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An Examination of the Verbal Behaviour of Intergroup Discrimination

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*To my dearest,
Evangelynn Skye
No matter how long or how hard I worked on this thesis
I had dedicated every day and every single working minute to you
Your mama and papa promised the world to you
And we'll continue to fight to make it right for you.*

*Also, in loving memory of
Toby and Athena
I'm sorry that I missed your twilight years in pursuit of these degrees,
May the biscuit and tennis ball supply in the afterlife be infinite
and each one just as satisfying as the last.*

Abstract

This thesis examined relationships between psychological flexibility, psychological inflexibility, prejudicial attitudes, and dehumanization across three cross-sectional studies with an additional proposed experimental study. Psychological flexibility refers to mindful attention to the present moment, willing acceptance of private experiences, and engaging in behaviours congruent with one's freely chosen values. Inflexibility, on the other hand, indicates a tendency to suppress unwanted thoughts and emotions, entanglement with one's thoughts, and rigid behavioural patterns. Study 1 found limited correlations between inflexibility and sexism, racism, homonegativity, and dehumanization. Study 2 demonstrated more consistent positive associations between inflexibility and prejudice. And Study 3 controlled for right-wing authoritarianism and social dominance orientation, finding inflexibility predicted hostile sexism and racism beyond these factors. While showing some relationships, particularly with sexism and racism, psychological inflexibility did not consistently correlate with varied prejudices across studies. The proposed randomized controlled trial aims to evaluate an Acceptance and Commitment Therapy intervention to reduce sexism through enhanced psychological flexibility. Overall, findings provide mixed support for the utility of flexibility-based skills in addressing complex societal prejudices. Research should continue examining flexibility integrated with socio-cultural approaches to promote equity.

Lay Summary

Prejudice remains deeply ingrained within society, permeating attitudes and behaviours toward groups based on characteristics like race, gender, and sexual orientation. This thesis examined whether “psychological flexibility” – the ability to openly experience thoughts and emotions while behaving consistently with one’s values – could potentially counteract prejudiced beliefs.

Across three studies, the research examined connections between psychological flexibility, inflexibility, dehumanization, and diverse forms of prejudice including sexism, racism, and homonegativity. It hypothesized that cultivating flexible skills like mindfulness, experiential acceptance of thoughts, and disentanglement from judgmental thoughts could weaken prejudiced attitudes.

Results provided mixed evidence for this premise. While inflexibility consistently linked to some biases like sexism and racism, flexibility failed to show broad relationships with prejudice across the studies. This suggests contextual factors shape whether biased beliefs manifest through psychological inflexibility. Specifically, lack of contact with personal values and rigid cognitive patterns were the most robust predictors of prejudice among facets of psychological inflexibility.

Overall, findings highlight the complexity of prejudice and the need to integrate psychological flexibility approaches with explicit anti-bias efforts. Fostering flexible skills shows potential but requires tailoring based on bias type, gender, and cultural context. Additional research should explore how flexibility training interacts with prejudice reduction methods to nurture inclusive, equitable communities.

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As I reflect on the completion of this thesis, I am overwhelmed with deep gratitude. My incredible family – especially my amazing wife and daughter – have shown me unwavering support and patience throughout this journey. I could not have done this without their love and understanding. I am so thankful for having them by my side. My accomplishments are a shared success that would not have been possible without their sacrifice and faith in me. I am truly blessed to have such a loving family to share this milestone with.

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Declaration

I declare that this thesis has been composed solely by myself and that it has not been submitted, in whole or in part, in any previous application for a degree. Except where stated otherwise by reference or acknowledgment, the work presented is entirely my own.

Signed

A handwritten signature in black ink, appearing to read "Benj. H. Farn", with a long horizontal flourish extending to the right.

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Acronyms and Abbreviations

AAQ-S	Acceptance and Action Questionnaire – Stigma
ACT	Acceptance and Commitment Therapy
ASI	Ambivalent Sexism Inventory
ATLG	Attitudes Towards Lesbians and Gay Men scale
BAME	Black, Asian, and Minority Ethnic
BIAS	Behaviours from Intergroup Affect and Stereotypes
BLS	[United States] Bureau of Labor Statistics
BMI	Body Mass Index
BRS	Bayesian Racism Scale
BSS	Belief in Sexism Shift scale
CBS	Contextual Behavioural Science
CDC	Centers for Disease Control [and Prevention] (United States)
COVID-19	Coronavirus Disease of 2019
DfE	Department for Education
DRR	Derived Relational Responding
EHRC	Equality and Human Rights Commission
fMRI	Functional Magnetic Resonance Imaging
GCSE	General Certificate of Secondary Education
GSJ	Gender-specific System Justification scale
HIV/AIDS	Human Immunodeficiency Virus/ Acquired Immune Deficiency Syndrome

IAT	Implicit Association Test
IELTS	International English Language Testing System
LGBTQ+	Lesbian, Gay, Bisexual, Transgender, Queer ('+' represents sexual and gender minorities not accurately identified by LGBTQ)
MHS	Modern Homonegativity Scale
MPFI	Multidimensional Psychological Flexibility Inventory
OSC	Open Science Collaboration
ONS	Office for National Statistics (United Kingdom)
PTSD	Post-Traumatic Stress Disorder
RFT	Relational Frame Theory
SDO	Social Dominance Orientation
RCT	Randomized Control Trial
RFT	Relational Frame Theory
RWA	Right-Wing Authoritarianism
SES	Socioeconomic Status
STEM	Science, Technology, Engineering, and Mathematics
STI	Sexually Transmitted Infection
UK	United Kingdom [of Great Britain and Northern Ireland]
UMB	Universal Measure of Bias
UN	United Nations
U.S.	United States [of America]
TRC	Truth and Reconciliation Commission (Canada)

Introduction Overview

Whether it is based on another person's gender, race, sexuality, culture, disability, mental health, or other factors, people find an abundance of reasons to classify and derogate other humans. These behaviours are so common that stigmatized groups can expect to experience harassment and stereotype-based microaggressions on a nearly daily basis (Deitch et al., 2003; Hyers, 2007; Schneider et al., 2000; Swim et al., 2001).

Discrimination pervades languages and cultures around the world and influences social interactions, levels of governance from municipal to federal, the questions that the scientific community are willing to investigate, even approaches to medicine (Bierman, 2007; Brown, 2013; Collins & Clément, 2012; Kaminsky & Gadaleta, 2002; Ng, 2007; Welch et al., 2011). The scientific literature on intergroup discrimination is vast, dating back nearly a century, and yet there is still a limited understanding of effective means of prejudice reduction (Paluck & Green, 2009).

The purpose of this thesis is to examine the verbal behaviour (e.g., thoughts, judgments, beliefs, appraisals) that underlies prejudice and the dehumanization of others with the objective of establishing a more nuanced understanding of prejudicial attitudes and the behaviours through which they manifest. The introductory section of this thesis will comprise of three chapters which provide a brief overview of prejudice and dehumanization, their reduction, and the study of verbal and overt behaviours called Contextual Behavioural Science (CBS).

More specifically, the focus of Chapter 1 will be to review the conceptualizations of different forms of prejudice and dehumanization, how these prejudices have become systemic, how they affect individuals, and how these behaviours still manifest today. In the second chapter, current methods and theories of prejudice reduction will be reviewed including the Contact Hypothesis, Diversity Training and related policies implemented in businesses, and Unconscious Bias Training. The focus of the third chapter will be an introduction to the philosophical conceptualization of “othering”, the verbal behaviour that underlies prejudice, and how these concepts may be interpreted under the worldview of functional contextualism and CBS.

Chapter 1 – Intergroup Discrimination

1.1 Chapter Overview

In the initial chapter of this thesis, an in-depth overview of the complex nature of prejudice and dehumanization will be presented, beginning with a contemporary definition of prejudice and an exploration of its complex and pervasive nature. This will be followed by an examination of the human inclination for group cohesion and cooperation and, within this context, the profound influence of language and its role in the perpetuation of inequality, discrimination, and social disparities. The narrative extends to the formation of racial biases in children and how these biases ebb and flow throughout childhood and adolescence yet remain an enduring social issue with detrimental, far-reaching consequences.

Building upon this foundational knowledge, the chapter will examine specific forms of prejudice, including racism, sexism, weight bias, and homonegativity. Each prejudice will be defined and elaborated upon as systemic frameworks for categorizing and stratifying social groups followed by a discussion of the impact of societal oppression on individuals. This portion of the chapter will conclude with a discussion of dehumanization, a distinct form of prejudice that deprives a person of their humanity, likening them to animals or automatons. The consequences of dehumanization can be as explicit and severe as genocide and mass slavery but may also be dangerously subtle in its escalation via the use of degrading language and influential media portrayals leading to reduced prosocial behaviours and diminished support for social policies.

Lastly, in this relatively brief overview of prejudice and dehumanization, it is essential to explore the common patterns inherent in all forms of prejudice. This final

section of the chapter will begin by addressing the fundamental cognitive process of categorization within social interactions, investigating how biases and judgments arise and how they are influenced by demographics, cultural knowledge, and situational context. I will then discuss the role of social categorization in relation to the self, emphasizing the significance of social identities in shaping an individual's self-concept and its impact on their interpersonal and intergroup behaviours. Lastly, I will examine the role of stereotypes as cognitive shortcuts and discuss the consequences of their application in real-world scenarios. To gain a comprehensive understanding of stereotypes, I analyse their contents in alignment with two core dimensions: warmth (intentions and moral character) and competence (skills and capabilities) and explore how these dimensions influence the perception of others and our social interactions.

1.2 From the Playground to Society: The Never-Ending Odyssey of Prejudice

Prejudice is a complex and widespread social phenomenon with profound implications for attitudes, behaviours, and intergroup relations. Prejudice refers to negative stereotypes and evaluations of groups or individuals based solely on their membership in that group, rather than on objective evidence about that person or group (Allport, 1954; Stangor, 2016). Prejudice manifests in diverse ways, ranging from subtle implicit biases and microaggressions to overt discrimination and hate crimes targeting marginalized groups (Meertens & Pettigrew, 1997). Discrimination involves acting upon prejudicial attitudes in ways that unjustly disadvantage members of certain groups. Discrimination entails unfair treatment, including unjustified negative behaviour toward specific groups and less favourable responses relative to members of dominant groups (Ford, 2000; Forman, 2004; Gordon & Meyer, 2008; Katz et al., 2019; Lantz & Wenger, 2023; Solar & Irwin, 2010).

Evidence of intergroup discrimination can be traced back to ancient civilizations, illustrating the deeply rooted human tendency to favour one's own group over others (Alam, 2003; Kramer, 1998). Classic studies by Tajfel et al. (1971) demonstrated that even with minimal group affiliation, people exhibited in-group favouritism and outgroup discrimination. In these studies, participants categorized into arbitrary groups consistently allocated more resources to anonymous in-group members over outgroup members even when doing so did not benefit themselves or the in-group. This pattern persisted even when group assignment was explicitly described as arbitrary and random (Billig & Tajfel, 1973).

Group formation and maintenance offer clear evolutionary advantages. Greater group cohesions and cooperation have played a pivotal role in ensuring the survival of individual members through collective efforts. Living in groups enhances efficiency in resource collection, provides defence against predators and rivals, and was essential for the development of human language (Arbib et al., 2008; Javarone & Marinazzo, 2017). In particular, the complexity of human language highlights the significance of group cohesion. Communication styles, such as gestures, contextually selective vocabulary, and syllabic emphasis, along with nonverbal cues like body language and facial expressions, are foundational elements of any culture. What sets human language apart is that, unlike other benefits of group living, it necessitates cooperation with others. Language development relies on contingencies mediated by the verbal community (Hayes & Sanford, 2014).

However, despite its numerous benefits, language can also be a double-edged sword. While it serves as a potent medium for fostering cooperation, it can equally be harnessed to sow discord. The surrounding verbal community is not only critical to the development of an individual's communication skills but also significantly influences the

dissemination of prejudice. An individual's perspectives and beliefs may be profoundly altered, either positively or negatively, when exposed to the attitudes of others towards various social groups, particularly when the source of influence is considered authoritative (Festinger, 1954; Stangor et al., 2001). Language, therefore, stands as a formidable force in the perpetuation of inequality and discrimination. This persistence of prejudice within language remains evident today, albeit often in subtler forms, despite anti-prejudice norms and a decrease in overtly biased expressions (Augoustinos & Every, 2007; Ng, 2007). For example, the choice of words used to label individuals or even oneself can have detrimental effects, including negatively impacting the perception of a particular group, hindering civil rights movements, contributing to self-stigmatization, or exacerbating symptoms of clinical psychopathology (Nadler et al., 2012; Rüsç et al., 2014; Yang et al., 2015).

Perhaps because it is easy to create, prejudice has deep roots. Beliefs in group differences often develop in early childhood during critical phases of socialization with children displaying in-group preferences for playmates by just 3-years-old (Cristol & Gimbert, 2008; Katz & Kofkin, 1997). This inclination intensifies with age, as children are highly impressionable (Baron & Banaji, 2006; Dunham et al., 2008). Implicit bias research showed that 4-year-olds could be trained to harbour prejudice by associating positive emotions with their own race and negative emotions with others, highlighting the influential role of the verbal community in the transmission of prejudice (Xiao et al., 2014). Among White children, racial bias may peak between ages 5-6 before declining by ages 7-12 into adulthood (Baron & Banaji, 2006; Dunham et al., 2008; for a review of the literature see Doyle et al., 1988; Hagerman, 2020; Raabe & Beelmann, 2011). While it tends to decrease over time, prejudice remains an ongoing challenge throughout life.

The impact of ongoing and historical prejudices on society is extensive and devastating. Prejudice is considered a root cause of disparities in healthcare and education, disproportionately affecting racial and ethnic minority groups who often live in low-income neighbourhoods with under-resourced schools and inadequate access to quality healthcare (Abedi et al., 2021; Dominguez, 2011; Wei et al., 2018). Moreover, health inequities cannot solely be attributed to systemic discrimination. Individual cultural influences also play a role in perpetuating disparities. For example, some Black and Hispanic men may experience cultural pressure against openly identifying as gay or bisexual. This self-stigmatization can prevent them from accessing crucial educational resources related to preventing and treating sexually transmitted infections (Arnold et al., 2014; Bird & Voisin, 2013; Flores et al., 2009; Mimiaga et al., 2009). Taken together, these complex and interrelated consequences underscore the profound and far-reaching impacts of prejudice on marginalized groups.

The indelible scars of human history are etched not in triumphant conquests, but in the shadowed valleys of prejudice that have repeatedly enabled horrific acts like genocide. In September 1941, a yellow star was not merely a piece of fabric; it was a brand of exclusion, the first step in a meticulously orchestrated dehumanization campaign that culminated in the Holocaust. This genocidal event resulted in the systemic extermination of 17 million people including Jews, Slavic, Serbian, and Romani communities, as well as homosexuals, Jehovah's Witnesses, Spanish Republicans, Soviet civilians and prisoners of war, and socialists across Nazi-occupied Europe.

Less studied but equally tragic is the devastation of the Taíno people, the indigenous inhabitants of the Caribbean islands who endured near annihilation due to novel infectious diseases carried by the Spanish colonizers, coupled with the cruelties inflicted under the

Spanish colonial rule including abduction into slavery and the deliberate erasure of Taíno cultural identity. Similarly, King Leopold II's of Belgium's insatiable greed that fuelled a ruthless reign of terror in the Congo Basin where forced labour, mutilation, and indiscriminate killings claimed upwards of 10 million Congolese.

While not exhaustive, these examples reveal how dominant groups have repeatedly used ideologies of superiority to justify genocide through mass killings, infectious diseases, displacement, sterilization, and cultural re-education. Regrettably, genocide persists as a chronic societal failure. From Rwanda to Myanmar, contemporary genocides underscore the urgent need to understand how prejudice enables dehumanization, and to actively combat prejudice in all its forms. As such, it is crucial to acknowledge how prejudice and dehumanization are not confined to the annals of history but remain pressing contemporary issues. These instances represent but a few of the many dark chapters of genocide and prejudice throughout human history and stand as powerful reminders of the continued importance of understanding and addressing their root causes.

1.3 Racism: The Enduring Legacy of an Oppressive Social Construct

Racism is a complex and pervasive system that categorizes individuals and groups based on ancestry or physical characteristics resulting in the unjust and unequal allocation of privileges, power, and resources to some at the expense of others (Bonilla-Silva, 1996; Williams, 2004, 2012). It involves the propagation of prejudice, the perpetuation of stereotypes, and the practice of differential treatment towards marginalized racial groups (Williams & Mohammed, 2013). Racism, discrimination, and inequality have deep historical roots as well as ongoing impacts through contemporary social relations and institutions (Bonilla-Silva, 1996).

Barnshaw (2008) identified four key characteristics commonly used to define race. First, the concept of race is not a fixed biological category but rather a socially constructed framework. While observable physical traits play a role in racial categorization, these traits have no inherent meaning and there is no legitimate scientific evidence to justify their use for social categorization (Foster & Sharp, 2004; Yudell et al., 2016). Second, the very act of racial categorization relies on arbitrary and subjective interpretations of observable physical traits like skin colour, facial features, and hair texture (Barnshaw, 2008; Brons, 2015). While these characteristics are genetic, their significance as markers of distinct racial groups is entirely a product of social construction and historical power dynamics. Third, although primarily associated with physical characteristics, the concept of race extends beyond skin-deep appearances to encompass broader social similarities. These include shared histories, linguistic patterns, and cultural traditions (Barnshaw, 2008). Such commonalities serve as the building blocks of racial identities and can contribute to the formation of stereotypes, as noted by Sherman (1996). However, it is crucial to remember that these shared behaviours and characteristics often stem from cultural experiences rather than an inherent biological basis. Furthermore, it is essential to note the heterogeneity within any racial group, as not all members will uniformly exhibit the same traits or engage in identical practices.

Lastly, the social legitimacy of racial categories is demonstrably linked to historical treatment, often reflecting the exertion of authority by dominant groups over marginalized or racialized populations (Barnshaw, 2008). Examining this historical context is crucial for understanding the formation and evolution of these categories. For example, the United States (U.S.) Constitution famously incorporated a 'three-fifths compromise.' This arrangement counted enslaved Africans as three-fifths of a person for the purpose of

allocating state representatives in the federal government, providing a stark illustration of how race was instrumentalized to centralize power among slaveholders. Understanding the historical development of race as a malleable concept, shaped by societal shifts and historical events, is essential for comprehending its persistent influence. It remains a potent force in many societies today with its roots firmly anchored in the legacy of past injustices.

1.3.1 Institutional Racism: From Historical Injustices to Contemporary Policies

Institutional racism refers to deeply entrenched and pervasive patterns of inequality that disadvantage racialized groups within societal structures and institutions. These systemic disparities are facilitated by social hierarchies that systematically undervalue, disenfranchise, demoralize marginalized groups, allocating them fewer resources and hindering opportunities for social mobility (Bonilla-Silva, 1997; Macpherson, 1999; McKenzie, 2017; Priest & Williams, 2021; Solar & Irwin, 2010).

This institutionalized discrimination manifests across various facets of organizations and societies, often intersecting with other forms of oppression and disadvantage. It is a dynamic system that evolves over time to maintain inequities, even in the absence of explicit racist intent (McKenzie, 2017). The insidious nature of institutional racism lies in its fundamental integration within ideologies, policies, and procedures of institutions, persisting even when there is no explicit intent to discriminate (Macpherson, 1999).

McKenzie (2017) outlined seven key characteristics of institutional racism. First, institutional racism operates across multiple levels, encompassing both internal organizational practices and external societal factors. For example, racial disparities in healthcare exemplify how institutional racism manifests within individual organizations and permeates the society at large (Priest & Williams, 2021; Williams, 2004).

Second, institutional racism is interconnected with other forms of marginalization and discrimination, amplifying its detrimental effects. Third, it evolves over time, often perpetuating disparities. Fourth, institutional racism is closely tied to an organization's ideology, as biases in practices and policies can lead to unequal outcomes. Fifth, it does not stem from individual wrongdoing, but is primarily rooted in organizational structure, processes, and policies which shape member behaviours. Sixth, institutional racism may be present without deliberate discrimination, complicating detection and recognition. Finally, it transcends organizational boundaries with shared responsibility for rectifying disparities arising from other organizations' actions (McKenzie, 2017).

The historical persistence of institutional racism across diverse contexts underscores the complexities of dismantling it. Racism has been deeply embedded in governmental systems worldwide for centuries, from the hierarchical *casta* system of the Spanish Empire, where access to legal protections based on racial purity, to the seemingly progressive 13th Amendment of the U.S. Constitution, which abolished slavery with an "except as punishment" clause that is still exploited today to force African Americans into severely underpaid menial labour tasks. More recently, data shows disproportionate police violence and mass incarceration of minorities (Carson, 2021; Gaston et al., 2021). While progress has been made, these ongoing injustices reveal the persistence of systemic racism. Scholars advocate anti-racist policies and transformative justice to better protect minorities' civil rights (e.g., Afuape & Oldham, 2022; Allen et al., 2023). Sustained efforts in education, legislation, and social activism are crucial to dismantle centuries-old prejudices and achieve a more just society.

United Kingdom. The racially motivated murder of Stephen Lawrence in 1993 highlighted institutional racism within the British criminal justice system. On April 22nd, Lawrence, an 18-year-old Black British man, was stabbed to death in an unprovoked attack by a group of White youths while waiting at a bus stop with his friend Duwayne Brooks. Though Brooks identified the perpetrators, the subsequent police investigation failed to gather sufficient evidence for prosecution, underscoring what many saw as indifference towards crimes against ethnic minorities. A public inquiry chaired by Sir William Macpherson (1999) concluded that London's Metropolitan Police Service was guilty of 'institutional racism' and made recommendations aimed at reforming the system to enhance race relations throughout the United Kingdom (UK).

The recommendations of the Stephen Lawrence Inquiry (Macpherson, 1999) eventually led to the enactment of the Equality Act 2006 which established the Equality and Human Rights Commission (EHRC). Since its inception, the EHRC had published several research reports that provide evidence of continued institutional discrimination against minority groups throughout the UK (e.g., EHRC, 2016, 2018, 2019). These reports reveal ongoing disparities and unequal outcomes for ethnic minorities, people with disabilities, and sexual minorities across domains like education, employment, healthcare, and criminal justice. Scholars argue that while overt acts of racism have declined since Macpherson's report, more subtle and systemic forms of discrimination persist in British institutions and organizations (Olusoga, 2020; Pilkington, 2021).

Despite increased awareness following high-profile cases like the murder of Stephen Lawrence, racial disparities and institutional racism remain systemic issues across the UK (Her Majesty's Inspectorate of Constabulary, 2013; Ministry of Justice, 2011, 2021;

Office for National Statistics [ONS], 2022). Glaringly, data from England and Wales revealed a 700% disparity in stop-and-search rates between Black and White people in both 2010 and 2020 (ONS, 2022). These disproportionate interactions with the criminal justice system have profoundly negative impacts on political participation for Black British communities, especially in major cities (Laniyonu, 2018). The repercussions of low political engagement ripple through these communities, exacerbating problems such as underemployment and inadequate political representation. Given the disproportionate effects of criminal justice interactions on ethnic minorities, it is imperative to address the unique experiences and needs of these groups.

For instance, significant disparities in educational attainment are a persistent issue in the UK, affecting pupils from minoritized ethnic backgrounds (Strand, 2021). A troubling trend has materialized in national assessments since 2015, reflecting these systemic disparities. On the General Certificate of Secondary Education (GCSE), White Irish Traveller and Romani students have scored the lowest among all groups. Meanwhile, Black Caribbean and Mixed White/Black Caribbean pupils have consistently achieved an average score approximately five points below their White British peers on this high-stakes exam (Department for Education [DfE], 2017, 2018, 2019, 2020, 2021, 2022; Strand, 2021). The sustained lower performance of these minoritized groups signifies the need for targeted interventions to dismantle structural barriers and promote educational equity. Overall, the patterns in GCSE results underscore how systemic racism continues to negatively impact educational trajectories and outcomes for non-dominant minority youth in the UK.

One potential explanation for these disparities lies in the circumstances of socioeconomic status (SES). Across all ethnicities, students eligible for Free School Meals tend to achieve lower average scores than their non-eligible peers (DfE, 2022). However, while differences in SES contribute to ethnic achievement gaps, they do not fully account for them. Persistent poverty disproportionately impacts students from minoritized backgrounds, with higher rates among Asian (28%) and Black (18%) households compared to White households (10%) (Department for Work and Pensions, 2022). Critically though, racial inequities remain even when controlling for SES. With similar SES levels, score differences between White British students and minoritized peers diminish but do not disappear, particularly at low and average SES (Strand, 2021). This suggests additional factors beyond SES perpetuate achievement gaps. Institutional racism, defined as the collective failure of an organization to provide appropriate and professional services to people because of their race (Macpherson, 1999), likely plays a role.

From curricula that exclude diverse perspectives to lower expectations and harsher discipline for students of colour, racism is embedded within educational systems and structures (Ang, 2010; Black, 2022; Demie, 2022). Rather than viewing disparities as stemming from cultural deficits in students and families, research must examine and challenge the role of systemic racism in shaping educational inequities. This involves moving beyond documenting gaps to interrogating how racist assumptions, stereotypes, and discriminatory policies and practices are perpetuated through everyday school processes. While poverty impacts educational outcomes, a singular focus on SES obscures how racial inequities persist across social classes. Truly addressing ethnic disparities requires disrupting the racist beliefs, policies, and practices entrenched within the education system itself.

In addition to these factors, racist bullying and discrimination within schools likely exacerbate ethnic disparities in educational outcomes. Non-White British students increasingly report experience racist name-calling, social exclusion, and physical aggression from peers (Arnott, 2019; Dennell & Logan, 2015; Dinisman & Moroz, 2020; Marsh & Mohdin, 2018; Tippet et al., 2010). While bullying in any form can negatively impact academic performance, racist bullying marginalizes students and conveys they do not belong (DfE, 2006; Strøm et al., 2013; van der Werf, 2014). Reported racist bullying rose 69% from 2012-2013 (ChildLine, 2014) and an additional 20% from 2015-2019 (Dodd, 2019). However, true prevalence is likely higher, given limited data on Traveller and Roma students who may not be recognized by school officials as a protected ethnic group (Tippet et al., 2010; Traveller Movement, 2019).

While schools aim to promote academic growth and engage students with diverse perspectives, they often inadvertently perpetuate discriminatory behaviours (Miller, 2016, 2020). As of 2022, there was a significant imbalance in teacher demographics in England, with 89.7% identifying as White and only 2.5% as Black (DfE, 2023). This lack of representation may negatively impact the academic achievement of the diverse student body. Beginning with preschool, research shows racial disparities in teachers' perceptions of academic ability, behaviour, and social skills for Black versus White students, with lasting consequences (Minor, 2014). The racial composition of schools influences how students are evaluated, especially by White teachers (Martinez, 2020; Takei & Shouse, 2008).

Matching students and teachers by race can improve outcomes for underperforming students, particularly at younger ages (Egalite et al., 2015; Penney, 2016). Exposure to teachers of the same race also significantly reduces disciplinary actions against Black

students across grade levels, especially in cases of intentional noncompliance (Lindsay & Hart, 2017). Compared to their White British peers, ethnic minority students face pronounced disparities in discipline. Black (2022) reported that Gypsy Roma students are 3.77 times more likely to be permanently expelled, while rates for Black Caribbean and Mixed White/Black Caribbean students are 2.41 and 2.28 times higher, respectively. This unsettling trend not only highlights a pressing issue within the educational system but also raises questions about the persistence of such disparities in higher education.

Within higher education, Black African and Black Caribbean students continue facing systemic barriers. A qualitative study by Osbourne et al. (2023) examined the experiences of Black students at a UK university where White students comprised 72% of the student body while Black students represented a mere 2%. This analysis revealed pervasive racism in interactions between Black and White students, highlighting complex intergroup dynamics that sustain these issues.

