisenstadt, 1991). In other words, ambivalence would be greatest when you feel strongly negatively about Blacks and strongly positive about advocating on their behalf.

The same line of thinking can be applied to the study of attitudes toward women, pioneered by Glick and Fiske. In their papers, Glick and Fiske (1996, 2001) argued and found support for the presence of ambivalent sexism which is the simultaneous presence of benevolent and hostile sexist attitudes. According to them, a person can act benevolently sexist towards a woman, which appears to be good-natured and well-intended. However, that behavior increases the vicious cycle of treating women differently because of their sex or gender, such as limiting the types of vocations women can and should pursue due to the perception of them being delicate or fragile (Glick & Fiske, 2001). Similar to the work by Katz and his collaborators, benevolent and hostile sexist attitudes have been shown to be positively correlated with one another, with r ranging from .40 to .50 (Glick et al. 2000), which suggests that they are independent yet interrelated constructs. Even though the underlying mechanisms of ambivalence in this document are similar to the racism and sexism programs of research, the object of which the ambivalence is being assessed is different (i.e., attitudes toward transgender-specific policies).

Going back to the definition, theoretically, attitudes researchers operationalized attitudes as a unidimensional bipolar construct in that people either have purely positive attitudes, negative attitudes, or neutral attitudes toward an object (Armitage & Conner, 2004). However, a more contemporary approach is to examine attitudes using the bidimensional model of attitudes that posits that people have the ability to hold positive

and negative evaluations of an attitude object, simultaneously (Conner & Sparks, 2002). According to the extant literature, there have been two different approaches in understanding attitudinal ambivalence. One perspective comes from the social psychological field; another comes from the political science field.

Social psychological literature views attitudinal ambivalence as a simultaneous mix of positive and negative evaluations toward an attitude object (Gardner, 1987; Priester & Petty, 1996; Thompson, Zanna, & Griffin, 1995). For example, some people may have simultaneous positive and negative feelings about clowns: the positive feelings may come from clowns' predisposition to demonstrate funny behaviors; the negative feelings may come from associations that people may have in connecting clowns with horrific events.

Political science literature tends to focus more on the presence of conflicting values or motives when evaluating an attitude object (Feldman & Zaller, 1992). For example, some people may feel conflicted on whether or not to support welfare state because of their simultaneous endorsement of individualism and humanitarianism values. Some part of them may feel that supporting welfare state is important so that everyone may enjoy the prosperity that is abundant in this world, but another part of them may feel like doing so would discount their belief that people ought to work hard to get what they want.

According to Thompson, Zanna, and Griffin (1995) in their citing of the historical context of attitudinal ambivalence research, the concept of attitudinal ambivalence came from conflict theories (Brown & Ferber, 1951; Miller, 1944), which operationalize ambivalence as response alternatives. These alternatives have to be contradictory in

nature (a mix of positive and negative; egalitarianism and traditional morality, which are seemingly incompatible with one another), must be of equal significance or strength, and must occur in situations where the various outcomes are equally available and desirable (people can either express positive or negative attitudes about transgender-related policies). Based on this citing of conflict theories by Thompson and her collaborators (1995), I would argue that both social psychological and political science perspectives in conceptualizing ambivalence are congruent with rather than divergent from one another.

In terms of strategies to measure ambivalence, researchers in the social sciences have proposed and demonstrated the validity of two main approaches. The first approach to measuring attitudinal ambivalence is asking a series of direct questions designed to assess the extent of subjective ambivalence experienced by the respondents (Priester & Petty, 1996, 2001). Some researchers called this *felt ambivalence* (or *subjective ambivalence*), and the particular concern is on how the state of being ambivalent about an attitude object induces psychological discomfort in the person (Newby-Clark, McGregor, Zanna, 2002). This approach allows people to make a calculative measure of where they stand when it comes to various attitude objects: whether they are in the state of confusion, or are experiencing mixed feelings, indecision, or uncertainty. The sample items include, “I find myself feeling ‘torn’ between two sides of the issue at hand,” and “I’m confused about the issue because I have strong thoughts about it, and I can’t make up my mind one way or another.” It would appear that measuring attitudinal ambivalence using this approach was pioneered by Jamieson (1988), and it has been validated by other research as well (Priester & Petty, 2001; Sparks, Hedderly, & Shepherd, 1992; Tourangeau, Rasinski, Bradburn, & D’Andrade, 1989).

It is important to note, however, that felt ambivalence need not be confused with cognitive dissonance, although both focus on how cognitive inconsistencies lead to a state of psychological aversion (Elliot & Devine, 1994). There are a few defining features that differentiate ambivalence from dissonance. Conceptually, ambivalence researchers tend to think about ways in which various psychological mechanisms give rise to cognitive inconsistencies that will translate into a state of discomfort. On the other hand, dissonance researchers tend to not focus on the measurement or quantification of these cognitive inconsistencies (Newby-Clark, McGregor, & Zanna, 2002). Operationally, cognitive dissonance experiments tend to do one of the following: (1) induce participants' hypocrisy (Aronson, Fried, & Stone, 1991), (2) ask participants to choose between two or more equally attractive options (Gerard & White, 1983; Younger, Walker, & Arrowood, 1977), or (3) instruct participants to write counter-attitudinal essays (Collins & Hoyt, 1972; Elliot & Devine, 1994). As for ambivalence researchers, their paradigm allows them to assess the extent of participants' cognitive inconsistencies (Newby-Clark, McGregor, & Zanna, 2002).

The second approach to measuring ambivalence is called *potential ambivalence* (or *objective ambivalence*): the underlying mechanisms that give rise to felt ambivalence (or subjective ambivalence; DeMarree, Petty, & Briñol, 2007). Another way to think about potential ambivalence is the quantification of our attitudinal evaluations – positive and negative evaluations or conflicts between two opposing values (e.g., egalitarianism and moral traditionalism). It is done usually by measuring the positive and negative evaluations that people have regarding an attitude object, typically by using a four-point unipolar scale. In this assessment, participants are asked to ignore the negative side of the

argument when thinking about the positive side, and vice versa. After that, researchers use the following formula to measure ambivalence:

$$\text{Ambivalence} = [(P+N)/2] - [P-N]$$

such that P stands for positive evaluations and N stands for negative evaluations of the attitude object. This approach was introduced by Kaplan (1972) and has been revised and improved by many various programs of research that examine attitudinal ambivalence (Jamieson, 1988; Thompson, Zanna, & Griffin, 1995). Using the formula as guidance, for those who have high positive and negative attitudes toward an attitude object, they are more likely to experience attitudinal ambivalence than people with low positive and negative attitudes. It is important to note, however, that this formula has also been used in the political science studies where the researchers investigated the conflicting values (e.g., egalitarianism and traditional morality) in predicting attitudes toward various policies (Craig, Kane, & Martinez, 2002; Craig, Martinez, Kane, & Gainous, 2005). For instance, researchers might replace positive evaluations (indicated as P in the formula) with the egalitarianism value and replace negative evaluations (indicated as N in the formula) with moral traditionalism to quantify potential ambivalence.

Some critics might argue that there should not be two different strategies to measure ambivalence. Some might even claim that felt ambivalence and potential ambivalence are the same construct. However, although they are correlated with one another, felt ambivalence and potential ambivalence are independent from one another. This has been shown by various research teams: Thompson, Zanna, and Griffin (1995) found that felt and potential ambivalence were correlated at $r = .40$; Newby-Clark, McGregor, and Zanna (2002) found the correlations to range from .18 to .36 across three

different experiments. If the two approaches were tapping into the same construct, the correlation coefficient should have been above the typical measure of $r \geq .80$.

There are also many instances in which felt ambivalence has been shown to be the primary driver of various outcomes of potential ambivalence (Maio, Bell, & Esses, 1996). Particularly, felt ambivalence has been shown to be the mediating factor that links potential ambivalence and relevant outcomes, such as temporal instability, attitude pliability, and likelihood of seeking new information (DeMarree, Wheeler, Brinol, & Petty, 2014). The focus of potential ambivalence is really on the structural properties of attitudes – as indicated by the simultaneous presence of positive and negative evaluations of an attitude object. On the other hand, felt ambivalence is more about direct feelings of discomfort due to the presence of evaluative conflicts (Nordgren, van Harreveld, & van der Plight, 2006). Therefore, people with high potential ambivalence only notice the presence of felt ambivalence when both positive and negative evaluations are brought to their level of awareness, a phenomenon called *simultaneous accessibility* (Newby-Clark, McGregor, & Zanna, 2002; Priester & Petty, 2001).

Even though both social psychology and political science as a field derive their quantification of potential ambivalence from the same formula introduced by Kaplan (1972), these two fields appear to be working only within their own silos. Most research in social psychology focuses on the positive and negative evaluations of an attitude object, while political science focuses on the conflict between values or motives. In this paper, however, my goal is to demonstrate the capability of these two fields to be merged together. Specifically, in my first two studies, I will show that the conceptualization and operationalization of ambivalence from both social psychology and political science to be

comparable to one another in predicting variables related to attitudes toward transgender policies.

How Does Attitudinal Ambivalence Differ from Other Attitudinal Indices

Before we dive deeper into the reasons why people feel ambivalent toward transgender policies, I think it is important to establish attitudinal ambivalence as an independent and distinct construct from other attitudinal structure indices such as attitudinal uncertainty, indifference, extremity, and strength. Attitudinal ambivalence is different from *attitudinal uncertainty* based on the amount of information held by someone: attitudinal uncertainty happens when someone does not have enough information to come up with dependable judgments or evaluations (Alvarez & Brehm, 2002). Another way to view the difference is by looking at attitudinal certainty: a degree to which someone is confident about his or her evaluations about an attitude object as being accurate (Krosnick & Schuman, 1988). Therefore, if someone lacks information regarding specific transgender policies, they are more likely to report greater uncertainty on that topic. Although ambivalence and uncertainty are related, one does not equal the other. Attitudinal ambivalence is distinctive from *attitudinal indifference* because indifference focuses on not having any types of evaluations about an attitude object (Martinez, Gainous, & Craig, 2012), whereas ambivalence is about having opposing evaluations. In other words, attitudinal indifference is simply when someone does not care about an attitude object. Moreover, attitudinal ambivalence is independent from *attitude extremity* because extremity focuses on how someone's attitude toward an object deviates significantly from the midpoint on any given scales (Judd & Johnson, 1981; Krosnick, Boninger, Chuang, Berent, & Carnot, 1993).

Another big distinction that has to be made is how attitudinal ambivalence is related to, and different from, *attitudinal strength*. One can easily deduce that feelings of ambivalence might affect attitudinal strength of a given object, meaning when we feel ambivalent about something, the strength of our attitude might be relatively weak. One can further this prediction by claiming that ambivalent attitudes are not as potent or as capable in predicting any behavior as, say, strong attitudes. Conceptually, there are two ways that researchers have viewed attitudinal strength: one aims at looking at how “durability and impactfulness would be viewed as the effect indicators,” and the other one aims at “treat[ing] durability and impactfulness as causal indicators” of attitudinal strength (Krosnick & Petty, 1995, p. 3). With regard to the first approach, we ought to view attitudinal strength as the antecedent to multiple variables of interest, which then gives rise to durability and impactfulness. However, the second approach focuses more on the idea of attitudinal strength as an outcome of durability and impactfulness. Following the argument made by Krosnick and Petty (1995), I am inclined to approach attitudinal strength as an outcome of durability and impactfulness. To the extent that someone demonstrates greater durability and impactfulness of an evaluation, the stronger that attitude would be.

When it comes to durability of an attitude, researchers further break down the exemplification into two aspects: (1) persistence of the attitude – the extent to which an attitude remains unchanged over the course of a period of time, and (2) resistance of the attitude – how well the attitude holds up after an attack (Petty, Haugtvedt, & Smith, 1995). Similarly, researchers examine impactfulness using two main outcomes. The first outcome relies on the premise that attitudes that we have about certain objects influence

the way we process information such that strong attitudes are more likely to influence biases in processing pro-attitudinal information (Miller & Peterson, 2004; Pomerantz, Chaiken, & Tordesillas, 1995). The second outcome of attitudinal impact relies on the premise that strong attitudes are more likely to guide our behavior than weak attitudes (Petty et al., 1995). In a nutshell, we can argue that strong attitudes are more persistent and resistant over time, more impactful when it comes to information processing, and more likely to guide behavior than weak attitudes. Therefore, it is a challenging task to elicit change from people with strong univalent attitudes (either positive or negative valence) toward transgender-specific policies.

Contrasting strong univalent attitudes with ambivalent attitudes should not be a difficult task. It has been generally argued and accepted that ambivalent attitudes are a form of weak attitudes (Krosnick & Petty, 1995). As a result of that, ambivalent attitudes are less stable over time, less reliable in predicting future behavior, less likely to be durable over time, more likely to facilitate information processing, more prone to persuasion, and more likely to cause psychological discomfort (Conner & Armitage, 2008; van Harreveld, Nohlen, & Schneider, 2015).

Why Might People Feel Ambivalent about Transgender Policies?

Now that we understand attitudinal ambivalence, the next question to address is why people might feel ambivalent about transgender individuals, and subsequently, policies related to them. Research has documented that intergroup contact between transgender and cisgender (non-transgender) individuals, though rising in number, is still low (Hoffarth & Hodson, 2018; Reimer et al., 2017). The relatively low contact allows for people to have conflicting perspectives regarding transgender individuals. Opponents

of transgender rights leverage their side of the arguments to paint negative images of transgender individuals (Capuzza & Spencer, 2017; McInroy & Craig, 2015). For instance, many scripted television shows and movies have portrayed transgender individuals in a negative light by showing them as sexual predators, villains, and criminally-driven minds (Hughto, Pletta, Gordon, Cahill, Mimiaga, & Reisner, 2021). On the other side, advocates of equality work hard to portray transgender lives as being as typical as their cisgender counterparts. Specifically, a content analysis and critical discourse analysis performed by McLaren, Bryant, and Brown (2021) shows how transgender characters in the television shows *Orange is the New Black* and *The Fosters* are indicating a promise for a more positive representation of this community.

Furthermore, societal norms and group norms matter when talking about attitudinal ambivalence. Depending on the heterogeneity of our social networks, various entities within our communities might provide us with conflicting information. Although it is true that U.S. society is becoming more egalitarian, and therefore is more willing to tolerate differences (Scarborough, Sin & Risman, 2019), people may still find themselves struggling between trying to maintain their ingroup interests and upholding the egalitarian values that emphasize a demand to help outgroup members as well. It could be that people have varying definitions of the term egalitarian. For example, in their experiment, Monteith and Walter (1998) found that most participants endorsed egalitarian views regardless of whether or not they expressed anti-Black prejudice. However, only participants who conceptualized egalitarianism as equality of opportunity (as opposed to advancement of individualism) were more likely to express moral obligations to temper their prejudice toward Black individuals. These differences in

defining egalitarianism could potentially arise from the assorted ways in which we are raised – different familial units emphasize different upbringing.

Attitudinal ambivalence might also be a product of perceived discrepancies between one's attitude with important others (Priester & Petty, 1996). According to Priester and Petty (2001), even though we might not have any internal conflicts, having important others like family and close friends disagree with us on various topics creates interpersonal evaluative tensions. This paper also emphasizes two important boundary conditions which are the importance of the topic to oneself and the valence of the relationship, suggesting the support for balance theory (Heider, 1946). Because of our need to achieve harmony with our own well-being and our social surroundings, we are more likely to agree with liked others (family members and friends) and disagree with disliked others (enemies). However, trying to appease liked others can be challenging especially when their values clash with one's own values. To put things in perspective, we can think about the evaluative tension and conflict that we might experience when talking to people we respect who find our stance of a topic to be wrong. The resulting outcome of the struggle between these conflicting values is attitudinal ambivalence. Hence, even if we are supportive of transgender policies but our close family members are opposed to them, having a conversation about it could create felt ambivalence.

Due to the internalization of both positive and negative evaluations, as well as conflicting values of egalitarianism and moral traditionalism, some people might view transgender-related topics through the lens of ambivalence. Since the seminal paper published by Converse (1964), a multitude of research projects from political science and social psychology fields have examined the role of core (conflicting) values and belief

systems in predicting political evaluations (e.g., policy preferences, evaluations of political candidates, assessments of political figures' work). However, for a long time, scientists and practitioners alike were convinced that people's political evaluations were made in response to how political elites structured and disseminated their persuasive messages to public. However, Feldman (1988) demonstrated that Americans' core beliefs and value systems, namely (1) beliefs in equality of opportunity or egalitarianism, and (2) support for economic individualism, predicted people's endorsement of various political outcomes. A more recent publication by Henry and Reyna (2007) found that the primary driver of heterosexual people's opposition toward gay-specific policies was the perceived violation of moral traditionalism by homosexual individuals. It is important to note, however, the extant literature examining the role of attitudinal ambivalence (either from a political science or social psychological standpoints) and attitudes toward transgender-specific policies has been severely understudied.

It is a wide-ranging understanding within the scientific literature that there are general core beliefs about what is right or wrong (think about it as moral conviction; Skitka, Bauman, & Sargis, 2005) that can lead us to desirable ends such as justice, courage, care, and equality. People use these values to guide their life's directions and choices, including whether or not they will support transgender-specific policies. But then, what makes moral conviction or moral mandate so powerful in swaying our day-to-day functioning? Political and moral psychologists have demonstrated that, (1) morality relies on a universality perception, (2) people experience morality as a fact, and (3) moral events evoke strong and powerful emotions. Universalism dictates an urgency for people to adopt the same view. In demonstrating the universality principle of morality, Skitka et

al. (2005) asked people to respond to the following question: “what do you think is the most important problem facing this country today?” (p. 899). After that, respondents were asked to complete measures on moral conviction and social distance from dissimilar others. In their analyses, Skitka et al. (2005) found that participants with greater moral conviction rejected attitudinally dissimilar others regardless of their levels of intimacy, suggesting that strong morality punishes others who have an alternative view on the subject. However, because these core beliefs are large in their bearing and magnitude, there ought to be overlaps between two or more core beliefs (Conner & Armitage, 2008), which then creates ambivalence – the state of having conflicting attitudes toward an object. For example, in the United States, a majority of people endorse egalitarianism – a belief that everyone should be treated the same or be treated as equals (Stanford Encyclopedia of Psychology) – but some may find that egalitarian values stand in conflict with their moral traditionalism values. Because of conflicting ideals, ambivalence occurs.

In regard to attitudes toward transgender policies, it could be that the reason for ambivalence lies in the presence of various conflicting sources of information. Because there is greater integration between transgender and cisgender people, there are now numerous opportunities for people to engage in high quality intergroup contact. Because of the opportunities for contact, cisgender people are confronted with a cross-pressure between their privileged views and intergroup relations with transgender people. The seemingly incompatible values – one that upholds a moral traditionalist view and one that begs people to bend their perspective to favor a more egalitarian view – could lead to greater attitudinal ambivalence (Garner, 2013). As implicated by Garner (2013), this ambivalence may vary as the function of intimacy of relationships with transgender

people. Feelings of ambivalence may be stronger when the relationships are formed with family members or close friends, and less so for distant acquaintances (Barth, Overby, & Huffmon, 2009).

Why Must We Care about this Issue? What are the General Downsides of Being Ambivalent?

As alluded in the introduction of this paper, transgender individuals are at higher risk of danger than their cisgender counterparts. They are also more likely to experience discriminatory episodes and to be denied access to gender affirming physical and mental health care. One approach to resolve this issue is by having more supportive transgender policies. However, progress toward transgender policies has been rather glacial in comparison to the progress made in the lesbian, gay, and bisexual movements. Even though research in political science and social psychology is slowly scratching the surface by examining the role of core beliefs and value systems in predicting attitudes toward specific transgender policies, the extant literature has yet to recognize the possibility that people could experience both positive and negative evaluations, as well as dealing with the demands of conflicting values between egalitarianism and moral traditionalism when reflecting on their endorsement of transgender policies.

What are some of the downsides of being ambivalent? To help organize answers to that question, Conner and Armitage (2008) suggested that ambivalence affects the following: attitude stability over time, the malleability of attitudes, information processing, and the attitude-behavior and attitude-behavioral intention link. It is worth mentioning that research examining the consequences of ambivalence in the context of transgender policies is severely understudied. Even for papers that did mention

ambivalence in the context of LGBT policies, they only focused on the presence of ambivalence, not the outcomes (Craig, Martinez, Kane, & Gainous, 2005; Garner, 2013; Steenbergen & Brewer, 2004). Moreover, the extant literature tends to lump studies of transgender-related topics (gender identity) with studies of gay-, lesbian-, and bisexual-related topics (sexual orientations), which is problematic because these individuals have varied lived experiences from one another based on their social identities.

Since research has documented that highly ambivalent attitudes are weak attitudes (Conner & Sparks, 2002), it has also been demonstrated that the temporal stability – in relation to different time points – of such attitudes is low (Armitage & Conner, 2000; Bargh, Chaiken, Govender, Pratto, 1992). Temporal stability is an important proxy in understanding the strength of any given psychological construct. Particularly, low temporal stability suggests that the attitudes are high in ambivalence. Bargh et al. (1992) demonstrated that respondents who gave similar evaluations on an attitude object between two time points also reported lower attitudinal ambivalence than respondents who gave different evaluations. In a different study, Craig, Martinez, and Kane (2005) surveyed Florida voters in the year of 1999 and found evidence of temporal instability for ambivalence toward abortion rights. Highly ambivalent respondents were more likely to report inconsistent answers between two time points than less ambivalent respondents; this effect was above and beyond other indices of attitudinal strength such as certainty, importance, intensity, and commitment. Thus, we could expect ambivalence toward transgender policies to be associated with low temporal stability from one time point to another.

What makes highly ambivalent attitudes less stable? In relation to changes in attitudes among multiple time points on a given topic, perhaps the Value Pluralism Model (Tetlock, 1986) could shed some light. This model posits that there are constantly going to be trade-offs when deciding on certain policies. For instance, in order to maintain public safety (the law of large numbers), people might have to give up some personal space and freedom. In the context of transgender policies, an argument can be made that allowing transgender individuals to serve in military might jeopardize the integrity of the institution or risking personal safety. According to the model, to resolve these conflicts, people are more likely to find common ground (integration) or observe a particular topic from different vantage points (differentiation). It is not surprising that highly ambivalent people are more likely to feel uncertain about their policy positions and are more likely to change their attitudes toward those policies at different times in the future (Craig, Martinez, & Kane, 2005; Fournier, 2005).

Various programs of research have established that ambivalent attitudes are more susceptible to persuasive messages than univalent (only positive or only negative) attitudes, suggesting the malleability of ambivalent attitudes. This is because, according to Eagly and Chaiken (1995), strong attitudes are embedded and anchored by existing attitudinal structures, making it harder to be flexible. In contrast, ambivalent attitudes do not have such a strong anchor to rely on, making it easier to adapt to new social contexts. In their experiment, Maio, Bell, and Esses (1996) exposed 113 participants to either a strong or weak argument regarding immigration from Hong Kong. Before that, they measured participants' ambivalence toward people from Hong Kong using an open-ended procedure. Attitudinal ambivalence is computed by examining the difference between

positive and negative evaluations using a formula similar to Kaplan (1972) that has also been validated by other researchers (Bell, Esses, & Maio, 1996; Hass, Katz, Rizzo, Bailey, & Eisenstadt, 1991). Consistent with their predictions, Maio et al. (1996) found that high ambivalence participants were more likely than low ambivalence participants to favor immigration policies when exposed to a strong pro-immigration argument. This phenomenon of switching attitudinal positions as a function of persuasive messages is called *response amplification*.

Persuasive messages can come in many forms, and that includes messages that are coming to fellow ingroup members or liked people. Because of our need to maintain a sense of belongingness to groups, we are more likely to be influenced by group members' collective opinion. For example, Hodson, Maio, and Esses (2001) demonstrated that out of nine attitude properties, only ambivalence seemed to moderate the relationship between consensus information and the attitudes toward social welfare. Not surprisingly, those who were high on ambivalence, when they were not given enough motivation or ability to think through, were more likely to align themselves with the opinions of their group members. In four different experiments, Visser and Mirabile (2004) confirmed that people who were embedded within homogeneous social networks were more likely to be resistant to change than those in heterogeneous networks. Visser and Mirabile (2004) supported that the reason for participants in the heterogeneous networks to be less resistant to persuasion was because of the interpersonal evaluative tensions that enhanced the simultaneous presence of positive and negative evaluations of an attitude object. To summarize, people who are ambivalent toward transgender policies are more likely to be

persuaded by strong persuasive messages, especially when those messages come from others that they like or respect.

How do We Reduce Ambivalence?

At this point, the downside of being ambivalent has been highlighted, particularly in the context of attitude stability and pliability. However, because of the weak structure of attitudinal ambivalence, there is an opportunity for scientists and practitioners alike to influence how people endorse transgender-related policies. It is also important to remember that ambivalent attitudes are weak, structurally, but strong, motivationally. When someone experiences ambivalence toward an attitude object, this experience is often accompanied by a sense of discomfort, confusion, or mixed feelings (Zembarain & Johar, 2007). In order to alleviate this discomfort, someone is propelled to seek any (often new) information to help them focus on one side (vs. two sides) of the attitude object, moving them from bivalent to univalent attitude structures.

Why might this be the case? Feeling ambivalent about a topic threatens our thought confidence, or the extent to which we are confident about our own thinking process. Thought confidence has been studied extensively in the persuasion and attitude change literature (Briñol & Petty, 2003; Petty, Briñol & Tormala, 2008). Research has shown that, in general, increasing one's thought confidence increases univalent cognitive responses (either positive or negative directions), which then increases predictive validity of one's attitudes. In one of their experiments, Petty, Briñol, and Tormala (2008) instructed fifty-eight undergraduate students to read arguments about the possibility of the Ohio State University to implement senior comprehensive exams in their students' respective major areas. After that, participants were asked to rate their valence of

thoughts (positive, negative, or neutral), thought confidence, likelihood and desirability of their thoughts, and attitudes toward the comprehensive exams. Petty et al. (2008) found that participants' thought confidence moderated the relationship between cognitive responses (or valenced thoughts) and attitudes toward comprehensive exams policy, such that an increase in participants' thought confidence strengthened the relationship of cognitive responses on attitudes.

Because experiencing ambivalence is often accompanied by discomfort, or feeling torn, high ambivalence people seek to find new information to reduce their ambivalence (Jonas, Diehl, & Brömer, 1997; Zemborain & Johar, 2007), and they do so in a systematic manner, given proper motivation and ability. However, ambivalence does not equate to not having an attitude about a particular topic. The assumption that people who are highly ambivalent about an attitude object as being without any preconceived attitude is a faulty one. For example, people who feel ambivalent about their attitudes toward transgender policies indeed have a specific stance on those topics; it is just that they also are able to see the other side of the arguments relatively more strongly than most. Therefore, the behavior of seeking new information serves an adaptive purpose of helping these people justify their current attitudes toward transgender policies. This is evident in research conducted by Nordgren, van Harreveld, and van der Pligt (2006). When participants were given an opportunity to seek out new information, the researchers found that there was a reduction in felt ambivalence, suggesting that finding new information helped highly ambivalent people feel more comfortable with their current stance.

When it comes to the likelihood of seeking new information, the extant literature typically operationalizes this construct into two approaches: either participants are given the options to pick information provided by the researchers (Clark et Al., 2008; Sawicki et Al., 2013) or they are afforded opportunities to report the extent to which they are interested in different types of information (Itzhakov & Van Harreveld, 2018), often in a general sense. The former approach allows researchers to analyze the proportion of participants favoring some information types but not others. The latter approach ensures a broader quantification of participants' likelihood of seeking new information about a given topic. The first approach assumes that participants would be interested in the information provided to them by the researchers, while the second approach affords an understanding that participants are autonomous individuals who may or may not be interested in exploring new information, therefore allowing for greater variability in the sample.

In an ideal world, when encountering topics that we are not entirely sure what to do about, we will go through all relevant resources to help us make decisions. However, we know that we live in a less-than perfect world with conflicting motives, time constraints, and attentional depletion. Therefore, we are more likely to rely on attitude-consistent selective exposure (Fischer, Jonas, Frey, & Schulz-Hardt, 2005; Johnston, 1996; Smith, Fabrigar, Powell, & Estrada, 2007). Specifically, research has shown that when we are ambivalent about a topic, we are more likely to seek out information that is pro-attitudinal rather than counter-attitudinal (Clark, Wegener, & Fabrigar, 2008) to tip us to one side in order to resolve the discomfort brought up by ambivalence. Importantly, research conducted by Sawicki et al. (2013) demonstrated that the distinguishing factor

lies on the fact that people who are highly ambivalent are more likely to process pro attitudinal information only when the current knowledge about that particular topic is low (versus high). Given the nuances of transgender-related policies that might come in conflict with people's values and belief systems, perhaps people would feel compelled to seek out new information before arriving at their decisions.

Because highly ambivalent people are more likely to seek out new information, they pay special attention to strong persuasive messages, most likely because those messages signal a potential to reduce their current subjective ambivalence. As mentioned in the previous section, Maio, Bell, and Esses (1996) found that high ambivalence (vs. low ambivalence) people were more likely to change their evaluations to favor immigration from Hong Kong following a strong (vs. weak) persuasive message. They also found a mediational process to explain the relationship. Particularly, a strong persuasive message increased thought favorability on the subject of immigration, which was then associated with greater agreement with immigration from Hong Kong. Another line of research by Nordgren, van Harreveld, and van der Pligt (2006) found that higher ambivalence was associated with univalent thoughts after a persuasive message, which suggests that people work through their ambivalence by processing persuasive messages in order to eliminate that feeling of discomfort. Nordgren et al. (2006) also demonstrated that a significant ambivalence reduction was only experienced by people who were given more opportunities to resolve that ambivalence (contrasted with low and medium opportunities).

On an individual level, when we feel ambivalent, we are more likely to seek out new information. But we have not talked about how outside influences can reduce or

heighten people's ambivalence. Social psychology is about the study of how contexts can influence one's thoughts, feelings, and behaviors. Therefore, we need to tease out these mechanisms. Because ambivalence is sensitive to social contexts (e.g., consensus or social norms; Hodson, Maio, & Esses, 2001), changing one's social circles from homogeneous to heterogeneous can change people's ambivalence toward transgender policies. To exemplify this, a study conducted by Garner (2013) found that participants who opposed gay/lesbian rights (strongly conservatives, Republicans, and evangelical Christians) tended to experience greater ambivalence when they experienced high quality intergroup contacts with gay/lesbian friends, family members, or colleagues. Being exposed to people outside of their homogeneous groups permitted these people to challenge their current understanding of their ingroup norms. Therefore, social justice advocates need to leverage the power of social norms if they want to mobilize more support for transgender policies. Importantly, the influence of social norms can be exemplified by the substance use literature. For instance, in Study 5 of Hohman, Crano, and Niedbala (2016), they manipulated social norms surrounding tobacco use, and measured people's subsequent attitudes and behavioral intentions. For participants who were asked to read an article that highlighted both positive and negative sites of tobacco use (a condition used to increase potential ambivalence), exposing them to the social norms condition that was antagonistic to tobacco use reduced their ambivalence, changed their attitudes to be more negative toward tobacco use, and reduced their intentions to engage in tobacco use. Hence, this paper purports that strengthening norms that are supportive of transgender policies would result in an increase in ambivalence, which then would be associated with greater likelihood of seeking new information.

Gap in the Literature and Review of Studies

The overall relationship between attitudinal ambivalence and attitudes toward transgender policies are still severely understudied. One study conducted by Hébert (2020) found that when a more inclusive policy toward transgender individuals was introduced in the prisons in Canada, sentiments from correctional administrators, staff members, and trans prisoners were marked with the state of ambivalence. Even so, there is not a framework that can be used to help us organize research on this relationship between ambivalence and transgender specific policies. In terms of conceptualization and empirical work, political science has argued that ambivalence is the presence of conflicting values/motives or conflicting types of information. On the other hand, social psychology research tends to argue that ambivalence stems from the presence of simultaneous positive and negative evaluations toward an attitude object. It would appear that these two fields of studies are working within their own silos. My goal in this dissertation is to open up the silos by marrying the interests in social psychological and political science research to show that these two fields are indeed congruent with, and building from, each other, and in doing so, advance a model to increase support for transgender policies.

The first study serves as a pilot to accomplish the following goals: (1) to test the reliability of various measures pertaining to transgender specifically, (2) to ensure that the formula to compute potential ambivalence works as expected, and (3) to ascertain the relationships among variables of interest. The second and third studies work to demonstrate the congruence of empirical lenses of social psychology and political science research. Specifically, the two studies will measure potential ambivalence using social

psychological and political science approaches. The Pearson's correlation coefficient and linear regression analysis will reveal that both methods (political science and social psychology) are comparable in evaluating people's ambivalence toward transgender policies. The fourth study seeks to accomplish two goals: (1) to empirically test an approach to manipulate ambivalence, and (2) to examine the downstream consequences of this ambivalence on likelihood of seeking new information. Lastly, the fifth study aims at investigating the interaction between people's ambivalence toward specific transgender policy and social norms. Specifically, the extant literature posits that people who are highly ambivalent are more likely to report their resulting attitude as being consistent with the social norms.

CHAPTER 2

STUDY 1

Brief Overview

The goal of this study was to pilot the different measures relevant to (potential and felt) ambivalence, as well as to ascertain the preliminary relationships among the following variables: potential ambivalence, felt ambivalence, likelihood of seeking new information, and attitudes toward specific transgender policies.

Participants and Design

150 cisgender heterosexual participants were recruited from CloudResearch services (formerly known as Turk Prime Panel) for this study. Participants were told that they were taking a survey to assess their agreement and disagreement with various social value and attitude statements. After removing participants who failed three attentional check questions and one open-ended question, the final sample consisted of 144 participants. CloudResearch was utilized instead of the traditional student participants' pool with the intention of increasing the generalizability and representativeness of the current study (Buhrmester, Talaifar, & Gosling, 2018). A sensitivity power analysis using G*Power Tool (Faul, Erdfelder, Lang, & Buchner, 2007) revealed that the current study was sufficiently powered to detect an effect size of $d = .23$ (small effect size) at $p < .05$ for a correlation point biserial model with two tails and 142 degrees of freedom.

Procedure

The study was advertised on the CloudResearch platform as the study of social values and attitudes. Unbeknownst to participants was the fact that they were taking a survey to examine their attitudes toward transgender-related policies. After reading the

study description and consenting to participate in the study, participants were asked questions related to their values and beliefs. To ensure clarity, definitions for both values and beliefs were provided as follows: *values* are guiding principles and shared goals of specific groups in a wide range of situations; *beliefs* are accepted ideas about some aspects of the world. The measures of values and beliefs were counter-balanced to minimize order effects. After completing measures of values and beliefs, participants completed a measure that assessed their attitudes toward transgender-related policies, followed by measures of felt ambivalence and likelihood of seeking new information. To maintain consistency, policies were defined as principles of actions adopted or proposed by a government, party, business, or individuals. Before finishing the study, participants were asked to complete some demographic and social identity questions, along with an open-ended question to detect any suspicion of the purpose of the study, as well as to check for potential bots.

Measures

For review of all survey construction, please consult Appendix B. For additional information on measures, please consult Appendix C.

Egalitarianism Scale

In order to understand the extent of participants' egalitarianism value, or participants' beliefs about granting everyone the same treatment regardless of their social identity, six items were adapted from Brewer (2003). For the purpose of this study, egalitarianism was to be viewed as equivalent to equality. Three items were reverse-coded. Sample items for this scale included: "Our society should do whatever is necessary to make sure that everyone has an equal opportunity to succeed regardless of

their backgrounds,” “As a society, we have gone too far in pushing equal rights in this country,” and “This country would be better off if we worried less about how equal people are,” These six items were rated on a seven-point scale (1 = strongly disagree to 7 = strongly agree) and were highly reliable (Cronbach’s alpha = 0.90).

Egalitarianism Belief Specific to Transgender Scale

To understand whether participants felt like transgender individuals deserved the same rights as their non-transgender (i.e., cisgender) counterparts, eight items were adapted from Sadeghi and Agadjanian (2019). None of these items were reverse-coded. Sample items included the following: “Transgender people should have equal rights as others when it comes to employment,” “Transgender people should have equal rights as others in political activities,” “Transgender people should have equal rights as others when it comes to access to higher education,” and “Transgender people should have the same rights as others when it comes to choices of spouse.” These eight items were on a seven-point scale (1 = strongly disagree to 7 = strongly agree) and were highly reliable (Cronbach’s alpha = 0.94).

Moral Traditionalism Scale

Moral traditionalism implies the need to cling on to stricter and less flexible social arrangements. Antithetical to progress, moral traditionalism urges people to stay with the status quo and resists any kinds of threat to such arrangement. To tap into this belief, four items were adapted from Brewer (2003), and two of these items were reverse-coded. The four items were as follow: “The modern lifestyles are contributing to the breakdown of society,” “The world is changing, and we should adjust our view of moral behavior to those changes,” “We should be more tolerant of people who choose to live according to

their own moral standards, even if they are very different from our own,” and “This country would have fewer problems if there were more emphasis on traditional societal arrangements.” The four items were on a seven-point scale (1 = strongly disagree to 7 = strongly agree) and were reliable (Cronbach’s alpha = 0.85).

Traditionalism Scale

Because the purpose of the first study was to serve as a pilot to determine the direction of future studies, a second traditionalism scale was included. The three items were adapted from Schwartz et al. (2012), and none of the items were reverse-coded. The three items were: “It is important for society to maintain traditional values or beliefs,” “Following one’s customs should be important to society,” and “Our society should strongly value the traditional practices of our culture.” The three items were on a seven-point scale (1 = strongly disagree to 7 = strongly agree) and were highly reliable (Cronbach’s alpha = 0.93).

Desire for Stimulation and Action Scale

An argument can be made that people who support transgender people and policies believe that people are their own individuals and deserve to have the rights to obtain that individuality. Therefore, five items were adapted from Schwartz et al. (2012) to tap into this belief, and none of these items were reverse-coded. Some sample items from the scale included: “It is important for people to form their own opinions and have original ideas,” “It is important for people to make their own decisions,” and “Freedom to choose what they do should be equally important for all people.” The five items were on a seven-point scale (1 = strongly disagree to 7 = strongly agree) and were in an acceptable range of reliability (Cronbach’s alpha = 0.78).

Specific Transgender Policies

A broad set of questions were utilized to assess participants' attitudes toward transgender-related policies. The goal of utilizing these questions was to assess which transgender specific policy would evoke the greatest ambivalence from participants. These items were created specifically for this study based on the current literature. Important to note, these items tapped into various aspects of a transgender individual's life, including military participation, adoption rights, housing protection, anti-bullying campaigns in schools, health insurance policies, healthcare services, and public bathroom use. Out of the 12 items, four items were reverse-coded. Some of the sample items included: "The United States military should allow transgender people to serve," "Health insurance policies should cover gender-affirming health care costs (e.g., hormone therapy, gender-affirming surgical procedures or formerly known as sex-change operation)," "A health care practitioner should be able to deny service to a transgender patient if the practitioner has a religious objection to doing so," and "People should use bathrooms or locker rooms that align with their sex assigned at birth." These 12 items were assessed on a seven-point scale (1 = Strongly Disagree to 7 = Strongly Agree).

Felt Ambivalence toward Transgender Policies Scale

To understand whether participants would feel their ambivalence (e.g., confusion, mixed feelings, and conflicted) after providing their stance on transgender-related policies, five items were adapted from previous research on attitudinal ambivalence (Newby-Clark, McGregor, & Zanna, 2002; Priester & Petty, 2001). Some of the items included were as follows: "I'm confused about transgender-related policies because I have strong thoughts about them, and I can't make up my mind one way or another,"

“My mind and heart seem to be in a disagreement on the issue of transgender-related policies,” and “I feel conflicted about transgender-related policies because on one hand I am able to see the positive side of arguments and on the other hand the negative side of the arguments.” These five items were rated on a seven-point scale (1 = Strongly Disagree to 7 = Strongly Agree) and were highly reliable (Cronbach’s alpha = 0.97).

Likelihood of Seeking New Information Scale

Current literature suggests that people who feel ambivalent about an attitude object seek new information to help them arrive at a decision (Itzhakov & Van Harreveld, 2018). Therefore, three items were developed to tap into this specific construct. The items were: “How likely are you to seek out new information regarding transgender-related policies?” “When it comes to transgender-related policies, how likely are you to find arguments that are counter to your current viewpoints?” and “When you are unsure about a specific transgender-related policy, how likely are you to search for such information?” These three items were on a five-point scale (1 = Very Unlikely to 5 = Very Likely) and were slightly below the acceptable range of reliability (Cronbach’s alpha = 0.61).

Attention Check Questions

Three attention check questions were employed to separate participants who were paying attention from the ones who did not pay attention to the survey. The first attention check item was embedded in the Egalitarianism Belief Specific to Transgender Scale: “Hi there, if you are reading this, please click strongly disagree (1).” The second attention check item was embedded in the Transgender-Related Policies Scale: “Just wanted to make sure you are paying attention. Please click strongly agree (7).” Lastly, the third

attention check item was embedded in the Likelihood of Seeking New Information Scale: “If you are reading this, please click “very likely” (5).”

Open-Ended Question

Before concluding the study, participants were asked to respond to an open-ended question to detect any suspicion in regard to the true purpose of the study. Moreover, this question was used to remove any potential bots. This was done by removing participants who responded in a manner that was not consistent with the question. The question asked, “In your own words, what is the purpose of the study? (Please respond in one or two sentences).”

Demographic and Social Identity Questions

Multiple demographic and social identity variables were measured in this study, including gender, sexual orientation, gender identity, age, race, country of origin, political orientation, and political party. Important to note: political orientation was coded such that greater values indicated greater conservatism. The full list of demographic and social identity questions can be found in Appendix B.

Analyses and Results

Prior to conducting any planned analyses, the dataset went through a cleaning process. To begin, all the variables included in the study were rescored so that a higher value would reflect higher level of that particular variable. For instance, higher levels of felt ambivalence would indicate that participants experience greater feelings of conflicted feelings and confusion. In this dataset, the following were rescored: three items from the egalitarianism scale, two items from the moral traditionalism scale, and four items from the specific transgender policies. After that, the initial sample (N = 150) was screened to

remove participants who did not meet the inclusion criteria. These participants failed to respond correctly to the attention check questions, as well as to the one open-ended question at the end of the study. As a result, six participants were removed, yielding a final sample of 144 participants.