Disturbingly, Black students encountered a culture of ‘acceptable racism,’ dismissed as mere ‘banter’ by White peers. These interactions suggest racist behaviours stem from shared historical and cultural norms rather than unconscious bias alone (Osbourne et al., 2023). Furthermore, White students held significant influence in shaping campus culture and determining acceptability, effectively silencing Black students. This constrained Black students’ self-expression, as they constantly navigated conforming to White expectations versus aligning with their self-concept. Osbourne et al. (2023) emphasized the burden racism places on victims as they navigate racist campus cultures. The issues lie not in individual intentions but in the failure to acknowledge racism’s pervasiveness.

At an institutional level, several issues impede efforts to address racial harassment on campus. A major problem is the lack of knowledge among both victims and universities about reporting protocols (EHRC, 2019). Victims often hesitate to report, uncertain if an incident qualifies as racial harassment or is considered serious enough. This doubt couples with little confidence in the process itself, as victims question if complaints will be taken seriously or lead to action.

For universities, handling staff cases is simpler than student cases due to clear codes of conduct and direct policy communication. However, unsubstantiated accusations may prematurely portray the accused as guilty prior to investigation. While suspended staff continue receiving full pay during investigations, student suspensions can cause financial hardship and academic impacts (EHRC, 2019).

Combating institutional racism on university campuses extends beyond students to encompass broader societal issues of diversity recognition. In this context, the widespread use of the term ‘BAME’ (Black, Asian, and Minority Ethnic) as an umbrella term for all non-White groups (Aspinall, 2002; 2021). However, the use of ‘BAME’ as a catch-all phrase fails to capture the complexity and diversity within and across these communities.

The grouping of all non-White individuals into one category belies vast differences in experiences and identity between various ethnic and racial groups in the UK. The term ‘BAME’ obscures how different minoritized groups experience racism and racialization in unique ways shaped by history, culture, and politics. Furthermore, some organizations employ ‘BAME’ in ways that misrepresent or overstate their commitment to diversity. For example, a company meeting arbitrary ‘BAME recruitment targets’ may obscure enduring underrepresentation of particular groups, like Black students or faculty (Malik et al., 2021).

Additionally, the use of the 'BAME' acronym may not be the most appropriate approach, as it can inadvertently stifle necessary action or concern when incorporated into statistics meant to convey vital information. As Aspinall (2020) criticized, a report by Public Health England (2020) on the impact of COVID-19 used the 'BAME' acronym 217 times without specifying which communities were more severely affected. Instead, one would need to consult other research reports to derive those critical details. In this instance, the Department for Levelling Up, Housing and Communities (2023) reported that Bangladeshi, Pakistani, and Black African families are more likely to reside in overcrowded households compared to White families. This overcrowding can increase susceptibility to infectious diseases including tuberculosis, influenza, meningococcal septicaemia, and COVID-19 (Gruer et al., 2022; Offer et al., 2016; Raisi-Estabragh et al., 2020).

While the 'BAME' acronym can hinder communication on racial inequities, it is vital to recognize disparities that may persist unnoticed. For example, healthcare disparities may exacerbate vulnerability to infectious diseases and affect treatment outcomes. These disparities stem, in part, from insufficient multicultural representation and culturally relevant communication with diverse patients. As Ugiagbe et al. (2023) contended, the mandatory language competency exams required for overseas nurses exhibit inherent biases, as this mandate applies unequally. While nurses from the European Economic Area are exempted, the same allowance is not extended to African nations like Ghana, Kenya, Nigeria, and South Africa where nursing education is conducted in English.

Furthermore, the most common English language examination, the International English Language Testing System (IELTS) fails to assess critical communication skills that are indispensable in healthcare contexts. As Sedgwick and Garner (2017) explained, the

IELTS does not evaluate abilities like formally eliciting personal information, reassuring anxious patients or co-workers, requesting assistance, participating in team decision-making, or initiating social conversations. This lack of awareness of sociocultural nuances in English, including sarcasm, nonverbal cues, and euphemisms, together with foreign accents, significantly contributes to workplace discrimination (Kawi & Xu, 2009). Kawi and Xu (2009) found that accents or pronunciation differences frequently led colleagues, supervisors, and patients to perceive nurses as lacking language proficiency, increasing the likelihood of discrimination and harassment.

Beyond language skills, healthcare workers from marginalized backgrounds are disproportionately placed in high-risk frontline roles, elevating exposure to infectious diseases (Martin et al., 2022). They also have reduced access to protective equipment, fewer career advancement opportunities, and higher rates of depression and anxiety compared to peers (Alexis & Vydelingum, 2005; Alexis et al., 2007; Henry, 2007; Martin et al., 2022; Moorthy & Sankar, 2020; Rhead et al., 2021; Rhead et al., 2023). These factors contribute to occupational burnout and a higher likelihood of considering resignation (Baek & Lee, 2022; Kline & Lewis, 2019; Otu et al., 2020).

These issues may produce a negative feedback loop. As diversity diminishes among healthcare workers, recruitment and mentorship opportunities suffer. With fewer advisors from similar cultural backgrounds, guidance for international hires decreases (Allan, 2010; Qureshi et al., 2020). Workforce diversity is critical for public health, especially for immigrant communities. The scarcity of bilingual advocates and lack of cultural understanding has disproportionately impacted healthcare access for Black, Asian, and Middle Eastern individuals in the UK (El Ansari et al., 2009).

Despite increased awareness and some progress, institutional racism remains deeply entrenched across various sectors in the United Kingdom, with ongoing disparities and inequities for minoritized groups. Persistent gaps and unequal outcomes in areas like education, healthcare, and employment and criminal justice signify the need for continued action to interrupt racist assumptions, practices, and policies within British institutions.

Australia. The legacy of colonialism continues to impact Indigenous Australians and Torres Strait Islanders through systemic and institutional racism. These communities face ongoing challenges rooted in Australia's history of racist policies and practices aimed at forced assimilation (Dudgeon et al., 2010; Funston & Herring, 2016; Plater et al., 2019). During the early 20th century, various Australian state governments enacted paternalistic policies under the guise of 'protecting' Indigenous peoples. However, these policies enabled the widespread removal of Indigenous children from their families, culminating in the Stolen Generations era (Peeters et al., 2014). The children were placed into religious missions and state institutions, where many endured physical, emotional, and sexual abuse while being coerced to abandon their cultural identities (Funston & Herring, 2016; Peeters et al., 2014). This traumatic disconnection from family, culture, and identity has led to intergenerational trauma transmitted down through many indigenous families and communities (Nogady, 2019). It further disrupts parenting practices and cultural continuity, and is linked to heightened risks for substance abuse, mental illness, incarceration, and suicide (Atkinson et al., 2010; Gee et al., 2020; Murphy, 2018).

The traumatic legacy of Australia's racist assimilatory policies continues to disproportionately impact Indigenous communities today. Despite some reforms, Indigenous children are still vastly overrepresented in contemporary out-of-home care

(Blackstock et al., 2020). Ongoing welfare interventions reflect a structural bias signalling the continuation of paternalistic approaches and assimilatory thinking (Ciftci, 2022). Moreover, Indigenous Australians comprise 32% of the adult prison population, but only 3.8% of the total adult population, reflecting systemic bias and socioeconomic inequality (Australian Bureau of Statistics, 2021, 2023). Factors driving this overrepresentation include discriminatory policing and sentencing practices, as well as entrenched disparities in education, employment, income, and access to healthcare (Plater et al., 2019).

Disparities manifest in various ways, including lower academic expectations for Indigenous students, inadequate and culturally insensitive healthcare outreach and services. Additionally, there are stark disparities in infant mortality rates, mental health hospitalizations, life expectancy, and instances of assault and homicide (Atkinson et al., 2014; Australian Institute of Health and Welfare, 2015; Bourke et al., 2019; Henry et al., 2004; Productivity Commission, 2020). These ongoing inequities stem from Australia's failure to fully address the enduring trauma and disenfranchisement born out of its colonial history and policies of forced assimilation.

In conclusion, the enduring social and economic obstacles faced by many Indigenous Australians today are deeply rooted in the historical ramifications of institutional racism and cultural genocide. Effectively addressing these issues mandates a comprehensive recognition of the past, coupled with concerted efforts across various sectors to implement substantial systemic reforms fostering equity and inclusion. To forge a future characterized by equity and inclusivity for all Australians, it is imperative not only to acknowledge historical injustices but also to collaboratively engage in purposeful initiatives aimed at instigating meaningful and lasting change.

Canada. The traumatic legacy of the Indian residential school system serves as one of the most egregious examples of systemic racism against Indigenous communities in Canada. Established via the Indian Act of 1876 and federally mandated from the late 19th century until the closure of the last school in 1997, the residential school system forcibly removed First Nations children from their families and communities to attend distant boarding schools with the explicit intention of cultural erasure and assimilation into White Canadian society (Truth and Reconciliation Commission [TRC], 2015).

The residential school system was authorized by the federal government, supported by the British Crown, and operated primarily by the Roman Catholic and Anglican churches, thus perpetuating cultural genocide against Indigenous peoples (TRC, 2015). Extensive research has revealed the magnitude of suffering and death within the schools. In 1906, Peter Bryce, Chief Medical Officer for the Department of Indian Affairs, reported that 25% of students had died from tuberculosis in Western Canadian residential schools, with mortality rates as high as 69% at some schools (Hay et al., 2020). Bryce concluded that these alarming rates resulted from overcrowded and poorly ventilated dormitories that housed sick and healthy students together, inadequate healthcare and staffing, and lack of proper quarantine facilities (Hay et al., 2020). However, his reports were suppressed and disregarded by authorities. In 1910, Deputy Superintendent General of Indian Affairs Duncan Campbell Scott disregarded Bryce's findings and denied additional funding for healthcare in the schools (Hay et al., 2020).

As of July 2021, the discovery of over 1,000 unmarked graves of children on the grounds of just five former schools further highlights the traumatic history (Associated Press, 2021). Survivors have described enduring post-traumatic stress disorder (PTSD),

depression, anxiety, suicidal ideation, homelessness, and substance abuse that persists across generations (Bingham et al., 2019; Elias et al., 2012; Hackett et al., 2016; TRC, 2015). This enduring intergenerational trauma starkly demonstrates how the residential school system was an instrument of institutional racism, oppression, and cultural genocide against the Indigenous peoples in Canada.

Despite the meticulous record-keeping by the Canadian government and the full awareness of Members of Parliament from 1876-1951 regarding the deplorable conditions in residential schools, no action was taken to address these issues (Lorenz, 2016). Instead, the government intensified its adherence to racist policies during the 1960s, implementing policies that led to what is now known as the ‘Sixties Scoop.’ This era continued the systematic removal of Aboriginal children from their birth families into the welfare system which only allowed for them to be adopted into non-Aboriginal environments, thereby exacerbating the erosion of cultural ties. This policy perpetuated the assimilationist objectives originally pursued through the residential school system (Sinclair, 2007).

Beyond the residential school system and assimilatory policies, the Indian Act and its amendments enacted extensive oppressive control over Indigenous peoples. Through this legislation, the Canadian government denied First Nations people basic rights like voting, suppressed cultural practices, restricted mobility off reserves, limited agricultural development, and enabled forced relocations (Dussault et al., 1996). Furthermore, the Canadian government offered little hope to Indigenous communities seeking relief from oppression. Individuals who pursued education to advocate for their communities often faced involuntary enfranchisement, stripping their Indian status and band membership, hindering their credibility and ability to challenge government oppression (Dussault et al.,

1996). The Indian Act thus served as a powerful tool to suppress Indigenous rights, autonomy, and ways of life. Its enduring legacy continues to foster mistrust of government institutions and systemic racism deeply embedded within Canadian law and society (Thibodeau & Peigan, 2007). This plight is exacerbated by the lack of access to clean drinking water faced by Indigenous communities in Canada, constituting a blatant violation of their fundamental human rights (Ragsdale & Shew, 2023). Even after revisions, the Indian Act's fundamental violation of Indigenous self-determination and sovereignty underscores Canada's history of racist colonialist policies. The traumatic impact and mistrust fomented by generations under this discriminatory law persist within Indigenous communities today.

Despite concerted efforts to improve equity between Indigenous people and the general population, the deep-rooted mistrust generated by the Indian Act has entrenched systemic racism into various institutions across Canada. In the justice system, Indigenous people, comprising only 4.3% of the Canadian population, represent 28% of the prison population (Zinger, 2018). Compared to non-Indigenous Canadians, from 2006 to 2016, indigenous men were eight times more likely to be incarcerated, while Indigenous women faced 12.5 times higher imprisonment rates (Clark, 2019).

Furthermore, disparities in education and healthcare persist due to the intergenerational damage caused by the residential school system. This lasting trauma has contributed to a high attrition rate among Indigenous youth within the education system, leading to lower literacy levels, graduation rates, and socioeconomic status (Mullen, 2020). The legacy of cultural suppression and abuse in residential schools has thus hindered educational attainment for generations of Indigenous peoples.

To this day, Indigenous students, educators, and researchers consistently report the marginalization of Indigenous knowledge within education systems. Indigenous knowledge is often viewed by mainstream academics as a static entity worthy of only incremental examination for relevance and exploitation, rather than as a valuable contributor to prevailing scientific theories of the Euro-American cultural sphere (Ellis, 2023; Ouellette, 2011). While some researchers advocate for integrating Indigenous knowledge and culture to address pressing issues like climate change and overfishing it is essential to consider the broader implications (e.g., Cyr & Riediger, 2021; Reed et al., 2022). The persistence of colonization through education may continue to suppress Indigenous peoples in Canada. This concern is accentuated by the clear link between inadequate education, low literacy rates, and reduced healthcare access demonstrated by multiple studies (Adelson, 2005, Johnson, 2014; Korhonen, 2006; Rootman & Ronson, 2004; Tsey, 1997).

In conclusion, institutional racism against Indigenous peoples in Canada has deep historical roots extending from colonialist policies to current inequities across education, healthcare, justice, and social services. The traumatic legacy of the residential school system and the oppressive Indian Act fostered intergenerational trauma, mistrust, and systemic marginalization that persists today. While progress has been made, achieving true reconciliation and equity requires continued efforts to dismantle lingering colonialist structures, integrate Indigenous knowledge systems, and overcome the detrimental impacts of Canada's racist policies and actions. Fundamental changes are needed to support Indigenous self-determination, sovereignty, and wellbeing including the promotion of equity, recognition of the contributions of Indigenous knowledge, and respecting the rights and dignity of all Canadians, regardless of their heritage.

United States of America. Institutional racism has been deeply ingrained in American society throughout the history of the United States (U.S.) affecting virtually every non-White, non-Protestant group. Like Canada, the U.S. committed genocide against Indigenous populations, marked by innumerable treaty violations, massacres, forced migrations, and residential schools for assimilation (Ostler, 2020; Smith, 2010). This oppression of indigenous communities was pervasive for 200 years, alongside other forms of systemic racism, including the Chinese Exclusion Act of 1882 which suspended Chinese immigration for a decade and imposed heavy restrictions until 1943 (Kil, 2011), the deportation of at least 500,000 Mexican American citizens as scapegoats for the Great Depression (Flores, 2003; Gratton & Merchant, 2013), and the internment of over 120,000 American citizens of Japanese heritage during World War II (Parks, 2004).

Despite these numerous atrocities, the institution of slavery stands out as the most brutal and dehumanizing system, the impacts of which reverberate to this day (Reece, 2022). The enslavement of African peoples enabled the rapid economic development of the South while simultaneously reinforcing pernicious racist ideologies (Murphy, 2022). Following abolition, Jim Crow laws and other discriminatory practices continued the legal subjugation of Black Americans (Cox, 2007). The effects of centuries of enslavement, violence, exclusion, and prejudice linger today in the form of gaping disparities between Black and White Americans across areas like wealth, health, education, and incarceration (Williams & Mohammed, 2013). Reckoning with this painful history and its enduring legacy is essential for understanding the deeply embedded nature of racism in American life.

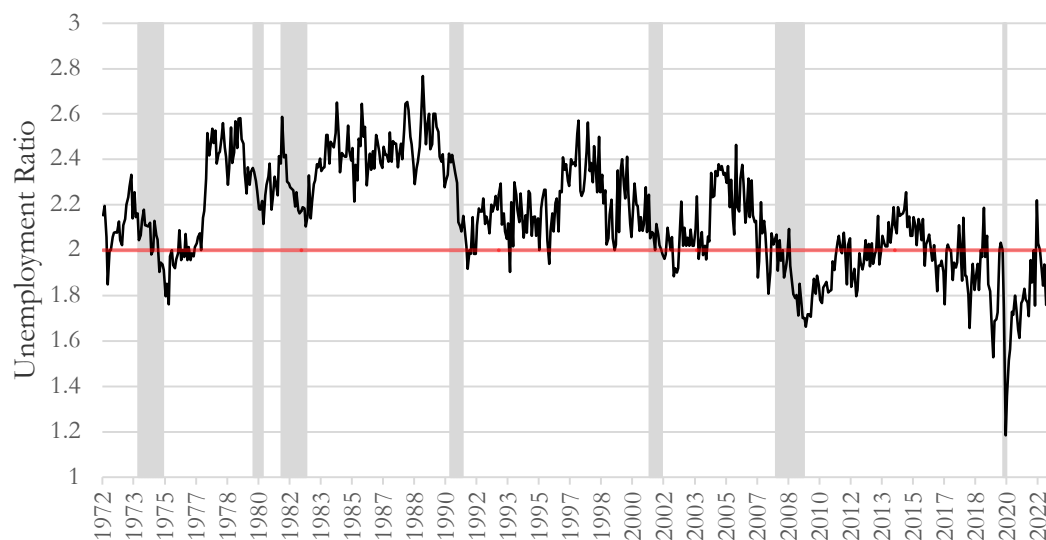
The intersection of labour inequality and over-incarceration perpetuates systemic oppression of Black Americans. Since the 1970s, Black unemployment rates have remained

around twice as high as White rates (U.S. Bureau of Labor Statistics [BLS], 2023a, 2023b; see Figure 1). Persistent hiring discrimination contributes to this disparity, with research showing preferential selection of White applicants over equally qualified Black applicants (Quillian et al., 2017). High unemployment fuels poverty in the Black community. Though only comprising 13.4% of the general population, Black Americans account for 25.6% of the impoverished population and 32.8% of the incarcerated population (Carson, 2020; U.S. Census Bureau, 2020). The ‘school-to-prison pipeline’ funnels Black youth into the criminal justice system through zero-tolerance policies, police presence in schools, and disciplinary disparities (Morgan, 2021). As incarceration disrupts employment and education, it propels cycles of poverty.

Furthermore, the stigma of incarceration creates additional barriers to employment and socioeconomic mobility for Black Americans. A criminal record carries significant social stigma, which translates into reduced employment opportunities and earnings potential, especially for Black Americans (Pager, 2003; Western et al., 2001). Studies reveal that even when qualifications are equal, White applicants with a criminal record receive more job call backs and offers than Black or Latino applicants without a criminal record (Pager & Western, 2016). The mark of a criminal record is thus disproportionately detrimental for Black jobseekers. This stigma compounds the challenges of re-entry after incarceration. As incarceration rates exploded in past decades due to harsh sentencing policies and the ‘War on Drugs’, collateral consequences accumulated for Black communities. Large numbers of returning citizens struggle to secure stable employment and housing, often fuelling recidivism (Plaff, 2015).

Figure 1

African American to Caucasian American Unemployment Ratio (1972-2022)



Note. This figure depicts the Black American unemployment rate relative to the White rates (aged 16 years and older) from Jan 1972 to Dec 2022. The grey shaded areas mark officially recognized economic recessions since 1972. The horizontal red line emphasizes where the Black American unemployment rate was double the White Americans’.

Source: *U.S. BLS (2023a, 2023b)*.

Punitive attitudes in the justice system often stem from racial prejudice and stereotyping. Research analysing data from the General Social Survey found desires for harsher punishments and support for the death penalty were predicted by anxiety about crime rates along with antipathy toward minorities and resentment toward the poor (Brown & Socia, 2017). The internalization of racial stereotypes exacerbates these punitive perspectives. In the current socio-political climate, anti-immigrant sentiment and animosity toward Latinos has increased, likely intensifying public demands for criminalization and harsh sentencing (Brown & Socia, 2017; Menjívar et al., 2018).

The enduring shadow of historical injustices continues to cast long and uneven lines across American society. While progress has been made, the legacies of slavery, genocide,

and systemic marginalization reverberate in the form of profound disparities between racial groups across domains like criminal justice, employment, income, health, and education. While the U.S., Australia, Canada, and the UK each grapple with the substantial challenges of addressing systemic racism and racial disparities, for an accurate delineation of the topic it is essential to acknowledge that institutional racism is not confined solely to nations with White majority populations. Systemic racism also affects other marginalized and racialized groups within other diverse societies, including religious minorities, migrants, and refugees. Dismantling systemic racism requires grappling with this painful history, examining how racist ideologies manifest in contemporary policies and practices, and pursuing restorative approaches focused on equity.

However, the reach of systemic racism extends beyond statistics and societal trends. Its pernicious sting is also deeply felt on an individual level, shaping personal narratives and lived experiences in profound and often invisible ways. To gauge the full extent of its harm, an examination of the psychological and social consequences of this pervasive force is essential. This individual-level analysis provides a crucial detail to the systemic perspective, offering a more intimate and visceral understanding of the human cost of racism.

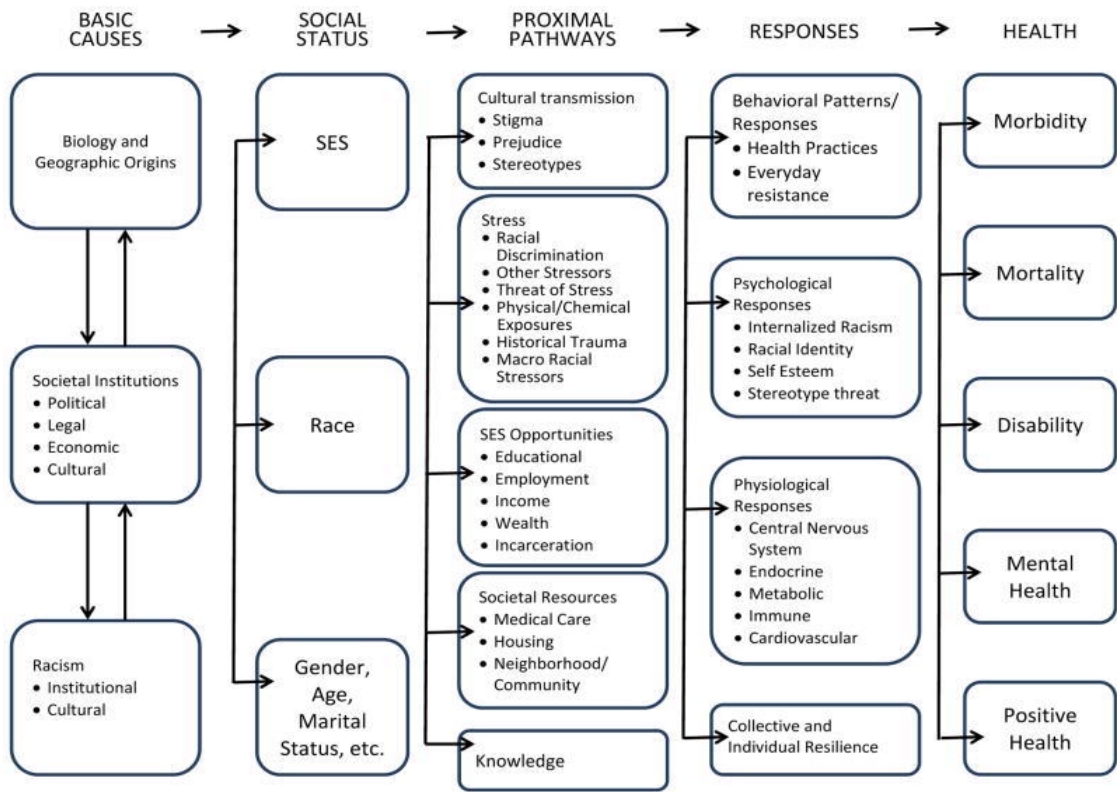
1.3.2 The Unrelenting Consequences of Racism

Beyond social disparities, racism profoundly affects the health and well-being of individuals within marginalized racial and ethnic groups (see Figure 2). Extensive research shows that racial minorities in the U.S. suffer worse health outcomes compared to White Americans, even when controlling for socioeconomic status. For example, Black American infants have lower average birth weights by approximately 250 grams ($\approx \frac{1}{2}$ lb.) relative to White infants, regardless of maternal income or education level (Jasienska, 2009). This racial

gap in birth outcomes is one driver of the higher infant mortality rate among Black Americans. Beyond birth outcomes, Black Americans experience increased risk of chronic conditions like asthma, diabetes, and cardiovascular disease compared to White Americans (Dominguez, 2011; Mays et al., 2007; National Center for Health Statistics, 2012). The persistent exposure to discrimination and marginalization faced by racial minorities is an important psychosocial stressor that researchers posit contributes to these racially disparate health outcomes.

Figure 2

A Framework for the Study of Racism and Health

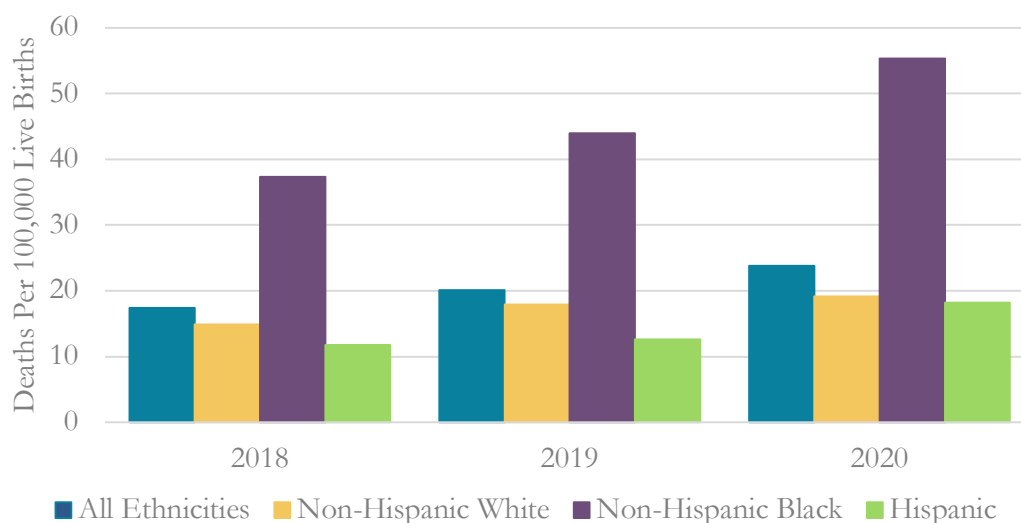


Note. This framework examines the different pathways by which racism becomes a fundamental determinant of health. It emphasizes how racism can lead to disparities in access to resources and opportunities, as well as exacerbate the negative effects of other health risk factors. Source: *Williams & Mohammed, 2013.*

Concurrently, the maternal mortality rate for Black women in the U.S. is three to four times higher than for White women (Howell, 2019). This racial gap in maternal deaths during pregnancy or childbirth has only widened in recent years. In 2020, the maternal mortality rate for Black women ages 10-44 sharply increased to 55.3 deaths per 100,000 live births, nearly triple the rate of 19.1 for White women (Hoyert, 2022; see Figure 3). Importantly, this racial disparity persists regardless of socioeconomic status and education level. Research shows college-educated Black women still experience worse maternal outcomes compared to White women without a high school diploma (Collins & David, 2009). The drivers of this disparity are complex, with experiences of racial discrimination and lack of access to quality prenatal care posited as key factors that disproportionately impact Black maternal health. Overall, the alarming racial gap in maternal mortality represents one of the most urgent health equity issues facing the U.S. today.

Figure 3

Comparison of Maternal Death Rates in the United States by Ethnicity



Note. This figure depicts a comparison of the maternal death rate per 100,000 live births in the U.S. among non-Hispanic White women, non-Hispanic Black women, and Hispanic women from 2018 to 2020. Source: Hoyert (2022).

Life expectancy stands as another stark illustration of racial inequities with Black men in the U.S. having the shortest lifespans of any demographic group (Arias et al., 2021). Analysis of the impact of SES reveals that Black American males in lower-income neighbourhoods have a life expectancy of just 65.3 years, compared to 84.9 years for Asian and Pacific Islander women in higher-income areas – a gap similar to that between developing and developed nations globally. Importantly, these racial disparities in longevity persist even when accounting for income. Research shows that at every income level, Black Americans have shorter life expectancies than their White counterparts (Clarke et al., 2010).

Simultaneously, research shows that Black Americans tend to experience more aggressive forms of diseases at younger ages compared to others. For example, Black Americans with chronic kidney diseases often require dialysis or an organ transplant earlier in life, with faster progression to end-stage renal failure (Bruce et al., 2009). There is further evidence that rates of early-onset diseases are higher among Black people, including heart failure developing before age 50 (Rethy et al., 2019). Additionally, Black women are more likely to be diagnosed with breast cancer before age 40, when screening typically begins (Bowen et al., 2008; Ingleby, 2008). The exact mechanisms driving these disparities in disease progression and life expectancy are complex and multifactorial. However, the experiences of chronic stress linked to racial discrimination and barriers to preventative healthcare access are posited as critical psychosocial stressors that disproportionately impact the health outcomes of Black Americans across the lifespan.

Living with constant stress takes a devastating toll on health. Research suggests that chronic exposure to various stressors like racism, financial hardship, work pressures, and general life stress disproportionately impacts the health of Black Americans. In a

neuroimaging study, Fani et al. (2021) observed heightened activity in brain regions associated with hypervigilance and sympathetic nervous system regulation among Black women who reported more experiences of racial discrimination. Remarkably, this activity surpassed levels typically seen in trauma victims, even when accounting for PTSD symptoms. This suggests that the stress of racism can have a profound and unique impact on brain function. Additional studies suggest that repeated exposure to violence, trauma, and racial discrimination can desensitize biological responses to fear and threatening stimuli, leading to diminished reactivity (Harnett et al., 2019; Kredlow et al., 2018). Moreover, experiences of racial discrimination correlate to higher rates of anxiety, post-traumatic stress disorder (PTSD), substance abuse, suicidal ideation, psychosis, and severe depression among Black people (Anglin et al., 2021; Bird et al., 2021; Curtis-Boles & Jenkins-Monroe, 2000; Kairuz et al., 2021; Keum et al., 2023; Oh et al., 2019; Williams et al., 2007).

Prolonged chronic stress exposure can result in allostatic load – the cumulative physiological burden of stress that can result in organ deterioration, cellular dysregulation, tissue damage, and a weakened immune system (Duru et al., 2012; Shiels et al., 2017). Research shows higher allostatic load occurs more frequently among Black Americans, regardless of income or health behaviours (Duru et al., 2012). This greater stress burden elevates Black Americans' risk for conditions including Type 2 diabetes, cardiovascular disease, kidney disease, liver disease, stroke, autoimmunity, cognitive decline, accelerated aging, and premature mortality (Duru et al., 2012; Fani et al., 2021; Geronimus et al., 2006; Steptoe et al., 2014). In summary, the profound mental and physical health impacts of prolonged exposure to racial discrimination highlight the need for clinical interventions and policies aimed at reducing chronic stress in marginalized groups.

Moreover, it is increasingly apparent these detrimental health effects will be exacerbated given the growing use of technology and social media. Qualitative research shows Black, Hispanic, Latino, and Latina adolescents describe dealing with nearly constant exposure to racism online, intensifying feelings of helplessness due to the pervasive and seemingly inescapable nature of racism (Heard-Garris et al., 2021).

The profound repercussions of racism on mental and physical health underscore the urgent need to confront this persistent societal issue. Moving forward, it is equally imperative to discuss the intersectionality of systemic oppression. Racism does not exist in isolation but intersects with other forms of marginalization like sexism.

1.4 Sexism: Toxic Masculinity and the ‘Jekyll and Hyde’ of ‘Nice Guys’

Gender discrimination is an enduring and pervasive issue deeply ingrained within social, economic, and political structures worldwide. It transcends geographical boundaries and perpetuates unequal power dynamics that systematically favour one gender over another (Becker & Sibley, 2015). Although sexism affects people of all genders in different ways, research has predominantly focused on sexist attitudes targeting women, reflecting the frequency with which women encounter sexism and the historical perception of men as the dominant group (Becker & Sibley, 2015; Leaper & Brown, 2008). Annual reports by the United Nations’ (UN) on women’s rights and representation across 162 nations reveal the ongoing struggle for gender equality globally (UN, 2020). Like racism, sexism relies on debunked pseudoscience yet continues to justify the unequal treatment of women in multiple societal domains. However, whereas racism may have proliferated due to a lack of intergroup contact, women have been integral members of human civilizations throughout history, regardless of their origins. Still, sexism emerged and spread across cultures.

Glick and Fiske (1996) proposed that sexism differs from other forms of prejudice in that it is a multidimensional construct characterized by ambivalence rather than a constant aversion. It manifests in two interconnected yet distinct dimensions of gender bias: hostile sexism and benevolent sexism. Both variations of ambivalent sexism stem from perceptions of women as inferior to men, causing extensive harm to women and society in distinct ways. Recognizing this complex, two-sided nature of sexism is crucial for understanding its operations and developing effective countermeasures.

Hostile sexism reflects the deeply entrenched beliefs in female inferiority. This outlook frequently engenders harmful attitudes and behaviours targeting women. Individuals endorsing hostile sexism are more inclined toward aggression against women, acceptance of catcalling as permissible flirtation, and higher rates of domestic abuse and rape convictions (Abrams et al., 2003; Martinez-Pecino & Durán, 2019; Masser et al., 2006; Poerwandari et al., 2021; Ucar & Özdemir, 2021; Walton & Pedersen, 2022).

Moreover, men adhering to hostile sexism can become particularly toxic romantic partners, as they are more prone to cyberbullying and emotionally or physically abusing partners perceived as insufficiently committed (Cross et al., 2017; Martinez-Pecino & Durán, 2019). In professional contexts, hostile sexism impedes women's advancement in male-dominated fields engendering negative performance evaluations for women and rejection for traditionally male roles (Masser & Abrams, 2004). In short, hostile sexism promotes violence, maltreatment, and discrimination against women in public spheres, relationships, and workplaces.

In contrast to hostile sexism, benevolent sexism represents a more subtle form of bias. It utilizes ostensibly positive stereotypes and traditional gender roles in ways that seem

harmless at first glance. However, this façade of benevolence shrouds its fundamentally sexist nature (Glick & Fiske, 1996). Individuals endorsing benevolent sexism are more inclined to believe women should avoid full-time employment and engage in victim-blaming in rape cases (e.g., scrutinizing the victim's attire) (Abrams et al., 2003; Hebl et al., 2007).

Despite its benign veneer, benevolent sexism insidiously obstructs gender equality. It diminishes women's engagement in feminist activism, downplays workplace discrimination, amplifies women's self-doubt, and adversely affects job performance (Becker & Wright, 2011; Dardenne et al., 2007; Jost & Kay, 2005; Lau et al., 2008). Hence, while benevolent sexist men may exhibit an ostensible cherishing of women, this also implies that women require protection and limits their roles. The guise of support and empathy complicates efforts to challenge these beliefs. In short, benevolent sexism subtly yet substantially undermines gender equality through its patronizing positive tone.

The interrelation between hostile and benevolent sexism appears complex. Sibley and Wilson (2004) found a moderately negative correlation between the two attitudes, indicating individuals can concurrently endorse both. Men also react differently toward women based on perceived sexual archetypes. When women matched a 'positive' archetype like chastity, men became more benevolent and less hostile. In contrast, when women fit a 'negative' archetype like a promiscuous seductress, men grew more hostile and less benevolent. Yet simultaneously, men valuing their own sexual experience tended toward greater hostility against women with similar sexual histories (Sibley & Wilson, 2004). This intricate interplay of attitudes and perceptions relates to sexual violence, as hostile sexism correlates with proclivity toward rape and acceptance of acquaintance rape (Abrams et al., 2003). This link underscores the perilous repercussions of hostile sexism.

It is important to note that these forms of sexism pervade cultures worldwide. Glick and colleagues (2000) collected cross-cultural data exhibiting the widespread existence of both hostile and benevolent sexism across diverse nations. Additionally, they found strong correlations between the two sexist orientations within each nation, indicating they function coherently and complementary as facets of sexism within a given society.

This interplay between benevolent and hostile sexism bears major societal ramifications. In nations where both orientations are commonplace, gender inequality is more pronounced (Glick et al., 2000). While women tend to more universally reject hostile sexism compared to men, an intriguing dynamic emerges in highly sexist societies, wherein women display greater acceptance of benevolent sexism. This phenomenon is theorized to represent a form of self-defence or adaptation (Glick et al., 2000).

The association between benevolent and hostile sexism propagates a system of rewards and punishments that entrenches gender inequality. In intensely patriarchal societies, women may encounter backlash for challenging the status quo or deviating from traditional gender roles, thereby finding conformity as a means of control, order, and safety.

To dismantle this system, reducing hostile sexism is of paramount importance (Glick et al., 2000). However, this alone would prove insufficient. To realize a just and equitable society, addressing benevolent sexism is equally essential, as both orientations collectively obstruct women's advancement and perpetuate systemic gender inequality. Efforts to dismantle the patriarchy must recognize that benevolent and hostile sexism, though divergent in tone, stem from the same worldview of female inferiority and traditional gender roles. Allowing benevolent sexism to endure permits the broader ideology to regenerate hostile sexism (Glick et al., 2000). Hence, initiatives must challenge the

fundamental perspective that women require protection and idealization within confined roles. Well-intentioned yet restrictive paternalism must be supplanted by full support for women's self-determination and unconditional equal status. Progress necessitates replacing ambivalent sexism's interconnected web with genuinely egalitarian attitudes valuing women as empowered equals entitled to the same rights, resources, and opportunities as men.

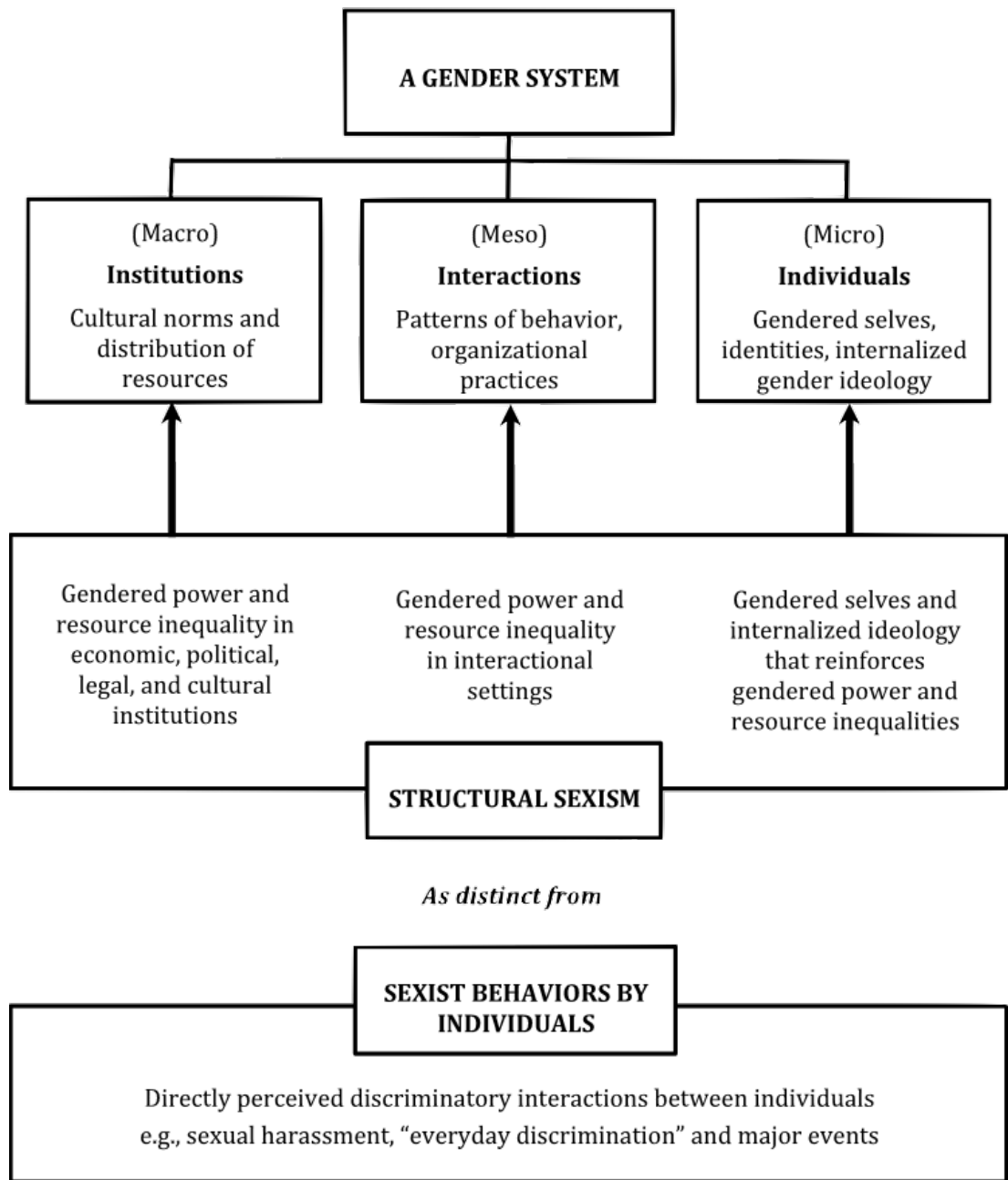
1.4.1 Structural Sexism: Impeding Progress with a 'Glass Ceiling' and 'Leaky Pipes'

Sexism permeates societal structures, manifesting as systemic gender-based inequality embedded within political, economic, and cultural institutions (Homan, 2019). This structural sexism trickles down to shape interpersonal power dynamics and individuals' self-perceptions. As Homan's (2019) conceptual model illustrates (see Figure 4), structural sexism materializes through institutions providing differential access to power, resources, and opportunities based on gender. The model depicts how structural sexism within societal systems influences individual-level experiences, leading to gender-based disparities across multiple societal domains. In essence, sexism extends beyond interpersonal interactions, becoming embedded into the fabric of organizations and social structures.

Structural sexism manifests in policy-making that create stark gender disparities in health and economic outcomes. Consider the geographic map of maternal mortality rates in the U.S. (Figure 5). Restrictions on reproductive health access imposed in various U.S. states contribute to significant variation in women's mortality rates. State policies related to healthcare, family leave, and economic conditions shape contexts that negatively impact women's health and income (Montez et al., 2016). Specifically, abortion access restrictions can force women into poverty and limit their economic opportunities, illustrating how policy decisions perpetuate gender inequities (Foster et al., 2018).

Figure 4

Conceptual Model of Structural Sexism

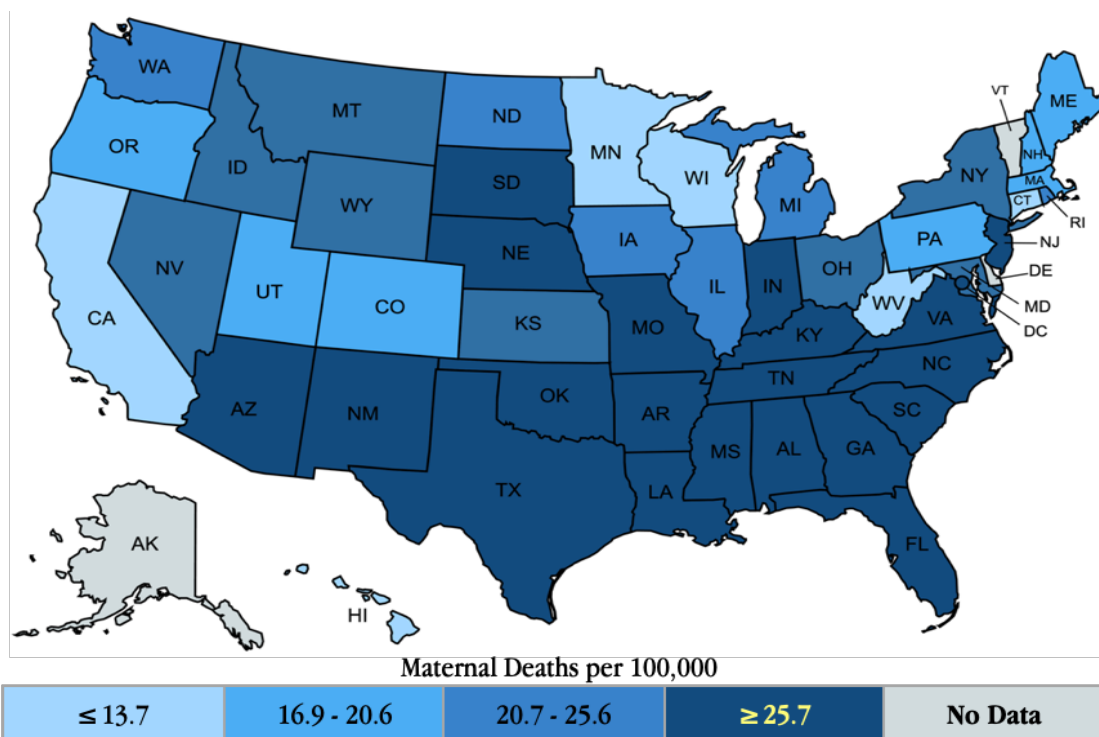


Note. A proposed model of structural sexism with three levels of the gender system: macro (institutional), meso (social interactions), and micro (individual) Source: *Homan, 2019*.

In addition to formal policies, structural sexism subtly normalizes gender biases through everyday social interactions and relationships (Ridgeway & Smith-Lovin, 1999). People automatically categorize one another by gender, even when other social categories apply. This occurs because gender operates as a fundamental social system that shapes our perceptions and expectations of others (Brewer & Lui, 1989). The deeply ingrained nature of gender biases causes people to view gender as a primary lens for understanding social relations, despite the availability of other categorizations. As a result, structural sexism persists through the embedding of gendered patterns into norms for social interactions.

Figure 5

U.S. Map of Maternal Mortality Rates by State



Note. The figure depicts maternal mortality rates, defined as the number of deaths from any cause related to or aggravated by pregnancy or its management (excluding accidental or incidental factors) during pregnancy and childbirth or within 42 days of termination of pregnancy, irrespective of the duration of the pregnancy, per 100,000 live births in each state. Source: *National Vital Statistics System, 2023*.

Gender biases extend beyond categorizations to constrain women's choices and responsibilities. For instance, research on workplace inequality reveals that societal expectations about gender roles lead women to accept less promotable tasks, even when they would prefer different responsibilities (Babcock et al., 2017). Prevailing stereotypes override women's personal preferences, subtly guiding their decisions toward traditionally feminine roles. As such, the biases embedded in social interactions do not merely influence perceptions – they actively shape women's behaviours and options.

These biased interactions accumulate to reinforce broader structural inequities across institutions and social systems. The gender stereotypes that guide individual decisions and relationships also restrict access to opportunities and resources on a societal level (Babcock et al., 2017; Ridgeway & Smith-Lovin, 1999). Micro-level categorization thus feeds into macro-level disparities, with biases entrenched at the interactional level upholding the gendered hierarchy embedded within overarching social structures (Homan, 2019). Consequently, the impact of categorizing by gender extends far beyond immediate interpersonal exchanges to perpetuate systemic inequalities.

In addition to shaping external opportunities, structural sexism affects how individuals perceive themselves. Micro-structural sexism refers to the internalization of gendered ideologies and norms that become embedded within one's self-concept and identity (Homan, 2019; Ridgeway & Correll, 2004; Risman, 2004). Through socialization processes, people integrate societal gender expectations into their own belief systems, bolstering broader structural inequality (Homan, 2019; Risman, 2004).

This micro-level sexism often starts early in life through differential treatment of girls and boys that reinforces traditional gender roles and stereotypes (Chaplin et al., 2005;

Eagly & Wood, 2012; Pahlke et al., 2014). For example, parents and teachers frequently harbour lower expectations for girls in mathematics (Riegle-Crumb & Humphries, 2012; Tiedemann, 2000a; Tiedemann, 2000b). Such early experiences can have enduring impacts on women's self-perception of competence in science, technology engineering, and math, potentially discouraging them from pursuing related careers (Good et al., 2008; Hand et al., 2017; Nosek et al., 2009). This contributes to a lack of female mentors in traditionally male-dominated career fields creating a self-reinforcing cycle and amplifying gender-identity threat (González-Pérez et al., 2020; van Veelen et al., 2019).

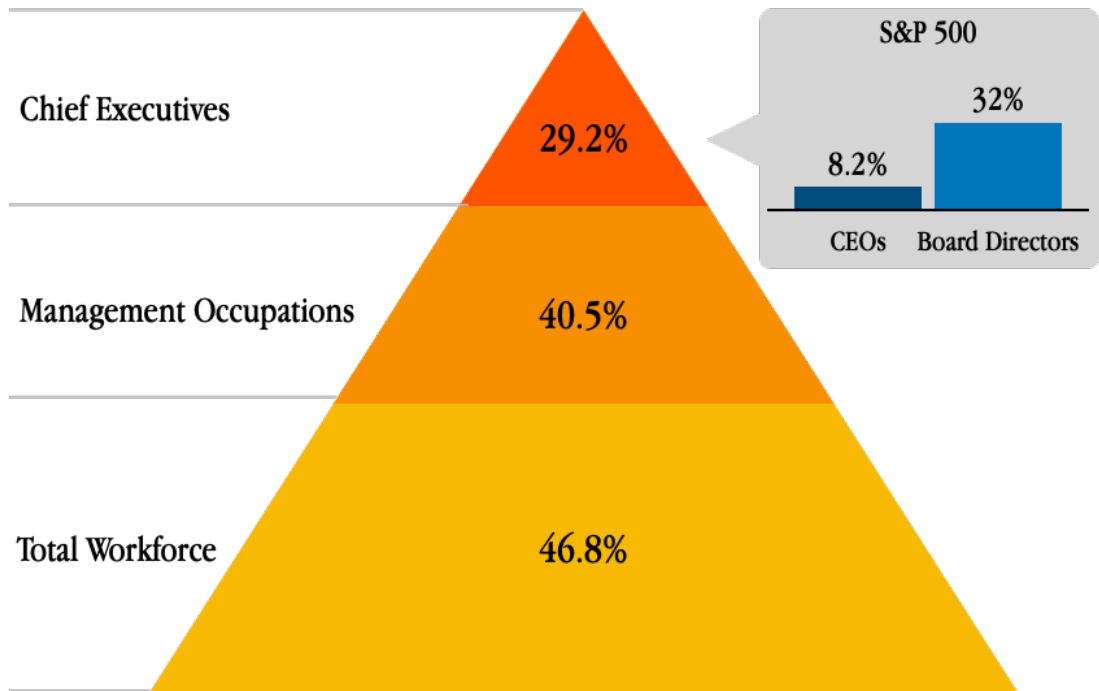
Accumulating biases within societal structures contribute to pervasive gender disparities across numerous domains. Scholars have developed vivid metaphors, such as the 'glass-ceiling,' 'leaky pipeline,' and 'sticky floors' to represent the complex and multi-layered barriers erected by structural sexism (Zeng, 2011). These metaphors aptly illustrate how implicit and explicit biases manifest within different social systems, hindering the advancement and full participation of women.

The 'glass ceiling' refers to organizational barriers obstructing women and other marginalized groups from reaching upper management and leadership roles (U.S. Department of Labor, 1991). Despite comprising half of the workforce, women only represent 29.2% of executives and 8.2% of CEOs in S&P 500 companies, reflecting substantial obstacles to advancement (Catalyst, 2023, see Figure 6).

Relatedly, the 'leaky pipeline' describes how women and other minorities encounter impediments causing them to 'leak out' of the leadership pipeline as they progress through their careers (Zeng, 2011). Discrimination and other pressures make transitions into higher positions more difficult, highlighting systemic barriers to upward mobility.

Figure 6

Representation of Women in the U.S. Workforce and Leadership Positions



Women in the United States Workforce

Note. This figure shows the percentage of the workforce in the U.S. that is comprised of women and the percentage of these women in management or chief executive positions. The “chief executives” category includes various high-ranking roles including CEOs, board members, chiefs of staff, and government positions such as governor, mayor, and superintendent of schools. The information regarding the S&P 500 represents only a portion of the overall workforce in the U.S. Source: *Catalyst* (2023).

Finally, the ‘sticky floor’ effect traps women and other marginalized groups in lower-level jobs with minimal advancement prospects (Zeng, 2011). Longitudinal studies reveal women disproportionately remain in the same occupations over time without progressing to leadership roles (Haveman et al., 2009; Schellenberg et al., 2016). This obstruction of vertical mobility contributes to the gender wage gap, which only narrows once more women ascend to management positions (Joshi et al., 2015).

The multitude of barriers created by structural sexism collectively depress wages and restrict opportunities for women and minorities. This contributes to widening income inequality compared to non-Hispanic White men (Bishu & Alkadry, 2017). Despite earning over half of all undergraduate and postgraduate degrees in the U.S., women on average still earn less than men with just an undergraduate or high school education (National Center for Education Statistics, 2021; U.S. Bureau of Labor Statistics, 2021). Mothers and women of colour face an even more drastic disparity, having to work many additional months annually to match previous year earnings of non-Hispanic White men (Jones, 2021).

In conclusion, structural sexism goes far beyond representation in politics and organizations to restrict people's lives in pervasive ways that perpetuate intersectional inequalities. Breaking the 'glass ceiling,' fixing the 'leaky pipeline,' cleaning the 'sticky floors,' and closing wage gaps are crucial starting points. However, these represent mere basic steps toward dismantling the deeply entrenched systemic sexism woven throughout societal institutions and structures and to build a more equitable society in its place.

1.4.2 Beyond the Punchline: When Sexism Takes a Toll

The normalization of sexist attitudes and experiences, often disguised as harmless humour and casual banter, carries significant consequences for women's well-being beyond their immediate discomfort. Dismissing sexism undermines its detrimental impact on mental health, career engagement, and overall sense of safety in social settings (Leaper & Brown, 2008; Mallett et al., 2016). While seemingly mild forms of everyday sexism might appear inconsequential, the cumulative exposure to such microaggressions can have profound psychological effects, including depression, PTSD, and diminished self-esteem (Schneider et al., 1997; Swim et al., 2001). Additionally, these experiences can erode job

satisfaction, compromise career advancement, even prompt women to withdraw from professional environments altogether (Schneider et al., 1997). Examining the multifaceted effects of sexism, even in its seemingly innocuous forms, is crucial to understanding its pervasive influence on women's lives and promoting equitable social spaces.

The detrimental impacts of sexism extend beyond mental health to profoundly shape women's workplace experiences and physical health. Encountering gender discrimination frequently makes women feel less autonomous, less connected to colleagues, erodes their sense of job security, and often compels them to consider resigning (Blau et al., 2005; Manuel et al., 2017). This results in even fewer women in leadership roles and reinforces gender inequality in the workplace (Ragins et al., 1998). Exposure to sexism can also compound stress, which can weaken immune system functioning and worsen chronic health conditions in women (Pohling et al., 2016). In a large cross-cultural study of women, gender discrimination was a stronger predictor of these outcomes than sexual harassment (Shaffer et al., 2000). Conversely, organizations that actively work to prevent sexism tend to have more satisfied, loyal female employees (Blau et al., 2003; Bond et al., 2004).

In short, the research clearly demonstrates that sexism presented jokingly does not mitigate its substantial impacts on women's mental health, physical health, job performance, and retention. Workplace sexism creates inhospitable culture that pushes women out of their careers. Organizations must implement interventions to confront gender discrimination to improve women's well-being and professional advancement. Future research should examine the underlying socio-psychological mechanisms that perpetuate these rigid behavioural patterns and facilitate the construction of inclusive workplace environments where women can thrive.