For each of the variables used in this study aside from the 12 specific transgender policies, factor analyses and reliability analyses were performed to ensure that the items were capturing the appropriate constructs of interest. Based on the factor analyses, all variables yielded one factor structure, and were therefore consistent with previous literature from which the items were adapted. In regard to the reliability analyses, all the variables' Cronbach's alphas were in the acceptable range ($\alpha > 0.70$), with the exception of the likelihood of seeking new information scale ($\alpha = 0.61$). In hindsight, the three items developed for the study could have yielded acquiescence bias due to the fact that they did not allow for sufficient variability in the sample.

After making sure that the items were reliable, all items were combined to create composite indexes of the variables of interest: (1) potential ambivalence (a conflict between egalitarianism and moral traditionalism), (2) felt ambivalence, and (3) likelihood of seeking new information. Two important things need to be noted. First, potential ambivalence was computed by using the formula introduced by Kaplan (1972) and validated by Thompson et al. (1995): $[(E + MT)/2] - [E - MT]$, whereby E represented egalitarianism value and MT represented moral traditionalism value. Participants' scores on the potential ambivalence scale could range from 1 to 7, with higher scores reflecting greater ambivalence. As to which measures being included in the potential ambivalence formula, egalitarianism scale and moral traditionalism scale (Brewer, 2003), they were

chosen because they resembled the greatest oppositional indicators of all the measures included in the study. Specifically, one could argue that it will be challenging to endorse egalitarianism and moral traditionalism simultaneously, although it is not impossible, and therefore doing so would result in greater ambivalence. Second, the 12 items for the transgender-specific policies were not combined because the purpose of this study was to examine which of the 12 policies would evoke the greatest values of potential and felt ambivalence from the current sample.

In the final stage of analyses, bivariate correlations were performed to assess the relationships among variables of interest. Correlation coefficients for variables of interest are reported in Table 1. Potential ambivalence was positively associated with felt ambivalence ($r = 0.46, p < .001$), such that the greater the potential ambivalence participants reported, the more likely it was for them to experience felt ambivalence. The data revealed positive relationships between potential ambivalence ($r = 0.57, p < .001$) as well as felt ambivalence ($r = 0.25, p = .004$) and political orientation, suggesting that the more conservative participants tended to report greater ambivalence toward the different policies. Furthermore, the results found that the likelihood of seeking new information was not associated significantly with potential ambivalence ($r = -0.13, p = .113$) and felt ambivalence ($r = -0.06, p = .474$). Out of the 12 transgender specific policies, the bathroom bill yielded the greatest association with potential ambivalence ($r = 0.56, p < .001$) and felt ambivalence ($r = 0.41, p < .001$).

Taking a deeper analysis into the transgender-related policies, participants were relatively supportive of the 12 policies. However, there were four policies that created greater variability among participants, either through quantitative analysis or visual

screening of the bar graphs: (1) health insurance policies and gender-affirming health care costs, (2) gender identity and US census data collection, (3) transgender sports participation, and (4) the bathroom bill. The mean for these four policies ranged from 3.56 to 4.86, with standard deviations ranging from 1.84 to 2.26. As indicated earlier, the bathroom bill yielded the greatest associations with potential ambivalence and felt ambivalence.

Table 1

Means, Standard Deviations, and Correlation Coefficients for Study 1

| Variable | M | SD | 1 | 2 | 3 | 4 | 5 |
|-----------------------------------|------|------|---------|----------|----------|---------|-----|
| Potential ambivalence (computed) | 0.98 | 2.11 | N/A | | | | |
| Felt ambivalence | 2.93 | 1.81 | 0.46*** | (0.97) | | | |
| Seeking new information | 3.07 | 1.13 | -0.13 | -0.06 | (0.61) | | |
| Attitude toward the bathroom Bill | 4.21 | 2.11 | 0.55*** | 0.401*** | -0.28*** | N/A | |
| Political orientation | 3.11 | 1.76 | 0.57*** | 0.24** | -0.21* | 0.50*** | N/A |

*** Correlation is significant at $p < .01$ (2-tailed)

** Correlation is significant at $p < .01$ (2-tailed)

* Correlation is significant at $p < .05$ (2-tailed)

Note: Values in diagonal represent Cronbach's alpha. For each of the variable, higher values indicate stronger magnitude.

Summary

Study 1 revealed that there were grounds in investigating the relationship among potential ambivalence, felt ambivalence, and attitudes toward specific transgender policies. The current study found that potential ambivalence was positively associated with felt ambivalence. The modest correlation coefficient between the two variables suggested that they were connected but independent from one another. The likelihood of seeking new information scale did not work out the way it was predicted (based on the near zero correlation coefficient), therefore Study 2 will overcome this by introducing an adjusted measure.

Moreover, the current study also found that attitude toward the bathroom bill yielded greatest associations with potential ambivalence and felt ambivalence. In hindsight, the operationalization of potential ambivalence should focus more on the extent to which certain values (in this case, egalitarianism and moral traditionalism) were deemed important to participants. The formula adapted from Kaplan (1972) would have still held up even when the values were assessed in their degrees of extremity and importance. Moving forward, a different potential ambivalence measure will be used. Lastly, since the bathroom bill yielded the greatest associations with potential and felt ambivalence, Study 2 and Study 3 will utilize this specific policy.

STUDY 2

Brief Overview

The purpose of Study 2 was to apply attitudinal ambivalence through the lens of social psychological research to study people's attitudes toward specific transgender policies. In this survey study, participants were asked to reflect on their ambivalence

toward a transgender bathroom bill. To be consistent with a social psychological approach, potential ambivalence was conceptualized as a simultaneous presence of positive and negative evaluations toward an attitude object. Currently, there are debates surrounding the question of whether or not to partition (or separate) the positive and negative evaluations (Refling, Calnan, Fabrigar, MacDonald, Johnson, & Smith, 2012). To circumvent this issue, the current study utilized the thought listing task (Hodson, Maio, & Esses, 2001) to ascertain the amount of ambivalence participants experienced without consciously thinking about the true intent of the study.

Participants and Design

The number of participants recruited was based on the power analysis conducted using G*Power software with 0.2 (small effect size) as the effect size, 0.8 as the power, and correlation point biserial model as the statistical test. The current study recruited 355 cisgender participants from CloudResearch services in exchange of \$1.50 for their time (approximately 12 to 15 minutes). Even though the recommended sample size is 191, the over sampling was intentionally done to factor in any attentional errors from participants. After removing negligent participants, the final sample for this study was 344. 57% of the participants identified as man, 91% identified as heterosexual, and these participants ranged in age of 19 to 78 years old. A majority of the participants (52.6%) in the sample were liberal (ranged from “extremely liberal” to “somewhat liberal) with 47.7% identified as democrat. Participants were told that they were taking part in a survey to assess their values and attitudes toward various social and moral topics. Similar to Study 1, CloudResearch services was used to increase diversity and representativeness of the

sample instead of using the typical college student population. All the components in this study were presented in the format of a survey – no manipulations were performed.

Procedure

The study was advertised on the CloudResearch platform as a study of social values and attitudes. Participants were not told that the true purpose of this study was to assess their attitudes toward a specific transgender policy (bathroom bill policy). After reading and consenting to the study, participants were shown an alleged bathroom bill policy that will be introduced in the state of Alabama. A transgender bathroom bill was chosen based on the pilot study indicating greater association between people’s felt ambivalence and attitude toward such policy (compared to other transgender policies such as military participation, adoption rights, and sports participation). The excerpts were broken into three separate slides to allow for deeper information processing, and participants were told that the screen was to appear for a minimum of 15 seconds before they can move on to the next screen. Another reason for separating the slides was to reduce information overloading. After reading the excerpt of the alleged policy, participants were given the following instructions to encourage them to reflect on arguments supporting and opposing the bathroom bill:

“As with any issue, there are arguments for and against it. Referring to the potential legislation, imagine that you are one of the representatives present in the debate. We would like for you to think about **your own** arguments, as well as arguments made by **people you love or respect**. In the 8 blank spaces below, please specify arguments that can be made to **support and/or oppose** the bathroom bill policy.”

Once they completed that task, participants were asked to go back to the list and assign specific values to each of their responses. This was done so that we can determine whether the arguments were supportive, against, or neutral as they relate to the bathroom bill using a strong quantitative approach rather than deciphering or making assumptions about participants' intentions. It is important to note that the purpose of asking participants to write down their thoughts was to help them access both positive and negative arguments when it comes to the bathroom bill – a phenomenon called simultaneous accessibility (Newby-Clark, McGregor, & Zanna, 2002). Since I have not received formal training in qualitative analyses, participants' open-ended responses were not analyzed; only their quantitative values were evaluated further. After the reflective exercise, participants responded to measures of felt ambivalence, attitudes toward the policy, and likelihood of seeking new information. Before completing the survey, participants completed some demographic and social identity questions.

Measures

Potential Ambivalence

To allow participants to naturally reflect on the positive and negative arguments for the bathroom bill, a thought listing task was utilized, following the protocol laid out by Hodson, Maio, and Esses (2001). Participants were asked to list as many responses as necessary in order to convey their perspectives on this bill. Important to note, this study deviated from Hodson et al. by asking participants to write down their thoughts to a maximum of eight instead of twelve responses to combat survey fatigue since the current study took place virtually rather than an in-lab setting. Participants were allowed to note positive, negative, and neutral arguments. Once they wrote down their thoughts,

participants were asked to go back to the list and assigned specific values to each of those responses. The values ranged from -3 (*Strongly Oppose*) to 3 (*Strongly Favor*).

Felt Ambivalence Scale

To be consistent with a social psychological approach, felt ambivalence measure was adapted from the work of Priester and Petty (2001; 1996). Participants were asked to complete the scale to assess the extent to which their thoughts about the bathroom bill were conflicted, mixed, and indecisive. The three items were scaled from 0 (*feel no conflict at all, feel no indecision at all, completely one-sided reactions*) to 7 (*feel a lot of conflict, feel a lot of indecision, completely mixed reactions*). These items were internally consistent and were highly reliable (Cronbach's alpha coefficient = 0.95).

Attitudes toward the Bathroom Bill

To understand participants' endorsement of the bathroom bill policy, six items were utilized. These items questioned whether or not participants agree, approve, and favor the bathroom bill. Moreover, the items also asked participants whether or not they found the bathroom bill to be good, wise, and beneficial. The six items were anchored from 0 (harmful, foolish, bad, unfavorable, definitely disapprove, strongly disagree) to 7 (beneficial, wise, good, favorable, definitely approve, strongly agree). Participants received an additional note indicating that moving to the right of the scale would indicate greater support for the legislation and moving to the left would indicate lower support for the legislation. Factor analysis was conducted using Principal Axis Factoring extraction and Promax rotation. The analysis revealed one factor with an eigenvalue greater than 1 (Factor 1 = 5.77). Therefore, a composite index of attitude toward the bathroom bill was created by averaging each participant's responses to the six questions. Operationally, the

attitude measure could vary from 0 to 7. The alpha coefficient for these six items was 0.99, suggesting a highly reliable measure.

Likelihood of Seeking New Information Scale

For this study, likelihood of seeking new information was operationalized as the extent to which participants were interested in learning more about the transgender policy. One item was developed to allow participants to either opt in or opt out of seeking new information. Participants were asked the following question: “Imagine that you have all the time and energy in the world, to what extent do you think you would be interested in learning more about this policy?” The wording of this item was intentional in capturing people’s sense of autonomy to decide for themselves on whether they were interested in learning more about the transgender policy. Moreover, this item did not constrict answers to information that either supported or opposed participants’ viewpoints. Participants responded to the question using a seven-point scale (1 = Extremely Uninterested to 7 = Extremely Interested).

Attention Check Question

One attention check question was employed to separate participants who were paying attention from the ones who were not paying attention to the survey. The attention check item was embedded in the Attitude toward the Bathroom Bill scale: “Are you paying attention to the study you are taking? Please click strongly agree (7) in the scale below to confirm. Thank you!”

Demographic and Social Identity Questions

Identical sets of demographic and social identity questions from Study 1 were utilized in this study, including gender, sexual orientation, gender identity, age, race, country of origin, and political orientation.

Analyses and Results

Prior to conducting further analyses, the dataset went through a cleaning process. The initial sample of 355 participants was screened to remove participants who did not meet the inclusion criteria. As such, from the original sample, four participants were removed because they failed to answer the attention check question correctly; four participants were removed because they identified as transgender (this study was meant to understand ambivalence from non-transgender individuals); and three participants were removed because they neglected to follow the study's instructions. The final sample consisted of 344 cisgender participants.

After the dataset went through the cleaning process, factor analyses and reliability analyses were performed to make sure that the items interacted well for each construct of interest (e.g., potential ambivalence, felt ambivalence, attitudes toward transgender policy). The scales that measured variables of interest in this study all demonstrated good reliability (all Cronbach's alphas were above 0.70).

Next, to create the index of potential ambivalence, two separate columns were created: one for positive ratings and one for negative ratings. Since each participant was allowed to write down their thoughts up to eight arguments, positive ratings were summed to obtain positive dimension scores (P) and negative ratings were summed to obtain negative dimension scores (N). The maximum amount for each argument was 3,

resulting in a maximum total summation of 24. Importantly, the actual number of arguments made by participants were not utilized as a proxy to their potential ambivalence. The quantification (and importantly, the absolute score) of these responses was the outcome of interest for this study. After that, participants' potential ambivalence was calculated using the potential ambivalence formula = $P + |N| - 2|P + N| + 24$ whereby P is positive evaluation, N is negative evaluation, and the number 24 is added as a constant to preclude negative ambivalence scores.

As this study sought to investigate the relationships among the variables from a social psychological standpoint, bivariate correlation analyses were performed on the measures. Correlation coefficients for variables of interest are reported in Table 2. Potential ambivalence (simultaneous presence of positive and negative attitudes toward the bathroom bill) was found to be positively correlated with felt ambivalence ($r = 0.29, p < 0.001$). Moreover, felt ambivalence was positively associated with likelihood of seeking new information ($r = 0.12, p < 0.022$), suggesting that the more participants experienced the ambivalence that manifested through discomfort or uneasiness, the greater the likelihood for them to seek new information. The results also found a positive relationship between political orientation and potential ambivalence ($r = 0.20, p < 0.001$), such that the more conservative a person was, the more they experienced potential ambivalence. Political orientation was also correlated positively with attitudes toward the bathroom bill ($r = 0.46, p < 0.001$), such that a more conservative person was more likely to view the bathroom bill favorably. There were no correlations between political orientation and felt ambivalence ($r = .02, p = .706$) which deviated from Study 1, as well

as between political orientation and likelihood of seeking new information ($r = -.07, p = .176$).

Table 2

Means, Standard Deviations, and Correlation Coefficients for Study 2

| Variable | M | SD | 1 | 2 | 3 | 4 | 5 |
|-----------------------------------|------|------|---------|---------|-------|---------|-----|
| Potential ambivalence (computed) | 7.84 | 6.32 | N/A | | | | |
| Felt ambivalence | 2.80 | 1.88 | 0.29*** | (0.95) | | | |
| Seeking new information | 4.10 | 1.84 | 0.03 | 0.12* | N/A | | |
| Attitude toward the bathroom bill | 3.40 | 2.21 | 0.22*** | 0.18*** | 0.13* | (0.99) | |
| Political orientation | 3.49 | 1.76 | 0.20*** | 0.02 | -0.07 | 0.46*** | N/A |

*** Correlation is significant at $p < .01$ (2-tailed)

** Correlation is significant at $p < .01$ (2-tailed)

* Correlation is significant at $p < .05$ (2-tailed)

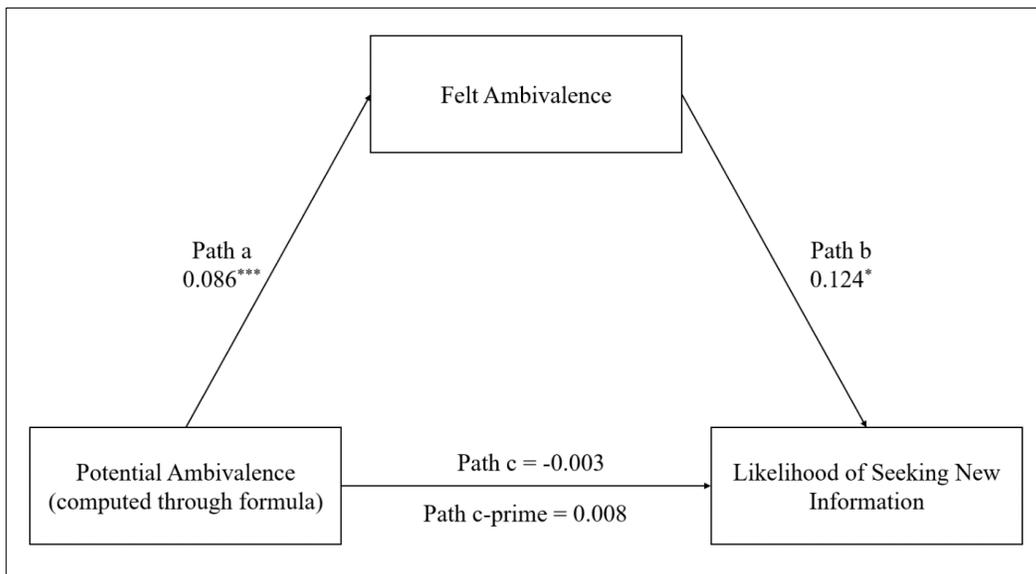
Note: Values in diagonal represent Cronbach's alpha. For each of the variable, higher values indicate stronger magnitude.

To demonstrate convergence with the extant literature linking potential ambivalence, felt ambivalence, and likelihood of seeking new information, a mediation analysis was performed using Hayes' PROCESS macro model 4 (Hayes, 2019). There was a significant indirect effect of potential ambivalence on likelihood of seeking new information via felt ambivalence ($b = 0.011, S.E. = 0.005, p = 0.036, 95\% CI [0.001, 0.021]$). (Please consult Figure 1 for values of the indirect paths; The indirect effect table can be found in Appendix A). Specifically, participants who experienced greater potential

ambivalence were more likely to experience felt ambivalence, which was then associated with greater likelihood of seeking new information. Importantly, when the position was reversed between potential ambivalence and felt ambivalence, the indirect effect became non-significant ($p = 0.854$).

Figure 1:

Hayes' PROCESS macro model 4 for the relationship between potential ambivalence and likelihood of seeking new information as mediated by felt ambivalence (Study 2).



Note: Greater potential ambivalence led to greater feelings of ambivalence, which was then associated with higher likelihood of seeking new information.

Summary

The goal of Study 2 was to investigate the relationships among potential ambivalence as well as felt ambivalence (both constructs were conceptualized through the lens of social psychological research), likelihood of seeking new information, and attitudes toward the bathroom bill. The study found that potential ambivalence was

associated positively with felt ambivalence; felt ambivalence was associated positively with likelihood of seeking new information; and conservative participants were more likely to express their support for the bathroom bill. The current study also found that conservative participants were more likely to experience potential ambivalence than their liberal counterparts. A mediation analysis revealed that greater potential ambivalence predicted greater felt ambivalence, which then was associated with greater likelihood of seeking new information. These findings are in alignment with extant literature linking potential ambivalence, felt ambivalence, and likelihood of seeking new information (Jonas, Diehl, & Brömer, 1997; Sawicki et al., 2013).

In the next study, both potential ambivalence and felt ambivalence were conceptualized, operationalized, and tested from a political science standpoint. This approach was taken to demonstrate a convergence of these two fields of study in understanding people's ambivalence toward transgender specific policies. Similar to Study 2, the bathroom bill was utilized for Study 3 in order to preserve consistency.

STUDY 3

Brief Overview

The purpose of Study 3 was to demonstrate that the political science conceptualization of attitudinal ambivalence (i.e., potential and felt ambivalence) was comparable to the one made in social psychological research. Instead of looking at potential ambivalence as a simultaneous presence of positive and negative evaluations of an attitude object, this study demonstrated that indeed potential ambivalence can also be understood as a presence of conflicting values (Brewer, 2003, Craig, Martinez, Kane, & Gainous, 2005). Informed by the results of Study 1, the two conflicting values of interest

were egalitarianism and moral traditionalism. Furthermore, felt ambivalence was conceptualized as an actual experience of being pushed and pulled in different directions because of people's conflicting values. This study went deeper into the experience rather than asking the extent to which participants felt conflicted, mixed, and indecisive.

Participants and Design

The current study recruited 309 participants from CloudResearch in exchange of \$1.50 to compensate for their time (around 12-15 minutes). The number of participants that were recruited came from a power analysis with 0.2 (small effect size) as the effect size, 0.8 as the power, and correlation point biserial model as the statistical test. Similar to Study 2, the oversampling was intentionally done to factor in technical and attentional errors. Participants were told that they were taking part in a study that would assess their value and belief systems in relation to certain social topics. All the components in this study were presented in the form of a survey – no manipulation were performed. After removing participants who did not meet the criteria of inclusion, the final sample of this study was 287. Of those participants, 59.67% identified as male, and these participants ranged in age of 20 to 76 years old. A majority of the participants (51%) in the sample were liberal (ranged from “somewhat liberal” to “extremely liberal”) with 46.7% identified as democrat.