1.5 Silenced Voices, Resilient Spirits: Confronting Homonegativity

The pursuit for equal rights and recognition for individuals within the non-gender normative community remains a complex and contentious global challenge (Mendos et al., 2020). Homonegativity, encompassing the spectrum of negative attitudes, prejudices, and discriminatory practices directed towards people identifying as lesbian, gay, bisexual, transgender, or with other gender and sexual non-conforming identities (LGBTQ+), persists in fracturing communities and straining interpersonal relationships (Herek, 2004; Malcomson et al., 2006). Although some cultures have become more tolerant, the persistence of homonegativity across nations poses an ongoing human rights challenge.

This cultural aversion towards homosexuality and gender non-conformity arises from a complex nexus of historical, cultural, religious, and socio-political factors. Historically, same-sex intimacy did not define a distinct identity in most pre-modern societies; instead, it constituted one practice or role within a broader social framework (Greenberg, 1988). While perceptions of same-sex intimacy in pre-modern societies have fluctuated throughout history, ranging from transitional rites of passage or passive tolerance to inciting moral outrage and legal prohibition, the practice itself did not define a distinct identity in most pre-modern societies; instead, it constituted one practice or role within a broader social framework (Greenberg, 1988; Nussbaum, 1999; Sullivan, 2004).

This cultural fluidity shifted dramatically in 1869 with Károly Mária Kertbeny's coinage of the terms: 'homosexual' and 'heterosexual.' While the intention was to advocate for decriminalization in the Austro-Hungarian Empire, this conceptual framework inadvertently laid the groundwork for the rigid heterosexual-homosexual binarism that prevails today (Féray & Herzer, 1990; Sullivan, 2004). The pathologizing of same-sex

intimacy gained further momentum during the era of colonialism. Serving as a vector for the dissemination of European cultural norms and religious beliefs, including the codification of anti-sodomy laws, colonialism entrenched and fortified homonegativity throughout the world (Gupta, 2008; Hepple, 2012). Consequently, systemic homonegativity and discrimination persists in many post-colonial nations.

LGBTQ+ individuals face pervasive challenges and threats to wellbeing worldwide, including oppression, legal and moral persecution, as well as violent acts like ‘corrective’ rape (Doan-Minh, 2019; Manalastas et al., 2017). They frequently experience family and peer rejection, abandonment, homelessness, or coercion into conversion therapy – an unfounded attempt to realign sexual orientation that lacks scientific evidence and is considered harmful to patients (American Psychiatric Association, 2018; Ecker, et al., 2019; Haldeman, 2002; Morton et al., 2017). Each year, thousands of LGBTQ+ youth are forced into homelessness after being rejected by families due to their sexual orientation or gender identity (Choi et al., 2015; Ecker et al., 2019). Homeless LGBTQ+ youth struggle to find welcoming shelters, as many have religious affiliations that lead to rejection of LGBTQ+ service users. Lacking shelter, many face sexual exploitation and pressure to exchange sexual favours for basic needs (Quintana et al., 2010). Faced with persistent threats of violence and rejection, many LGBTQ+ individuals hide their identities and live in fear.

1.5.1 Systemic Homonegativity: Criminalizing Love, Marginalizing Lives

The emergence of the Human Immunodeficiency Virus and Acquired Immune Deficiency Syndrome (HIV/AIDS) epidemic in the early 1980s occurred alongside heightened stigma, homonegativity, and lack of government support. When HIV/AIDS was first recognized in 1981, it was thought to disproportionately affect gay men and was

termed ‘gay-related immune deficiency’ (GRID) (Kitzinger & Peel, 2005; Shilts, 1987). This label gained traction among medical professionals and the media who began to depict the disease as a ‘gay plague,’ contributing to homonegativity attitudes that framed AIDS as divine retribution for immorality (Herek & Glunt, 1988). The then-president of the U.S., Ronald Reagan and his administration largely ignored the epidemic, failing to fund research or prevention campaigns while AIDS ravaged marginalized communities (Siplon, 2002).

Despite mounting evidence of the growing public health crisis, official action to address HIV/AIDS in the U.S. was limited. It was not until 1983, after thousands had already died, that the U.S. government formally acknowledged HIV/AIDS as a major health concern. However, even then, the official response was limited to the establishment of a task force (Shilts, 1987). During this period, the Centers for Disease Control and Prevention (CDC) continued to define AIDS exclusively based on diagnoses among gay men, overlooking other affected groups (Herek & Glunt, 1988).

In 1985, the CDC attempted to organize efforts to disseminate information about HIV/AIDS. However, the Reagan administration quickly directed the CDC to discontinue this prevention program, asserting “The government should not be in the business of telling homosexuals how to have sodomy,” (Shilts, 1987, p. 576). It was not until September 1985, that Ronald Reagan publicly acknowledged HIV/AIDS, when he claimed it was “one of the top priorities [...] over the last 4 years,” (Reagan, 1985, para 11). However, during that same period, the Reagan administration had redirected research funds and significantly reduced the budgets of U.S. public health agencies beyond what the U.S. Congress had mandated (Francis, 2012). By December 1985, nearly 12,000 Americans had been diagnosed with HIV/AIDS, with a 58% mortality rate (CDC, 2001).

With inadequate government support, it was left primarily to community organizations like ACT UP and Gay Men's Health Crisis to provide education, services, and advocacy (Siplon, 2002). However, these organizations struggled to counter dominant narratives that blamed HIV/AIDS on LGBTQ+ 'lifestyles' and labelled afflicted individuals as social pariahs. It was not until scientific evidence disproved misconceptions about contagion through casual contact in the late 1980s that social attitudes slowly began to improve (Herek & Glunt, 1988).

As of 2020, same-sex intimacy between consenting adults remains a criminal offense in 69 nations, with potential punishments ranging from compulsory psychiatric treatment to the death penalty (Mendos et al., 2020). These laws violate human rights and foster hostility toward the LGBTQ+ community. Criminalizing homosexuality marginalizes LGBTQ+ people, engenders distrust and fear of law enforcement, and increases vulnerability to violent crimes including assault, domestic abuse, rape, and murder (Burke et al., 2001; Human Rights Council, 2015; Waters, 2017). Additionally, these laws leave people susceptible to blackmail, unjustified arrests, police brutality, non-consensual medical procedures such as sterilization, and other abuses including the denial of housing and healthcare (Baral et al., 2009; Mallory et al., 2015; Misra, 2009; Waters, 2017; World Health Organization, 2014; Zahn et al., 2016). Furthermore, the codification of homonegativity has exacerbated the global HIV/AIDS epidemic by reducing access to testing, treatment, and prevention for LGBTQ (Arreola et al., 2015).

Even in countries that have decriminalized homosexuality, LGBTQ+ people often continue to face discrimination and violence, frequently fuelled by propaganda from socially

conservative, state-sponsored, or religious media outlets. For instance, Dmitry Kiselyov, the head of Russia's state media, once offered his view on homosexuality:

Just imposing fines on gays for homosexual propaganda among teenagers is not enough. They should be banned from donating blood, sperm. And their hearts [when donated] should be buried in the ground or burned as unsuitable for the continuation of life. (Essig, 2014, p. 39).

Such inflammatory rhetoric from public figures perpetuates hostility and sanctions abuse against LGBTQ+ people, even where homosexuality itself is legal. This exemplifies how structural stigma and institutionalized homophobia can persist despite legal reforms.

Although same-sex relations between consenting adults are legal in Russia, in 2013 the State Duma passed a law prohibiting the dissemination of information or media that expresses support for people LGBTQ+ people (Mendos et al., 2020). Similar political movements restricting LGBTQ+ rights and visibility have emerged across the globe. In 2019, several regions in Poland declared themselves 'LGBT-free zones' (Chowaniec et al., 2021). In 2020, Hungary amended its constitution to ban adoption by same-sex couples and passed a law declaring one's sex assigned at birth as legally immutable (Takács et al., 2022). Indonesia has classified 'homosexuality', 'bisexuality', and 'transsexualism' as mental disorders in medical texts (Mendos et al., 2020). Additionally, conservative politicians in the U.S. have pushed for legislation that would prohibit disseminating information about gender nonconformity and homosexuality to minors (Goldberg & Abreu, 2023).

In short, while there have been notable advancements securing equal rights for LGBTQ+ communities, millions of marginalized people still live in fear for their safety.

Moreover, homonegativity and transphobia extend beyond criminalization, with profound personal consequences. Anti-LGBTQ+ laws and policies remain pervasive worldwide.

1.5.2 Aging with Pride: Resilience Amid the Impacts of Homonegativity

Homonegativity profoundly impacts LGBTQ+ individuals across the lifespan, influencing various aspects of their lives. Numerous studies have consistently shown an increased risk of depression, anxiety, maladaptive eating behaviours, and substance abuse in LGBTQ+ populations compared to cisgender heterosexuals (Akré et al., 2021; Hazzard et al., 2020; Macbeth et al., 2022; Mustanski et al., 2011; Rosner et al., 2021). Furthermore, research suggests that LGBTQ+ adolescents face a disproportionate burden of verbal abuse, threats of violence at school, and are three times more likely to attempt suicide (Kann et al., 2018; Mustanski et al., 2011; Raifman et al., 2020).

Discrimination, bullying, and potential rejection from family can engender profound feelings of hopelessness and despair, significantly impacting mental health (Ryan et al., 2010). Across cultures, research highlights how discomfort within one's family relates to poorer mental health outcomes among LGBTQ+ populations (Gato et al., 2020; Lozano-Verduzco et al., 2023; McConnell et al., 2015). Indeed, LGBTQ+ youth seeking emergency care after a suicide attempt have emphasized needing acceptance, affirmation, accomplishment, control, and safety (Schultz et al., 2022).

In addition to impacting mental health, experiences of homonegativity may also have far-reaching impacts on their overall well-being. Studies indicate societal-level sexual prejudice and discrimination can prompt increased physical and sexual risk behaviours among LGBTQ+ youth, especially those experiencing homelessness (Gangamma et al., 2008; Shilo & Mor, 2014). These adverse coping responses to stress raise likelihoods of

health issues persisting into adulthood. Per a U.S. population-based study, rates of contracting sexually transmitted infections – including HIV, herpes simplex 2 virus, gonorrhoea, and chlamydia – were greater among homosexual men relative to heterosexual men (Operario et al., 2014). Moreover, significantly higher prevalence of substance misuse and excessive drinking among lesbian and bisexual women point to gender differences in coping, contributing to increased obesity and cardiovascular disease (Fredriksen-Goldsen et al., 2017; Operario et al., 2014).

Moreover, persistent exposure to stress like homonegativity across one's lifetime may accelerate aging and increase risks of early cognitive decline (Correro & Nielson, 2020). This effect is especially pronounced among transgender individuals, given their greater likelihood of experiencing dementia-related symptoms compared to cisgender people (Dragon et al., 2017; Guo et al., 2022). Alongside cognitive aging, LGBTQ+ older adults also encounter other medical issues, including an increased likelihood of chronic pain and disability (Fredriksen-Goldsen et al., 2013; 2017). Sexual minority women have higher likelihoods versus heterosexual women of experiencing strokes, heart attacks asthma, arthritis, and chronic pain (Fredriksen-Goldsen et al., 2017). Although each condition may eventually necessitate familial caregiver support, many LGBTQ+ elders lack access to adequate assistance due to insufficient familial support and discriminatory policies historically restricting marriage rights (Bränström et al., 2020; Carpenter et al., 2021).

These challenges may persist in healthcare and palliative care settings, where LGBTQ+ patients may feel anxious disclosing information and fear discrimination, neglect, or mistreatment due to prevailing homonegative prejudices (Ahmed et al., 2004; Cloyes et al., 2018; Elk et al., 2018; Rödahl et al., 2003; Witten, 2009). Additionally, due to long-term

homonegativity exposure, a dominant heteronormative culture, and ageist assumptions that older adults lack sexual needs, LGBTQ+ elders may fear separation from partners and denial of conjugal visits (Hash & Rogers, 2017). From medical professionals' viewpoint, there may be discomfort with a lack of competence regarding the needs of the diverse LGBTQ+ population (Carabez & Scott, 2016; Cloyes et al., 2018).

This concern is valid, as the LGBTQ+ acronym encompasses diverse sexual and gender identities (see Table 1), which may lead medical professionals and researchers to erroneously adopt a homogenous approach, rather than recognizing and addressing individual variances in lifestyles, experiences, and health needs (McDermott et al., 2021). Further examination of health disparities within the LGBTQ+ communities is vital to inform clinical practices and improve the sexual health of LGBTQ+ older populations.

In summary, the experiences of discrimination and lack of social support can lead to significant stress to the daily lives of LGBTQ+ individuals, potentially contributing to long-term physical health problems (Fredriksen-Goldsen et al., 2017). Despite the notable progress in recent years to improve attitudes toward LGBTQ+ people, there are still many failings to overcome including dehumanization and the near-constant threat to rescind their human rights (Mendos et al., 2020; van der Toorn et al., 2020). In conclusion, addressing homonegativity and its consequences is essential to enhance the well-being of LGBTQ+ individuals in various life domains.

In summary, experiences of discrimination and lack of social support can engender significant stress, potentially contributing to long-term physical health among LGBTQ+ individuals (Fredriksen-Goldsen et al., 2017). Despite notable progress recently improving societal attitudes, many troubling issues persist, including dehumanization and the constant

Table 1*Glossary of LGBTQ+ Sexual and Gender Identities*

Agender	Person who identifies with no gender or does not experience gender as a primary component of their identity.
Aromantic	Person who experiences little or no romantic attraction to others and may not be interested in forming romantic relationships.
Asexual	A person who experiences little or no sexual attraction to others. Asexual people may still engage in sexual activity.
Bigender	A person whose gender identity combines two genders.
Bisexual	Person attracted to both females and males emotionally and/or sexually.
Gay	Refers to people attracted to the same sex/gender. Typically, the word describes men attracted to men, but also women attracted to women.
Gender Fluid	A person without a fixed gender identity; may fluctuate between different genders sometimes aligning with one over another or none, at all.
Intersex	Congenital conditions affecting sexual anatomy development; may refer to a person with such conditions.
Lesbian	A woman who is emotionally and physically attracted to other women.
Non-Binary	A person whose gender identity falls outside of the traditional gender binary structure of male or female.
Pangender	A person whose gender identity includes multiple genders or goes beyond the traditional cultural norms that define gender.
Pansexual	A person who is attracted to individuals of all gender identities or whose attractions are not influenced by the gender of others.
Queer	An umbrella term describing people who think of their sexual orientation or gender identity as outside of societal norms.
Questioning	Describes a person who is unsure about or is exploring their sexual orientation and/or gender identity.
Transgender	A person whose sex assigned at birth does not correspond with their gender identity based on traditional expectations.
Trans Feminine	A person who was assigned male sex at birth and identifies with femininity to a greater extent than with masculinity.
Trans Masculine	A person who was assigned female sex at birth and identifies with masculinity to a greater extent than with femininity.
Two-Spirit	Term used in certain Native American cultures to describe a person embodying both masculine and feminine spirits.

Note. This list is not comprehensive, and definitions vary across communities.

Source: *National LGBTQIA+ Health Education Center, 2020.*

threat of rescinding human rights (van der Toorn et al., 2020). In conclusion, addressing homonegativity and its consequences across the lifespan is imperative to enhance well-being among LGBTQ+ populations across various life domains.

1.6 Weight Stigma: The Last Socially Acceptable Prejudice

From characters like Kevin Malone in the superior U.S. version of *The Office* to the iconic figure of Homer Simpson, media representations have often portrayed obese people through unflattering stereotypes such as laziness, incompetence, and overindulgence (Heuer et al., 2011; Puhl & Heuer, 2009). These harmful depictions contribute to weight stigma, which refers to the pervasive cultural devaluation and marginalization of people perceived as overweight or obese (Himmelstein et al., 2018).

In addition to negative media portrayals, research documents negative attitudes toward obese individuals across several areas including interpersonal relationships and daily experiences in employment, healthcare, education, media, and (Puhl & Heuer, 2009). Obese individuals frequently endure a range of stigmatizing behaviours, including unsolicited advice, microaggressions like scrutiny of their shopping choices, and overt bullying from strangers, friends, and even family members (Jeon et al., 2018; Lewis et al., 2011; Vartanian et al., 2014). Weight stigma also emerges through environmental barriers and restrictions, such as being required to purchase extra airplane seats or encountering limited clothing options (Owen, 2012). These stigmatizing attitudes and policies exacerbate difficulties for higher weight individuals across many life domains including healthcare, education, and employment (Puhl et al., 2008; Puhl & Heuer, 2009). Weight stigma contributes to body image dissatisfaction, disordered eating, exercise avoidance, and decreased self-esteem among affected individuals (Carels et al., 2010; Friedman et al., 2008; Han et al., 2018).

Weight stigma persists as one of the most socially acceptable forms of prejudice, often eliciting little backlash compared to other stigmatized identities like race, gender, and sexual orientation (Crandall, 1994; Phelan et al., 2014; Puhl. & Heuer, 2009). The pervasive belief that one's weight is entirely controllable leads to the attribution of personal blame toward individuals perceived as overweight, as many assume excess weight reflects deficiencies in self-control and motivation (Berryman et al., 2006; Brown, 2006; Karsay & Schmuck, 2019). This perspective aligns with the cultural veneration of self-reliance, which further propagates weight bias. Many people who actively avoid overt discrimination toward other marginalized groups still readily exhibit weight prejudice and engage in fat shaming (Latner et al., 2008; Puhl & Heuer, 2009).

1.6.1 The Weight of Discrimination: The Impact of Weight Stigma

However, weight stigma can ironically undermine efforts to maintain a healthy lifestyle. Like other forms of prejudice, weight bias inflicts social stress through experiences of discrimination, rejection, and devaluation. This frequently reduces self-efficacy in following a nutritious diet plan, diminishes motivation for physical activity, and increases consumption of calorie-dense comfort foods as coping mechanisms (Major et al., 2014; Seacat & Mickelson, 2009; Tomiyama, 2014). Furthermore, avoiding exercise in public spaces to prevent potential stigma can increase blood pressure, stress, and impair emotional regulation (Daly et al., 2020; Major et al., 2012; Thedinga et al., 2021). Simply, anticipating weight evaluation can elicit these negative outcomes (Hunger et al., 2020).

A substantial body of research has documented the adverse psychological outcomes associated with experiencing weight-based discrimination. These include increased risk for depression, anxiety, stress, low self-esteem, body dissatisfaction, disordered eating patterns,

substance abuse, healthcare avoidance, reduced quality of life, as well as suicidal ideation (Amy et al., 2006; Eaton et al., 2005; Hatzenbuehler et al., 2009; Pearl & Puhl, 2018). In a study of over 22,000 overweight adults, over half of those reporting weight-based discrimination met diagnostic criteria for at least one psychiatric disorder and were 2.41 times more likely to have three or more diagnoses compared to those not stigmatized. These associations persisted even after accounting for body mass index (BMI) and sociodemographic variables (Hatzenbuehler et al., 2009).

In addition to psychological consequences, weight stigma also adversely affects the educational experiences and academic performance of students. Overweight students who experience bullying and teasing tend to have lower grades, higher absenteeism, and diminished educational attainment (Krukowski et al., 2009; Puhl & Luedicke, 2012). Many teachers also exhibit weight bias, perceiving overweight students as more emotional, disorganized, and less competent across academic, physical, and social domains (Greenleaf & Weiller, 2005; Neumark-Sztainer et al., 1999). This can prompt differential treatment from school staff. Weight stigma persists into higher education as well. Burmeister et al. (2017) found that acceptance into psychology post-graduate programs were significantly lower for applicants with higher BMIs if the process included an in-person interview, despite receiving more positive letters of recommendation overall. Taken together, these findings demonstrate weight bias within schools and academia detrimentally affects overweight students' performance, experience, and educational attainment.

Weight stigma can also inflict lasting psychosocial damage over the lifespan. Youth who experience weight-based teasing are more prone to developing binge eating disorder and engaging in unhealthy weight control behaviours in adulthood like extreme dieting

(Haines et al., 2006). Weight-based discrimination may also promote social isolation.

Fearing judgment and rejection, some higher-weight individuals may withdraw from social interactions, which can exacerbate loneliness, depression, meaninglessness in life, and suicidal ideation independent of BMI and baseline depression levels (Daly et al., 2020; Sjöberg et al., 2005; Stillman et al., 2009).

Additionally, weight stigma pervades healthcare settings and jeopardizes quality of care for overweight patients. Studies show many physicians explicitly or implicitly endorse stereotypes of obese patients as lazy, noncompliant, and undisciplined (Phelan et al., 2015). Consequently, providers frequently exhibit less respect for overweight patients in their communication, provide them with inadequate health information, and view them as less likely to follow medical advice (Harvey & Hill, 2001; Huizinga et al., 2009; Huizinga et al., 2010; Richard et al., 2014). This bias manifests in frequent disrespectful remarks and inadequate time spent educating and addressing the patient's concerns (Alberga et al., 2019; Bertakis & Azari, 2005).

As a result of this pervasive weight bias, many overweight patients report feeling judged and misunderstood by providers, which can prompt delays or avoidance of seeking necessary care (Flint et al., 2021). Women perceiving themselves as overweight show heightened risk for adverse health consequences, as weight stigma deters them from undergoing potentially life-saving cancer screenings that require disrobing, like mammograms and Pap smears (Adams et al., 2008; Maruthar et al., 2009).

Furthermore, weight stigma intersects with other forms of prejudice, highlighting the need to consider both structural and individual factors. Discrimination based on weight compounds disadvantages for individuals also facing biases tend to gender, race, ethnicity,

and socioeconomic status (Panza et al., 2020). For example, Reece (2019) found that obese White Americans and lighter-skinner Black Americans tend to have a lower average income compared to obese darker-skinner Black and Hispanic Americans. This suggests that one's BMI influences income disparities. This may be partially attributed to cultural beauty standards that vary across ethnic groups and shape experiences of weight bias (Himmelstein et al., 2017; Mui et al., 2015; Tang et al., 2012). Overall, intersectionality of weight stigma emphasizes addressing inequities faced by diverse overweight individuals through a multifaceted lens accounting for social identities and structural barriers. Comprehensive efforts to mitigate weight bias must consider its intersectional nature.

The detrimental psychosocial and health consequences of weight stigma are well-documented. Experiencing discrimination leads to increased stress, disordered eating habits, healthcare avoidance, and diminished self-efficacy in adopting healthier lifestyles (Amy et al., 2006; Haines et al., 2006; Major et al., 2014; Pearl & Puhl, 2018). Moreover, weight stigma intersects with other forms of disadvantage to further marginalize individuals facing multiple prejudices (Panza et al., 2020; Reece, 2019). Fundamentally, weight bias stems from the perception that body weight is entirely controllable, which enables the attribution of blame toward individuals deemed responsible for their size (Brown, 2006). However, this overlooks the complex biological, genetic, and environmental determinants of obesity (Herrera & Lindgren, 2010). While reducing individual prejudice is important, addressing weight stigma necessitates challenging broader sociocultural attitudes and structures that devalue and dehumanize overweight people. Combatting the stigma that enables the continued marginalization of obese individuals is imperative to upholding universal human rights to belonging, respect, and dignity.

1.7 Dehumanization: When Empathy Fades

Dehumanization – the tendency to view or treat other people or groups as less than fully human – has only recently become a major focus of theory and research within social psychology (Haslam, 2006). This is somewhat surprising given the well-documented tendency for people throughout history to dehumanize others across different cultures and time periods (Livingstone-Smith, 2021). While discrimination and prejudice were heavily studied in the mid-20th century, research on dehumanization did not gain significant momentum until the early 2000s. Three major theoretical models have elucidated the psychological processes underlying the denial of humanity to others: infrahumanization theory (Leyens et al., 2000), Haslam’s (2006) dual model of humanness, and Kteily and colleagues (2015) blatant dehumanization. Together, these frameworks have quantified different ways in which people strip humanity from others, enabling discrimination and cruelty. When groups or individuals are seen as less than human, people exhibit less empathy, prosociality, and moral concern towards them. Thus, examining the antecedents and consequences of dehumanization provides insight into prejudices that facilitate intergroup conflict across contexts.

1.7.1 Infrahumanization

The first major theory of the psychology of dehumanization in peaceful contexts was developed by Jacques-Philippe Leyens and colleagues (2000). Their seminal work introduced the concept of ‘infrahumanization,’ a subtle everyday form of dehumanization that operates even in the absence of conflict. Through informal surveys, Leyens et al. (2001) identified intelligence, language, and secondary emotions (e.g., pride) as key markers of humanity. They then sought to examine the attribution of secondary emotions to in-groups,

out-groups, and animals. Through three studies, they consistently demonstrated the differential attribution of emotions: while primary emotions like anger or fear are readily attributed to both in-group and out-group members, secondary emotions like pride, optimism, and embarrassment are reserved exclusively for the in-group (Leyens et al., 2001). They also observed that individuals consistently assigned a broader range of both positive and negative emotions to in-group versus out-group members. This suggests that infracommunication stems from more than mere in-group favoritism, reflecting a fundamental difference in how the inner lives and emotional experiences of others are perceived based on their group affiliation. Furthermore, Demoulin et al. (2005) provided evidence that infracommunication is not a passive perception but rather an active and motivated cognitive process to avoid the acknowledgement of shared similarities with out-group members. By restricting out-groups' emotional capabilities, infracommunication can foster prejudice by placing them outside one's scope of moral concern (Leyens et al., 2003). This effect persists regardless of familiarity between groups (Cortes et al., 2005), highlighting the pervasive nature of infracommunication.

The subtle bias of infracommunication is readily demonstrable through faster reaction times when associating in-groups with secondary emotions and out-groups with primary emotions (Paladino et al., 2002). This tendency to perceive out-groups as less capable of complex emotions effectively reduces their perceived humanity (Demoulin et al., 2004).

Vaes et al. (2003, 2004, 2006) conducted a series of studies demonstrating the differential reactions triggered by out-group members' expression of emotions. When in-group members express secondary emotions, it typically elicits positive reactions. However, when outgroup members express secondary emotions, individuals tend to react

negatively, perceiving these expressions as disingenuous or manipulative (Vaes et al., 2006; Wohl et al., 2012). This negativity likely stems from the implicit denial of out-group members' capacity for genuine human emotions, reinforcing their perceived lack of humanness (Vaes et al., 2006). This suggests that infrahumanization not only reduces empathy and prosocial behaviour towards out-groups, but also strengthens in-group favouritism.

Infrahumanization theory advanced the study of dehumanization in several notable ways (Haslam & Loughnan, 2014; for reviews, see Leyens et al., 2003, 2007). First, it empirically operationalizes the construct of humanness for quantifiable study (Haslam & Loughnan, 2014). Second, its use of simple methods allowed for the empirical testing of dehumanization distinct from attitudes or evaluations (Paladino et al., 2002; Vaes, 2023). Third, it demonstrates that dehumanization can occur separately from overt negativity towards groups, revealing nuances in intergroup attitudes (Leyens et al., 2001). Finally, it establishes dehumanization as a spectrum, from mild to severe, that manifests even in relatively peaceful interrelations (Vaes et al., 2012). By highlighting these everyday manifestations, infrahumanization theory shifts the paradigm beyond extreme cases to advance knowledge regarding common biases.

1.7.2 Dual Model of Dehumanization

Elaborating on this foundational theory, Haslam (2006; see also Haslam et al., 2013) proposed a more detailed model of dehumanization, which distinguishes between two types of attributes that define humanness – human uniqueness and human nature (for a review, see Haslam & Loughnan, 2014).

Human uniqueness refers to the qualities that distinguish humans from other animals, such as refined emotions, complex cognition, and ethics. These attributes are acquired through socialization and cultural learning, potentially varying in emphasis and expression across different communities and cultures (Haslam, 2006). The denial of these uniquely human attributes to another individual or group often manifests in perceiving them as animalistic, lacking civility, morality, or rationality (Viki et al., 2006). This form of dehumanization shares similarities with infrahumanization (Leyens et al., 2000), but extends beyond secondary emotions to encompass a broader spectrum of uniquely human qualities.

In contrast, human nature represents the fundamental emotional and psychological core of a person. Traits like responsiveness to emotional cues, open-mindedness, and individuality with varied interests fall under this category, reflecting humanity's shared bond with the natural world and inherent capacity for empathy and connection. While some aspects of human nature, like curiosity, may not be unique to humans, Haslam (2006) argues that they are universal, innate, and emerge early in development. Denial of human nature traits often leads to perceiving individuals as cold, unemotional, and akin to machines, devoid of inner complexity.

The distinctiveness and psychological impact of these two forms of dehumanization have been empirically validated, highlighting how individuals can be perceived as lacking one dimension while possessing the other (Haslam et al., 2004, 2005). This nuanced understanding allows for a more comprehensive analysis of how prejudice and discrimination manifest. Individuals can be dehumanized even without explicit denial of their basic humanity, simply by undermining their uniquely human capacities or shared emotional core (Haslam & Bain, 2007; Haslam et al., 2005). For example, Loughnan and

Haslam (2007) found that participants dehumanized businesspeople primarily through the denial of human nature and Bain and colleagues (2009) demonstrated that Australians attributed less human nature but more human uniqueness to Chinese people. Furthermore, cross-cultural research suggests a striking core understanding of these two dimensions across diverse cultures (Bain et al., 2012; Park et al., 2013). Despite differences in self-construal (individualist vs. collectivist), relational qualities like empathy and cooperation consistently emerge as central to human nature, highlighting a universal recognition of its importance (Park et al., 2013).

This framework has facilitated analyses of the dehumanization of other individuals (e.g., Haslam et al., 2005) and other social groups (e.g., Loughnan & Haslam, 2007). For instance, some medical students exhibited beliefs that Black people have lower pain sensitivity, which could impact treatment recommendations (Hoffman et al., 2016). Moreover, both Black and White Americans minimize Black people's susceptibility to psychological distress from racist experiences (Deska et al., 2020). Additionally, the dehumanization of women has been associated with greater proclivity for rape as well as more negative attitudes towards rape victims (Bevens & Loughnan, 2019). By denying attributes of human nature, such as the capacity to feel physical and emotional pain, the full humanity of the dehumanized group is diminished.

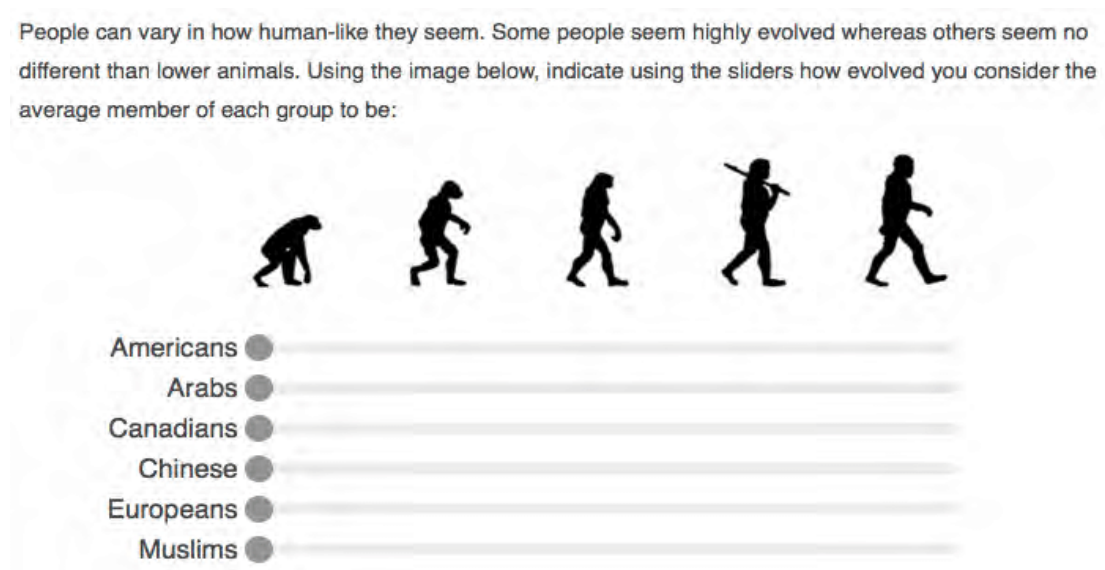
1.7.3 Blatant Dehumanization

While the infrahumanization model and the dual model of dehumanization assess the denied qualities of humanness in outgroups, Kteily et al. (2015) noted numerous historical examples of groups being directly likened to animals or vermin. For example, Nazi propaganda depicted Jewish people as parasitic rats (Hartman, 2000) and Hutu media

labelled Tutsis as cockroaches in the Rwandan genocide (Nikuze, 2016). This blatant form of dehumanization, distinct from more subtle forms, led Kteily and colleagues (2015) to develop the ‘Ascent of Man’ measure (see Figure 6). This assessment involves respondents rating the evolutionary status of out-groups using a rating scale based on five silhouettes, each one emblematic of the different stages in human evolution.

Figure 6

The Ascent Measure of Blatant Dehumanization



Note. In “The Ascent Measure of Blatant Dehumanization” scale (Kteily et al., 2015), participants assess the evolutionary development of each of targeted group listed above by adjusting a slider to indicate their perceived level of evolutionary advancement today.
Source: *Kteily et al. (2015).*

Across seven studies in the United States (U.S.), United Kingdom (UK), and Hungary, Kteily and colleagues (2015) demonstrated that blatant dehumanization uniquely predicted not only support for social hierarchies but also aggressive attitudes and behaviours towards outgroups. For example, blatant dehumanization spiked after real intergroup violence and predicted increased support for actions like torture. This research

not only extends the theoretical understanding of dehumanization's role in intergroup relations but also provides a reliable tool to measure and investigate its overt and dangerous impacts, complementing existing research on more subtle forms.

Additionally, the simplicity of the 'Ascent of Man' measure (Kteily et al., 2015) allowed for researchers to examine the perception and effects of an out-group's view of a person's in-group as less than human (Kteily et al., 2016). This meta-dehumanization is a distinct concept from meta-prejudice – the belief one's group is disliked – and plays a pivotal role in perpetuating intergroup conflict through a self-reinforcing cycle. When one group perceives itself as dehumanized by another, it is more likely to reciprocate that dehumanization, fuelling aggression and discrimination (Kteily et al., 2016).

This dynamic has been observed in diverse real-world conflicts, involving groups like Americans and Arabs/Muslims, Hungarians and Roma, and Israelis and Palestinians (Kteily et al., 2016). Kteily and colleagues (2016) showed that learning of an out-group's dehumanizing view of one's in-group can trigger similar responses in one's own group, even when controlling for existing prejudice. Furthermore, meta-dehumanization indirectly influences support for aggressive policies through increased out-group dehumanization, even when controlling for individual levels of prejudice (Kteily et al., 2016).

Beyond promoting direct aggression, dehumanization can also increase support for negative societal attitudes and policies. For example, Kteily and Bruneau (2017) highlighted how the U.S.'s conservative Republican party's portrayal of Mexican immigrants and Muslims as less than human was directly linked to support for harmful measures like mass deportations and travel bans. Simultaneously, experiences of dehumanization could erode feelings of belonging, increase a sense of isolation and marginalization, and potentially

increase support for aggressive responses, including violent collective action (Kteily & Bruneau, 2017). The potential for dehumanization to legitimize aggressive responses, even within targeted groups, can exacerbate intergroup tensions and hinder social cohesion.

Irrespective of how humanness is denied, the dehumanization of others can enable atrocities against them. The theoretical developments in the psychology of dehumanization have elucidated the processes and consequences of denying humanity to others. The infrahumanization model (Leyens et al., 2000) identified the subtle attribution of fewer complex emotions to out-groups. The dual model of dehumanization (Haslam, 2006) distinguished between the denial of uniquely human attributes versus traits that are considered universal among humans. And the blatant dehumanization approach (Kteily et al., 2015) empirically demonstrated overt likening of others to non-human entities. Together, these theories provide a nuanced framework for examining how the deprivation of humanness precipitates intergroup harm across diverse contexts. They reveal dehumanization as an alarming yet pervasive phenomenon that can enable prejudice, discrimination, aggression, and violence towards the targeted groups. Afterall, when the full humanity of individuals or groups is diminished, it can foreshadow their maltreatment.

1.7.4 When Humanity Falters: The Dark Consequences of Dehumanization

The inadequate response by the U.S. federal government to Hurricane Katrina's devastation of New Orleans in August 2005 provides a sobering example of how the dehumanization of outgroups can diminish prosocial behaviours. When the hurricane made landfall on the 29th of August, it caused catastrophic flooding that resulted in at least 1,464 deaths and stranded approximately 50,000 people in the Superdome and the Convention Center without access to food or potable water for days (Burnett, 2015; Frontline, 2005).

Yet Michael Brown, Director of the Federal Emergency Management Agency, spent more time exchanging light-hearted e-mails with colleagues about his press conference appearances than responding to increasingly desperate pleas describing the humanitarian crisis (Associated Press, 2005; Burnett, 2015; Frontline, 2005). This prioritization of self-image over compassion reflects the way out-group dehumanization can reduce empathy and helping behaviours.

To examine this lacklustre response, Cuddy et al. (2007a) conducted a study in which they had people at a train station read a fictional news article about a mother desperately searching for her missing toddler after the hurricane. Participants read identical vignettes that varied only in the race of the mother and child, either Black or White. Results showed that those who read about the Black mother were less likely to attribute complex human emotions like grief or despair to her and said they would be less inclined to volunteer for relief efforts compared to those who read about the White mother and child.

Although dehumanization has historically enabled the rationalization of countless acts of cruelty, the consequences of dehumanizing others reach far beyond these overt horrors, subtly impacting behaviours toward out-groups and individual members. Cuddy and colleagues' (2007a) study highlights how denying the full humanity of out-groups can engender reduced empathy and prosociality. Even in the absence of overt aggression, dehumanization appears to diminish people's willingness to help or feel compassion toward out-group members in need, as the inadequate response to Hurricane Katrina illustrates. This evidence underscores the need to challenge processes of dehumanization not only to prevent overt intergroup conflict, but also to foster helping behaviours and social cohesion on an intrapersonal level.

Moreover, dehumanization in media representations yields substantial real-world influence. In one study scrutinizing news coverage of criminal proceedings in the Philadelphia Inquirer from 1979 to 1999, Goff et al. (2008a) found that Black defendants described with animalistic language were more likely to receive the death penalty than those given more neutral coverage. Additionally, when an individual's in-group has victimized another group, dehumanization makes people less empathetic and willing to reconcile. It also reduces support for reparations or diversity policies that could benefit the harmed group (Čehajić et al., 2009; Tam et al., 2007; Wohl et al., 2012; Zebel et al., 2008).

Although dehumanization often occurs between groups, rejected ingroup members accused of criminal or norm-violating behaviours may also face dehumanization. For example, Viki et al. (2012) found dehumanizing sex offenders increased support for longer sentences, ostracism, and less support for rehabilitation. One possible explanation for this phenomenon is that child molestation elicits such moral outrage that it elicits a visceral response and dehumanization of the accused to distance the person to such a degree they no longer belong to the ingroup (Bastian et al., 2013). Moreover, even broad labels like 'mentally ill' can promote stigma and dehumanization (Martinez et al., 2011).

In summary, researchers have identified multiple ways that the denial of human attributes to others enables their maltreatment. Whether through infrahumanization, denying qualities of human uniqueness or human nature, or blatant dehumanization, stripping away humanness diminishes empathy and prosociality. Together these frameworks elucidate the process by which dehumanization facilitates harm against the dehumanized.

While the specific groups targeted for dehumanization vary, the underlying psychology shares commonalities with other forms of prejudice. Comprehending the shared

roots underlying discrimination can elucidate potential strategies to counteract the resulting harms. By examining the basic cognitive processes that engender prejudices against various targets, common principles emerge that may inform reduction strategies.

1.8 Patterns of Prejudice: Unravelling the Common Threads of Bias

Without a doubt, prejudice and discrimination are persistent and pervasive issues that have afflicted societies throughout history (e.g., Alam, 2003; Ebrey, 2023). Regardless of what characteristics the prejudiced is based upon, bias and discrimination create barriers to social cohesion and equality. However, as with all human behaviours, underlying patterns exist that reinforce and perpetuate these biases. These patterns have endured and transcended different societies and historical periods and remain influential today. Gaining insight into these patterns and commonalities offers a better comprehension of prejudice and dehumanization, aiding in the pursuit of a more inclusive and equitable society.

1.8.1 Social Categorization: Navigating the Social Landscape with Labels

In our daily lives, we are constantly inundated with a vast amount of information from our surrounding environment. To effectively manage this influx of information, we rely on a fundamental cognitive skill known as categorization (Sloutsky, 2003). This skill helps us make sense of the world around us and it has been essential for the survival of virtually every animal on Earth, including humans. Among early humans, categorization enabled them to distinguish between predators and prey, between edible and toxic substances, and arid versus fertile land, among other situational variables vital to the survival of the species (Smith et al., 2012). This ability expedites decision-making, facilitates the communication of critical information, and extends its influence into the complex realm of social interactions (Contreras Kallens et al., 2018).

Social categorization is the cognitive process by which individuals classify themselves and others into distinct social groups based on shared attributes (Stangor et al., 1992; Kunda & Spencer, 2003). This process simplifies our perception of the social world by identifying similarities, organizing our social contexts, and establishing order. It aids in our comprehension and navigation of complex social environments, enabling individuals to define their roles within social settings and align their thoughts and behaviours with the expectations associated with group membership (Kreuger, 2001; Tajfel & Turner, 1979). While social categorization serves as an adaptive function, allowing us to make sense of chaotic social information through inductive assumptions, it also influences our social interactions, leading to biases such as ingroup favouritism and outgroup homogeneity (Hornsey, 2008; Kreuger, 2001).

Categorization is a fundamental process of human perception and interaction, influenced by a multitude of factors. The primary distinctions emphasized in social categorization pertain to basic demographics such as age, race, gender, and social class (Brewer, 1989; Fiske & Neuberg, 1990). People often spontaneously utilize sex and race as categories to classify others, with memory often organizing around these categories (Stangor et al., 1992). Neuroscience studies have revealed that individuals quickly attend to the race and sex of a face, with race recognized within 100 milliseconds and gender within 150 milliseconds of presentation (Ito & Urland, 2003). However, the focus of categorization shifts over time (Kunda & Spencer, 2003).

Another influential aspect of social categorization in shaping our social interactions revolves around the salience of categorical cues and individual trait cues (Bodenhausen et al., 1999). Social categories are not static entities; they are significantly influenced by how

well another person's characteristics fit into possible categories based on normative fit and comparative fit. Normative fit assesses the extent to which an individual's behaviours align with the expectations associated with a specific category, while comparative fit examines how effectively a category captures both intragroup similarities and intergroup differences (Oakes et al., 1991).

For instance, imagine meeting someone new at a symphony. At first, you might categorize them as a 'music lover.' As you start talking to them, you discover that they are a devoted fan of a rival sports team. This can create some confusion between two categories: 'music lover' and 'sports enthusiast' as they may not seem to fit together cohesively. In situations like this, when one social category does not align well with prevailing social norms and expectations, other categories may be prioritized until a better fit is identified. Thus, the salience of any social category is inextricably linked to the specific social environment in which it operates (Stangor & Schaller, 1996).

Additionally, categorical impression formation may be impacted by one's cultural knowledge and learning history exerting influence and shaping biases and behaviours. Devine (1989) demonstrated that knowledge of African American stereotypes was consistent across individuals with varying levels of prejudice. Furthermore, when participants were exposed to stereotypical cues, they tended to judge new individuals in a stereotype-consistent manner regardless of their explicit beliefs about them. However, cognizance of the potential impact of race upon automatic responses resulted in participants with low prejudice to modify and control their judgments. Conversely, participants with high prejudice persisted in endorsing racial stereotypes, seemingly impervious to this awareness.

Researchers have also observed that social categorization can be influenced by the social context in which a category is salient. Wittenbrink et al. (2001) found that a spray-painted wall, indicative of a ghetto, produced an in-group bias pattern when assessed automatically. However, the bias was attenuated when the same category was presented within a religious context.

Barden et al. (2004) corroborated when the context a classroom elicited stereotypes related to Asian academic achievement and Black academic underachievement. These racial biases were reversed when the context shifted to a basketball court, where Black people received more positive evaluations, while Asian people were evaluated more negatively. Barden and colleagues (2004) further refined this contextual effect by highlighting the effect of differential social roles as a moderating mechanism in the influence of social context. Regardless of the social context (e.g., church, classroom, office), when Black individuals were dressed as prisoners, they received negative evaluations, but when dressed as lawyers, they elicited positive attitudes. This pattern remained consistent regardless of whether the participant was White or Black.

The complexities and malleability of social categorization as evidenced by the influences of social context, culture, and cognitive processes, necessitates a more in-depth examination of social interactions. Specifically, it is essential to examine how individuals perceive themselves within social groups and how the internalization of these categories influences their behaviours and biases.

1.8.2 Social Identities: Embracing Our Inner Categories

In the process of social categorization, the self is often used as a central point of reference (Srull & Gaelick, 1983). Even during brief interactions with strangers, individuals

tend to cognitively position others in relation to themselves (Bentley et al., 2017). This concept is further explored by Social Identity Theory (Tajfel & Turner, 1979) and Self-Categorization Theory (Turner et al., 1987; Turner & Oakes, 1986).

In the 1970s researchers (Tajfel, 1970; Tajfel et al., 1971) conducted a series of studies in which they formed arbitrary groups based on trivial criteria, such as preferences for abstract art styles or the outcome of a coin toss. Despite the absence of real differences or competition between these groups, participants consistently perceived more individuality within their own group, while viewing the outgroup as more homogenous and stereotypical (Linville et al., 1986; Tajfel, 1981). As a result, this perception led to increased in-group favouritism and intergroup discrimination, with participants allocating more resources to their ingroup, even when doing so was detrimental to the group's overall success (Tajfel, 1970; Tajfel et al., 1971). These behaviours aimed to maximize the distinctiveness of their ingroup and enhance their positive social identity (Brewer, 1979).

Tajfel and Turner (1979) developed Social Identity Theory based on these findings. A social identity is defined as the portion of an individual's self-concept that derives from perceived membership in relevant social groups or categories. It represents the knowledge that one belonging to certain social groups, as well as the emotional significance and value attached to these affiliations (Tajfel, 1974). In essence, this theory highlights the significant influence of group memberships in shaping one's self-concept. This, in-turn, results in the development of distinct social identities, compelling individuals to align their personal dispositions and behaviours with the group's norms, beliefs, rules, perceptions, attitudes, and conduct (Zepp et al., 2013). To illustrate, consider how your behaviour may differ around your parents, friends, or co-workers. Within this framework, researchers examine

how individuals perceive themselves within the context of social groups and how these group identities influence behaviour and attitudes.

Expanding on this research, Turner and Oakes (1986) examined the intricacies of how and why people select specific group affiliations, culminating in the development of Self-Categorization Theory (Turner et al., 1987). Self-categorization is the process by which individuals classify themselves into social categories or groups, emphasizing similarities with ingroup members while differentiating from outgroup members. Self-categorization results in depersonalization, wherein individuals perceive themselves more as representatives of their social categories than as unique individuals (Turner et al., 1987).

The extent to which an individual self-categorizes as a group member hinges on two key factors: accessibility and fit (Turner et al., 1987). Accessibility refers to the ease with which categorizations become salient based on past experiences and motivations. Fit, on the other hand, pertains to how well a specific categorization aligns with the current social context. When accessible categorizations closely align with the social context, individuals are more likely to exhibit a higher degree of self-categorization (Turner et al., 1994).

Higher levels of self-categorization produce stronger adherence to in-group norms, values, beliefs, and behaviours (Balliet et al., 2014). For example, an fMRI (Functional Magnetic Resonance Imaging) study found that higher self-categorization with a group increased conformity to ingroup opinions even when objectively incorrect (Chen et al., 2012). Through self-categorization, groups essentially become a part of the self-concept and hence guide cognitive, affective, and behavioural responses, especially in intergroup contexts (Hogg et al., 2017).

Both Self-Categorization Theory and Social Identity Theory converge in their observation that categorizing people as ingroup or outgroup tends to foster ingroup favouritism and outgroup derogation. These cognitive processes play a pivotal role in how individuals represent themselves within social groups.

Moreover, Self-Categorization Theory distinguishes between personal identity and social identity, classifying them as discrete levels of social categorization (Turner et al., 1994). A fundamental premise of this theory is that people categorize themselves and others based on the attributes that they find most salient, which significantly influences a wide range of attitudes, emotions, and behaviours (Turner et al., 1987).

According to Tajfel and Turner (1986), there is an important distinction between an individual's personal identity and their social identities. Personal identity pertains to an individual's unique traits, preferences, and distinctive qualities. In contrast, social identity is the sense of belonging and affiliation with specific groups, such as nationality, ethnicity, gender, religion, or club membership. This differentiation illuminates how personal variables and social categorization processes interact to influence behaviour across a variety of contexts, including interpersonal and intergroup interactions.

Moreover, individuals can perceive the self at different levels of inclusivity, including the personal self, self as a group member, and the superordinate level of self as a human being. The level at which the self is defined, influences how individuals interact with others, whether they belong to their ingroup or an outgroup (Turner et al., 1987 as cited in Reimer et al., 2020).

Types of Social Identities. To further elucidate the distinction between

personal and social identities, Brewer (2001) outlined four variations of social identity: person-based social identities, relational social identities, group-based social identities, and collective identities. Each of these variants uniquely contribute to a person's self-concept and their experience of the self.

Person-based Social Identities. Grounded within an individual's self-concept, person-based social identities are often framed within social categories. This form of social identity prompts individuals to explore how they perceive themselves within a specific social category, defining their self-concept within that context (Thoits & Virshup, 1997 as cited in Brewer, 2001). Examples of person-based social identities include gender identity (e.g., Carter, 2014; van Breen et al., 2017), ethnic and racial identity (e.g., Hughes et al., 2015; Sidanius et al., 2004; Verkuyten, 2016), and cultural identity (e.g., Kim, 2007; Miramontez et al., 2008). These identities are defined by their emphasis on content, which includes the adoption of psychological traits, expectations, customs, beliefs, and ideologies associated with belonging to a particular social group or category (Brewer, 2001). This emphasis on content is a fundamental aspect of how the individual shapes and defines the self in the context of the larger social landscape.

Relational Social Identities. At the interpersonal level, relational social identities reconceptualize the self in relation to others within the context of role relationships (Brewer & Gardner, 1996; Sluss & Ashforth, 2007). These relationships include occupational roles (e.g., supervisor-subordinate, doctor-patient), familial connections (e.g., parent-child, sibling-sibling), and personal relationships such as friendships and intimate partners (Brewer, 2001). Relational social identities are moulded by societal norms, the expectations

associated with specific roles, and the intricate dynamics of interpersonal relationships within these roles (Brewer, 2001).

Group-Based Social Identities. When an individual's sense of self transitions from a focus on their unique traits and personal identity to a cohesive identity shared by a salient group or social category, they are embracing a group-based social identity (Brewer, 2001).

This shift in identity has two primary effects on an individual's self-concept. First, the salience of a specific group accentuates the contrast between the ingroup and outgroup thereby effectively blurring the boundary between an individual's personal identity and the homogenous group identity (Brewer, 2001). The cohesiveness of this group identity exerts substantial influence, as individuals may experience neurological and physical effects arising from favourable or adverse experiences shared with ingroup members. For instance, an fMRI study examined the neural activity of baseball fans supporting rival teams while watching a simulated baseball game. The study found that observing negative outcomes for the favoured team, such as losing a game or the rival team scoring, was correlated with brain activity typically linked to experiences of pain and anger. Conversely, observing favourable outcomes for the preferred team, like game victory or the rival team's defeat, was correlated with brain activity typically associated with the experience of pleasure. Notably, these correlations were particularly pronounced among participants who reported a willingness to aggress toward rival fans (Cikara et al., 2011).

The second way self-concept is altered by this group-based social identity is through self-stereotyping, where individuals adapt their behaviours and attitudes to align with those of the group, thereby enhancing commonalities within the ingroup and distinctions from outgroups (Turner et al., 1987). For example, consider a football fan surrounded by fellow

fans in a stadium. While at the office, this fan may be a respected professor and researcher, but within the stadium, she transforms into a passionate supporter of her football team, well-versed in the latest fan chants dedicated to her team.

In essence, group-based social identities signify a shift in how individuals perceive and experience themselves. Rather than fixating on personal dispositions and unique identifiers, individuals identify as typical members of the group or social category with which they are affiliated. This group membership becomes an integral part of their self-concept (Turner et al., 1987).

Collective Identities. Unlike group-based social identities or categorizations, collective identities involve more than just belonging – collective identities emerge from the interactive efforts of group members to define the group's distinct values, goals, and desired reputation (Brewer, 2001). This type of identity refers to the integrated group identity that emerges from common interests and experiences (Brewer, 2001; van Zomeren et al., 2018). Collective identities can form the basis for various forms of collective action, as groups strive to defend their interests and values. The concept is therefore critical for understanding grassroots social and political mobilization (Brewer, 2001).

In examining these variations of social identities, we gain a profound insight into the multifaceted ways individuals perceive themselves within the context of social groups. This intricate tapestry of social identities is integral to our understanding of human behaviour, particularly in social and group contexts. Recognizing the distinctiveness and interplay of these variations of social identities, paves the way for a more nuanced understanding of how individuals perceive themselves, others, and the groups they belong to. These

perceptions not only impact intrapersonal dynamics but also have far-reaching implications for intergroup relations, intercultural interactions, and even collective actions.

Gaps in Social Identity Research. Social Identity Theory (Tajfel & Turner, 1979) and Self-Categorization Theory (Turner et al., 1987) offer a robust framework for understanding prejudice and dehumanization between groups. However, certain shortcomings are evident in the limited evaluation of interactions and relationships between different group identities, including the potential fusion or conflict among elements from different identities, as well as the insufficient focus on how contextual factors influence these identities (Amiot et al., 2007; Deaux & Martin, 2003; Stryker et al., 2005; Turner & Reynolds, 2012). For instance, African Americans who achieve success in American society may sometimes grapple with complex feelings related to betraying their racial identity (Postmes & Branscombe, 2002). These limitations highlight the necessity for further analysis of the complexities of identity development and its multifaceted influence on various social relationships.

This oversight highlights the gaps in our understanding of the specific mechanisms through which social identities shape a person's cognition and behaviour. While extensive research has shown the effects of self-stereotyping on behaviour and attitudes, such as negative self-views, declining math performance, and negative impact on salary negotiations observed among female STEM (Science, Technology, Engineering, and Mathematics) majors (e.g., Casad et al., 2021; Lenton et al., 2009; Tellhed & Björklund, 2022), there remains a need for a more comprehensive understanding, especially considering that these influences may vary between different groups. For example, Sinclair et al. (2006) found that African American university students who were knowledgeable of low academic

performance stereotypes and allowed salient social identities to influence self-evaluation in stereotype-consistent ways did not engage in self-stereotyping that would have negatively affected their academic performance. This suggests that the social identities developed in smaller peer interpersonal networks may exert more influence on academic performance than stereotypes (Sinclair et al., 2006). While Social Identity Theory has yet to fully articulate the cognitive mechanisms linking the salience of one's identity to stereotype-consistent behaviour (Casad et al., 2021; Crabtree et al., 2010) and Self-Categorization Theory asserts that depersonalization plays a role in shaping normative behaviours (Hogg & Smith, 2007), the intricate interplay of factors driving self-stereotyping requires further specification.

1.8.3 Beyond the Clichés: The Good, the Bad, and the Ugly Truth of Stereotypes

Stereotyping is a central element in all forms of prejudice, playing a pivotal role in how outgroups are perceived and portrayed (Ghavami & Peplau, 2013; Koenig & Eagly, 2019; Son & Shelton, 2011; Spencer-Rodgers et al., 2007; Vonk, 2002). Stereotypes covertly mould intergroup relations and influence overt human behaviour towards those who are perceived as different (Cuddy et al., 2007a; Rutland & Brown, 2001). Researchers have provided compelling evidence of the impact of stereotypes, demonstrating how priming of negative stereotypes can result in discriminatory practices such as biased hiring decisions against women in leadership roles or maintaining physical distance from Black people (Goff et al., 2008; Lane et al., 2007). These effects persist even among individuals who explicitly deny biases or consciously disavow racism (Lane et al., 2007; Pearson et al., 2009). This highlights the insidious and enduring influence of stereotypes on human behaviour, often operating beneath the surface of conscious awareness.