Procedure

Study 3 was structured very similar to Study 2 in that participants were not aware of the true intention of the study, which was to assess their attitudes toward a specific transgender policy: a bathroom bill. The same prompt from Study 2 regarding the alleged bathroom policy in Alabama was used in this study. Again, participants were told that the

slide would stay on-screen for a duration of 15 seconds before they could proceed to the next slide to ensure greater information processing. After reading the policy, participants responded to questions that assessed their potential ambivalence. In the context of this study, potential ambivalence was operationalized as conflicting values, particularly egalitarianism and moral traditionalism (although other values were assessed as well to avoid participants from guessing the true intention behind this study). Specifically, participants were asked to indicate how important egalitarianism, moral traditionalism, freedom, and humanitarianism values were to them. To ensure clarity, definitions of these values were provided as follow:

Egalitarianism: a belief that all people are equal and deserve equal rights and opportunities regardless of their backgrounds and identities

Moral traditionalism: a belief that society should pay more attention to traditional lifestyles and social arrangements

Freedom: a belief that people in society should be able to say and do whatever they please, so long as it does not directly harm anyone else

Humanitarianism: a concern and belief in promoting human welfare and well-being

Freedom and humanitarianism values were included as an attempt to obfuscate the true intention of the study. Ultimately, this study was interested in how the conflict between egalitarianism and moral traditionalism resulted in people's ambivalence toward transgender policies, and only these two values were used in future analyses. After completing the potential ambivalence questions, participants responded to measures of felt ambivalence, attitudes toward the policy, and likelihood of seeking new information.

Before completing the survey, participants completed some demographic and social identity questions.

Measures

Potential Ambivalence

There are various methods to measure conflicting values in the current literature, and all of them have their own pros and cons. For this document, participants were asked to reflect on how different values might come into play when evaluating the bathroom bill. Participants were asked to rate egalitarianism, moral traditionalism, freedom, and humanitarianism values on a 7-points scale (1 = “Not at all Important to Me” to 7 = “Extremely Important to Me”). Some example items included: “How important is equality to you when evaluating this policy?” and “How important is moral traditionalism to you when evaluating this policy?” Potential ambivalence was computed using a formula that will be outlined in the results section below.

Felt Ambivalence

Six items were adapted from Mulligan (2004) that tapped into the emotional experience of being pushed and pulled in different directions when dealing with multiple conflicting values (egalitarianism and moral traditionalism). Instead of using the bipolar measure adapted from Priester and Petty (2001; 1996), these items had higher face validity in assessing participants actual experience of value conflict. Sample items included “My views on moral traditionalism make me feel like I should favor this policy, but my views on egalitarianism make me feel like I should oppose this policy,” “When I think of this policy, my views on moral traditionalism and egalitarianism are extremely consistent with each other,” and “When I think about this policy, my views on moral

traditionalism pull me in one direction but my views on egalitarianism pull me in a different direction.” These six terms used a 7-point scale (1 = Strongly disagree to 7 = Strongly agree). Factor analysis revealed that the six items clustered into two factors: one focused on *conflict of values* and one focused on *consistency of values*. These two factors were in acceptable range of internal consistency (Cronbach’s alphas were above 0.70). However, since the focus on this measure was on conflict of interest, only that factor was entered in the main analyses – consistency of values was included for the sake of transparency with the data reporting.

Attitudes toward Transgender Policy Scale

Identical items were used from Study 2.

Likelihood of Seeking New Information Scale

Identical items were used from Study 2.

Attention Check Questions

Similar item was used from Study 2.

Demographic and Social Identity Questions

Identical demographic and social identity questions from Study 1 and Study 2 were used for this study.

Analyses and Results

The dataset went through a preparation process before any further analyses were conducted. Similar exclusion criteria from Study 2 were applied to this study to remove ineligible participants from further analyses. The initial sample of 309 participants was screened visually. From the original sample, five participants were removed because they identified as transgender (this study was intended to understand ambivalence from non-

transgender individuals); and 15 participants were removed because they failed to answer the attention check question correctly. The final sample consisted of 289 cisgender individuals.

After the dataset went through the cleaning process, factor analyses and reliability analyses were performed to make sure that the items interacted well for each construct of interest (e.g., felt ambivalence, attitudes toward transgender policy). All scales that measured variables of interest in this study demonstrated good reliability (all Cronbach's alphas were above 0.70). One factor analysis that warranted further explanation was the Felt Ambivalence measure. Upon careful examination, contrary to Mulligan's (2004) findings, the six items clustered into two factors instead of one. As such, the first factor was extracted as *conflict of values* and the second factor was extracted as *consistency of values*. The two factors are negatively related to one another ($r = -.695$). Because the goal of this study was to really understand people's actual agony of experiencing their ambivalence, only conflict of values was utilized for further analyses.

To create the index that captured potential ambivalence, the following formula was utilized (Mulligan, 2004):

$$\text{Potential Ambivalence} = | (\text{Egalitarianism} + \text{Moral Traditionalism})/2 | - |$$

$$\text{Egalitarianism} - \text{Moral Traditionalism} |$$

Since the items for felt ambivalence (conflict of values) attitudes toward the bathroom bill were internally reliable, those items were combined to create composite indexes. The goal of this study was to demonstrate that measurements using a political science operationalization were comparable to the one by social psychological research. To accomplish this goal, bivariate correlation analyses were used to examine the

relationships among variables of interest. Correlation coefficients for variables of interest were reported in Table 3. The correlation matrix revealed that all relationships were in expected directions and magnitudes. Specifically, potential ambivalence (conflicting values between egalitarianism and moral traditionalism) was found to be positively correlated with felt ambivalence (conflict of values; $r = 0.38, p < 0.001$). Moreover, felt ambivalence was positively associated with likelihood of seeking new information ($r = 0.25, p < 0.001$). Political orientation was positively associated with potential ambivalence ($r = 0.28, p < 0.001$), felt ambivalence (conflict of values; $r = 0.12, p < 0.05$), and attitudes toward the bathroom bill ($r = 0.51, p < 0.001$), such that more conservative participants were more likely to report greater potential ambivalence, greater felt ambivalence, and greater support for the bathroom bill. There were no correlations between political orientation and felt ambivalence: consistency of values, as well as between political orientation and likelihood of seeking new information ($r = .04, p = .557$).

To demonstrate convergence with the extant literature, a mediation analysis was performed using Hayes' PROCESS macro model 4 (Hayes, 2019). (Please consult Figure 2 below for the indirect effect values; The indirect effect table can be found in Appendix A). The results showed that there was a significant indirect effect of potential ambivalence (conflicting values of egalitarianism and moral traditionalism) on likelihood of seeking new information via felt ambivalence: conflict of values ($b = 0.053, S.E. = 0.018, p = 0.004, 95\% CI [0.017, 0.088]$). Specifically, an increase in one unit difference in potential ambivalence would lead to greater conflicts of feelings, which then was associated with greater likelihood of seeking new information.

Table 3*Means, Standard Deviations, and Correlation Coefficients for Study 3*

| Variable | M | SD | 1 | 2 | 3 | 4 | 5 |
|-----------------------------------|------|------|---------|---------|------|---------|-----|
| Potential ambivalence (computed) | 1.61 | 2.70 | N/A | | | | |
| Felt ambivalence | 3.22 | 1.50 | 0.38*** | (0.734) | | | |
| Seeking new information | 3.75 | 1.90 | 0.21*** | 0.25*** | N/A | | |
| Attitude toward the bathroom bill | 3.86 | 2.18 | 0.36*** | 0.19*** | 0.06 | (0.99) | |
| Political orientation | 3.59 | 1.77 | 0.28*** | 0.12* | 0.04 | 0.51*** | N/A |

*** Correlation is significant at $p < .01$ (2-tailed)

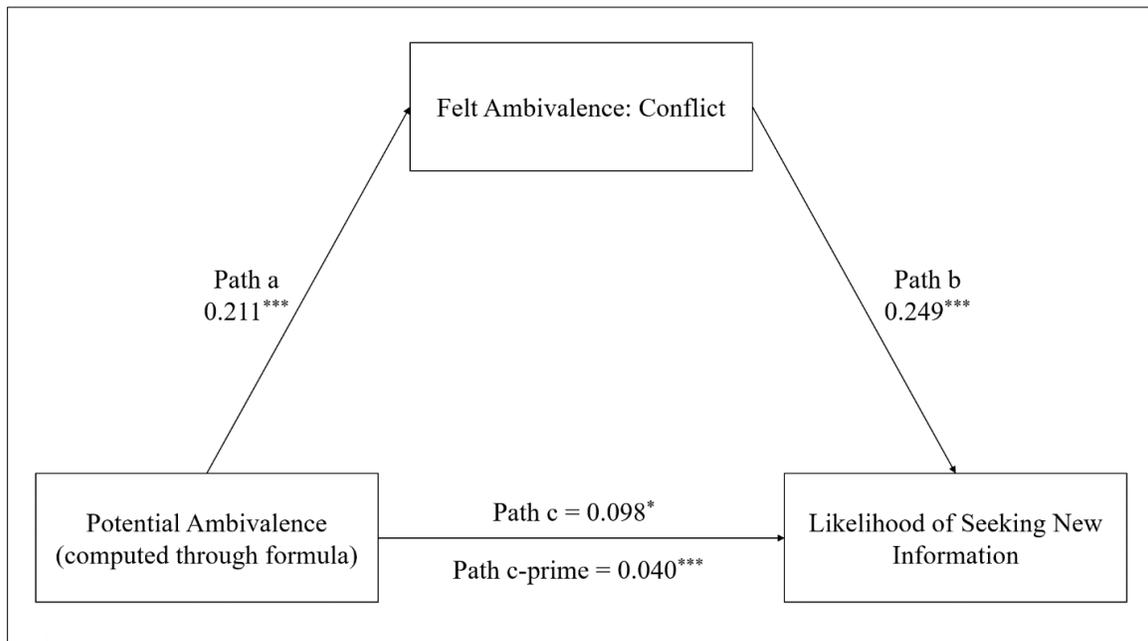
** Correlation is significant at $p < .01$ (2-tailed)

* Correlation is significant at $p < .05$ (2-tailed)

Note: Values in diagonal represent Cronbach's alpha. For each of the variable, higher values indicate stronger magnitude.

Figure 2:

Hayes' PROCESS macro model 4 for the relationship between potential ambivalence and likelihood of seeking new information as mediated by felt ambivalence (Study 3).



Note: Greater potential ambivalence predicted higher conflicting values, which was then associated with greater likelihood of seeking new information.

Summary

The goal of Study 3 was to validate the relationships between potential ambivalence, felt ambivalence, likelihood of seeking new information, and attitudes toward the bathroom bill using a political science perspective. This study examined ambivalence by computing the extent to which participants experienced conflicts between egalitarianism and moral traditionalism. Moreover, Study 3 dived into how these two seemingly conflicting values may push and pull participants' attitudes toward supporting the bathroom bill policy. Important to note, the ultimate goal of Studies 2 and 3 was to

demonstrate a convergence in the conceptualization and operationalization of potential ambivalence and felt ambivalence from a political science standpoint and a social psychological standpoint.

All variables in Study 3 correlated in the expected directions, such that there were positive correlations between potential ambivalence and felt ambivalence, as well as felt ambivalence and likelihood of seeking new information, suggesting a convergence with Study 2. A point of divergence in Study 3 from Study 2 lay on the presence of small positive relationship between felt ambivalence and political orientation, such that more conservative participants tended to experience greater felt ambivalence toward the policy. Important to note, however, was the greater magnitudes of the correlation coefficients in this study (compared to those in Study 2), connecting potential ambivalence, felt ambivalence, and likelihood of seeking new information. Study 3 also found an indirect effect of potential ambivalence on likelihood of seeking new information via felt ambivalence, similar to the finding in Study 2. Since felt ambivalence has been shown as a critical piece in mobilizing people to seek out new information, measures of felt ambivalence from both social psychology and political science were utilized moving forward.

Once this paper demonstrated the presence of relationships between potential ambivalence, felt ambivalence, likelihood of seeking new information, and attitudes toward a specific transgender policy (i.e., the bathroom bill), the next step was to establish whether ambivalence can be manipulated. If the eventual goal was for people to seek more information that will help them form more favorable attitudes toward transgender policies, being able to manipulate ambivalence would be a first critical step.

Study 4 and Study 5 featured a different transgender-specific policy: the transgender sports participation policy (see Study 4 for explanation).

STUDY 4

Brief Overview

The goal of this study was to test the possibility of manipulating people's felt ambivalence when they thought about a specific transgender policy. In this context, transgender sports participation was chosen as the policy due to an increasing publicity toward the debates on whether transgender athletes should be allowed to compete in sport activities that were consistent with their gender instead of their biological sex (Sharro, 2021). Moreover, research conducted by Thorson and Serazio (2018) demonstrated that a majority of Americans identified as sports fans, regardless of their political party affiliations, and therefore an argument can be made that people were more likely to care about what was going on in regard to policies related to transgender sports participation because the topic itself was relevant to them. Following the recommendations implicated by the work of Reveling, Calnan, Fabrigar, MacDonald, Johnson, and Smith (2012), the current study manipulated people's ambivalence through a writing exercise. This writing exercise required participants to write down either one-sided arguments or two-sided arguments when reflecting on a specific transgender policy. The use of writing exercise had been integral in increasing simultaneous accessibility (Newby-Clark, McGregor, & Zanna, 2002), which was important for attitude ambivalence researchers because it allowed people to reflect on both sides of the arguments, which then would increase the likelihood of felt ambivalence. The current study hypothesized that participants in the

one-sided arguments condition would report lower levels of ambivalence than participants in the two-sided arguments.

Participants and Design

To accomplish the goal of this study, 352 cisgender participants were recruited from the CloudResearch platform in exchange of \$1.50 (to compensate around 10 to 15 minutes of their time). The number of participants was estimated by a power analysis using the G*Power software with 0.3 as the effect size (small effect size), 0.8 as the power, two experimental groups, and difference between two independent means (two groups) as the statistical test. After removing participants who did not meet the inclusion criteria of the study, the final sample of this study was 328. Participants were told that they were invited to provide their thoughts and perspectives on a recent transgender policy – the transgender sports participation bill that was debated in the Tennessee General Assembly. This experiment focused on a manipulation of the ambivalence-inducing conditions. Participants were asked either to provide one-sided arguments (low ambivalence condition) or to provide two-sided arguments (high ambivalence condition) after reading a potential legislation proposal.

Procedure

After consenting to participate in the study, participants were instructed to read a brief report about a recent legislation that was allegedly debated in the Tennessee General Assembly regarding a transgender sports participation bill. In this report, participants were introduced to arguments that both supported and opposed the bill. For the supportive arguments, the value of fairness was invoked; the value of egalitarianism was invoked for the opposition arguments. After reading the report, participants were

randomly assigned to one of two conditions that were purported to induce their ambivalence regarding the proposed bill. In the low ambivalence condition, participants were instructed to write down up to eight arguments that either supported or opposed the bill – they may take a stance on the topic. Specifically, participants were given the following instruction:

“Referring to the potential legislation, we would like for you to consider just **one side** of the argument, **the side that agrees with your current thinking**. Consider your own arguments, as well as arguments made by people you love and respect. In the 8 blank spaces below, please specify as many arguments you can think of that can be made to **EITHER support OR oppose** the proposed bill (you may take a stance on this topic). Note: please be honest as you are responding. We will de-identify your responses and use them for our future studies.”

Asking participants to provide arguments on only one side of the debate alluded them to block any possible alternatives that could have been presented to the table. This approach was used to solidify participants’ stances on the topic regardless of whether they supported or opposed the bill, making only one value (fairness or egalitarianism) highly accessible in their minds. A note about using participants’ responses in the future studies was a bogus attempt at making sure that they were invested in the study, hence minimizing the possibility of negligent responses.

In the high ambivalence condition, participants were asked to consider and to present both sides of the arguments, for a maximum of eight responses. Specifically, participants were given the following instruction:

“Referring to the potential legislation, we would like for you to consider **both sides** of the argument, **even if they conflict with your current thinking**. Consider your own arguments, as well as arguments made by people you love and respect. In the 8 blank spaces below, please specify as many arguments you can think of that can be made to **BOTH support AND oppose** the proposed bill. Note: please be honest as you are responding. We will de-identify your responses and use them for our future studies.”

By asking participants to consider both sides of the arguments for this proposed bill, participants were subtly nudged to access both values at the same time, a phenomenon called simultaneous accessibility (Newby-Clark, McGregor, & Zanna, 2002).

Theoretically, even when participants did not endorse some of those arguments, simply bringing them to awareness was sufficient in creating that sense of discomfort brought up by ambivalence. These open-ended responses from participants were not analyzed or reported in this document – the focus of this document was on the quantitative portion of the experiment. The open-ended responses were utilized solely to create that sense of ambivalence in the current sample.

Once they completed the manipulation, participants responded to measures of potential ambivalence, felt ambivalence, attitudes toward the policy, and likelihood of seeking new information. Before completing the survey, participants completed some demographic and social identity questions.

Measures

Potential Ambivalence

Participants were asked to rate egalitarianism, moral traditionalism, fairness, and humanitarianism values on a 7-points scale (1 = “Not at all Important to Me” to 7 = “Extremely Important to Me”). Some example items included: “How important is equality to you when evaluating this policy?” and “How important is moral traditionalism to you when evaluating this policy?” Potential ambivalence was computed using a formula that was outlined in the results section below.

Felt Ambivalence Scale (Social Psychological Standpoint)

Identical items were used from Study 2.

Felt Ambivalence – Conflict of Values (Political Science Standpoint)

Identical items were used from Study 3. The verbiage was adapted to reflect two related values in the context of transgender sports participation policy: (1) egalitarianism and (2) fairness. To avoid confusion and to distinguish this scale from a social psychological standpoint, this scale was referred to as “conflict of values” in the analysis section.

Attitudes toward Transgender Policy Scale

Identical items were used from Study 2 and Study 3.

Likelihood of Seeking New Information Scale

Identical item was utilized from Study 2 and Study 3.

Attention Check Questions

One attention check question was used in the study to discern whether or not participants were actually reading the items carefully. The attention check item was

embedded in the Attitudes toward Transgender Policy measure: “Are you paying attention to the study you are taking? Please click “Strongly Agree (7)” in the scale below to confirm. Thank you!”

Demographic and Social Identity Questions

Identical demographic and social identity questions from Study 2 and Study 3 were used for this study.

Analyses and Results

The first step was to submit the dataset to a thorough cleaning process. From the original sample of 352 participants, 184 of them were randomly assigned to the low ambivalence condition while 168 of them were randomly to the high ambivalence condition. The exclusion criteria that were used included the following: 12 participants were removed due to negligent responses (i.e., saying things like “corona,” “dumb,” “liberal,” “Recommended is supposed,” “Battled is use,” “Like,” “Candy”) or because they wrote the incorrect positionality argument (e.g., wrote supportive arguments when opposing arguments were asked); 3 participants were removed due to incorrect responses to the attention check question; and 9 participants were removed because they identified as transgender. A chi-square analysis was conducted to determine whether there were significant differences in the number of participants being removed across the two conditions. Results showed that there was no significant difference in the removal of participants in either low or high ambivalence conditions, $\chi^2(1, 328) = 0.598, p = .440$. The final working sample consisted of 328 cisgender individuals. Of these participants, 50.6% identified as male, 89% identified as heterosexual, and these participants ranged in age of 20 to 73 years old. A majority of the participants (52.7%) in the sample were

liberal (ranged from “somewhat liberal” to “extremely liberal”), with 45.9% identified as a democrat. 171 participants were randomly assigned to the low ambivalence condition; 157 participants were in the high ambivalence condition.

For each of the variables used in the study, means and standard deviations were calculated. Moreover, factor analyses and reliability analyses were performed to make sure that the items interacted the way they were intended for each construct of interest (e.g., felt ambivalence, attitudes toward transgender policy). The scales that measured variables of interest in this study all demonstrated good reliability (all Cronbach’s alphas were above 0.70).

To compute potential ambivalence, a decision was made to evaluate ambivalence by looking at the extremity and strength of the following values: egalitarianism and fairness. These two values are constantly being invoked when discussing transgender athletes’ involvement in sports (Pike, 2021). Egalitarianism and fairness columns were entered into the potential ambivalence (PA) formula: $PA = (Egalitarianism + Fairness)/2 - |Egalitarianism - Fairness|$. The next step was to run bivariate correlation analyses to ascertain the relationships among variables of interest. Correlation coefficients for variables of interest were reported in Table 4. Replicating previous findings, the results showed that there was a positive relationship between potential ambivalence and felt ambivalence ($r = .31, p < .001$). The data revealed a positive relationship between potential ambivalence and conflict of values ($r = .12, p = .027$). Furthermore, there was a positive relationship between felt ambivalence and likelihood of seeking new information ($r = .39, p < .001$). Moreover, there was a positive relationship between conflict of values and likelihood of seeking new information ($r = .31, p < .001$). Lastly, diverging from

findings from Studies 1-3, political orientation was negatively associated with potential ambivalence ($r = -.41, p < .001$), felt ambivalence ($r = -.36, p < .001$), and conflict of values ($r = -.19, p < .001$).

Because the goal of this study was to demonstrate the ability to manipulate people's ambivalence, independent t-tests were conducted to determine whether or not there was a significant difference between the low and high ambivalence conditions in predicting felt ambivalence and conflict of values (please see Table 5). The 171 participants who were randomly assigned to the low ambivalence condition ($M = 2.93, SD = 1.90$) compared to the 157 participants in high ambivalence condition ($M = 3.43, SD = 2.03$) demonstrated significantly lower felt ambivalence scores ($t(326) = -2.28, p = .023$). Similarly, the low ambivalence condition resulted in significantly lower reports of conflict of values ($M = 3.37, SD = 1.64$) compared to the high ambivalence condition ($M = 3.75, SD = 1.62; t(326) = -2.06, p = .040$). The result found that the experimental conditions did not significantly impact potential ambivalence ($t(326) = 1.68, p = .094$) and likelihood of seeking new information ($t(326) = -1.30, p = .190$).