The term “stereotype” originates from two ancient Greek words: *stereos* (στερεός) meaning ‘solid’ and *týpos* (τύπος) meaning ‘impression’. These words converged to create the French word “*stéréotype*,” originally describing a printing process that involved duplicating a document from the metallic impression of a papier-mâché mould of the original (Vilinbakhova, 2014). When this concept is applied to people, the etymology of “stereotype” aptly aligns with its modern definition: rigid beliefs of one social group, which indiscriminately ascribe the same characteristics to all individuals within a targeted outgroup, primarily based on race, ethnicity, culture, or other differences (Elligan, 2008; Miller, 1982 as cited in Schneider, 2004).

Stereotypes, despite their negative aspects, serve a functional purpose. Research has consistently demonstrated that human cognitive limitations when required to observe, assess, and respond to vast amounts of stimuli, often results in a reliance on mental shortcuts, such as stereotypes and prior knowledge, for quick evaluations and judgments (Fiske & Taylor, 2020; Goffin et al., 2003). These shortcuts become especially prominent when individuals face contextual challenges, including cognitive resource depletion, time pressure, and ego depletion (Fiske & Taylor, 2013; Hagger et al., 2010; Stepanikova, 2012). Under such conditions, pre-existing perceptions, such as those related to race, gender, sexual orientation, or ethnicity become more prominent (Kleider-Offutt et al., 2016; Krieglmeyer & Sherman, 2022; Stepanikova, 2012). Although these cognitive shortcuts conserve mental energy, they can inadvertently result in biased judgments and discriminatory attitudes (McConnell & Leibold, 2001).

In cognitively or physically demanding situations, individuals with higher levels of prejudice tend to default to stereotype-consistent knowledge (Sherman et al., 2000, 2005).

Even in low-demand scenarios, highly prejudiced individuals dedicated more attention to counter-stereotypic behaviours, possibly to question the validity of the inconsistent information and rationalize unexpected behaviours (Ditto et al., 2003; Sherman et al., 2005). In contrast, individuals with lower levels of prejudice strive for less biased judgments by attempting to form individuated impressions, even when those impressions contradict stereotypes (Sherman et al., 2005). Apart from cognitive fatigue, the extent of stereotype usage can be influenced by factors such as the salience of relevant social categories, the relational strength between a category and a stereotype, and a perceived power imbalance within the interaction (Dijksterhuis et al., 2000; Goodwin et al., 2000; Rees et al., 2020).

Goodwin and colleagues (2000) demonstrated that individuals in positions of power tend to rely on stereotypes when evaluating their subordinates, leading to biases in attention and judgment toward stereotypical information. This tendency to stereotype can persist over time, potentially resulting in negative consequences such as discrimination and ingroup favouritism (Goodwin et al., 2000). Moreover, these findings bear significant real-world implications. For example, González et al. (2019) found evidence of gender bias in recruitment, with a preference for male candidates. However, this bias diminished when female candidates had higher qualifications than their male counterparts but increased when the female candidates were mothers. The researchers concluded that this variation in hiring practices among highly qualified women was primarily rooted in the stereotype that mothers, even when highly qualified, might be less productive.

Additionally, Govorun and Payne (2006) discovered that cognitively depleted participants were more likely to misinterpret a common household tool as a weapon when it was overlaid with a Black person's face. This finding carries broad implications,

particularly in the context of the treatment of underrepresented and marginalized groups within the domain of law enforcement and the criminal justice system.

Building upon the intricacies of stereotype activation and how they affect interpersonal and intergroup interactions, it is also essential to examine the contents that shape these pervasive social constructs. This involves a closer examination of the elements and characteristics that define stereotypes, providing a nuanced perspective on the complexities of social perception.

Stereotype Content Model. Since the 1930s, researchers in the field of Social Psychology had typically studied stereotypes using a binary ingroup vs outgroup approach. This perspective assumed that groups were perceived as either positive or negative with a focus on understanding the formation of stereotypes rather than their specific content (Fiske et al., 2002). However, this perspective was significantly altered when Fiske and her colleagues (2002) introduced the Stereotype Content Model, asserting that stereotypes are not limited to a simple positive or negative dichotomy; rather they can exhibit a spectrum of characteristics based on two core dimensions: warmth and competence.

The warmth dimension pertains to the assessment of perceived intentions and moral character of others (Fiske et al., 2002). This dimension involves the examination of positive attributes in individuals and groups, including qualities like prosociality, friendliness, sincerity, and tolerance. When these attributes are discerned within others, they tend to be perceived as non-threatening, fostering an increased sense of approachability and trustworthiness. As a result, groups characterized as warm typically receive favourable evaluations, as they are generally regarded as amicable and safe (Cuddy et al., 2007a). In

essence, this dimension highlights the pivotal role of moral character and benevolent intentions in shaping social stereotypes (Fiske et al., 2002).

The competence dimension, on the other hand, reflects the perceived skilfulness, intellect, efficacy, and overall capabilities of a group or individual (Fiske et al., 2002). When others are rated as highly competent, they are typically viewed as proficient, influential, and adept at attaining their goals (Cuddy et al., 2007a). In contrast, groups stereotyped as low in competence are often perceived as unskilled, ineffective, and lacking aptitude.

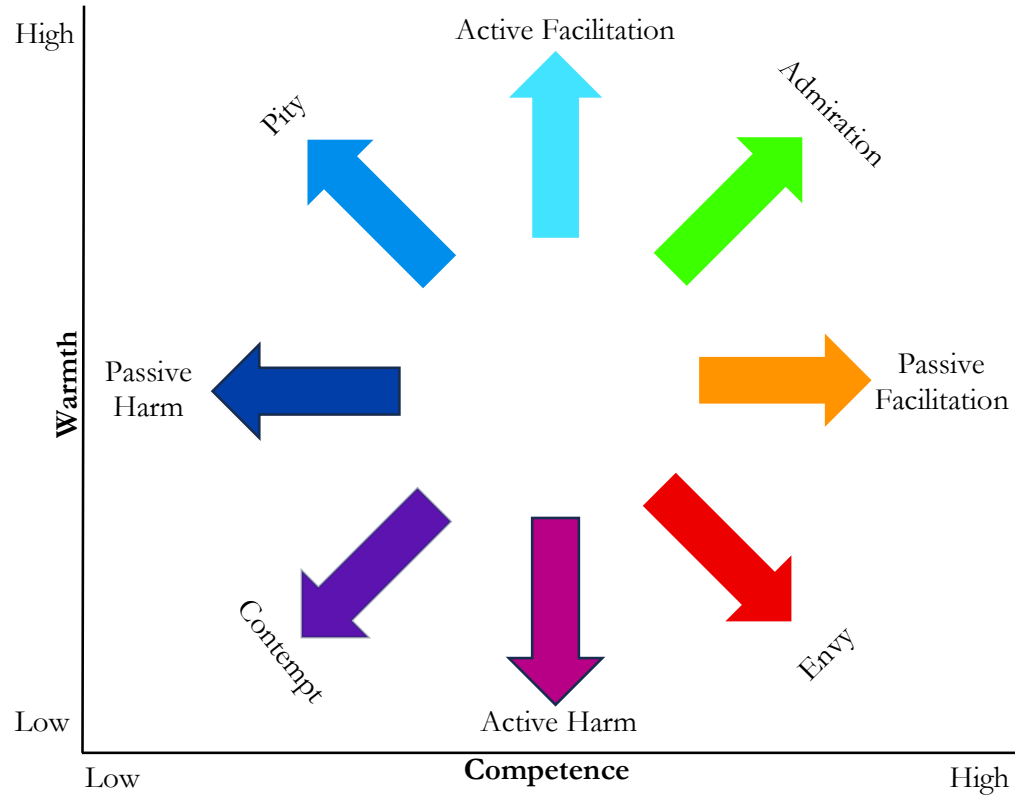
The Stereotype Content Model (Fiske et al., 2002) is graphically represented as a dual-continuum model (see Figure 7) to highlight the potential blending of warmth and competence attributes. This framework reinforces the model's central premise that stereotypes are not rigid, one-dimensional constructs, but rather dynamic and multifaceted (Fiske et al., 2002). Moreover, it highlights that the emotions evoked by judgments of warmth and competence and the prejudices associated with outgroup stereotypes, are deeply rooted in social factors, particularly the presence of cooperation or competition and status in society – economic or otherwise (Fiske et al., 2002).

In practical terms, consider societies marked by significant economic disparities. In a competitive society, high-status groups and individuals are often perceived as competent but cold, resulting in feelings of resentment from others. Meanwhile, those with lower status may be perceived as cold and incompetent, leading to derision and avoidance (Durante et al., 2013, 2017; Fiske et al., 1999, 2002). Conversely, in a cooperative society high-status groups and people are likely to be viewed as both competent and warm, eliciting admiration, while those with low status are considered warm but incompetent evoking feelings of pity (Cuddy et al., 2007a; Fiske et al., 2002).

The model is elaborated upon by the BIAS (Behaviours from Intergroup Affect and Stereotypes) map developed by Cuddy et al. (2007b) (see Figure 7). This map predicts the direction of stereotypes and prejudice based on four behavioural responses aligned with the Stereotype Content Model: active facilitation (e.g., helping), active harm (e.g., aggression), passive facilitation (e.g., obligatory or convenient cooperation), and passive harm (e.g., ignoring or neglect) (Cuddy et al., 2007b).

Figure 7

Stereotype Content Model with BIAS Map



Note. Predicted behavioural responses to warmth and competence judgments aligned with the stereotype content model according to the BIAS map. Source: *Cuddy et al. (2007)*.

According to Cuddy et al. (2008), in this way, the stereotype content model and BIAS map account for the synchrony among the three facets of prejudice – cognitions (stereotypes), affect (emotion-driven biases), and behaviours (discrimination). Evaluations of other peoples' behaviours, whether fully elaborated or stereotyped, evoke unique emotional reactions. These emotions, in turn, influence the behavioural responses tailored to the situational context and the perceived potential threat posed by the outgroup. Within this framework, the warmth and competence content of stereotypes collectively generate distinct patterns of bias, impacting cognition, emotion, and behaviour (Cuddy et al., 2008).

In conclusion, the Stereotype Content Model provides a nuanced perspective on stereotypes, highlighting the complexity and diversity of stereotyping processes and their interplay with emotions, cognitions, and behaviours. It underscores the central role of warmth and competence as dimensions influenced by status and competition and challenges the notion of uniform antipathy in stereotypes, recognizing the functional roles of mixed stereotypes in maintaining societal reference groups. This integration with principles of intergroup bias and appraisal theories further enriches our understanding of the intricate nature of stereotyping.

While the specific targets of bias may vary across contexts, these psychological roots of discrimination have commonalities. Comprehending these shared underpinnings illuminates universal patterns in how prejudices arise and persist. This foundation provides crucial insight into the psychological roots of prejudice that may underlie inflexible responding and harmful intergroup attitudes and will inform the next discussion of evidence-based methods to counteract prejudice. By bridging the gap between the roots of prejudice, we gain a more holistic perspective to progress toward a more just society.

Chapter 2 – Methods of Prejudice Reduction

2.1 Chapter Overview

Prejudice remains a persistent and enduring societal challenge, proving resistant to targeted interventions. As discussed in the previous chapter, the tenacity of prejudice stems from deeply rooted cognitive processes of social categorization, stereotyping, and ingroup favouritism. These prejudices manifest in a myriad of forms, including racism, sexism, weight bias, and homonegativity with far-reaching consequences, exacerbating disparities, perpetuating discrimination, and profoundly impacting health and wellbeing.

Language within the verbal community is pivotal in the spreading, instilling, and legitimization of prejudice and with increasingly dehumanizing rhetoric, it may lead to a lack of empathy, denial of full humanness, and even the endorsement of violence against the outgroup. The multifaceted nature and enduring presence of prejudice highlight the need for continued research to fully understand its nuances and derive effective strategies to counteract prejudice in all its manifestations. This chapter will build upon the foundation established in Chapter 1, by reviewing evidence-based methods to reduce prejudice. While promising approaches exist, prejudice remains an enduring issue, emphasizing the necessity of additional research to refine existing techniques and develop novel interventions.

In this chapter, I will discuss three prominent strategies for combating prejudice: Intergroup Contact Theory, Diversity Training, and Unconscious Bias Training. Each approach will be introduced and discussed with an emphasis on empirical support and limitations to their implementation, shedding light on the complexities of prejudice reduction in contemporary society.

Intergroup Contact Theory, also known as the Contact Hypothesis, serves as one of the cornerstone strategies in prejudice reduction. This approach emphasizes the power of interpersonal interactions between members of different social groups in mitigating prejudice. I will discuss the theoretical underpinnings of this approach, examining its key principles and how contact can foster improved intergroup relations. Additionally, I will review empirical evidence supporting its effectiveness in promoting tolerance and understanding between groups. However, I will also critically analyse its limitations, including the conditions under which contact may not yield the desired outcomes.

Diversity Training is another widely employed strategy to tackle prejudice. This section will provide a comprehensive definition of diversity training and its objectives. We will delve into the various forms and methods employed, from workshops to online modules, and discuss the impact of diversity training programs on reducing prejudice and promoting inclusivity within organizations and society at large. Concurrently, we will critically examine the challenges and criticisms associated with these programs, including issues related to effectiveness, resistance, and potential unintended consequences.

Last, a relatively newer approach to prejudice reduction: Unconscious Bias Training which focuses on addressing hidden biases that people may hold. I will introduce the concept of implicit bias, delve into the techniques and strategies used in training programs, and evaluate the evidence regarding their effectiveness in reducing prejudice and discrimination. This section will also offer a critical analysis of unconscious bias training, highlighting concerns about its long-term impact, potential backlash effects, and critiques surrounding its methodology.

2.2 How to Make Friends and Influence Prejudice Through Intergroup Contact

One of the first documented cases of empirical evidence for prejudice reduction through intergroup interactions was the desegregation of the U.S. Merchant Marines during World War II. Brophy (1945) surveyed hundreds of White seamen on shore leave and found that the more often that a sailor served within an integrated crew, the more likely he would report significantly less prejudice against African Americans. This finding was extended into the general population, specifically among housewives residing in desegregated low-income housing projects in New York City, who expressed increased admiration and respect for their Black neighbours (Deutsch & Collins, 1951). These studies provided early quantitative support for Intergroup Contact Theory.

Intergroup Contact Theory (Allport, 1954), also known as the Contact Hypothesis, proposes that under specific optimal conditions, interpersonal contact between members of different groups can reduce prejudice between those groups. Allport (1954) hypothesized that prejudice reduction hinges on four key conditions: equal status between groups, cooperative pursuit of common interests and goals, and the endorsement of such contact by institutional authorities.

Since this theory was first proposed, a plethora of studies have provided empirical support for the prejudice-reducing effects of intergroup contact. Meta-analyses consistently find an overall negative relationship between intergroup contact and prejudice, meaning more contact is associated with lower prejudice (Pettigrew & Tropp, 2006). One of the most influential studies was conducted by Sherif et al. (1961), who found that competition between groups of boys at summer camp led to hostility, but subsequently introducing superordinate goals that required cooperation significantly improved intergroup attitudes.

Building on the concept of superordinate goals, Cook (1971, 1978) conducted a controlled experimental study to meticulously examine the optimal conditions for intergroup contact in the southern U.S. during the Civil Rights Era (ca. 1954-1968). In these studies, several White female college students, who held prejudicial views against Black people, were recruited for a part-time job in railroad management. Unbeknownst to them, they would be working with a White supervisor and with two other students: one White and one Black, who were confederates working for the researchers. Throughout the experiment, multiple manipulations targeted the participants' prejudicial views. First, the supervisor and White student established themselves as sources of social approval while modelling egalitarian behaviour toward the Black confederate. Second, commonly held stereotypes were gradually deconstructed as the Black confederate consistently performed well and presented herself as friendly, competent, motivated, and self-respecting. Third, daily task rotation emphasized equal status and contributions from all team members. At the end of the experiment, participants in the contact group expressed more empathy for the Civil Rights Movement, rated their Black co-worker highly on competence and likability, and reported less racial prejudice than the control group. This experiment demonstrated the causal relationship between optimal intergroup contact conditions and reduced prejudice.

However, Pettigrew and Tropp (2006) questioned the necessity of Allport's (1954) ideal conditions for intergroup contact. They found that intergroup contact was effective in reducing prejudice, even when it did not meet each of Allport's conditions. For example, Broockman and Kalla (2016) conducted a randomized field experiment on intergroup contact and prejudice towards transgender people. They found that a single, brief conversation between transgender and non-transgender people reduced prejudice towards

transgender people, and that these effects persisted for up to three months. In another randomized field experiment, Kalla and Broockman (2020) examined intergroup contact and prejudice towards immigrants. They found that even brief and unstructured contact between immigrants and non-immigrants reduced prejudice towards immigrants, and that these effects persisted for up to two years. This suggests that contact can be effective in reducing prejudice even under less-than-ideal conditions. Pettigrew and Tropp's (2006) meta-analysis also suggest that contact interventions should be tailored to the specific context in which they are being implemented. For example, if contact is taking place in a setting where there is a lot of prejudice and discrimination, it may be necessary to create contact situations that are more structured and supportive.

Yet it is important to note that a later meta-analysis found that intergroup contact is more effective when the interaction was positive and occurred within a context of equal status and cooperation (Pettigrew & Tropp, 2011). Together, these findings suggest that Allport's ideal conditions moderate the process of prejudice reduction but are not essential.

How contact effects operate psychologically is a prominent and debated issue within the contact hypothesis literature. Researchers have identified several mediating variables, however the most effective one appears to be intergroup anxiety (Brown & Hewstone, 2005; Pettigrew & Tropp, 2006; Stephan & Stephan, 1985). Intergroup anxiety refers to feelings of apprehension and awkwardness when envisioning or participating in intergroup contact, perhaps due to expectations of rejection, embarrassment, or misunderstanding (Stephan & Stephan, 1985). Intergroup contact serves to reduce this intergroup anxiety, which in turn improves intergroup attitudes (Çakal et al., 2021).

Building upon these findings, researchers have also explored how different conditions of contact influence its prejudice-reducing effects. A meta-analysis by Lemmer & Wagner (2015) compared the effects of voluntary and involuntary contact. They found voluntary contact to be more effective at reducing prejudice, supporting Allport's (1954) hypothesis about the importance of equal status contact. Other work has examined factors like whether contact is one-on-one or in groups, finding that one-on-one contact promotes greater gains in outgroup knowledge (Pettigrew et al., 2007).

Another mechanism through which intergroup contact reduces prejudice is that it increases knowledge and empathy for the other group. When people have positive contact with members of other groups, they learn about the other group's culture and perspectives. This increased knowledge and empathy leads to more positive attitudes towards the other groups. Intergroup contact can also lead to the development of cross-group friendships. Cross-group friendships are friendships that develop between members of different groups. Cross-group friendships are particularly effective at reducing prejudice because they allow people to get to know members of other groups on a personal level.

Generalization of Intergroup Contact Effects. One of the key questions about Intergroup Contact Theory is whether the effects of contact generalize to other groups and other people within the targeted group. For example, if you have positive contact with a Muslim person, will you also have more positive attitudes towards other Muslims, or even towards other religious groups?

The research on the extent to which positive intergroup contact translates into improved attitudes toward other groups or people is mixed. On one hand, some studies provide evidence for generalization. For example, Brown and Hewstone (2005) conducted a

study demonstrating that contact with one group improved attitudes towards other outgroups, even without cooperative or equal status contact. Additionally, Rhodes and colleagues (2001) demonstrated that indirect exposure to individual outgroup members using positive images of composite faces resulted in generalization of positive attitudes to other outgroup members. These findings were corroborated in a meta-analysis by Dovidio et al. (2011) which indicated that contact with one group yielded more favourable attitudes toward other groups, even when the contact was brief and indirect. However, the use of composite faces may suggest attractiveness of the individual group member during contact as an influential factor (Amaya et al., 2022; Rhodes et al., 2005).

However, other studies suggest generalization is difficult to achieve. González and Brown (2003) investigated the conditions necessary for facilitating generalization and found that priming salience of one's own group and a superordinate group (e.g., nationality) proved to be the most effective means to achieve generalization, yet still difficult. Even when employing optimal strategies, positive attitudes may not generalize beyond the specific contact itself or to all members of the targeted outgroup. As some people holding prejudices may dismiss counter-stereotypical individuals as "one of the good ones," (Wolsko et al., 2003). González and Brown (2003) further identified factors that diminish the likelihood of generalization, including the salience of group membership, the nature and context of the interaction (e.g., supportive or hostile; cooperative or competitive), and the intensity of any pre-existing animosity between the groups. They explained that if the pre-existing animosity between the groups is too great, individuals may be less likely to generalize positive attitudes from individuals to other members of the outgroup.

Moreover, Pettigrew and Tropp's (2008) meta-analysis revealed that enhanced knowledge about the outgroup reduces intergroup anxiety, increases empathy, and fosters perspective-taking towards outgroup members. Together, these factors effectively diminish the threat perception associated with the outgroup and significantly mediates the relationship between contact and the reduction of prejudice.

While questions remain about the extent of generalization, Intergroup Contact Theory has proven one effective prejudice reduction approach as numerous studies have replicated the positive effects of intergroup contact (Pettigrew & Tropp, 2006, 2008, 2011). Fostering positive interactions between different social groups has been demonstrated to promote civic engagement, challenge stereotypes, and improve the experiences of minority groups (Glass, 2012; Gocłowska et al., 2013; Gurin et al., 2004; McKeown & Taylor, 2017).

However, Intergroup Contact Theory is not without its limitations. Critics have identified several key issues that constrain the theory and may restrict its applicability across settings. One major critique is that contact interventions place undue burden on minority group members to drive attitude change (e.g., Barlow et al., 2013; Stathi et al., 2020). Additionally, creating the optimal conditions specified by the theory can prove challenging in real world contexts (e.g., Enos, 2014, 2019). Furthermore, the effects of contact tend to be strongest at the individual level, with broader societal attitude change difficult to achieve (e.g., Friehs et al., 2023). As such, while intergroup contact represents a useful prejudice reduction approach, examining its limitations provides important insights for refining and expanding its implementation.

2.2.1 Limitations of Intergroup Contact Theory

Intergroup Contact Theory (Allport, 1954) presents a promising framework for reducing prejudice between different groups. The basic premise of the theory is that, under optimal conditions, interpersonal contact between members of different groups can improve intergroup attitudes. Nonetheless, there are several conceptual limitations such as the emphasis on individual-level contact overlooks the broader social context in which intergroup relations are embedded (Forbes, 1997, 2004).

Interwoven factors such as social inequalities, power differentials, and institutionalized discrimination significantly impede the effectiveness of intergroup contact in reducing prejudice. Previous encounters with prejudice and discrimination can overshadow and negate positive contact experiences, reinforcing biases rather than fostering empathy and understanding. This is evident in research like that of Guffler & Wagner (2017), where an intergroup contact intervention between Jewish and Arab-Israeli students led to positive short-term effects for Arab Israeli students but negative short- and long-term effects for Jewish Israeli students. These findings highlight the potential for intergroup contact to backfire, particularly when underlying power differentials and societal imbalances are not addressed. Moreover, minority group members' previous experiences with perceived discrimination and their anticipation of majority group members' intergroup anxiety can heighten their own anxiety and lead them to avoid future interactions (Andrighetto et al, 2013). Contact within unequal power dynamics often reinforce rather than challenge existing intergroup hierarchies (Saguy et al., 2009). Addressing underlying status imbalances is crucial for fostering genuine intergroup equality and reducing prejudice.

Furthermore, social conflict may harden intergroup tensions beyond the capacity of intergroup contact to reduce prejudices. Prime examples of this tension include the Israeli and Palestinian conflicts (e.g., Guffler & Wagner, 2017; Saguy et al., 2009) and the Northern Ireland conflict between the Catholics and Protestants (e.g., Moeschberger et al., 2005). To this end, Intergroup Contact Theory is criticized for its assumption that participants enter the contact relatively open-minded, downplaying the role of social tension and motivations as prejudice only plays a limited role in ethnic conflicts (Green & Seher, 2003). This oversight is problematic because pre-existing attitudes likely moderate the relationship between contact and reduced prejudice (Hodson, 2011).

Individuals do not enter intergroup interactions as 'blank slates' as prejudice is often transmitted by parents and other members of the verbal community (Dhont & Van Hiel, 2012). Their pre-existing attitudes, experiences, motivations, and personalities all influence how they respond to intergroup contact (Hodson, 2011). For example, Asbrock et al. (2012) found that intergroup contact had different effects on prejudice reduction depending on individual differences in Social Dominance Orientation (SDO) and Right-Wing Authoritarianism (RWA). People high in RWA, who tend to perceive the world as a threatening place and desire security and order, benefitted from positive intergroup contact because it reduced perceived threat. In contrast, people high in SDO, who typically prioritize maintaining the social hierarchy and ingroup dominance, did not benefit. Failing to assess these pre-existing differences limits our understandings of how and when contact can enhance intergroup relations.

Additionally, a consistent problem for researchers is how to encourage highly prejudiced individuals to seek out intergroup interactions in the first place. Authoritarians,

for example, are more likely to view contact with outgroup members as superficial, forced, and of unequal status (Pettigrew, 2008). They also consistently avoid intergroup contact at multiple levels including being less likely to reside in diverse neighbourhoods, avoid contact with outgroup neighbours, and are less likely to form friendships with them (Pettigrew, 2008). This avoidance of intergroup contact reinforces their prejudices and makes reducing prejudice more difficult (Paolini et al., 2016).

These individual differences in prejudice levels allude to a key limitation in the sustainability of prejudice reduction following intergroup contact. Intergroup Contact Theory operates on the assumption that positive contact is a self-perpetuating process. The theory suggests that once individuals experience positive intergroup interactions, they are more likely to seek out similar experiences in the future, leading to a virtuous cycle of reduced prejudice and improved intergroup relations (Allport, 1954). In principle, this notion aligns with physiological evidence showing benefits from positive intergroup contact including decreased physiological stress responses during future intergroup interactions (Page-Gould et al., 2010; West et al., 2015). However, this assumption may not always hold true. Individuals with deeply entrenched prejudices may require more extensive and sustained intergroup contact to experience lasting attitudinal shifts (Dhont et al., 2012; Hodson, 2011). While initial contact may lead to positive changes in attitudes and behaviours, these effects may dissipate over time, particularly in the absence of ongoing contact or supportive social norms (Guffler & Wagner, 2017). Moreover, the nature of the intergroup contact itself plays a significant role. Negative or anxiety-inducing intergroup interactions can reinforce existing prejudices and lead to avoidance of future interactions, highlighting the importance of high-quality intergroup contact (Pettigrew & Tropp, 2006).

Lastly, Intergroup Contact Theory assumes both majority and minority groups share responsibility for reducing prejudice. Yet minorities often shoulder a disproportionate share of the burden for ensuring the success of the interaction (Dixon et al., 2010). White people frequently worry about appearing prejudiced during these encounters, while minorities may anticipate prejudice and discrimination affecting their perception of the interaction (Shelton et al., 2005; Shelton et al., 2010). This dynamic can lead minorities to use self-protective social strategies to avoid conflict and dispel negative attitudes like exaggerated engagement in the conversation, avoiding the discussion of prejudice or systemic oppression, suppressing negative emotions, and engage in impression management to disconfirm stereotypes (Bergsieker et al., 2010; Nuru-Jeter et al., 2009; Saguy et al., 2008; Shelton et al., 2005; Wilson & Gentzler, 2021).

Although these behaviours may reassure their majority group counterparts and reduce their prejudice, the minority group member experience more negative emotions, feel inauthentic, and evaluate the interaction and their partner negatively (Saguy et al., 2008; Shelton et al., 2005). This emotional labour is taxing, especially for minorities with a history of prejudice (Banos et al., 2021). It is further compounded when majority members lack the motivation to alter their views or understand the minority perspective (Asbrock et al., 2012; Saguy & Dovidio, 2013).