Table 4*Means, Standard Deviations, and Correlation Coefficients for Study 4*

| Variable | M | SD | 1 | 2 | 3 | 4 | 5 | 6 |
|---|------|------|----------|----------|---------|----------|---------|-----|
| Felt Ambivalence | 3.17 | 1.97 | (0.96) | | | | | |
| Conflict of Values | 3.55 | 1.64 | 0.69*** | (0.81) | | | | |
| Consistency of Values | 4.39 | 1.63 | -0.45*** | -0.62*** | (0.84) | | | |
| Likelihood of Seeking New Information | 4.34 | 1.90 | 0.39*** | 0.31*** | -0.15** | N/A | | |
| Attitude toward the Sports Participation Policy | 4.39 | 2.21 | -0.22*** | -0.05 | 0.12* | -0.14* | (0.99) | |
| Political Orientation | 3.45 | 1.78 | -0.36*** | -0.19*** | 0.13* | -0.25*** | 0.45*** | N/A |

*** Correlation is significant at $p < .01$ (2-tailed)

** Correlation is significant at $p < .01$ (2-tailed)

* Correlation is significant at $p < .05$ (2-tailed)

Note: Values in diagonal represent Cronbach's alpha. For each of the variable, higher values indicate stronger magnitude.

Table 5: Comparing Low Ambivalence and High Ambivalence Conditions (Study 4)

| Variable | | Conditions | | <i>t</i> -value | <i>p</i> -value | Effect size (Cohen's <i>d</i>) |
|---------------------------------------|-----------------------|---------------------------|----------------------------|-----------------|-----------------|---------------------------------|
| | | Low ambivalence (N = 171) | High ambivalence (N = 157) | | | |
| Potential ambivalence | <i>M</i> <i>SD</i> | 3.61 (2.81) | 4.11 (2.51) | -1.682 | 0.094 | 0.189 |
| Felt ambivalence | <i>M</i> <i>SD</i> | 2.93 (1.90) | 3.43 (2.03) | -2.283 | 0.023 | 0.254 |
| Conflict of values | <i>M</i> <i>SD</i> | 3.37 (1.64) | 3.75 (1.62) | -2.059 | 0.040 | 0.233 |
| Consistency of values | <i>M</i> <i>SD</i> | 4.43 (1.68) | 4.34 (1.58) | 0.505 | 0.614 | 0.055 |
| Likelihood of seeking new information | <i>M</i> <i>SD</i> | 4.21 (1.90) | 4.48 (1.91) | -1.301 | 0.194 | 0.142 |

Summary

The goal of Study 4 was to investigate the possibility of manipulating people's ambivalence through a writing exercise. The manipulation conditions were structured such that participants were randomly assigned to either write down one-sided arguments or two-sided arguments when reflecting on the transgender sports participation policy. When asked to reflect both sides (vs. one side) of the arguments for the transgender sports participation policy, participants were more (vs. less) likely to feel ambivalent about their thoughts and feelings about such policy. This phenomenon was supported both times using the felt ambivalence measure (Priester & Petty, 2001; 1996) and the

conflict of values measure (Mulligan, 2004). The study did not find the ambivalence conditions to affect likelihood of seeking new information, suggesting that the manipulations were effective only to evoke participants' sense of ambivalence and not their intention to seek new information about the sports participation policy. Moreover, the study did not find support for the manipulation conditions on potential ambivalence, suggesting that the writing exercise was effective in changing people's experience of ambivalence (i.e., sense of discomfort; feelings of being pushed and pulled in different directions) and not the structure of the attitude itself (i.e., the ability to think about the positive and negative arguments).

In hindsight, this study would have benefited from a manipulation check to make sure that participants responded in a manner consistent with the experimental conditions they were randomly assigned to. However, a precaution was taken to ensure that participants that were included in the final analyses responded as requested by the experimental conditions (e.g., if they were asked to write down one-sided arguments, they responded either for *or* against the policy).

In Study 5, the goal was to observe whether people's attitudes toward the transgender sports participation policy could be influenced by social norms. Research in the social norms' literature demonstrates the power of the critical mass in influencing people's attitudes toward various topics, including health-related interventions (Dempsey, McAlaney, & Bewick, 2018), gay marriage (Tankard & Paluck, 2017), expression and suppression of prejudice (Crandall, Eshleman, & O'brien, 2002), vaccine intake (Abdallah & Lee, 2021), and bullying (Perkins, Craig, & Perkins, 2011). Even though people might not necessarily change their personal views of the topics evoked by the

social norms, they are still being nudged to consider the alternative to their current attitudinal stance (Tankard & Paluck, 2017). Following the arguments laid out by Hodson, Maio, and Esses (2001), Study 5 sought to test the hypothesis that highly ambivalent people were more likely to be influenced by social norms than unambivalent people. This is because attitude structures of ambivalent topics are less stable and are more prone to persuasion (Maio, Bell, & Esses, 1996).

STUDY 5

Brief Overview

The goal of Study 5 was to understand the role of social norms in influencing subsequent attitudes toward a specific transgender policy, especially for those people who are highly ambivalent toward the topic. Similar to Study 4, this study examined people's attitudes toward transgender sports participation. Random assignment was utilized to assign whether participants viewed the majority *support* condition, or the majority *oppose* condition. Because transgender sports participation is continuously being debated and arguments from both sides seem plausible, the public might still be unsure as to how to respond appropriately. Therefore, perhaps introducing people to stronger social norms (Feldman & Harel, 2008) could be the solution to mobilizing greater support for transgender sports participation policy. Moreover, based on the response amplification theory, it was predicted that participants who were highly ambivalent about a transgender policy were more likely to be swayed by the social norms (Bell & Esses, 1997; Hodson, Maio, & Esses, 2001). As such, when the social norms claimed that a majority of people had favorable attitudes toward the transgender sports participation policy, it was expected

that highly ambivalent (vs. low ambivalent) participants were more likely to express favorable attitudes toward such policy.

Participants and Design

For this experiment, 398 participants were recruited from CloudResearch in exchange of \$1.50 (commensurate to approximately 12 to 15 minutes of their time). The number of participants recruited was based on the power analysis conducted using G*Power software with effect size of 0.05 (small effect size), 0.8 as the power, two predictors, and linear multiple regression (fixed model, R^2 increase) as the statistical test. After removing participants who did not meet the inclusion criteria, the final sample consisted of 308 cisgender participants. Participants were told that they were going to provide their thoughts and perspectives about various topics. However, to reduce the amount of time taken to complete the experiment, the computer will randomly assign participants to one of three topics. In actuality, all participants received information about the transgender sports participation policy.

This experiment utilized a manipulation of the social norms. After completing measures of ambivalence, participants were randomly assigned to one of two social norms manipulation conditions. Participants were told that based on the ongoing research on this topic, a majority of the previous participants who had completed the study either *supported* or *opposed* the transgender sports participation policy. This norms manipulation was adapted from the work of Hodson, Maio, and Esses (2001). Then, participants completed the remainder of the study by completing measures related to their final attitudes toward the policy along with various demographic and social identity questions.

Procedure

After providing their consent to participate in the experiment, participants were instructed to read a brief report about recent legislation that was debated in the Tennessee General Assembly regarding a transgender sports participation bill. (The stimuli presented to participants were exactly the same as the ones used in Study 4). Participants were instructed to complete measures of felt ambivalence, conflict of values, and likelihood of seeking new information. After that, participants were told that the experimenters were interested in their final stance regarding the transgender sports participation bill. To create a cover story that was convincing enough to disguise our social norms manipulation, participants were told that the researchers have been collecting data from various individuals to understand their attitudes toward this bill. Participants were then randomly assigned to one of two conditions that differed in terms of social norms. In the majority *support* condition, participants were shown the following statement:

“Currently, a majority of our respondents (irrespective of their political ideologies) agreed that athletes should participate in sports that correspond with their biological sex to ensure fairness for all athletes.”

In the majority *oppose* condition, participants were shown the following statement:

“Currently, a majority of our respondents (irrespective of their political ideologies) agreed that athletes should be allowed to participate in sports that correspond with their gender identity to ensure equality for all athletes.”

Once they read the manipulation conditions, participants responded to measures of attitudes toward the bill. Before completing the experiment, participants completed some demographic and social identity questions.

Measures

Felt Ambivalence Scale (Social Psychological Standpoint)

Identical items were used from Studies 2-4.

Felt Ambivalence – Conflict of Values (Political Science Standpoint)

Similar items were used from Study 4. Important to note, similar to Study 4, only items for the conflict of values scale were utilized in this study.

Attitudes toward Transgender Policy Scale

Identical items were used from Studies 2-4.

Likelihood of Seeking New Information Scale

Identical item was utilized from Studies 2-4.

Manipulation Check

One item was used as a manipulation check for the study to ensure participants were actually paying attention to the cues in the experiment. The statement read: “Based on what you have seen, please click the correct answer option.” The answer options were as followed: “A majority of the respondents in this study supported the Transgender Sports Participation policy,” “A majority of the respondents in this study opposed the Transgender Sports Participation policy,” and “No information was presented to me during this study. (This was the wrong answer).”

Attention Check Questions

One attention check question was used in the study to discern whether or not participants were actually reading the items carefully. The attention check item was embedded in the felt ambivalence measure: “Are you paying attention to the study you are taking? Please click "Strongly Agree" in the scale below to confirm. Thank you!”

Demographic and Social Identity Questions

Identical demographic and social identity questions from Studies 2-4 were used for this study.

Analyses and Results

The dataset went through a cleaning process to make sure that only participants' who passed the inclusion criteria were submitted for further analyses. From the original sample of 398 participants, 188 of them were randomly assigned to the majority *support* condition and 210 of them were randomly assigned to the majority *oppose* condition. The exclusion criteria involved visual screening and responding to the attention and manipulation check question accurately. As such, 90 participants were excluded from future analyses due to the following reasons: ten participants were removed because they did not respond to the attention check question correctly; three participants were removed because they identified as “transgender”; and 77 participants were removed because they failed the manipulation check question. A chi-square analysis was performed to ascertain whether there was a significant difference in the exclusion of participants as a function of the manipulation conditions. Results show that there was no significant difference in the removal of participants in either majority support or majority oppose conditions, $\chi^2(1, 310) = 2.90, p = .088$. The final working sample consisted of 308 cisgender individuals. Of these participants, 55.5% of participants identified as male, 90.3% identified as heterosexual, and participants ranged in age from 20 to 84 years old. A majority of the participants (49.7%) in the sample were liberal (ranged from “somewhat liberal” to “extremely liberal”), with 45.8% identified as a democrat. 169 participants were assigned

to the majority support condition; 139 participants were assigned to the majority oppose condition.

Similar to previous studies, means and standard deviations were calculated for each construct of interest (please see Table 6). Furthermore, factor analyses and reliability analyses were performed to ascertain that all variables interacted in a manner consistent with what they were intended to measure. All variables revealed good reliability, as evident by the Cronbach's alpha being above 0.70. The next step was to run bivariate correlation analyses to measure the relationships among all the variables of interest (felt ambivalence, conflict of values, political orientation, and attitudes toward the policy). There was a positive relationship between felt ambivalence and conflict of values ($r = .551, p < .001$), such that the more people experienced felt ambivalence, the higher likelihood for them to experience conflict of values. The correlation matrix revealed small negative relationships between political orientation and felt ambivalence ($r = -.195, p < .001$). Moreover, there were positive relationships between felt ambivalence and likelihood of seeking new information ($r = .346, p < .001$), as well as conflict of values and likelihood of seeking new information ($r = .218, p < .001$). There was no correlation between political orientation and conflict of values ($r = -.111, p = .052$).

Table 6*Means, Standard Deviations, and Correlation Coefficients for Study 5*

| Variable | M | SD | 1 | 2 | 3 | 4 | 5 |
|---|------|------|----------|---------|----------|---------|-----|
| Felt Ambivalence | 3.56 | 2.03 | (0.93) | | | | |
| Conflict of Values | 3.64 | 1.54 | 0.55*** | (0.76) | | | |
| Likelihood of Seeking New Information | 4.15 | 1.90 | 0.35*** | 0.22*** | N/A | | |
| Attitude toward the Sports Participation Policy | 4.32 | 2.03 | -0.03 | -0.05 | -0.13* | (0.99) | |
| Political Orientation | 3.59 | 1.79 | -0.20*** | -0.11* | -0.33*** | 0.29*** | N/A |

*** Correlation is significant at $p < .01$ (2-tailed)

** Correlation is significant at $p < .01$ (2-tailed)

* Correlation is significant at $p < .05$ (2-tailed)

Note: Values in diagonal represent Cronbach's alpha. For each of the variable, higher values indicate stronger magnitude.

Table 7: Comparing Majority Support and Majority Oppose Conditions (Study 5).

A higher value indicates stronger support for the sports participation policy.

| Variable | Conditions | | <i>t</i> -value | <i>p</i> -value | Effect size (Cohen's <i>d</i>) | |
|--|----------------------------|---------------------------|-----------------|-----------------|---------------------------------|-------|
| | Majority Support (N = 170) | Majority Oppose (N = 140) | | | | |
| Attitudes toward the transgender sports participation policy | <i>M</i> <i>SD</i> | 4.73 (1.92) | 3.83 (2.05) | 4.004 | <0.001 | 0.453 |

To measure the difference between majority support and majority oppose manipulation conditions in predicting attitudes toward the transgender sports participation policy, independent samples *t*-tests were conducted (please see Table 7). The results showed that there was a significant difference between the two manipulation conditions in predicting people's attitudes toward the transgender sports participation policy ($t(308) = 3.91, p < .001, d = .448$). Specifically, cisgender participants who were given information that the majority of people in the study supported the transgender sports participation policy were more likely to express support for such policy ($M = 4.72, SD = 1.92$), and participants who were given information that the majority of people in the study opposed the policy were more likely to oppose such policy ($M = 3.84, SD = 2.05$).

In order to examine the moderating effect of participants' own ambivalence on the relationship between the social norms conditions and attitudes toward the transgender sports participation policy, Hayes' (2019) PROCESS macro model 1 was utilized. The

interaction effect was not significant in predicting participants' attitudes toward the transgender sports participation policy, suggesting that regardless of participants' felt ambivalence, only social norms were driving their support or opposition toward the policy. The same model was used to test the moderating effect of conflict of values on the relationship between the social norms conditions and attitudes toward the transgender sports participation policy. Again, the interaction effect between conflict of values and social norms conditions was not significant in predicting attitudes toward such policy.

Summary

The goal of Study 5 was to investigate the power of social norms in swaying people's endorsement of the transgender sports participation policy, especially for those who were highly ambivalent. Participants' felt ambivalence, conflict of values, and likelihood of seeking new information were measured at the beginning of the study. Participants were then given bogus information about people's attitudes toward the sports participation policy by being randomly assigned to the majority support or majority oppose conditions. Their attitudes toward the policy were assessed next.

This study found that there was a positive correlation between felt ambivalence and conflict of values, such that greater felt ambivalence was associated with greater experience of conflict. Important to note however, the two constructs were related at Pearson's correlation coefficient of .551, suggesting that they were indeed related but distinct from one another. The results also stated that both felt ambivalence and conflict of values were positively associated with likelihood of seeking new information: the more participants experienced the conflicting values between egalitarianism and fairness, the greater likelihood for them to search for new information.

The results also revealed that participants were influenced by the social norms manipulations. Specifically, when they were told that a majority of people supported the transgender sports participation policy, participants were more likely to report their support for such policy, and vice versa. Replicating previous studies in attitudes toward immigrants (Bell & Esses, 1997) and attitudes toward health behavior (Hohman, Crano, & Niedbala, 2016), this study highlighted the importance of communicating social norms in guiding people's future attitudes. Contrary to expectation, however, this study did not find the moderating effect of participants' ambivalence on social norms conditions and attitudes toward the transgender sports participation policy. Regardless of their ambivalence, participants tended to follow what the majority of people claimed to be doing. Perhaps participants were confused or unsure about what was the right approach in dealing with such policy, and therefore it was easier to succumb to the pressure from others. In retrospect, this study could have benefitted from removing another potential confounding variable, namely whether participants were aware of how hormonal treatments may affect athletic performance.

CHAPTER 3

General Discussion

Summary of Findings

The overarching goal of this document was to expand our current understanding of how attitudinal ambivalence was associated with people's varying degrees of endorsement of transgender policies. At the beginning of this document, three main aims were highlighted: (1) to demonstrate the efficacy of using both social psychological and political science conceptualization and operationalization in looking at ambivalence toward transgender policies; (2) to investigate the effectiveness of a writing exercise in changing people's felt ambivalence and their subsequent likelihood of seeking new information; and (3) to examine the influence of social norms in mobilizing support or opposition toward transgender-specific policies. Studies 1-3 were conducted in a survey format; Study 4-5 utilized an experimental design.

Across five studies, it was consistently demonstrated that there were positive relationships among the following variables: potential ambivalence, felt ambivalence, and likelihood of seeking new information. Studies 1-3 showed that indeed both social psychological and political science perspectives were comparable in effectiveness when evaluating people's attitudes toward the bathroom bill, with political science measurement yielding slightly higher correlation coefficients than the social psychological measurement. The findings should not be surprising given a tighter connection between the verbiage used in the political science measurement and the topics at hand (policy-related topics). Study 4 established that people were more likely to express greater felt ambivalence when they were asked to write down arguments that

supported and opposed the transgender sports participation policy, compared to people who were asked to reflect on only one side of the policy arguments. The two-sided arguments were effective in influencing participants' sense of ambivalence. Lastly, Study 5 revealed the power of social norms: people's attitudes toward the transgender sports participation policy were consistent with that of the social norms regardless of their ambivalence levels. When told that a majority of people supported (vs. opposed) the policy, participants expressed greater (vs. lower) support for the transgender sports participation policy, and vice versa.

These findings agreed with and expanded upon previous literature in the attitudinal ambivalence tradition. Specifically, the general correlational findings (Studies 1-5) were consistent with the extant literature, either from a social psychological standpoint (Newby-Clark, McGregor, & Zanna, 2002; Sawicki et al., 2013; Thompson, Zanna, & Griffin, 1995) or a political science standpoint (Craig, Martinez, Kane, & Gainous, 2005; Steenbergen & Brewer, 2004). When it comes to using a writing exercise to induce felt ambivalence (Study 4), this study was the first in my knowledge to have expanded the extant literature (Maio, Bell, Esses, 1996) by showing that felt ambivalence averages are significantly different between one-sided arguments and two-sided arguments conditions. In contrast with the previous literature (Hodson, Maio, & Esses, 2001), this study did not find evidence that ambivalence moderated the relationship between social norms conditions and attitudes towards transgender sports participation policy. Participants in Study 5, whether their felt ambivalence was at the mean, 1 SD above the mean, or 1 SD below the mean, conformed to the majority group when reporting their attitudes toward the policy. Psychological constructs such as attitudinal

ambivalence is complex from both theoretical and empirical standpoint. Perhaps participants in Study 5 were much more amenable to the power of social norms compared to participants in Hodson et al. (2001).

Contributions and Implications

The biggest contribution of this paper was demonstrating the congruence of evidence operationalizing ambivalence from both social psychological and political science perspectives. Studies 2 and 3 confirmed that the correlation coefficients among potential ambivalence, felt ambivalence, likelihood of seeking new information, and attitudes toward transgender policies were comparable to one another. An argument can be made that the correlation coefficients in Study 3 (a political science lens) were slightly larger than those in Study 2 (a social psychology lens). It should be interpreted less about the rigor or validity of the social psychological lens, and more so about the specificity of verbiage used in the political science measures. The political science language lent itself more strongly to topics related to policies, as opposed to a more generalized version adapted from social psychology measures. Although not part of the main proposal, supplemental findings showed that when felt ambivalence preceded potential ambivalence, the indirect effect of felt ambivalence on likelihood of seeking new information through potential ambivalence became non-significant, suggesting that the attitudinal structures of positive and negative feelings (potential ambivalence) toward transgender-specific policies always preceded how people actually experience such ambivalence (felt ambivalence). This finding was consistent with the empirical evidence presented by Thompson, Zanna, and Griffin (1995).

This paper also further contributed to the importance of reflecting on both sides of a specific policy when attempting to evoke people's sense of ambivalence. When asked to reflect arguments that both supported *and* opposed the transgender sports participation policy, people tended to express greater felt ambivalence compared to when they were asked to reflect on only one side of the policy arguments (either supportive *or* opposed). Even though attitudinal ambivalence has received negative reputations (Conner & Armitage, 2008; Cornelis, Heuvinck, & Majmundar, 2020), this document would like to propose a more positive spin whereby advocates of transgender policies should rejoice at the prospect of mobilizing people through educational initiatives – because highly ambivalent people are more motivated to search for new information that will tip them over to univalent (vs. bivalent) attitudes. For instance, the advocates of transgender right should consider the work of DeMarree, Brinol, and Petty (2015). In their studies, DeMarree and colleagues introduced doubt to the ambivalent participants by manipulating the credibility of the message provider. They found that participants who were randomly assigned to the high doubt condition were more likely to report lower subjective (i.e., felt) ambivalence than participants in the low doubt condition. Future studies should address this topic by looking at how doubting one side of the arguments – not only the credibility of the message provider but also the quality of the message itself – may or may not have a consequential impact on people's support for transgender-specific policies.