Even well-intentioned majority members can inadvertently create communication barriers and hinder understanding through anxious behaviours like hesitant speech, limited eye contact, fidgeting, excessive blinking, physical distance, or appearing visibly uncomfortable, which can be interpreted as indicators of prejudice (Dovidio et al., 1997; Greenland et al., 2012; McConnell & Leibold, 2001; Trawalter & Richeson, 2008).

Ironically, these signals of anxiety about appearing prejudiced, may be construed as indicators of prejudice that confirms the minority group member's expectations increasing intergroup anxiety and avoidance of future interactions (MacInnis & Page-Gould, 2015; Richeson & Shelton, 2005). This dynamic of intergroup anxiety and interpreting the anxious behaviours through the lens of prejudice anticipation may, in turn, increase prejudice against the majority group altering the interaction into a self-fulfilling prophecy that perpetuates prejudice (Fiske, 2002; Hayward et al., 2017). Mitigating majority members' intergroup anxiety is critical for positive interracial contact that fosters mutual understanding and reduces unintentional prejudice perpetuation.

In summary, while Intergroup Contact Theory (Allport, 1954) provides a valuable framework for understanding and addressing prejudice through positive interpersonal interactions. However, it is important to acknowledge its limitations, such as its emphasis on individual-level contact and its oversight of broader social factors that can impede its effectiveness. Moreover, the potential for intergroup contact to backfire necessitates a nuanced understanding of the underlying dynamics involved.

Given these limitations, it becomes evident that intergroup contact alone is insufficient for effective prejudice reduction. A more comprehensive approach that addresses the root causes of prejudice, such as social inequalities, power differentials, and institutionalized discrimination, is needed. Diversity training programs can play a valuable role in this regard by raising awareness of biases, promoting cultural competency, and fostering empathy and understanding between different groups. In the next section, the efficacy of diversity training programs in reducing prejudice and promoting intergroup harmony and a more equitable society will be examined.

2.3 Mind the Gap: Using Diversity Training to Build Bridges Over Troubled Waters

Across many industries, women and minorities frequently experience significant workplace discrimination (e.g., Coombs et al., 2005; Grandey et al., 2019; Wingfield, 2007). For example, managers often doubt the cognitive abilities of Black employees, which reinforces and contributes to racial disparities in job performance ratings between Black and White employees (McKay & McDaniel, 2006).

This discrimination is especially pronounced in the service industries where Black employees are pressured to showcase exuberant enthusiasm to increase perceptions of warmth and have their performance considered on par with their White colleagues (Grandey et al., 2019). To be viewed as more professional, Black employees may alter how they speak, style their hair, or even use a different name at work (McCluney et al., 2021).

A toxic organizational culture in which discrimination proliferates can have detrimental impacts on both victimized employees and the organization itself. For individual employees, frequent exposure to workplace discrimination is associated with increased stress affecting life both at work and at home, increased susceptibility to chronic illnesses, depression, anxiety, as well as increased unhealthy behaviours like smoking and heavy drinking (Chavez et al., 2015; Okechukwu et al., 2014; Woodhead et al., 2021; Xu & Chopik, 2020). At the organizational level, discrimination can lead to burnout among disadvantaged employees and lead to reduced productivity, job satisfaction, lower organizational commitment, along with an increased turnover rate (Anjum et al., 2018; Antón et al., 2022; Nunez-Smith et al., 2009; Ensher et al., 2001). These impacts underscore

the need for proactive interventions to address workplace discrimination not only to ensure the wellbeing of their employees but also as a strategic imperative for maintaining a health and sustainable organizational environment.

One of the most popular methods of addressing these issues is through diversity training. Diversity training programs emerged in the 1960s during the U.S. Civil Rights Movement as organizations sought strategies to comply with new equal employment opportunity regulations (Anand & Winters, 2008). They are educational interventions in the workplace, designed to raise awareness of prejudice, discrimination, and other forms of intergroup bias, while promoting positive intergroup relations (Bezrukova et al., 2016).

Diversity training programs draw heavily on conceptual frameworks from social psychology and organizational behaviour research with their theoretical foundation anchored in Intergroup Contact Theory (Allport, 1954; Paluck, 2006; Paluck et al., 2021). They also incorporate contemporary principles like aversive racism and modern racism (Dovidio & Gaertner, 2004). These concepts address the subtle and often ‘invisible’ forms of bias that characterize contemporary prejudice, compared to more blatant racism of the Jim Crow-era and the UK’s colonial past (e.g., segregation, interracial violence).

These programs are typically delivered in a workshop format and cover a range of topics, including implicit bias, stereotypes, inclusive communication, and how cultural factors like values, biases, and assumptions shape communication and influence decisions (Lindsey et al., 2015; Okorie-Awé et al., 2021; Paluck, 2006; Sanchez & Medkik, 2004). These workshops often employ experiential learning techniques, group discussions, and role-playing exercises, to engage participants and enhance their understanding of these issues (Civitillo et al., 2018; Lawson et al., 2010; Lawson & Veraldo, 2022; Paluck, 2006).

Effective diversity interventions require a systemic approach, strategically targeting various facets of organizational culture. This includes leadership, organizational policies, and the behaviours of individual employees (Sabharwal, 2014). The objective is to cultivate an inclusive environment that not only embraces diversity at an individual level but also instigates a transformation of organizational practices, policies, and structures. The aim is to facilitate the seamless integration of individuals from diverse social identity groups within the organizational framework (Jackson, 2014). However, it is important to acknowledge that the efficacy of diversity training programs in reducing prejudice and discrimination remains mixed. While some studies have demonstrated positive outcomes, others have shown limited effects (Bezrukova et al., 2016; Lai & Linsek, 2023; for a review see Paluck, 2006).

2.3.1 Limitations of Diversity Training

Diversity training has become one of the most widely utilized methods for fostering greater inclusivity and equity in the workplace (Paluck & Green, 2009). However, despite its widespread adoption, there is growing concern regarding the ethical implications of implementing training programs without a clear and consistent methodological foundation, coupled with limited empirical evidence of efficacy (Paluck, 2006).

The limitations plaguing diversity training programs stem from a lack of robust theoretical foundations (Paluck, 2006; Bezrukova et al., 2012). This has led to a lack of consensus on optimal curriculum, structure, length, delivery methods, and measurement tools, making it challenging to compare the efficacy of different training programs and impeding the development of standardized practices (Paluck, 2006). Consequently, a multitude of training approaches have emerged, with varying degrees of effectiveness (Bezrukova et al., 2012).

While Intergroup Contact Theory (Allport, 1954) serves as the primary theoretical basis for many diversity training programs and these programs provide a unique medium for contact hypothesis researchers to attain real world data, there is mixed evidence on the efficacy of these interventions (Paluck, 2006). While there is evidence that diversity training programs that incorporate positive intergroup contact are more effective than courses exclusively focused on content (Denson, 2009), intergroup contact alone does not guarantee positive outcomes.

Although the optimal conditions proposed in Intergroup Contact Theory (Allport, 1954) are not essential (Pettigrew & Tropp, 2006), the workplace is a distinct context where the absence of factors such as equal status can have financial ramifications. For instance, attendees of a diversity training course recruited by Sanchez and Medkik (2004), who were recruited to monitor the post-intervention behaviour of managers in-situ, noted increased discrimination toward their non-White co-workers. This could be attributed to managers feeling accused of prejudice and being mandated to undergo diversity training. The mere assumption that an employee from a marginalized group had filed a grievance against a manager, even when anonymous, often leads to retaliation against that employee (U.S. Equal Employment Opportunity Commission, 2020).

Reviews of diversity training methods suggest that their effectiveness is not only questionable but may even be counterproductive (Devine & Ash, 2022; Paluck et al., 2021). Although participation in diversity interventions can enhance the perception and awareness of diversity within groups and foster positive intersectional attitudes, perceived social diversity can simultaneously trigger perceptions of threat among members of dominant

groups. Paradoxically, this may inadvertently reinforce biases and stereotypes against underrepresented groups (Ehrke & Steffens, 2014).

Moreover, research has shown that the use of emotionally charged language, such as accusatory or guilt-laden language, can lead to resentment and resistance among participants (Barnes & Grayer, 2023). This implies that the way diversity training is framed can impact participants' attitudes towards it. Individuals may react defensively when they perceive themselves as being accused of prejudice (Legault et al., 2011; Winslow, 2004).

An additional concern noted by Paluck et al. (2021) is the alarming lack of extensive and rigorous research investigating the specific mechanisms and processes through which diversity programs purportedly achieve prejudice reduction. Comprehensive investigations into how diversity training impacts attitudes, emotions, behaviours, and workplace relationships over time are essential to attaining an accurate evaluation of the efficacy of these programs. Yet there is a scarcity of studies examining the long-term effects of diversity training and cross-cultural awareness programs (Bezrukova et al., 2012; Paluck & Green, 2009). Among the few studies that have included follow-up measures, there is a mixed perspective with little evidence of positive attitude or behavioural changes which are liable to deteriorate over time (Bezrukova et al., 2012; Dobbin & Kalev, 2018; Paluck & Green, 2009). Instead, studies have indicated that the positive effects of one-off diversity training sessions are often short-lived (Devine & Ash, 2022; Paluck et al., 2021).

One of the common methodological shortcomings highlight in the systematic reviews is the tendency to focus on short-term effects, often measured immediately after training, providing a limited understanding of the long-term impact of these interventions (Bezrukova et al., 2012). By primarily focusing on short-term outcomes, researchers and

practitioners may overlook the potential for diversity training to foster lasting change of the organizational culture.

Often the measured outcomes of diversity training programs focus on attitudinal learning rather than behavioural change (e.g., Anderson et al., 2020; Levitan & Visser, 2008; for review, see Dobbin & Kalev, 2018). While positive shifts in attitudes are valuable, a critical question emerges regarding whether these attitudinal changes translate into meaningful changes in behaviour and decision-making in the workplace. There is often a disconnect between attitude and behaviour. This gap is rooted in the complexities of human cognition and is further compounded by the deeply ingrained biases that shape our perceptions, judgments, and behaviours even when prejudice is consciously rejected (Albarracín & Wyer, 2000; Sheeran & Webb, 2016; van den Bergh et al., 2010). Our behaviours and choices do not always align with our stated beliefs and attitudes (Young et al., 2010). Because biases are so deeply rooted, increased awareness and improved attitudes towards diversity may not be sufficient to override their subtle influence on everyday workplace interactions, choices, and behaviours (Noon, 2018). For diversity training to foster sustained, increases in equitable behaviours, the programs may need to move beyond a focus on attitudes and provide concrete tools, modelling, feedback, and reinforcement to disrupt automatic biased responses and ingrain new patterns of behaviour.

Chang and colleagues (2019) addressed some of these methodological limitations with a large-scale international diversity training involving over 3,000 participants. While a 20-week post-intervention follow-up showed a notable improvement in attitude change, significant behavioural changes were not observed, except among participants with initially low prejudice towards the targeted group. The deeply ingrained biases and prejudices that

diversity training aims to address are unlikely to be dismantled or significantly altered by a single training session (Bezrukova et al., 2012, 2016; Chang et al., 2019).

In summary, while diversity training has potential for prejudice reduction, assessing efficacy remains challenging due to inconsistencies in approaches, methodologies, and duration of effects. More rigorous, longitudinal research is essential to elucidate how programs may or may not achieve their aims. Given the widespread adoption of diversity training, further research is essential to shed light on how these programs may or may not achieve their intended purpose of reducing workplace discrimination and fostering inclusion. Yet numerous diversity training practitioners rely on a content-focused methodology rather than emphasizing concrete skills trainings like modelling, feedback, perspective-taking, and reinforcement of equitable behaviours.

Considering the varied efficacy of diversity training programs there has been increased interest in implicit bias training as an alternative approach. Implicit bias training focuses specifically on addressing unconscious biases, offering practical skills and tools to recognize and mitigate automatic biased responses. While diversity and implicit bias training aspire for the same goals of equity and inclusion, they employ notably different strategies and methodologies. Implicit bias training's emphasis on addressing unconscious bias through skill-building may offer advantages.

2.4 The Explicit Impact of Implicit Thoughts

In the intricate tapestry of human behaviour and social interactions, a pervasive and often unrecognized force operates beneath the surface of our conscious awareness, shaping our perceptions, judgments, and behaviours. Implicit biases, also known as unconscious bias or implicit social cognition, refers to the attitudes, stereotypes, and associations that we

hold about others without conscious awareness or endorsement (Banaji & Greenwald, 1994; Greenwald & Banaji, 1995; Staats, 2016). These deeply ingrained biases, often acquired through exposure to societal norms, media portrayals, and personal experiences and exert a profound influence on our interactions with others, often leading to unintended consequences that can perpetuate social injustices and inequities (Nosek et al., 2007). Unlike explicit biases that people may choose to conceal for social reasons, implicit biases activate automatically and unintentionally (Nosek et al., 2007; Rudman, 2004). Rather, implicit biases are not accessible through introspection (Greenwald & Banaji, 1995).

Implicit bias is pervasive phenomenon, possessed even by those who explicitly renounce prejudice and discrimination on a conscious level (Holroyd, 2002). Research indicates a divergence between self-reported or consciously held attitudes and those that operate outside conscious intent. Implicit biases do not necessarily align with declared beliefs, and individuals may unknowingly harbour biases that do not reflect the stances they would explicitly endorse (Gawronski et al., 2006). Even those who openly affirm and practice equitable treatment across social identity groups can still retain implicit biases rooted in broader cultural stereotypes (Greenwald & Banaji, 1995).

The influential nature of implicit bias extends beyond everyday interactions, permeating society in education, employment, criminal justice, healthcare, and many other domains (Karpinski & Williams, 2001). For instance, the implicit biases of educators can lead to disparities in academic expectations and support for students from marginalized groups (Guryan et al., 2008). Similarly, implicit biases in the hiring process can contribute to underrepresentation of minorities in various professions (Kleinberg & Raghavan, 2018).

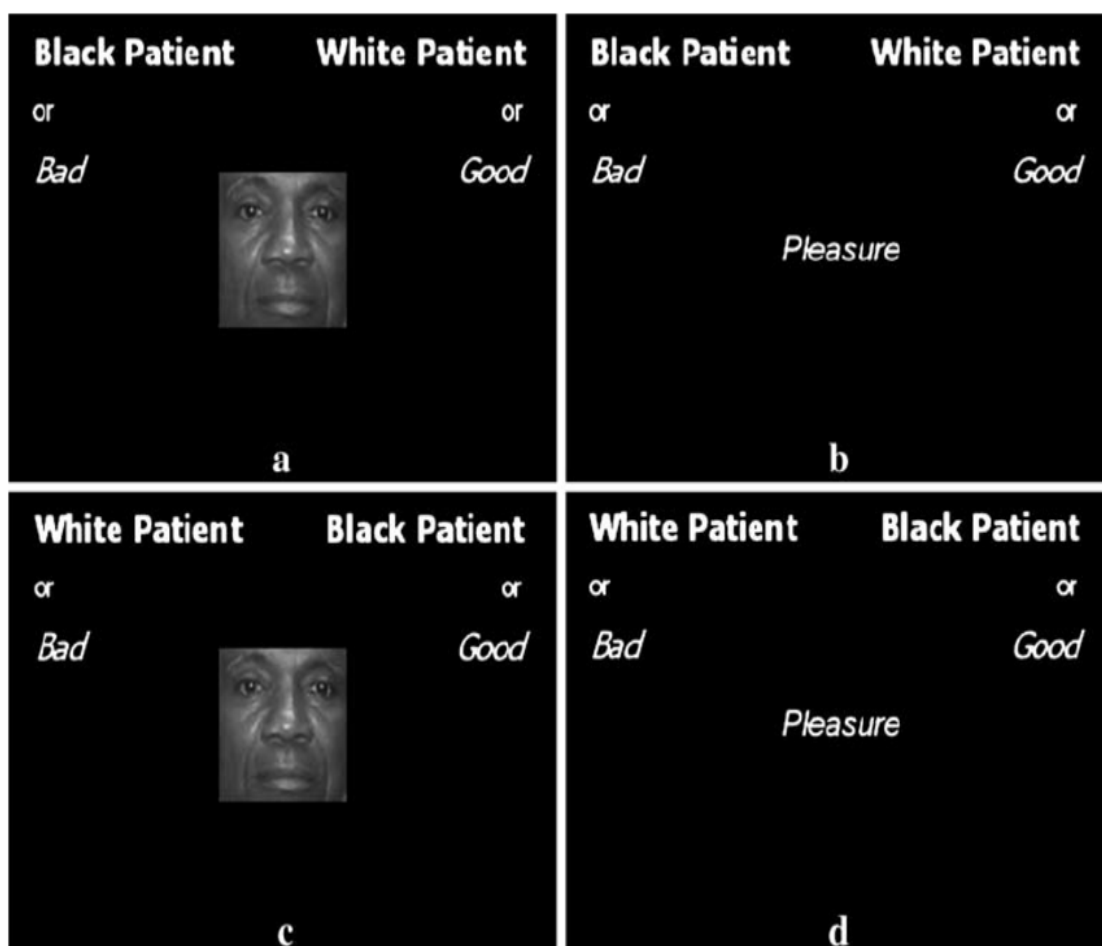
Researchers have developed specialized tools to measure implicit social cognition. The most utilized instrument is the Implicit Association Test (IAT; Greenwald et al., 1998), a computer-based timed categorization task used to detect and analyse reaction times as indicators of unconscious bias (see Figure 8). Other methodologies include physiological measures like eye tracking and facial electromyography to reveal implicit associations (Vanman et al., 2004). Across instruments, patterns observed in thousands of studies affirm that implicit biases are pervasive, can diverge from conscious attitudes, and influence consequential behaviour (Greenwald & Pettigrew, 2014).

Research by Correll and colleagues (2002, 2006) illustrated the impact of implicit biases. In their shooter bias studies, White participants made quicker decisions to shoot an armed Black person relative to an armed White person and likewise faster decisions not to shoot unarmed White people compared to unarmed Black people, regardless of explicit attitudes. These findings suggest that implicit racial biases can lead to discriminatory decision-making, particularly in high-stakes situations where split-second decisions may have life-or-death consequences. Correll et al. (2006) delved into the neurological basis using event-related brain potentials, revealing perceptual differences in processing unarmed White people compared to armed individuals, regardless of race, with even more rapid decision-making and less of a significant difference in time for perceiving Black individuals. The magnitude of implicit bias was correlated with cultural stereotypes and contact levels with different ethnic groups, suggesting social and environmental influences (Correll et al., 2002). Notably, this bias was independent of explicit racial prejudice, operating even without consciously endorsed prejudiced beliefs as both African American and White participants exhibited similar levels of implicit bias, emphasizing its pervasive nature.

Moreover, the observed racial differences in responses were not due to variations in accuracy but rather a lower threshold for deciding to shoot Black people. In essence, the findings of Correll et al. (2002, 2006) underscore the imperative to address implicit bias in the interest of promoting and fostering more equitable and just outcomes in society.

Figure 8

Sample Screens of the Implicit Association Tests



Note. Four sample screenshots of the IAT using racial preference stimuli. Each of the screenshots (*a*, *b*, *c*, *d*) are presented separately. During each stimuli presentation, participants respond rapidly (> 1 sec.) to pair Black with bad and White with good (*a* and *b*) then pair Black with good and White with bad (*c* and *d*). The order of stimuli presentations is counterbalanced across participants. The difference in response speed between each set of pairings results in the *d-score* interpreted as implicit prejudice. Source: *Green et al., 2008*.

The scientific consensus is clear – implicit bias significantly influences human judgment and behaviour, even for well-intentioned people who strive to avoid discriminating (Greenwald & Banaji, 1995). The underlying mechanisms of implicit bias are rooted in the brain's natural tendency to categorize and rapidly form judgments about our surroundings (Sloutsky, 2003). Implicit biases guide the inferences and predictions people make about others before interacting with them, impacting how individuals process and encode information about people they encounter (Carmona et al., 2020). Unconscious assumptions can shape the human tendency to seek evidence that aligns with expectations and disregard contradictory information (Coles & Heimberg, 2002).

Implicit bias also influences the literal movements of social interaction, including facial expressions, eye contact, blinking frequency, proximity, and other non-verbal behaviours (Abend et al., 2020; Amodio et al., 2003; Holroyd & Kelly, 2016; Soderberg & Sherman, 2013; Vanman et al., 2004). Analyses indicate that implicit biases correlate with policy positions on key social and political issues as well as hiring, promotions, and resource administration decisions (Chaxel, 2015; Petersen et al., 2015; Spencer et al., 2016). Moreover, decisions made in key gatekeeping positions, for example in education and medical contexts, reflect widespread evidence of systemic bias (Chapman et al., 2013).

The capacity to override implicit bias depends on both individual factors and contextual factors (Sukhera & Watling, 2018). Ambiguity creates conditions for implicit biases to exert influence on judgment and behaviour. Introducing, clear decision criteria and accountability serves to diminish ambiguity and motivate more reasoned decision-making (Devine et al., 2012). When the ambiguity of a situation is minimized, biases are more likely to yield to factual reality and explicit commitments to impartiality.

Implicit bias training has been shown to effectively reduce unconscious discriminatory behaviours by increasing awareness of unconscious biases, motivating individuals to address them, and providing skills and empowerment for individuals to do so (e.g., Devine et al., 2012; Girod et al., 2016; Leslie et al., 2017; Whatley, 2018). Research also suggests that establishing an inclusive organizational culture is essential for reducing the influence of bias in key domains like healthcare and law enforcement (Desai et al., 2021). However, like diversity training programs, research on the efficacy of unconscious bias trainings is mixed (e.g., Jackson et al., 2014; Oswald et al., 2013). Further research is required to develop assessment tools and identify control strategies that effectively manage implicit biases across various high-stakes intergroup contexts (Lai & Wilson, 2020).

2.4.1 Limitations of Implicit Bias Training

While the existence of implicit bias is well-established, and tools like the IAT (Greenwald et al., 1998) can reliably measure individual differences, some limitations persist in understanding the precise nature and scope of unconscious bias (Osman, 2021). There are also open questions regarding how malleable implicit biases really are, and the extent to which existing interventions produce meaningful change that translates to real-world settings (Lai et al., 2016).

Implicit bias remains an ambiguous concept lacking consensus around definitive features and precise boundaries from related constructs like stereotypes and attitudes (Greenwald & Lai, 2020). Consequently, implicit measures often capture more than just implicit bias, including attitudes, cultural knowledge, social norms, and associative histories (Han et al., 2006; Olson & Fazio, 2004). The distinctiveness of implicit bias as a unique

psychological phenomenon separate from other implicit processes requires further empirical clarification across domains (Gawronski et al., 2022).

Critiques persist regarding the validity of implicit measures in predicting real-world discriminatory behaviours is limited. Although tools like the IAT show test-retest reliability, they have low predictive validity regarding actual discriminatory behaviours in natural settings (Carlsson & Agerström, 2016; Meissner et al., 2019). For example, the IAT's quantitative index of implicit bias, the *d-score*, has been shown to have inconsistent and illogical relationships with criterion variables like interracial interactions across studies (Blanton et al., 2009; Greenwald et al., 2019). The observed correlations between implicit bias, as measured in laboratory experiments, and observable behaviour are tenuous. This suggests that the influence of implicit bias in shaping intergroup behaviours in everyday contexts may be overstated (Oswald et al., 2013). This highlights the need for further research to isolate implicit bias from other influences that drive behaviours and to empirically demonstrate its causal effects (Forscher et al., 2019). Such efforts are essential for developing and validating bias reduction approaches that can yield enduring effects.

Many common intervention techniques have failed to produce lasting reductions in implicit bias across contexts (Lai et al., 2014; Machery, 2021). Reported effects tend to be transient rather than stable over time and contexts (Forscher et al., 2019). Lai et al. (2014) compared 17 interventions targeting implicit racial biases along with an IAT faking condition. They found eight interventions successfully reduced IAT scores, but only three outperformed the faking instructions that trained people to deliberately slow down responses pairing Black with 'bad'. The most effective interventions evoked challenges to stereotypes via vivid narratives and experiences countering anti-Black biases.

However, implicit biases are often considered non-malleable or resistant to meaningful change. While bias awareness can promote reflection, the ability of the training to significantly alter implicit attitudes and translate to changes in real-world behaviour remains debated (Payne et al., 2017). Reported training effects tend to be context-specific without transferring widely or generalizing across populations (Fitzgerald et al., 2019).

Moreover, the automatic nature of implicit processes suggests conscious overrides may have minimal impact on underlying unconscious associative structures, calling into question assumptions around the malleability of unconscious bias and limiting the efficacy of increasing bias awareness (Gawronski & Bodenhausen, 2011). Alternate intervention approaches require rigorous testing, and replication to establish durable bias reduction.

Many existing interventions targeting implicit bias reduction lack a strong theoretical grounding in the specific cognitive and affective processes of implicit bias (Fitzgerald et al., 2019; Greenwald et al., 2022). Although some methods temporarily alter IAT scores, how this occurs via changes in associations, automaticity, or other means remains speculative (Forscher et al., 2017; Lai et al., 2016). Limited mechanistic understanding hampers purposeful design of maximally effective implicit bias reduction techniques.

The mixed findings may reflect oversimplified operationalization. The treatment of implicit biases as universal and static fails to account for complex individual and situational factors that moderate implicit responses (Han et al., 2006; Wittenbrink et al., 2001). Multiple distinct forms of bias toward social groups exist, supporting more nuanced measurement approaches (Hall et al., 2015). Interventions adopting a one-size-fits-all approach overlook the highly variable nature of implicit processing across people and

contexts. Targeting tailored interventions based on emerging research on moderators represents a more effective strategy.

Applying incomplete and imperfectly understood concepts from implicit bias research into practical domains like policy and law raises ethical issues regarding misuse and unintended consequences (Jost, 2019). Premature translation of limited experimental findings risks promoting harmful agendas that undermine social justice aims if not appropriately qualified and contextualized (Tetlock & Mitchell, 2009). Scholars caution against overinterpreting findings in ways that may promote prejudice and undermine social justice reforms (Dixon & Levine, 2012).

In conclusion, implicit bias research has established the presence of unconscious biases toward social groups that often diverge from conscious values (Greenwald & Banaji, 1995). However, key limitations around conceptual clarity, predictive validity, malleability, mechanisms of change, and ethical application remain. Further research is required to address these issues and paint a more complete picture regarding the scope and significance of implicit bias in shaping real-world intergroup behaviours. This will allow the informed development of bias reduction interventions that effectively produce meaningful improvement in equity across domains.

2.5 The Long and Winding Road to Prejudice Reduction

In summation, prejudice and discrimination remain widespread issues with significant adverse effects on both individuals and society. Addressing these issues necessitates the development of effective interventions that not only reduce prejudice but also leave an enduring impact across contexts and diverse outgroups. Despite aspirations for such transformative interventions, existing approaches, including Intergroup Contact

Theory (Allport, 1954), diversity training programs, and implicit bias interventions, share key shortcomings regarding efficacy, sustainability of effects, and their ability to translate into meaningful behavioural changes in the real world. Considering these shortcomings, an alternative approach grounded in behavioural science principles may offer some insights.

Intergroup Contact Theory (Allport, 1954) presents a valuable and promising framework highlighting the potential for positive intergroup interactions to reduce prejudice under optimal conditions. However, solely emphasizing an individual perspective overlooks broader societal and contextual factors that perpetuate inequities and impede meaningful change (Forbes, 1997; Saguy et al., 2009). Moreover, a disproportionate burden placed on minority group members as well as the optimistic assumptions that participants enter interactions open-minded and that the effects of positive contact will self-perpetuate often do not hold, especially for those with deeply entrenched prejudices (Dixon et al., 2010; Hodson, 2011; Paolini et al., 2016). As a result, contact effects are context-dependent, easily undermined by negative encounters, require extensive contact to produce lasting shifts for highly prejudiced persons, and fail to generalize widely (Moeschberger et al., 2005; Dhont & Van Hiel, 2012; Gawronski & Bodenhausen, 2011).