A couple of final notes about the implications of this program of research. We now know that there was evidence linking potential ambivalence, felt ambivalence, and likelihood of seeking new information when it comes to people's endorsement of

transgender-specific policies. Both theoretical and empirical evidence suggests that simply bringing up relevant (often conflicting) values can affect people's felt ambivalence (Newby-Clark, McGregor, & Zanna, 2002). Even though the concern of this document was mainly on highly ambivalent individuals, perhaps reminding people the multiple vantage points to transgender-specific policies may be useful in mobilizing them to consider a more supportive stance. Let us suppose we consider these two conflicting values: egalitarianism and moral traditionalism. When these values are highly accessible, people feel uncomfortable, confused, and mixed up. As human beings we want to resolve the discomfort by looking out for more information that can now tip us over to one side of the topic at hand (Rudolph & Popp, 2007). Advocates of transgender rights need to make sure that relevant information can easily be located and digested by the information seekers, so that subsequently, they will adopt more favorable attitudes toward different transgender policies.

Limitations and Future Directions

In hindsight, the lack of support for the moderating effect in Study 5 should not be interpreted as a failure of the experiment. It is important to note that regardless of the science behind it, people's general perceptions of whether to let transwomen athletes play on a women's team are still conflicted (Flores, Haider-Markel, Lewis, Miller, Tadlock, & Taylor, 2020). Some people might argue that allowing transwomen athletes to compete in the women's team/category is consistent with the equality principle; others might argue that doing so would give them an unfair disadvantage. As such, in dealing with this confusing situation, people are more likely to rely on others – especially the influence of the majority groups – for information on how to act. In one of their experiments,

Wittenbrink and Henly (1996) demonstrated that when given negative information about African Americans as a group, participants were more likely to report greater negative evaluations about a specific (and neutral) Black target. From a political science perspective, Houck, King, and Taylor (2021) found that participants from their studies were more willing to change their misperceptions to be consistent with that of the majority, suggesting that people use others to guide their behavior, especially when the situation is ambiguous or conflicted. In the context of this paper, when participants were told that a majority of people from the survey supported the transgender sports participation policy, they were more likely to support such policy as well.

Looking back at the findings of Study 5, perhaps the study would have benefited from a condition that did not include information about the social norms to establish a baseline for how highly ambivalent participants would have responded in such a condition. Theoretically, participants who would have been in the no social norms condition should report their attitudes toward the transgender sports participation policy as they see fit with their current highly accessible value. For example, if their fairness (or egalitarianism) value was highly accessible at that time, then they were more (or less) likely to support a policy that would prevent transgender athletes from competing in teams that were consistent with their gender identity. However, the experimenter did have a strong empirical support (Hodson, Maio, & Esses, 2001) that two conditions (majority support vs. majority oppose) should have been sufficient to see movements in the current sample. As such, future studies should explore the intricacies of the relationship among attitude ambivalence, social norms, and attitudes toward transgender sports participation policy – and beyond.

Even though current findings across the five studies are promising in establishing that attitudinal ambivalence is an important lens for researchers and practitioners alike to venture into when looking at support for transgender-specific policies. For now, we have only barely scratched the surface. It is important to note that all findings are cross-sectional (a single time-point). If we were to follow a strict political science tradition, future studies should examine how attitudinal ambivalence (conflict of values) impacts support for transgender-specific policies across different time points, political landscapes, and dynamics of interpersonal relationships. These differences in context would matter greatly in what kinds of information or values that would be accessible and salient to people, therefore influencing their attitudes toward various policies. Another interesting future investigation is to examine people's actual voting behavior rather than just their voting intention. For instance, future studies can establish a paradigm similar to the theory of planned behavior tradition in examining how attitudinal ambivalence impacts attitudes, subjective norms, and perceived behavioral control (Conner, Povey, Sparks, James, & Shepherd, 2003). Moreover, future research should contextualize this line of research by conducting field experiments closer to an election time (Presidential or mid-term) to increase people's motivation and information salience.

Upon reflecting the stimulus for the five experiments, perhaps some readers might question the demand characteristic of the likelihood of seeking new information item that was utilized in Studies 2-5. The question itself gave participants the opportunities to perform an introspection on whether or not they were interested in seeking out for more information regarding the transgender-supportive policies. The question was framed in such a way that freed participants from thinking they might have additional burdens to

their cognition such as time and opportunity constraints. Hence, the question appeared to be relatively generalized. Perhaps future studies could inquire additional questions differentiating between pro- and anti-attitudinal additional information consistent with the work of Clark, Wegener, and Fabrigar (2008).

Another important angle for future studies to address is the interconnectedness among the concepts of ambivalence, value pluralism, and need for cognition. Since ambivalence is about juggling with multiple sources of attitudinal structures, one would expect that highly ambivalent topics would be associated with greater value pluralism. The work by Tetlock (1986) might be a good starting point in understanding that the more people assign similar strength and importance toward two or more values, the more likely for them to have differentiated opinions about a specific policy. The idea behind value pluralism is that people grow more cognitively complex in their evaluations of various topics when they are being pushed and pulled in different frames of reference rather than simply saying yes or no. Therefore, theoretically, there should be a strong correlation between ambivalence and need for cognition. For a more recent publication on value pluralism, Isacs, Kenter, Wetterstrand, and Katzeff (2023) demonstrated that when it comes to thinking about environmental policies, there was a greater uncertainty and conflicting values in people's arguments. Moreover, they argued that value pluralism gave rise to greater emotional anguish for people (a similar result to when people experience ambivalence). However, the tradition of value pluralism studies focuses on how people's tendencies to resolve those conflicts by practicing more inclusive reasoning and engaging in compromise. Future studies need to address to what extent ambivalence

is associated with value pluralism by specifically addressing whether one concept precedes or is a result of the other one.

A relatively important positionality needs to be recognized. Research projects and publications on the concept of attitudinal ambivalence tend to focus on Western, educated, industrial, rich, and democratic participants. Most of the papers cited in this document were adapted from White researchers in the Western hemisphere. Even though this document is the first to document people's ambivalence when it comes to their attitudes toward transgender-specific policies, most participants identified as White and were citizens of the United States. Therefore, the findings warrant further investigation by focusing on the intentionality of incorporating the voice of people of color, immigrants, lower socioeconomic individuals, less educated people, and people who are socialized in non-democratic societies. Presently, echoing the paper authored by Remedios (2022), the findings presented in this document should be interpreted and applied only to an extent that pertains to people who Westerners, relatively educated, industrialized, rich, and democratic by societal expectations. Future work should test whether this ambivalence phenomenon also applies to different groups. It is important to also note that simply recognizing a positionality issue does not solve the inherent discriminatory and prejudiced structures of the academy, especially in psychology. A strategic approach needs to be implemented not only to attract/recruit students of color and other members of stigmatized identities, but also to provide continuous support and enrichment for their professional development. When we diversify the field, we also enhance the representativeness of our research programs – “diversity is as diversity does” (Vasquez et al., 2006).

Conclusion

Attitudinal ambivalence is often understood as simultaneous presence of conflicting thoughts, feelings, or behaviors. Although ambivalence has been studied extensively in the laboratory and field settings, its application in understanding people's endorsement of transgender-specific policies has yet to be conducted. Therefore, this document sought to explore three main goals: (1) to understand the congruence of the operationalization of ambivalence through the lens of social psychology and political science; (2) to test the possibility of manipulating felt ambivalence; and (3) to explore the consequences of social norms in mobilizing support for transgender policies. Developing a greater understanding of the antecedents and consequences of attitudinal ambivalence in the context of transgender-specific policies can inform efforts to change people's attitudes toward such policies to be more favorable.

APPENDICES

APPENDIX A

Indirect Effect (Mediation Analysis) of Potential Ambivalence on Likelihood of Seeking
New Information via Felt Ambivalence (Study 2).

| Effect | Label | Estimate | SE | 95% Confidence Interval ^(a) | | Z | p |
|----------|-----------|----------|-------|--|-------|--------|-------|
| | | | | Lower | Upper | | |
| Indirect | a x b | 0.011 | 0.005 | 0.001 | 0.021 | 2.096 | 0.036 |
| Direct | c | -0.003 | 0.016 | -0.035 | 0.029 | -0.184 | 0.854 |
| Total | c + a x b | 0.008 | 0.016 | -0.023 | 0.039 | 0.490 | 0.624 |

Note: (a) Confidence intervals computed with Biased Corrected Bootstrap method.

| Path | Label |
|------|---|
| a | Potential Ambivalence → Felt Ambivalence |
| b | Felt Ambivalence → Likelihood of Seeking New Information |
| c | Potential Ambivalence → Likelihood of Seeking New Information |

Indirect Effect (Mediation Analysis) of Potential Ambivalence on Likelihood of
Seeking New Information via Felt Ambivalence (Study 3).

| Effect | Label | Estimate | SE | 95% Confidence Interval^(a) | | Z | p |
|---------------|--------------|-----------------|-----------|--|--------------|----------|----------|
| | | | | Lower | Upper | | |
| Indirect | a x b | 0.053 | 0.018 | 0.017 | 0.088 | 2.91 | 0.004 |
| Direct | c | 0.098 | 0.043 | 0.014 | 0.182 | 2.27 | 0.023 |
| Total | c + a x b | 0.150 | 0.040 | 0.071 | 0.229 | 3.72 | < 0.001 |

Note: (a) Confidence intervals computed with Biased Corrected Bootstrap method.

| Path | Label |
|-------------|--|
| a | Potential Ambivalence → Felt Ambivalence: Conflict |
| b | Felt Ambivalence: Conflict → Likelihood of Seeking New Information |
| c | Potential Ambivalence → Likelihood of Seeking New Information |

APPENDIX B

Study 1

Pilot - Social Values and Attitudes - April 2021

Thank you for beginning this study!

This study will take approximately 10-20 minutes, and you will receive payment for taking part in this study per the information provided on the survey platform through which the study was advertised.

Please continue to the next page to read the study information sheet.

As mentioned in the Study Information Sheet, you will complete two different tasks in this study. First, we would like you to start by indicating your agreement or disagreement with various social value and attitude statements. There are no right or wrong answers to these statements so please provide your honest opinions on these topics. Before you finish the study, we would like you to answer some demographic and social identity questions to assess representativeness of our sample.

Please proceed to the first task by clicking the red arrow.

We would like to start by asking questions related to your values and beliefs.

- Values are guiding principles and shared goals of specific groups in a wide range of situations.
- Beliefs are accepted ideas about some aspects of the world.

It is important for us that you be completely honest in your responses. There are no right or wrong answers – just be honest and truthful about them.

Instruction: please indicate your agreement or disagreement with the following statements using a 7-point scale (1 = strongly disagree, to 7 = strongly agree).

1. Our society should do whatever is necessary to make sure that everyone has an equal opportunity to succeed regardless of their backgrounds.
2. As society, we have gone too far in pushing equal rights in this country. (R)
3. This country would be better off if we worried less about how equal people are. (R)
4. It is not really that big of a problem if some people have more of a chance in life than others. (R)
5. If people were treated more equally in this country, we would have fewer problems.
6. One of the big problems in this country is that we don't give everyone an equal chance.

Instruction: Please indicate your agreement or disagreement with the following statements using a 7-point scale (1 = strongly disagree, to 7 = strongly agree).

Note: transgender is someone who has a gender identity or gender expression that differs from the sex that they were assigned at birth.

1. Transgender people should not have equal rights as others when it comes to employment. (R)
2. Transgender people should have equal rights as others in political activities.
3. Transgender people should have the same rights as their counterparts to become a minister or president.
4. Hi there, if you are reading this, please click strongly disagree (1).
5. Transgender people should have equal rights as others when it comes to access to higher education.
6. Transgender people should have the same rights as others when it comes to choices of spouse.
7. Transgender people should not have the same rights as others in divorce. (R)
8. Transgender people should have the same rights as others to become a president.

Instruction: please indicate your agreement or disagreement with the following statements using a 7-point scale (1 = strongly disagree, to 7 = strongly agree).

1. The modern lifestyles are contributing to the breakdown of society.
 2. The world is changing, and we should adjust our view of moral behavior to those changes. (R)
 3. We should be more tolerant of people who choose to live according to their own moral standards, even if they are very different from our own. (R)
 4. This country would have fewer problems if there were more emphasis on traditional societal arrangements.
-

Instruction: please indicate your agreement or disagreement with the following statements using a 7-point scale (1 = strongly disagree, to 7 = strongly agree).

1. It is important for society to maintain traditional values or beliefs.
 2. Following one's customs should be important to society.
 3. Our society should strongly value the traditional practices of our culture.
-

Instruction: please indicate your agreement or disagreement with the following statements using a 7-point scale (1 = strongly disagree, to 7 = strongly agree).

1. It is important for people to form their own opinions and have original ideas.
 2. Learning new things is important to our society.
 3. It is important for people to make their own decisions.
 4. Doing everything independently should be equally important for all people.
 5. Freedom to choose what they do should be equally important for all people.
-

Instruction: thank you for completing those questions! Now we are interested in your thoughts and attitudes about transgender-related policies. Again, there are no right or wrong answers; we are simply interested in your honest opinions.

Definition: Policies are principles of actions adopted or proposed by a government, party, business, or individuals.

Example: A progressive tax system, such that people who make more money should pay more money into the system and those who make less money should pay less money into the system.

1. The United States military should allow transgender people to serve.
2. We should treat transgender people the same way we treat others.
3. Adoption rights should be given to people regardless of their gender identity.

4. Housing non-discrimination policies should be extended to cover transgender people as well.
5. Health insurance policies should cover gender-affirming health care costs (e.g., hormone therapy, gender-affirming surgical procedures or formerly known as sex-change operation).
6. Gender identity categories should be removed from the US census data collection. (R)
7. Schools should implement anti-bullying campaigns to protect transgender students.
8. Physical and mental health care services should be more accommodating to transgender people.
9. A business owner should be able to deny service to a transgender person if the owner has a religious objection to doing so.
10. A health care practitioner should be able to deny service to a transgender patient if the practitioner has a religious objection to doing so.
11. Transgender athletes should be allowed to compete in sports against athletes of the other gender.
12. People should use bathroom or locker room that align with their sex assigned at birth.

Instruction: please indicate your agreement or disagreement with the following statements using a 7-point scale (1 = strongly disagree, to 7 = strongly agree).

1. I'm confused about transgender-related policies because I have strong thoughts about them, and I can't make up my mind one way or another.
2. I find myself feeling 'torn' between the two sides of the issue when it comes to transgender-related policies.
3. My mind and heart seem to be in a disagreement on the issue of transgender-related policies.
4. I feel conflicted about transgender-related policies because on one hand I am able to see the positive side of arguments and on the other hand the negative side of the arguments.
5. I have strong mixed emotions both for and against transgender-related policies, all at the same time.

Instruction: please indicate your agreement or disagreement with the following statements using a 5-point scale (1 = very unlikely, to 5 = very likely).

Think about your views on transgender-related policies you just saw earlier. Keep those policies in mind when answering the following questions.

1. How likely are you to seek out new information regarding transgender-related policies?
 2. When it comes to transgender-related policies, how likely are you to find arguments that are counter to your current viewpoints?
 3. If you are reading this, please click “very likely” (5).
 4. When you are unsure about a specific transgender-related policy, how likely are you to search for such information?
-

Instruction: You are now done with all the tasks and surveys in this experiment! Please continue to the next page to fill out the demographic information.

What is your gender?

- Male
- Female
- Other (please specify)

What is your sexual orientation?

- Heterosexual
- Homosexual
- Other (please specify)

What is your gender identity?

- Cisgender
- Transgender
- Other (please specify)

What is your age (in years)? _____

What is your race? (you may choose more than one)

- White/Caucasian
- African American
- Hispanic
- East Asian
- South Asian
- Middle Eastern
- Native American/American Indian
- Native Hawaiian or Pacific Islander
- Other (please specify)

What is your country of origin?

- United States of America
- Other

What is your political orientation?

- Extremely liberal
- Liberal
- Somewhat liberal
- Neutral
- Somewhat conservative
- Conservative
- Extremely conservative

How would you categorize your political party affiliation?

- Democrat
- Republican
- Independent
- Other (please specify)

Study 2

Thought Listing Final Study - May 2022

First, you will review a policy brief that was debated in the Alabama House of Representative.

To make it easier to read the information, we separated this policy brief into multiple slides. In addition, this **screen will appear for a minimum of 15 seconds** before you can move to the next screen.

We ask that you read each slide carefully and think about your own stance of the subject matter.

First, you will review a policy brief that was debated in the Alabama House of Representative.

To make it easier to read the information, we separated this policy brief into multiple slides. In addition, this **screen will appear for a minimum of 15 seconds** before you can move to the next screen.

We ask that you read each slide carefully and think about your own stance of the subject matter.



**THE ALABAMA
LEGISLATURE**

- Alabama - The Alabama House of Representative is considering a bill that would stipulate that individuals must use bathrooms that correspond with the designated sex listed on their birth certificates when in government buildings, such as city halls and schools.
- The bill was discussed at a hearing of the House of Committee on Labor and Commerce on Wednesday. It was reported that both sides of the political parties brought in their best arguments to either endorse or oppose this policy.
- Victor Schneider, a law professor at the University of Alabama who spoke at the hearing, said that **the policy, if made into law, presents a choice between competing values. Rejecting the policy would demonstrate Alabama's commitment to egalitarian ideals, while supporting the policy would demonstrate the state's commitment to traditional moralist ideals.**



According to the proposed bill, any facilities that have restrooms, bathrooms, or changing rooms must follow one of the three requirements:

1. the restroom has to be designed to be used by only one person at any given time, or
2. the restroom has to be designed to be used by only members of the same gender, or
3. if people from different genders are allowed to use the same restroom, an attendant must be assigned to address any issues that are raised by the users.



“Some would argue that it’s shameful that in this day and age we would allow transgender individuals to be denied access to bathrooms that correspond to their current gender identity,” he said. “Protection and assurance of full equality under the law must extend to transgender individuals as well.”

“But others would say that there is a big difference between tolerating people’s choice to be transgender and endorsing their behavior by granting it special legal protection,” Schneider remarked. “Laws granting transgender individuals access to the bathrooms that correspond to their gender identity would only legitimize and encourage a lifestyle that most Americans find deeply offensive.”

Schneider said that **given these opposing values and considerations, “we must balance these competing values when deciding on this issue.”**

Thank you for reading the brief carefully. As with any issue, there are arguments for and against it. Referring to the potential legislation, imagine that you are one of the representatives present in the debate. We would like for you to think about **your own** arguments, as well as arguments made by **people you love or respect**. In the 8 blank spaces below, please specify arguments that can be made to **support and/or oppose** the bathroom bill policy.

- Argument 1: ____
- Argument 2: ____
- Argument 3: ____

- Argument 4: ____
- Argument 5: ____
- Argument 6: ____
- Argument 7: ____
- Argument 8: ____

Now, we would you to assign specific values to the arguments that you just wrote down. Based on your personal thoughts and feelings, **indicate to what extent the arguments you have provided are in favor or in oppositional** to the policy.

Use the following scale to help guide your task.

| | | | | | | |
|-----------------|--------|-----------------|--------------------------|----------------|-------|----------------|
| -3 | -2 | -1 | 0 | 1 | 2 | 3 |
| Strongly oppose | Oppose | Somewhat oppose | Neither favor nor oppose | Somewhat favor | Favor | Strongly favor |

Think about the proposed legislation. Imagine that you were asked to indicate your attitude and perception of this policy. Please indicate your attitudes toward the proposed legislation on a 7-point semantic differential scale.

Note: for the scale, moving to the **right** would indicate **greater support** for the legislation and moving to the **left** would indicate **lower support** for the legislation.

| | | |
|-----------------------|---|--------------------|
| Harmful | <input type="radio"/> | Beneficial |
| Foolish | <input type="radio"/> | Wise |
| Bad | <input type="radio"/> | Good |
| Unfavorable | <input type="radio"/> | Favorable |
| Definitely disapprove | <input type="radio"/> | Definitely approve |
| Strongly disagree | <input type="radio"/> | Strongly agree |

Are you paying attention to the study you are taking?

Please click "**Strongly Agree**" in the scale below to confirm. Thank you!

- Strongly disagree
- Disagree
- Somewhat disagree
- Neither agree nor disagree
- Somewhat agree
- Agree
- Strongly agree

Based on our ongoing research, we acknowledge that different people have different reactions to the proposed legislation. Some people may have strong feelings one direction or another; others might not be so sure about their reactions.

Please indicate to what extent your reactions to the legislation are **conflicted**, **mixed**, and **indecisive**.

| | | |
|--|---|--|
| Feel no conflict at all | <input type="radio"/> | Feel a lot of conflict |
| Feel no indecision at all | <input type="radio"/> | Feel a lot of indecision |
| Completely one-sided reactions (agree or disagree) | <input type="radio"/> | Completely mixed reactions (both agree and disagree) |

If you have all the time and energy in the world, to what extent do you think you would want to learn more about this legislation?

- Very uninterested
- Uninterested
- Slightly uninterested
- Neither interested nor uninterested
- Slightly interested
- Interested
- Very interested

Instruction: You are now done with all the tasks and surveys in this experiment! Please continue to the next page to fill out the demographic information.

What is your gender?

- Male
- Female
- Other (please specify)

What is your sexual orientation?

- Heterosexual
- Homosexual
- Other (please specify)

What is your gender identity?

- Cisgender
- Transgender
- Other (please specify)

What is your age (in years)? _____

What is your race? (you may choose more than one)

- White/Caucasian
- African American
- Hispanic
- East Asian
- South Asian
- Middle Eastern
- Native American/American Indian
- Native Hawaiian or Pacific Islander
- Other (please specify)

What is your country of origin?

- United States of America
- Other

What is your political orientation?

- Extremely liberal
- Liberal
- Somewhat liberal
- Neutral
- Somewhat conservative
- Conservative
- Extremely conservative

How would you categorize your political party affiliation?

- Democrat
- Republican
- Independent
- Other (please specify)

Study 3

Study 3 - Political Science Perspective - May 2022

As mentioned in the Study Information Sheet, you will complete two different tasks in this study. First, we would like you to start by reading a short report about a **potential legislation being considered by the House of Representatives of Alabama**. We ask that you pay attention to the details since we will have some follow-up questions for you. These questions will include your thoughts, feelings, and potential behaviors.

Before you complete the study, we would like you to answer some demographic and social identity questions to assess representativeness of our sample.

Please proceed to the first task by clicking the red arrow.

First, you will review a policy brief that was debated in the Alabama House of Representative.

To make it easier to read the information, we **separated this policy brief into multiple slides**. In addition, this screen will appear for a **minimum of 15 seconds** before you can move to the next screen.

We ask that you read each slide carefully and think about your own stance of the subject matter.



THE ALABAMA
LEGISLATURE

- Alabama - The Alabama House of Representative is considering a bill that would stipulate that individuals must use bathrooms that correspond with the designated sex listed on their birth certificates when in government buildings, such as city halls and schools.
- The bill was discussed at a hearing of the House of Committee on Labor and Commerce on Wednesday. It was reported that both sides of the political parties brought in their best arguments to either endorse or oppose this policy.
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THE ALABAMA
LEGISLATURE

According to the proposed bill, any facilities that have restrooms, bathrooms, or changing rooms must follow one of the three requirements:

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2. the restroom has to be designed to be used by only members of the same gender, or
3. if people from different genders are allowed to use the same restroom, an attendant must be assigned to address any issues that are raised by the users.



THE ALABAMA
LEGISLATURE

“Some would argue that it’s shameful that in this day and age we would allow transgender individuals to be denied access to bathrooms that correspond to their current gender identity,” he said. “Protection and assurance of full equality under the law must extend to transgender individuals as well.”

“But others would say that there is a big difference between tolerating people’s choice to be transgender and endorsing their behavior by granting it special legal protection,” Schneider remarked. “Laws granting transgender individuals access to the bathrooms that correspond to their gender identity would only legitimize and encourage a lifestyle that most Americans find deeply offensive.”

Schneider said that **given these opposing values and considerations, “we must balance these competing values when deciding on this issue.”**

The next set of questions will ask you about values that you might regard as important in evaluating the earlier policy. Just to be sure that we are on the same page, we provide definitions for the four values being assessed:

- **Egalitarianism**: a belief that all people are equal and deserve equal rights and opportunities regardless of their backgrounds and identities
- **Moral traditionalism**: a belief that society should pay more attention to traditional lifestyles and social arrangements
- **Freedom**: a belief that people in society should be able to say and do whatever they please, so long as it does not directly harm anyone else

- **Humanitarianism**: a concern and belief in promoting human welfare and well-being

Based on the policy that you just read, please rate the importance of each of the following values when thinking about the **bathroom bill**. Please rate the following statements using a 7-point scale (1 = Strongly disagree to 7 = Strongly agree).

1. How important is **egalitarianism** in thinking about this policy?
2. How important is **moral traditionalism** in thinking about this policy?
3. How important is **freedom** in thinking about this policy?
4. How important is **humanitarianism** in thinking about this policy?

Think about the proposed legislation. Imagine that you were asked to indicate your attitude and perception of this policy. Please indicate your attitudes toward the proposed legislation on a 7-point semantic differential scale.

Note: for the scale, moving to the **right** would indicate **greater support** for the legislation and moving to the **left** would indicate **lower support** for the legislation.

| | | | | | | | | |
|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|--------------------|
| Harmful | <input type="radio"/> | Beneficial |
| Foolish | <input type="radio"/> | Wise |
| Bad | <input type="radio"/> | Good |
| Unfavorable | <input type="radio"/> | Favorable |
| Definitely disapprove | <input type="radio"/> | Definitely approve |
| Strongly disagree | <input type="radio"/> | Strongly agree |

Based on our ongoing research, we acknowledge that different people have different reactions to the proposed legislation. Some people may have strong feelings one direction or another; others might not be so sure about their reactions.

Please indicate to what extent your reactions to the legislation are **conflicted**, **mixed**, and **indecisive**.

| | | | | | | | | |
|--|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|--|
| Feel no conflict at all | <input type="radio"/> | Feel a lot of conflict |
| Feel no indecision at all | <input type="radio"/> | Feel a lot of indecision |
| Completely one-sided reactions (agree or disagree) | <input type="radio"/> | Completely mixed reactions (both agree and disagree) |

Instruction: Please respond to the following statements on a 7-point scale: 1 = (Strongly Disagree) to 7 = (Strongly Agree).

1. My views on egalitarianism make me feel like I should favor this issue but my views on moral traditionalism make me feel like I should oppose it.
 2. When I think about this issue, my views on egalitarianism and moral traditionalism are extremely consistent. (*reverse coded*)
 3. When I think about this issue, my views on egalitarianism pull me in one direction but my views on moral traditionalism pull me in a different direction.
 4. My views on egalitarianism do NOT contradict my views on moral traditionalism when it comes to my opinion on this issue. (*reverse coded*)
 5. When I think about this issue, my views on egalitarianism and moral traditionalism make me feel like I could EITHER favor OR oppose this issue.
 6. My views on egalitarianism are in complete agreement with my views on moral traditionalism when it comes to my opinion on this issue. (*reverse coded*)
-

If you have all the time and energy in the world, to what extent do you think you would want to learn more about this legislation?

- Very uninterested
 - Uninterested
 - Slightly uninterested
 - Neither interested nor uninterested
 - Slightly interested
 - Interested
 - Very interested
-

Instruction: You are now done with all the tasks and surveys in this experiment! Please continue to the next page to fill out the demographic information.

What is your gender?

- Male
- Female
- Other (please specify)

What is your sexual orientation?

- Heterosexual

- Homosexual
- Other (please specify)

What is your gender identity?

- Cisgender
- Transgender
- Other (please specify)

What is your age (in years)? _____

What is your race? (you may choose more than one)

- White/Caucasian
- African American
- Hispanic
- East Asian
- South Asian
- Middle Eastern
- Native American/American Indian
- Native Hawaiian or Pacific Islander
- Other (please specify)

What is your country of origin?

- United States of America
- Other

What is your political orientation?

- Extremely liberal
- Liberal
- Somewhat liberal
- Neutral
- Somewhat conservative
- Conservative
- Extremely conservative

How would you categorize your political party affiliation?

- Democrat
- Republican
- Independent
- Other (please specify)

Study 4

Study 4 - Manipulating Ambivalence - August 2022

As mentioned in the Study Information Sheet, you will complete two different tasks in this study. First, we would like you to start by reading a short report about a **potential legislation being considered by the Tennessee General Assembly**. We ask that you pay attention to the details since we will have some follow-up questions for you. These questions will include your thoughts, feelings, and potential behaviors.

Before you complete the study, we would like you to answer some demographic and social identity questions to assess representativeness of our sample.

Please proceed to the first task by clicking the red arrow.

First, you will review a policy brief that was debated in the Tennessee General Assembly .

To make it easier to read the information, we separated this policy brief into multiple slides. In addition, because we want you to process the information more effectively, **this screen will appear for a minimum of 15 seconds** before you can move to the next screen.

We ask that you read each slide carefully before answering the relevant questions.

T E N N E S S E E
GENERAL ASSEMBLY

- **Tennessee** – The Tennessee General Assembly is considering a bill that would stipulate athletes can only participate in sports that correspond with the designated sex listed on their birth certificates.
- The bill was discussed at a hearing of the Senate Education Committee on Wednesday. It was reported that both sides of the political spectrum brought in their best arguments to either endorse or oppose this legislation.
- Victor Schneider, a law professor at the Vanderbilt University who spoke at the hearing, said that the policy, if made into law, presents a choice between competing values. **Rejecting the values would demonstrate Tennessee’s commitment to egalitarianism ideals, while supporting the policy would demonstrate the state’s commitment to justice and fairness for all athletes.**

T E N N E S S E E
GENERAL ASSEMBLY

According to the proposed bill, for the purposes of participation in a middle school or high school interscholastic athletic activity or event,...

1. A student's gender be determined by the student's sex at the time of the student's birth, as indicated on the student's original birth certificate.
2. If a student does not have an original birth certificate or the original birth certificate does not indicate the student's sex at birth, the student must provide other evidence to indicate the student's sex.
3. The student or the student's parents or guardian must pay the cost associated with providing evidence.
4. This bill requires the state board of education, local boards of education, and governing bodies of public charter schools to adopt and enforce policies to ensure compliance with this bill.

T E N N E S S E E
GENERAL ASSEMBLY

- "Some would argue that it's shameful that in this day and age we would allow transgender individuals to be denied access to participate in sports that correspond to their identities," Schneider said. "Protection and assurance of full equality under the law must extend to transgender athletes as well."
- "But others would argue that implementing this bill will level the playing field between men and women to ensure fairness by asking athletes to participate in sports that correspond with their biological sex," Schneider claims. "The implementation of this law will ensure fairness and justice for our athletes."
- Schneider said that, given these opposing values and considerations, "we must find a consensus of balancing these competing values when deciding on this issue."

In the **High Ambivalence** condition, participants were given the following instructions:

Thank you for reading the brief carefully. As with any issue, there are arguments for and against it.

Referring to the potential legislation, we would like for you to consider **both sides** of the argument, **even if they conflict with your current thinking**. Consider your own arguments, as well as arguments made by people you love and respect.

In the 8 blank spaces below, please specify as many arguments you can think of that can be made to **BOTH support AND oppose** the proposed bill.

Note: please be honest as you are responding. We will de-identify your responses and use them for our future studies.

In the **Low Ambivalence** condition, participants were given the following instructions:

Thank you for reading the brief carefully. As with any issue, there are arguments for and against it.

Referring to the potential legislation, we would like for you to consider just **one side** of the argument, **the side that agrees with your current thinking**. Consider your own arguments, as well as arguments made by people you love and respect.

In the 8 blank spaces below, please specify as many arguments you can think of that can be made to **EITHER support OR oppose** the proposed bill (you may take a stance on this topic).

Note: please be honest as you are responding. We will de-identify your responses and use them for our future studies.

The next set of questions will ask you about values that you might regard as important in evaluating the earlier policy. Just to be sure that we are on the same page, we provide definitions for the four values being assessed:

- **Egalitarianism**: a belief that all people are equal and deserve equal rights and opportunities regardless of their backgrounds and identities
 - **Moral traditionalism**: a belief that society should pay more attention to traditional lifestyles and social arrangements
 - **Fairness**: a belief in impartiality and just treatment or behavior without favoritism or discrimination.
 - **Humanitarianism**: a concern and belief in promoting human welfare and well-being
-

Based on the policy that you just read, please rate the importance of each of the following values when thinking about the **bathroom bill**. Please rate the following statements using a 7-point scale (1 = Strongly disagree to 7 = Strongly agree).

1. How important is **egalitarianism** in thinking about this policy?
2. How important is **moral traditionalism** in thinking about this policy?
3. How important is **freedom** in thinking about this policy?
4. How important is **humanitarianism** in thinking about this policy?

Think about the proposed legislation. Imagine that you were asked to indicate your attitude and perception of this policy. Please indicate your attitudes toward the proposed legislation on a 7-point semantic differential scale.

Note: for the scale, moving to the **right** would indicate **greater support** for the legislation and moving to the **left** would indicate **lower support** for the legislation.

| | | | | | | | | |
|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|--------------------|
| Harmful | <input type="radio"/> | Beneficial |
| Foolish | <input type="radio"/> | Wise |
| Bad | <input type="radio"/> | Good |
| Unfavorable | <input type="radio"/> | Favorable |
| Definitely disapprove | <input type="radio"/> | Definitely approve |
| Strongly disagree | <input type="radio"/> | Strongly agree |

Based on our ongoing research, we acknowledge that different people have different reactions to the proposed legislation. Some people may have strong feelings one direction or another; others might not be so sure about their reactions.

Please indicate to what extent your reactions to the legislation are **conflicted**, **mixed**, and **indecisive**.

| | | | | | | | | |
|--|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|--|
| Feel no conflict at all | <input type="radio"/> | Feel a lot of conflict |
| Feel no indecision at all | <input type="radio"/> | Feel a lot of indecision |
| Completely one-sided reactions (agree or disagree) | <input type="radio"/> | Completely mixed reactions (both agree and disagree) |

Instruction: Please respond to the following statements on a 7-point scale: 1 = (Strongly Disagree) to 7 = (Strongly Agree).

1. My views on egalitarianism make me feel like I should favor this issue but my views on fairness make me feel like I should oppose it.
2. When I think about this issue, my views on egalitarianism and fairness are extremely consistent. (*reverse coded*)
3. When I think about this issue, my views on egalitarianism pull me in one direction but my views on fairness pull me in a different direction.
4. My views on egalitarianism do NOT contradict my views on fairness when it comes to my opinion on this issue. (*reverse coded*)

5. When I think about this issue, my views on egalitarianism and fairness make me feel like I could EITHER favor OR oppose this issue.
 6. My views on egalitarianism are in complete agreement with my views on fairness when it comes to my opinion on this issue. (*reverse coded*)
-

If you have all the time and energy in the world, to what extent do you think you would want to learn more about this legislation?

- Very uninterested
 - Uninterested
 - Slightly uninterested
 - Neither interested nor uninterested
 - Slightly interested
 - Interested
 - Very interested
-

Instruction: You are now done with all the tasks and surveys in this experiment! Please continue to the next page to fill out the demographic information.

What is your gender?

- Male
- Female
- Other (please specify)

What is your sexual orientation?

- Heterosexual
- Homosexual
- Other (please specify)

What is your gender identity?

- Cisgender
- Transgender
- Other (please specify)

What is your age (in years)? _____

What is your race? (you may choose more than one)

- White/Caucasian
- African American
- Hispanic
- East Asian
- South Asian

- Middle Eastern
- Native American/American Indian
- Native Hawaiian or Pacific Islander
- Other (please specify)

What is your country of origin?

- United States of America
- Other

What is your political orientation?

- Extremely liberal
- Liberal
- Somewhat liberal
- Neutral
- Somewhat conservative
- Conservative
- Extremely conservative

How would you categorize your political party affiliation?

- Democrat
- Republican
- Independent
- Other (please specify)

Study 5

Study 5 - Manipulating Social Norms - September 2022

As mentioned in the Study Information Sheet, you will complete two different tasks in this study. First, we would like you to **indicate your support or opposition toward three different policies** that are being considered by the Tennessee General Assembly.

After that, you will be randomly assigned by the computer system to **read a short report that would go in depth about ONE of those three policies**. We ask that you pay attention to the details since we will have some follow-up questions for you. These questions will include your thoughts, feelings, and potential behaviors.

Before you complete the study, we would like you to answer some demographic and social identity questions to assess representativeness of our sample.

Please proceed to the first task by clicking the red arrow.

Now, you will review one of three policy briefs that was debated in the Tennessee General Assembly.

In your case, you will be reading about the **Transgender Sports Participation** policy.

To make it easier to read the information, we separated this policy brief into multiple slides. In addition, because we want you to process the information more effectively, **this screen will appear for a minimum of 15 seconds** before you can move to the next screen.

We ask that you read each slide carefully before answering the relevant questions.

T E N N E S S E E
GENERAL ASSEMBLY

- **Tennessee** – The Tennessee General Assembly is considering a bill that would stipulate athletes can only participate in sports that correspond with the designated sex listed on their birth certificates.
- The bill was discussed at a hearing of the Senate Education Committee on Wednesday. It was reported that both sides of the political spectrum brought in their best arguments to either endorse or oppose this legislation.
- Victor Schneider, a law professor at the Vanderbilt University who spoke at the hearing, said that the policy, if made into law, presents a choice between competing values. **Rejecting the values would demonstrate Tennessee’s commitment to egalitarianism ideals, while supporting the policy would demonstrate the state’s commitment to justice and fairness for all athletes.**

T E N N E S S E E
GENERAL ASSEMBLY

According to the proposed bill, for the purposes of participation in a middle school or high school interscholastic athletic activity or event,...

1. A student’s gender be determined by the student’s sex at the time of the student’s birth, as indicated on the student’s original birth certificate.
2. If a student does not have an original birth certificate or the original birth certificate does not indicate the student’s sex at birth, the student must provide other evidence to indicate the student’s sex.
3. The student or the student’s parents or guardian must pay the cost associated with providing evidence.
4. This bill requires the state board of education, local boards of education, and governing bodies of public charter schools to adopt and enforce policies to ensure compliance with this bill.

T E N N E S S E E
GENERAL ASSEMBLY

- “Some would argue that it’s shameful that in this day and age we would allow transgender individuals to be denied access to participate in sports that correspond to their identities,” Schneider said. “Protection and assurance of **full equality under the law must extend to transgender** athletes as well.”
- “But others would argue that implementing this bill will level the playing field between men and women to ensure fairness by asking athletes to participate in sports that correspond with their biological sex,” Schneider claims. “The implementation of **this law will ensure fairness and justice for our athletes.**”
- Schneider said that, given these opposing values and considerations, “we must find a consensus of **balancing these competing values** when deciding on this issue.”

The next set of questions will ask you about values that you might regard as important in evaluating the earlier policy. Just to be sure that we are on the same page, we provide definitions for the four values being assessed:

- **Egalitarianism**: a belief that all people are equal and deserve equal rights and opportunities regardless of their backgrounds and identities
- **Moral traditionalism**: a belief that society should pay more attention to traditional lifestyles and social arrangements
- **Fairness**: a belief in impartiality and just treatment or behavior without favoritism or discrimination.
- **Humanitarianism**: a concern and belief in promoting human welfare and well-being

Based on the policy that you just read, please rate the importance of each of the following values when thinking about the **bathroom bill**. Please rate the following statements using a 7-point scale (1 = Strongly disagree to 7 = Strongly agree).

1. How important is **egalitarianism** in thinking about this policy?
2. How important is **moral traditionalism** in thinking about this policy?
3. How important is **freedom** in thinking about this policy?
4. How important is **humanitarianism** in thinking about this policy?

Based on our ongoing research, we acknowledge that different people have different reactions to the proposed legislation. Some people may have strong feelings one direction or another; others might not be so sure about their reactions.

Please indicate to what extent your reactions to the legislation are **conflicted**, **mixed**, and **indecisive**.

| | | |
|--|---|--|
| Feel no conflict at all | <input type="radio"/> | Feel a lot of conflict |
| Feel no indecision at all | <input type="radio"/> | Feel a lot of indecision |
| Completely one-sided reactions (agree or disagree) | <input type="radio"/> | Completely mixed reactions (both agree and disagree) |

Instruction: Please respond to the following statements on a 7-point scale: 1 = (Strongly Disagree) to 7 = (Strongly Agree).

1. My views on egalitarianism make me feel like I should favor this issue but my views on fairness make me feel like I should oppose it.
 2. When I think about this issue, my views on egalitarianism and fairness are extremely consistent. (*reverse coded*)
 3. When I think about this issue, my views on egalitarianism pull me in one direction but my views on fairness pull me in a different direction.
 4. My views on egalitarianism do NOT contradict my views on fairness when it comes to my opinion on this issue. (*reverse coded*)
 5. When I think about this issue, my views on egalitarianism and fairness make me feel like I could EITHER favor OR oppose this issue.
 6. My views on egalitarianism are in complete agreement with my views on fairness when it comes to my opinion on this issue. (*reverse coded*)
-

If you have all the time and energy in the world, to what extent do you think you would want to learn more about this legislation?

- Very uninterested
- Uninterested
- Slightly uninterested
- Neither interested nor uninterested
- Slightly interested
- Interested
- Very interested

In the **Majority Support** condition, participants received the following excerpt:

Before we move on to some demographic questions, we would like to know **your final stance** on the **Transgender Sports Participation** policy.

We have been collecting data on people's attitudes toward this policy for the past three months, and here is what we know about people in our current sample:



The infographic consists of a purple circle containing the text '1,756 Respondents (and counting)' and an orange rounded rectangle containing the text '56.49% A majority of the respondents supported this policy.'

Currently, a majority of our respondents (irrespective of their political ideologies) agreed that **athletes should participate in sports that correspond with their biological sex** to ensure fairness for all athletes.

In the **Majority Oppose** condition, participants received the following excerpt:

Before we move on to some demographic questions, we would like to know **your final stance** on the **Transgender Sports Participation** policy.

We have been collecting data on people's attitudes toward this policy for the past three months, and here is what we know about people in our current sample:



The infographic consists of a purple circle containing the text '1,756 Respondents (and counting)' and an orange rounded rectangle containing the text '56.49% A majority of the respondents opposed this policy.'

Currently, a majority of our respondents (irrespective of their political ideologies) agreed that **athletes should be allowed to participate in sports that correspond with their gender identity** to ensure equality for all athletes.

Think about the proposed legislation. Imagine that you were asked to indicate your attitude and perception of this policy. Please indicate your attitudes toward the proposed legislation on a 7-point semantic differential scale.

Note: for the scale, moving to the **right** would indicate **greater support** for the legislation and moving to the **left** would indicate **lower support** for the legislation.

| | | | | | | | | |
|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|--------------------|
| Harmful | <input type="radio"/> | Beneficial |
| Foolish | <input type="radio"/> | Wise |
| Bad | <input type="radio"/> | Good |
| Unfavorable | <input type="radio"/> | Favorable |
| Definitely disapprove | <input type="radio"/> | Definitely approve |
| Strongly disagree | <input type="radio"/> | Strongly agree |

Based on what you have seen, please click the correct answer option.

A majority of the respondents in this study **supported** the Transgender Sports Participation policy.

A majority of the respondents in this study **opposed** the Transgender Sports Participation policy.

No information was presented to me during this study. (This is the wrong answer).

Instruction: You are now done with all the tasks and surveys in this experiment! Please continue to the next page to fill out the demographic information.

What is your gender?

- Male
- Female
- Other (please specify)

What is your sexual orientation?

- Heterosexual
- Homosexual
- Other (please specify)

What is your gender identity?

- Cisgender
- Transgender
- Other (please specify)

What is your age (in years)? _____

What is your race? (you may choose more than one)

- White/Caucasian

- African American
- Hispanic
- East Asian
- South Asian
- Middle Eastern
- Native American/American Indian
- Native Hawaiian or Pacific Islander
- Other (please specify)

What is your country of origin?

- United States of America
- Other

What is your political orientation?

- Extremely liberal
- Liberal
- Somewhat liberal
- Neutral
- Somewhat conservative
- Conservative
- Extremely conservative

How would you categorize your political party affiliation?

- Democrat
- Republican
- Independent
- Other (please specify)

APPENDIX C

MEASURES

Attitudes toward Policy

This approach was used to measure both policies: the bathroom bill and the transgender sports participation policy.

Instructions: Think about the proposed legislation. Please indicate your attitudes toward the proposed legislation on a 7-point semantic differential scale. Note: for the scale, moving to the right would indicate greater support for the legislature and moving to the left would indicate lower support for the legislature.

| | | |
|-----------------------|---|--------------------|
| Harmful | <input type="radio"/> | Beneficial |
| Foolish | <input type="radio"/> | Wise |
| Bad | <input type="radio"/> | Good |
| Unfavorable | <input type="radio"/> | Favorable |
| Definitely disapprove | <input type="radio"/> | Definitely approve |
| Strongly disagree | <input type="radio"/> | Strongly agree |

Adapted from:

Blankenship, K. L., Wegener, D. T., & Murray, R. A. (2015). Values, inter-attitudinal structure, and attitude change: Value accessibility can increase a related attitude's resistance to change. *Personality and Social Psychology Bulletin*, 41(12), 1739-1750.

Felt Ambivalence: A Social Psychological Conceptualization

Instructions: Based on our ongoing research, we acknowledge that different people have different reactions to the proposed legislation. Some people may have strong feelings one direction or another; others might not be so sure about their reactions. Please indicate to what extent your reactions to the legislature are conflicted, mixed, and indecisive.

| | | |
|--------------------------------|---|----------------------------|
| Feel no conflict at all | <input type="radio"/> | Feel a lot of conflict |
| Feel no indecision at all | <input type="radio"/> | Feel a lot of indecision |
| Completely one-sided reactions | <input type="radio"/> | Completely mixed reactions |

Adapted from:

Newby-Clark, I. R., McGregor, I., & Zanna, M. P. (2002). Thinking and caring about cognitive inconsistency: When and for whom does attitudinal ambivalence feel uncomfortable?. *Journal of personality and social psychology*, 82(2), 157.

Priester, J. R., & Petty, R. E. (2001). Extending the bases of subjective attitudinal ambivalence: Interpersonal and intrapersonal antecedents of evaluative tension. *Journal of personality and social psychology*, 80(1), 19.

Felt Ambivalence: Conflict of Values and Consistency of Values Scale

Instruction: Please respond to the following statements on a 7-point scale: 1 = (Strongly Disagree) to 7 = (Strongly Agree).

1. My views on fairness make me feel like I should favor this issue but my views on egalitarianism make me feel like I should oppose it.
2. When I think about this issue, my views on fairness and egalitarianism are extremely consistent. (*Reverse-coded*)
3. When I think about this issue, my views on fairness pull me in one direction but my views on egalitarianism pull me in a different direction.
4. My views on fairness do NOT contradict my views on egalitarianism when it comes to my opinion on this issue. (*Reverse-coded*)
5. When I think about this issue, my views on fairness and egalitarianism make me feel like I could EITHER favor OR oppose this issue.
6. My views on fairness are in complete agreement with my views on egalitarianism when it comes to my opinion on this issue. (*Reverse-coded*)

Adapted from:

Mulligan, K. (2004). *The nature of value conflict and its consequences for public opinion*. The Ohio State University.

Attitudes toward Transgender-Specific Policies (Study 1)

Instruction: Please indicate your agreement or disagreement with the following statements using a 7-point scale (1 = strongly disagree, to 7 = strongly agree).

1. The United States military should allow transgender people to serve.
2. We should treat transgender people the same way we treat others.
3. Adoption rights should be given to people regardless of their gender identity.
4. Housing non-discrimination policies should be extended to cover transgender people as well.
5. Health insurance policies should cover gender-affirming health care costs (e.g., hormone therapy, gender-affirming surgical procedures or formerly known as sex-change operation).
6. Gender identity (cisgender or transgender) categories should be removed from the US census data collection.
7. Schools should implement anti-bullying campaigns to protect transgender students.
8. Physical and mental health care services should be more accommodating to transgender people.
9. A business owner should be able to deny service to a transgender person if the owner has a religious objection to doing so.
10. A health care practitioner should be able to deny service to a transgender patient if the practitioner has a religious objection to doing so.
11. Transgender athletes should be allowed to compete in sports against athletes of the other gender.

12. People should use bathroom or locker room that align with their sex assigned at birth.

Demographic and Social Identity Questions

Instruction: You are now done with all the tasks and surveys in this experiment! In the next few pages, we would like for you to fill out your demographic and social identity information.

What is your gender?

- Male (1)
- Female (2)
- Non-binary / third gender (3)
- Other (please specify) (4)

What is your sexual orientation?

- Heterosexual (1)
- Homosexual (2)
- Other (please specify) (3)

Are you a transgender person?

- Yes (2)
- No (1)

What is your age (in years)?

What is your race? (You may choose more than one)

- White / Caucasian (1)
- Black / African American (2)
- Hispanic / Latino (3)
- East Asian (4)
- South Asian (5)
- Middle Eastern (6)
- Native American / American Indian (7)
- Native Hawaiian or Pacific Islander (8)
- Other (please specify) (9)

What is your country of origin?

- United States of America (1)
- Other (please specify) (2)

How would you describe your political orientation?

- Extremely liberal (1)
- Liberal (2)
- Somewhat liberal (3)
- Neutral (middle of the road) (4)
- Somewhat conservative (5)
- Conservative (6)
- Extremely conservative (7)

How would you categorize your political party affiliation?

- Democrat (1)
- Republican (2)
- Independent (3)
- Other (please specify) (4)

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CURRICULUM VITAE

Muhammad Fazuan Bin Abdul Karim

EDUCATION

| | | |
|---------------------------------|--|------|
| Indiana University Bloomington | Bachelor of Arts, Psychology Bachelor of Arts, Criminal Justice | 2017 |
| | Minor: Counseling | |
| Indiana University Indianapolis | Doctor of Philosophy, Applied Social and Organizational Psychology | 2024 |
| | Minor: Nonprofit Management Concentration: Diversity Science | |

PROFESSIONAL APPOINTMENTS

| | | |
|---|---|-----------------------------|
| Post Holdings Inc | People Analytics Analyst | April 2024-Present |
| Washington University in St Louis, Human Resources | Senior HR Research Analyst | November 2022-April 2024 |
| Indiana University School of Medicine, Department of Medicine, Indianapolis | Project Management Specialist | May 2022-November 2022 |
| | Organizational Development Graduate Intern | May 2019-April 2022 |
| Indiana University Indianapolis, Department of Psychology | Instructor of Record | May 2018-May 2022 |
| | Graduate Research Assistant | August 2017-May 2022 |
| | Teaching Assistant | August 2017-May 2018 |
| Indiana University Bloomington | Undergraduate Teaching Assistant | January 2015-May 2016 |
| | Program Assistant – Office of First Year Experience Program | April-August 2015 |

PROFESSIONAL ORGANIZATIONS MEMBERSHIPS

| | |
|---|------------------|
| Society for Personality and Social Psychology | 2017- Present |
| Society for Industrial Organizational Psychology | 2019- Present |
| Midwestern Psychological Association | 2016- Present |
| Society for the Psychological Study of Culture, Ethnicity, and Race | 2018-2021 |

RECOGNITIONS, AWARDS, AND HONORS

| | |
|--|-------------------|
| Society for Personality and Social Psychology Emergency Bridging Grant | April 2021 |
| APA Division 45 HOPE Award | March 2021 |
| Indiana University Indianapolis Department of Psychology Outstanding Graduate Student Teaching Award | March 2020 |
| Indiana University Indianapolis School of Science Outstanding Graduate Student Teaching Award | February 2020 |
| Society for Personality and Social Psychology Diversity Travel Award <i>This award affords an opportunity for a minoritized scholar to meet their admired scholars in the field. I was able to connect with Dr. Jennifer Bosson of the University of South Florida.</i> | September 2019 |
| Midwestern Psychological Association Diversity Travel Award | April 2018 |
| IU Bloomington Department of Criminal Justice Distinguished Hoosier Award <i>The award is given to a senior who excelled academically while distinguishing themselves through self-reliance, perseverance, and commitment to excellence.</i> | May 2017 |
| Perdana Scholar's Award, Finalist <i>The award is given to celebrate Malaysian students who have achieved the highest performance in regard to academics and volunteerism.</i> | July 2016 |

RESEARCH INTERESTS

- Engagement in resume whitening: Examining how Black ingroup members react to Black resume whitener (making one's resume appear more stereotypically white).
- Manhood and masculinity: Exploring the intricacies of manhood and masculinity in relation to discrimination toward the LGBTQ+ population.
- Conflict of values and transgender policies: Investigating the impact of ambivalence (conflicting values) on people's attitudes toward transgender-friendly policies.

PUBLICATIONS

Sotto-Santiago, S., Brown, C., **Abdul Karim, M. F.**, Sears, C., Gist, A., & Rohr-Kirchgraber. (Submitted). And the pendulum swings: from hostile to benevolent sexism in academic medicine. *Journal of General Internal Medicine*.

Liu, M. A., **Abdul Karim, M. F.**, Prestigiacomo, C. J., Ashburn-Nardo, L., & Cyders, M. A. (2021). Alcohol use outcomes and moderating risk and protective factors associated with reported incidents of discrimination among Asian Americans. *Alcoholism: Clinical and Experimental Research*, 175A-175A.

Ashburn-Nardo, L., & **Abdul Karim, M. F.** (2019). *The CPR model: Decisions involved in confronting prejudice responses*. In R. Mallett, & M. Monteith (Eds.), *Confronting prejudice and discrimination: The science of changing minds and behaviors*, Oxford, UK: Elsevier.

CONFERENCE PRESENTATIONS

ORAL PRESENTATIONS

Abdul Karim, M. F. & Ashburn-Nardo, L., (April 2021). *African Americans' Negative Reactions toward Ingroup Résumé Whiteners*. Oral presentation was presented at the annual meeting of the Midwestern Psychological Association Conference. Chicago, IL.

Muller, L., Pietri, E., & **Abdul Karim, M. F.**, (April 2021). *Exploring Organizational Identity-Safety Cues for Lesbian and Gay Employees*. Oral presentation was presented at the annual meeting of the Midwestern Psychological Association Conference. Chicago, IL.

Abdul Karim, M. F. & Pietri, E., (August 2019). *Getting Thrown under the Rainbow Bus: Heterosexual Men's Reluctance to Endorse LGBTQ-Supportive Policies Following Threat Perceptions*. Oral presentation was presented at the IUPUI School of Science Graduate Student Symposium. Indianapolis, IN.

Fukui, S., **Abdul Karim, M. F.**, & Salyers, M. P., (January 2019). *Factors That Affect Quality of Care Among Mental Health Providers*. Paper talk presented at the annual meeting of the 2019 Society for Social Work and Research. San Francisco, CA.

Abdul Karim, M. F. & Devine, D. J., Olson, M. (April 2018). *All Rise: Studying Juries From the Gallery*. Paper talk presented at the annual meeting of the 2018 Midwestern Psychological Association Conference. Chicago, IL.

Devine, D. J., Olson, M., & **Abdul Karim, M. F.**, (March 2018). *All Rise: Studying Juries From the Gallery*. Paper presented at the annual meeting of the 2018 American Psychology – Law Society Conference. Memphis, TN.

POSTERS

Sotto-Santiago, S., **Abdul Karim, M. F.**, Brown, C. (2022). “Promote Women”: Lessons in Climate, Professional Fulfillment, and Benevolent Sexism. Poster’s abstract was presented at the Association of American Medical Colleges.

Schneider, J., **Abdul Karim, M. F.**, Williams, J. (June 2020). *You Threatened My Manhood: Reactions to Feedback from Female Supervisors*. Poster was presented at the Society for the Psychological Study of Social Issue’s 2020 Summer Conference. Denver, CO.

Abdul Karim, M. F. & Pietri, E., (February 2020). *Heterosexual Men’s Reluctance to Endorse LGBT-Supportive Policies: The Role of Perceived Threat and Negative Attitudes toward LGBT*. Poster was presented at the Gender Preconference of the Society for Personality and Social Psychology. New Orleans, LA.

Abdul Karim, M. F. & Ashburn-Nardo, L., (February 2020). *African Americans’ Negative Reactions toward In-group Résumé Whiteners*. Poster was presented at the Society for Personality and Social Psychology Conference. New Orleans, LA.

McMurray, K., Hall, D., **Abdul Karim, M. F.**, & Ashburn-Nardo, L., (April 2020). *Are There Racial Disparities in Perceived Quality of Scientific Research?* Poster will be presented at the annual meeting of the Midwestern Psychological Association Conference. Chicago, IL.

Abdul Karim, M. F., Jettinghoff, W., & Kroeper, K., (April 2017). *Overlooking Police Brutality: How Race and Ambiguity Affect Culpability Judgments*. Presented at the 89th Annual Meeting of the Midwestern Psychological Association (MPA). Chicago, IL.

BEST PRACTICE REPORTS

| Topic | Modality |
|---|---|
| Managing Biases during Faculty Search and Recruitment | <ul style="list-style-type: none"> • Best practice report • PowerPoint slides • Training materials |
| Managing Workforce Remotely | <ul style="list-style-type: none"> • Best practice report |
| Career Planning and Development for IU Employees | <ul style="list-style-type: none"> • Individualized plans |
| Delivering Effective Coaching and Feedback | <ul style="list-style-type: none"> • PowerPoint slides • Training materials |
| Leveraging Employee Engagement and Motivation | <ul style="list-style-type: none"> • Best practice report |
| Implementing 360-Degree Feedback Evaluation | <ul style="list-style-type: none"> • PowerPoint slides • Training materials |
| Creating Inclusive Job Descriptions | <ul style="list-style-type: none"> • Best practice report |

FACULTY, STAFF, AND STUDENT PROFESSIONAL DEVELOPMENT

Developed and Led

| | |
|--|----------------------------|
| Basic Essentials for Supervision Training (B.E.S.T.) – focusing on staff in supervisory roles | May 2019- November 2022 |
| Coaching and Delivering Feedback for Employees – training for staff in supervisory roles as part of B.E.S.T. program | May 2019- November 2022 |
| Driving Inclusive Excellence Conversation – workshop with IU School of Medicine Graduate Division | August 2022 |
| Small Group Lab Meetings – mentored undergraduate research assistants in developing industry standard research methodologies and processes | 2020-2021 |

Co-Led

| | |
|------------------------------|----------------------|
| Writing Accountability Group | May-November 2022 |
|------------------------------|----------------------|

Strategic Equity and Inclusion Leadership Program (program developed by Dr. Sylk Sotto) May-November 2022
 Confronting Prejudiced Remarks in the Clinical Psychology area – collaboration with Dr. Leslie Ashburn-Nardo 2019
Invited Panelist

“Being a Teaching Assistant (TA): What’s in it for you and your students?” sessions for IUPUI Center for Teaching and Learning Fall 2018 and Spring 2019
 “What is it Like Being a Doctoral Student?” session for the Indiana University Bloomington Malaysian Students Association 2018

PROFESSIONAL DEVELOPMENT PROGRAMS

“Project Management Simplified” (LinkedIn Learning) July 2022
 “Diversity, Inclusion, and Belonging” (LinkedIn Learning) July 2022
 “R and R-Studio Tutorial” (Society for Personality and Social Psychology) September 2021
 “Graduate Students Mentoring Program” (National Research Mentoring Network) Summer 2019
 “Emerging Scholar College Instruction Program (ESCIP)” by Anusha Rao and Jessica Alexander (IUPUI Center for Teaching and Learning) Spring 2018-Fall 2020
 “Applying for Teaching-Focused Institutions” (Society for Personality and Social Psychology) August 2019

PROJECTS COMPLETED – (list is not exhaustive)

| Project Name – Date | Role(s) | Highlights |
|---|---|---|
| WUSM Department of Neurology Value Alignment Survey – May-November 2023 | <ul style="list-style-type: none"> • Expert individual contributor • Primary data analyst • Data manager | Developed and monitored survey for the department; led data analysis process. |

| | | |
|--|--|--|
| Bureau of Labor Statistics Monthly Compliance Reports (SAM, LEIE, JOLTS, CES, and Multiple Worksite) | <ul style="list-style-type: none"> • Primary analyst and contact person for the BLS | Streamlined the analytical protocol to ensure accurate and timely reporting. |
| Department of Medicine Climate Survey – May- October 2022 | <ul style="list-style-type: none"> • Expert individual contributor • Data manager | Provided expert opinions related to strategies to improve climate and culture for 15 divisions. |
| Department of Medicine Promotion & Tenure – 2021-2022 | <ul style="list-style-type: none"> • Review aggregator and editor | Single-handedly spearheaded the change in platform of review collection from Qualtrics to RedCap. |
| Transforming Performance Management Systems for Lutheran Child and Family Services – Spring 2021 | <ul style="list-style-type: none"> • Expert individual contributor • Data aggregator and analyzer | Led a team of four graduate students in analyzing and providing tangible solutions to fix the organization's performance management systems. |
| Department of Medicine Colleague Satisfaction Survey – May-June 2021 | <ul style="list-style-type: none"> • Survey manager • Data analyzer | Provided analytical expertise in examining quantitative and qualitative data. |
| Department of Medicine Remote Work Arrangement – July- September 2021 | <ul style="list-style-type: none"> • Survey manager • Data analyzer | Provided analytical expertise in examining quantitative and qualitative data. |
| Department of Medicine Staff Performance Evaluations – 2021 | <ul style="list-style-type: none"> • External reviewer coordinator • Communications manager (external) | Oversaw a successful execution of 360-degree feedback evaluations from 55 external reviewers. |
| Department of Medicine Staff Performance Evaluations – 2020 | <ul style="list-style-type: none"> • Expert individual contributor | Performed extensive literature review to understand the issues with 360-degree feedback and potential solutions. |

TEACHING – (Curriculum development and instructions)

| Course # | Title | Format | Role | Term | Enrollment number |
|--------------|--|-------------------------------------|-----------------------|----------------|-------------------|
| PSY-B 370 | Social Psychology | Classroom / Large Lecture | Instructor | Spring 2022 | 116 |
| | | Synchronous | Instructor | Fall 2021 | 96 |
| | | Synchronous | Instructor | Summer 2020 | 41 |
| | | Asynchronous | Instructor | Spring 2020 | 84 |
| | | Classroom / Large Lecture | Instructor | Fall 2019 | 80 |
| PSY-B 203 | Ethics and Diversity | Synchronous | Instructor | Spring 2021 | 79 |
| | | Classroom / Large Lecture | Teaching Assistant | Fall 2017 | 128 |
| PSY-B 110 | Introduction to Psychology | Asynchronous | Instructor | Fall 2020 | 74 |
| PSY-B 312 | Research Methods Psychology Lab | Classroom / Small Discussions | Lab instructor | Summer 2019 | 8 |
| | | Classroom / Small Discussions | Lab instructor | Spring 2019 | 30 |
| | | Classroom / Small Discussions | Lab instructor | Fall 2018 | 25 |
| PSY-B 454 | Capstone Seminar in Psychology – I/O Psychology | Classroom / Small Discussions | Teaching Assistant | Spring 2018 | 25 |

TYPES OF REPORTS GENERATED

- Sexual harassment compliance
- Communications and strategic planning
- St Louis Business Journal employee headcount
- Marketing campaign for recruitment
- Demographic reports for Danforth Campus at WashU
- Litigation data and reporting
- Legacy employees data on Cognos
- Turnover data for WUSM and Danforth at WashU
- Adjunct bargaining unit
- Grad students pay data
- Bureau of Labor Statistics data
- Compensation and merit increase reporting

THESIS / DISSERTATION

Abdul Karim, M. F. (2021). *The Effect of Resume Whitening on African Americans Ingroup Members' Perceived Likability, Hireability, Future Encounters, and Emotional Reactions: The Role of Perceived Racial Identity* (Master's thesis).

Abdul Karim, M. F. (defended 2022). *Being Pushed and Pulled in Different Directions: Examining People's Ambivalence toward Transgender-Specific Policies* (Doctoral Dissertation).