Likewise, in the pursuit of fostering workplace inclusion and equity, diversity training programs rooted in contact theory strive to mitigate prejudicial attitudes and behaviours (Bezrukova et al., 2016). However, after decades of widespread implementation, there is mixed evidence regarding their efficacy, often yielding counterproductive results (Bezrukova et al., 2016; Chang et al., 2019; Devine & Ash, 2022; Dobbin & Kalev, 2018; Paluck et al., 2021). Although the aims of diversity training programs are well-intentioned, enhancing perceived diversity within groups may paradoxically elicit threat responses that

reinforce biases, especially when content emphasizes guilt attribution (Barnes & Grayer, 2023; Ehrke & Steffens, 2014). Accusatory framing frequently results in backlash, undermining the desired outcome (Winslow, 2004). Moreover, short-term attitude improvements following training rarely yield meaningful behaviour change or long-term effects without continued reinforcement (Bezrukova et al., 2016; Chang et al., 2019).

Even contemporary diversity training programs that focus on implicit bias awareness and interventions have significant limitations. Critiques persist regarding the questionable predictive validity of real-world discrimination as behaviour correlations are inconsistent across contexts (Blanton et al., 2009; Oswald et al., 2013). Reported training effects tend not to transfer widely or persist over time (Fitzgerald et al., 2019; Lai et al., 2014). Additionally, assumptions around malleability contrast with evidence suggesting conscious overrides minimally impact underlying structures or durable change (Forscher et al., 2019; Gawronski & Bodenhausen, 2011).

Collectively, these approaches demonstrate limited ability to achieve lasting prejudice reduction, with desired outcomes being easily undermined, context-dependent, and requiring extensive reinforcement over time to yield meaningful attitudinal and behavioural change. These limitations are compounded by divergences between implicit attitudes and explicit behaviours, as deeply ingrained biases subtly shape social interactions even when prejudice is consciously rejected (Greenwald et al., 1998; Sheeran & Webb, 2016). Targeting attitudes alone often falls short in overriding automatic responses, with minimal impacts on underlying cognitive structures and inconsistent transference of positive outcomes to real-world settings. The simplistic strategy of solely increasing awareness of diversity and implicit biases and essentially placing a blind trust in attendees to

do something positive with the information is not an effective strategy for meaningful behaviour change (Noon, 2018).

Long-lasting behaviour change likely requires multi-pronged approaches that span individual, intergroup, community, institutional, and societal levels over sustained periods of time. Even though the effects from individual intergroup contact sessions or diversity training workshops may be small in isolation, cumulatively over time with sustained engagement, these small effects can add up into meaningful progress. However, this accumulation of change leading to impactful shifts in prejudice levels and equitable behaviours tends to happen gradually rather than suddenly. It is an incremental process with many potential pitfalls that may result in backtracking. Thus, prejudice reduction may require persistent effort across varying contexts rather than focussing on a quick fix.

Over time, shaping equitable language and behaviours through reinforcement while withholding reinforcement for prejudice can bypass limitations related to directly targeting internal events like attitudes, instead promoting lasting reductions in prejudice by modifying the social environment (Skinner, 1974). Regularly emitting newly trained behaviour patterns to access positive reinforcement can lead to habit formation, while the absence of reinforcement for prejudicial behaviours may result in their extinction (Skinner, 1938; Wood & Neal, 2007). Integrating behavioural science principles with social psychology techniques could therefore promote enduring prejudice reduction not by changing minds, but by modifying the social context to reinforce inclusivity and extinguish prejudicial behavioural responses. Examining the underlying verbal behaviour of prejudice will elucidate whether there are consistent patterns linking rigid behavioural patterns to specific prejudicial outcomes.

Chapter 3 – The Verbal Behaviour of Intergroup Discrimination

3.1 Chapter Overview

This chapter provides an analysis of prejudice and dehumanization from the perspective of Contextual Behavioural Science (CBS) – a behaviour analytic approach to complex human behaviour including language and cognition. The chapter begins by expanding upon the brief overview of language and prejudice provided in the first chapter followed by a brief introduction and discussion of B. F. Skinner's (1957) conceptualization of verbal behaviour as operant behaviour.

The chapter then transitions into an exploration functional contextualism which in conjunction with radical behaviourism acts as the philosophical foundation of CBS. This philosophy of science has been instrumental in shaping and supporting two distinct avenues of research: Relational Frame Theory (RFT; Hayes, Barnes-Holmes, & Roche, 2001) and Acceptance and Commitment Therapy (ACT; Hayes et al., 1999; 2012).

RFT, a more contemporary behaviour analytic approach that examines the derived relational nature of human language and cognition, provides insights into how prejudices may emerge and persist within networks of verbal relations. Research is presented showing how racial biases can form through associations and equivalence classes and maintained by rule-governed behaviour.

Observations drawn from RFT have been incorporated into ACT, an approach to psychotherapy grounded in behaviour analysis, mindfulness, and values. ACT embraces a holistic view of human behaviour shifting the focus from the reduction of maladaptive behaviours through control to an individual-centred approach that helps the individual improve present moment awareness and aligning behaviours with personally chosen values.

Research suggests ACT can help reduce stigma and prejudice by cultivating psychological flexibility – the ability to embrace difficult thoughts and feelings while still engaging in value-driven directions. Each of the six core processes of psychological flexibility will be defined and examined.

Finally, the chapter synthesizes key takeaways for understanding and addressing prejudice from a functional contextual perspective. It emphasizes examining prejudices in terms of verbal behaviour shaped by contextual factors rather than inherent individual traits or attitudes. Fostering skills like perspective-taking and acceptance of challenging emotional experiences is presented as an avenue for prejudice reduction. The dynamic, relational understanding of language and cognition within RFT and the psychological flexibility model offers new pathways for investigating and intervening on societal issues like discrimination.

3.2 When We Talk About ‘Them’: Othering Through Language

At the heart of prejudice and dehumanization is the socio-verbal behaviour known as ‘othering.’ Othering refers to a process in which an individual simultaneously constructs an identity for themselves or their ingroup, while assigning a distinct and unequal identity to another person or an outgroup. This differentiation is based upon a quality perceived to be lacking or absent in the outgroup, yet present within the ingroup (Brons, 2015). The reductionist nature of this process forms the foundation of prejudice. Othering manifests in two main forms: *crude othering* and *sophisticated othering* (Brons, 2015). Crude othering involves the deliberate separation of ingroup and outgroup identities by arbitrarily assigning value to a specific attribute present in the ingroup (e.g., paleness of skin colour) but lacking in the outgroup. On the other hand, sophisticated othering represents a more complex variation of crude othering, where a rationalization supported by generalized assumptions of

superiority is established around the initial observation and valuation of the attribute that is absent or lacking in the outgroup.

An illustrative example of othering is the etymology and historical progression of the term ‘barbarian.’ Originating in ancient Greece around the 8th century BCE, this word was coined as a descriptive onomatopoeia intended to characterize individuals who did not speak Greek. It was used to depict their languages as an indecipherable, unstructured sequence of ‘bar-bar-bar-bar—,’ while also serving as a broad classification for non-Greeks, particularly those from Anatolia (modern-day Türkiye) (Alam, 2003; Kramer, 1998). As time progressed, during the 5th or 6th century BCE, the term’s usage expanded to encompass other Greek city-states, particularly by the Athenians. Playwright Aristophanes, for instance, portrayed characters speaking different Greek dialects using nonsensical language for comedic effect (Colvin, 2000). However, it was not until the 4th century BCE that the term took on connotations of superiority, as evidenced in Aristotle’s work *‘Politics’*, in which he asserted that barbarians were inherently deficient, incapable of self-governance, and suited only for servitude, while the Greeks were inherently free and destined to rule over others (Alam, 2003; Aristotle, 1997; Kramer, 1998; Lockwood, 2021). To this day, the term ‘barbarian’ has persisted across languages and cultures, retaining its ethnocentric implications, and continues to be employed to dehumanize outgroups. In essence, othering has remained a persistent facet of human language for over two millennia.

The intricacies of human communication represent a fundamental evolutionary advantage, but this capacity comes with inherent challenges. The distinctive human ability to assign significance to otherwise primal sounds or arrangements of symbols, such as letters, words, and numbers, resulting in coherent language, is immensely beneficial.

Nevertheless, as discussed in the first chapter, the impact of language is multifaceted – it can serve as both a valuable tool and a dangerous weapon. Regrettably, language often becomes a means to perpetuate inequality, foster animosity, and propagate discrimination (Augoustinos & Every, 2007; Ng, 2007; for review, see Collins & Clément, 2012). This phenomenon is especially pronounced in modern times. While overt expressions of prejudice have become largely socially unacceptable in recent decades, a trend has emerged where conservative politicians in the U.S. increasingly openly articulate their biases, and a series of studies involving over 10,000 participants has documented a noteworthy rise in racial and religious prejudices among their supporters (Ruisch & Ferguson, 2022).

While language can indeed be used to propagate and reinforce prejudices, it also possesses the capacity to confront and mitigate such attitudes, thereby reducing related behaviours. Notably, research has revealed a correlation between second language acquisition and a decline in prejudice (Genesee & Gándara, 1999; Rubinfeld et al., 2007; Wright & Bougie, 2007). Furthermore, the acquisition of one's traditional ingroup language, in contrast to the dominant language of the majority population language (e.g., Basque, Inuktitut, Irish, Romani, Scottish Gaelic) might even serve as a means for victims of discrimination to shield themselves from adverse consequences of prejudice (Wright & Bougie, 2007). Language stands as an essential tool in the endeavour to reduce prejudice and its repercussions. As astutely articulated by Jean-Louis Monestès (2016, pp. 106):

Language [...] selects behaviours, it modifies the values of the stimuli potentially responsible for their selection, it increases variation in behaviours, and it changes their retention and inheritance. Finally, language can give rise to behaviours that are seemingly incompatible with the process of evolution itself.

3.3 Verbal Behaviour

Skinner (1957) proposed that verbal behaviour can be understood as a form of operant behaviour. Much like other operant behaviours, Skinner (1957) argued that verbal behaviour is shaped and maintained by the consequences it produces within the verbal community, with responses followed by reinforcement being strengthened and more likely to reoccur in the future.

At the core of Skinner's analysis is the proposition that verbal behaviour is functional, not structural (Skinner, 1957). In other words, Skinner was concerned with how language is used, not syntax or morphology. Instead, Skinner focused on the causes of verbal behaviour and the effects of verbal responses in listeners (Michael, 1985). He explained that verbal behaviour consists not only of the words and grammar that form a sentence but also encompasses how these units, known as verbal operants, function within an individual's environment.

From this functional perspective, Skinner identified several elementary verbal operants, each serving distinct functions within the verbal environment (Skinner, 1957). These verbal operants include mand, tact, intraverbal, echoic, and textual responses (Skinner, 1957). The mand is a verbal response controlled by an establishing operation and defined by its reinforcing consequences (Sundberg, 2014). For example, uttering "water" when thirsty because it has been reinforced by receiving water. The tact, in contrast, operates under the control of nonverbal discriminative stimuli, such as identifying an animal with four legs that barks by saying "Doggy!" (Sundberg, 2014). Intraverbal responses involve responding to a verbal stimulus with another verbal response, as in answering

questions (Michael, 1985). Echoics refer to repeating verbal behaviour, while textual behaviours involve responding to written words (Skinner, 1957).

Another important concept outlined in Skinner's (1957) analysis of verbal behaviour is that of the autoclitic. Autoclitics are secondary verbal operants that modify the functions of other verbal behaviour (Sautter & LeBlanc, 2006). For instance, adding 'I think' to the statement 'It is cold outside' modifies it from a tact to an opinion, while adding the word 'definitely' emphasizes certainty.

Autoclitics, such as adverbs, conjunctions, articles, and demonstrative pronouns, provide refinement and complexity to language by allowing for relations, clarification, categorization, affirmations, negations, quantifiers, temporals, intensifiers, and other modifications of other verbal units (Shahan & Chase, 2002). For example, including the adverbs "quickly" modifies the speed or urgency of an action being described. Autoclitics combine with other verbal behaviour to expand the capabilities of language to exert further functional control over listener behaviour (Shahan & Chase, 2002; Skinner, 1957). As Sautter and LeBlanc (2006) aptly summarize, autoclitics serve an integrative function in verbal behaviour and are essential for explaining advanced language, verbal mediation of behaviour, and thinking. Understanding and applying these verbal operants are fundamental to unravelling and appreciating the subtlety and complexities inherent in verbal behaviour.

Although the verbal community plays an important role in language acquisition, Skinner (1957) emphasized the necessity of reinforcement in shaping and maintaining an individual's verbal repertoire. Positive reinforcement from the verbal community facilitates language development, but it can also lead to problematic language patterns or undesirable behaviours when reinforcement contingencies are misaligned (Skinner, 1957).

Skinner's (1957) analysis of verbal behaviour remains a cornerstone of linguistics and psychology, however, it is not without limitations. The subjective nature of private stimuli, such as thoughts, pain, and emotions, poses a challenge in studying verbal behaviour, as these elements are not directly observable or easily measured (Skinner, 1945). This limitation highlights the need for a more nuanced approach to understanding language that allows for the measurement and analysis of both observable and unobservable aspects of behaviour. One such approach is functional contextualism which emphasizes the importance of context in understanding behaviour while simultaneously focusing on the functional significance and broader purpose that underlie behaviour, providing a promising for delving into the complexities of verbal behaviour (Hayes et al., 1988).

3.4 Functional Contextualism

Functional contextualism is a philosophical approach that emerged as an extension of Skinner's radical behaviourism to address some of its perceived limitations in accounting for complex human behaviour and cognition (Hayes et al., 1988). Functional contextualism aimed to establish "an organized system of empirically based verbal concepts and rules that allow behavioural phenomena to be predicted and influenced with precision, scope, and depth" (Biglan & Hayes, 1996, pp. 50-51). It aspires to provide a more adequate philosophical framework for exploring private events like thoughts, feelings, and other internal experiences (Hayes et al., 1988).

This philosophy is the foundation of Contextual Behavioural Science (CBS), which aims to identify key variables that "predict the event in question and would, if manipulated, affect the probability, incidence, or prevalence of the event" (Biglan, 1995, p. 34; Biglan & Embry, 2013). At its core, functional contextualism emphasizes the functional role of

behaviour as an *act-in-context*. That is to consider the behaviour within the context in which it occurred including the organism's learning history, situational context, and environmental factors as inseparable in any analysis (Hayes, 1993; Hayes & Sanford, 2014). As Hayes and colleagues (2012) describe, functional contextualism directs scientific efforts towards “predicting and influencing psychological events using empirically verifiable principles of behaviour in ways that are contextually appropriate” (p. 92). This notion of contextual appropriateness is also pivotal, as functional contextualism maintains that the goals of any behaviour analysis should align with social values and human well-being as defined within a cultural and historical context (Hayes, 1993).

Functional contextualism's approach to understanding human behaviour is grounded in the philosophical concept of pragmatic contextualism (Hayes et al., 1988; Pepper, 1942). This worldview emphasizes that knowledge and truth are context-dependent and should be evaluated based on their practical usefulness and ability to achieve desired outcomes within that specific context (Hayes et al., 1988; Pepper, 1942). For example, imagine a four-year-old playing with a large cardboard box. During independent play, she may imagine it is a car speeding through a racetrack to win the championship. But if a friend were to visit for a play date, the function of the box must be redefined to allow for more inclusive play as a car may only have one driver at a time. They may imagine the box to be a castle or a kitchen or a time machine. In this case, the child is using knowledge and truth in a flexible way that is appropriate for the context. Another example may be a medical doctor using her knowledge of anatomy and physiology to diagnose an illness but may also use her knowledge of human psychology to translate the information in a way that helps the patient feel less anxious or hopeless. This acknowledgment that behaviour and

worldviews are context-dependent varying across organisms allows for a more practical and effective means of prediction and influence of human behaviour (Fox, 2006).

As the underlying philosophy of CBS, functional contextualism provides several conceptual tools for exploring complex behavioural phenomena: perspectives by incongruity, levels of abstraction, the distinction between act and action, and rules as ongoing verbal behaviour (Fox, 2006; Hayes et al., 2012). Functional contextualism provides a distinct contextualist-behavioural alternative to mechanistic logical positivism or radical behaviourism for exploring the nature of complex human behaviour and cognition. The philosophy continues to evolve through two distinct theoretical extensions and lines of research Relational Frame Theory (RFT; Hayes, Barnes-Holmes, & Roche, 2001) which delves into the intricacies of the relational nature of human language and cognition, and Acceptance and Commitment Therapy (ACT; Hayes et al., 1999; 2012) which applies these insights to therapeutic interventions.

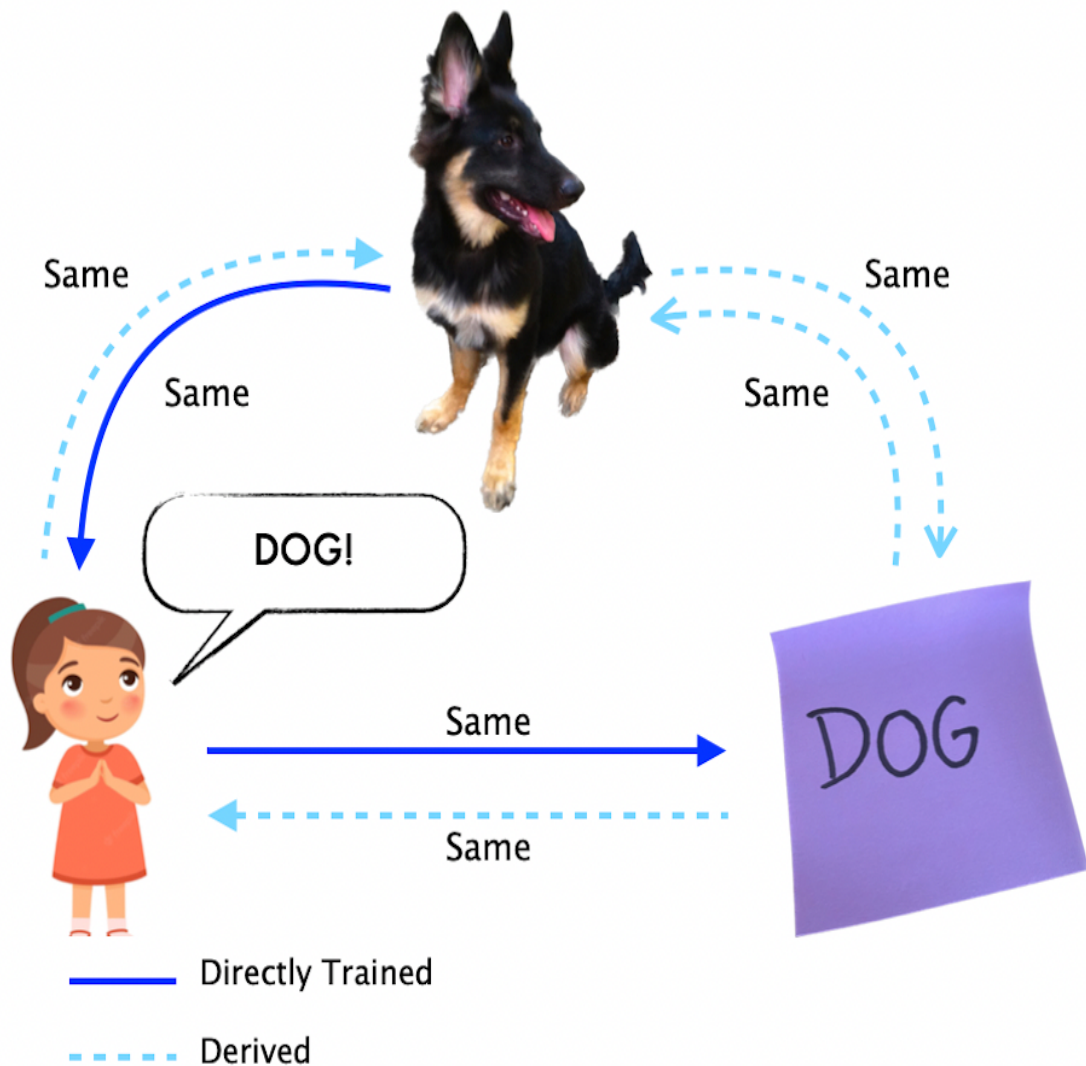
3.4.1 Relational Frame Theory

RFT (Hayes, Barnes-Holmes, & Roche, 2001) is a behaviour analytic approach to human language and cognition. It is based on the idea that verbal behaviour is a form of operant behaviour referred to as derived relational responding (DRR). DRR involves the unique human ability to relate events even when the individual has not directly experienced or has been reinforced for those specific relations. While many other species have demonstrated the ability to respond to non-arbitrary relationships among stimuli, such as size and brightness (Reese, 1968), only verbally able species (i.e., humans) are able to relate stimuli based solely upon arbitrary contextual cues.

DRR is a behaviour that develops through social reinforcement in several stages: joint attention, imitation, and bidirectional responding with multiple exemplars (Hayes, Fox et al., 2001; Luciano et al., 2007; Peláez, 2009). For instance, consider a child's learning history with the word "dog." The child is first introduced to a German shepherd by her parents as they point to the unfamiliar fluffy creature and repeatedly say the word, "dog." Initially, the child simply looks in the direction that her parents are pointing and smiles. After repeated encounters with the animal followed by the parents saying "dog," the child begins to relate the word with the animal through reinforcement of joint attention. Subsequently, through imitation and multiple encounters with dogs, the child begins to independently label the animal as a "dog!" When parents reinforce the child's pointing to specific objects and saying corresponding words, bidirectional responding is established. Finally, this kind of relating can extend even further. If a parent writes the letters, D-O-G, and reads the word aloud, after multiple exemplars, the child will likely be able to point to the correct word when asked, "Which word says 'dog?'," be able to read the word aloud, and be able to point to a picture of a dog when presented with the word D-O-G and point to the word D-O-G when presented with a dog (see Figure 6). Derived symmetrical relations have been demonstrated to emerge as early as 16 months of age, while more complicated relating does not emerge until later (Lipkens et al., 1993).

Figure 9

Illustrated Example of Derived Relational Responding

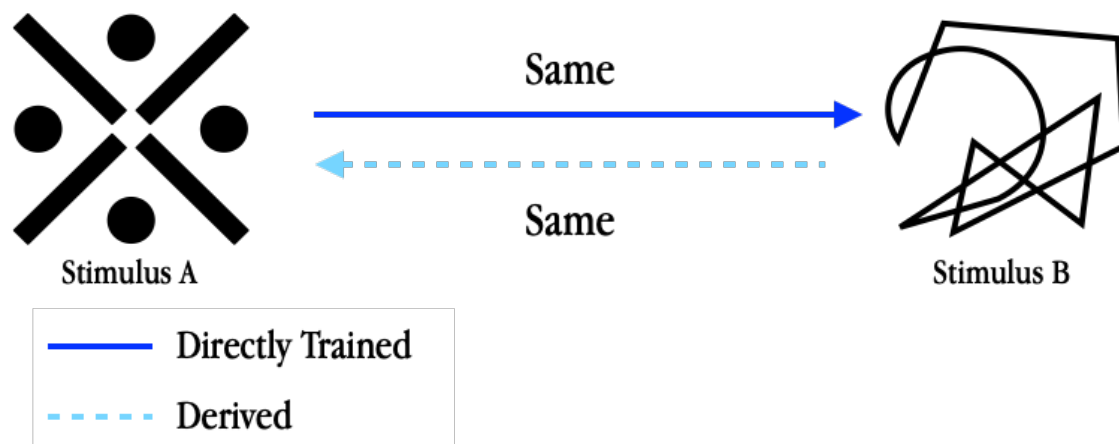


Note. Visual demonstration of the example of DRR described above. The solid blue line indicates a relation that the child was directly trained to create (i.e., That big fluffy animal is a dog, and that word reads "Dog.") The dashed lines indicate derived relations in which the child understands the inverse of the directly trained relations as well as other relations that did not need to be trained (i.e., The word "Dog" is about the animal).

DRR is defined in terms of three properties: *mutual entailment*, *combinatorial entailment*, and *transfer or transformation of stimulus functions* (Hayes, Fox et al., 2001). Mutual entailment refers to the symmetrical relationship between two stimuli, leading to the ability to derive the relationship in both directions (see Figure 7). For instance, if the response that Stimulus ‘A’ is the same as Stimulus ‘B’ is reinforced, then one will also respond to ‘B’ like it is the same as ‘A’ (i.e., will derive that ‘B’ is the same as ‘A’). This bidirectional nature of mutual entailment is essential to understanding how humans relate and derive various stimuli, forming the basis for the formation of equivalence classes in RFT. As an example, consider learning a new language. If Evie learned that to identify a car in Spain she must say “coche” then she would also understand that “coche” means “car” in English without direct training of the inverse relation.

Figure 10

Diagram of Mutual Entailment in Relational Frame Theory

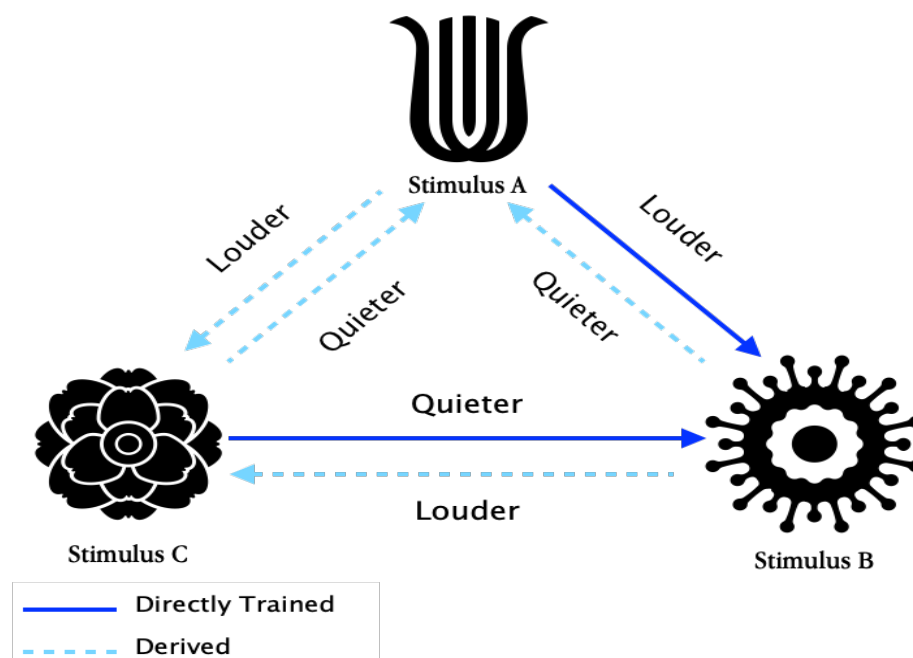


Note. This figure illustrates mutual entailment, a fundamental concept in RFT. Mutual entailment refers to the symmetrical relationship between two stimuli. In this diagram the relation that ‘A’ is the same as ‘B’ has been taught to the learner. Through this relation the learner has derived that ‘B’ is the same as ‘A’ without being directly taught.

Combinatorial entailment refers to a type of derived stimulus relation where the presence of two or more stimulus relations allows for the derivation of new relations (Hayes, Fox et al., 2001). If responding to Stimulus ‘A’ as if it is related to Stimulus ‘B’ and ‘B’ as if it is related to Stimulus ‘C’ is reinforced, then one will also derive that ‘C’ is related to ‘A’ (see Figure 8). To illustrate by using the previous example, if Evie also learned to identify a car in France by saying “voiture,” Evie would then not only learn the relation that “voiture” means “car” and the inverse relation, but also derive that “voiture” is equivalent to the Spanish word “coche.”

Figure 11

Diagram of Combinatorial Entailment in Relational Frame Theory



Note. This figure illustrates combinatorial entailment, a type of derived stimulus relation in which the presence of two or more stimulus relations allows for the derivation of new relations. In this diagram, the relations that ‘A’ is related to ‘B’ and ‘B’ is related to ‘C’ have been taught to the learner. Through these relations, the learner is not only able to derive the inverse relations of ‘B’ being related to ‘A’ and ‘C’ being related to ‘B’ through mutual entailment but also to derive that ‘A’ is related to ‘C’ as well as the inverse of that relation.

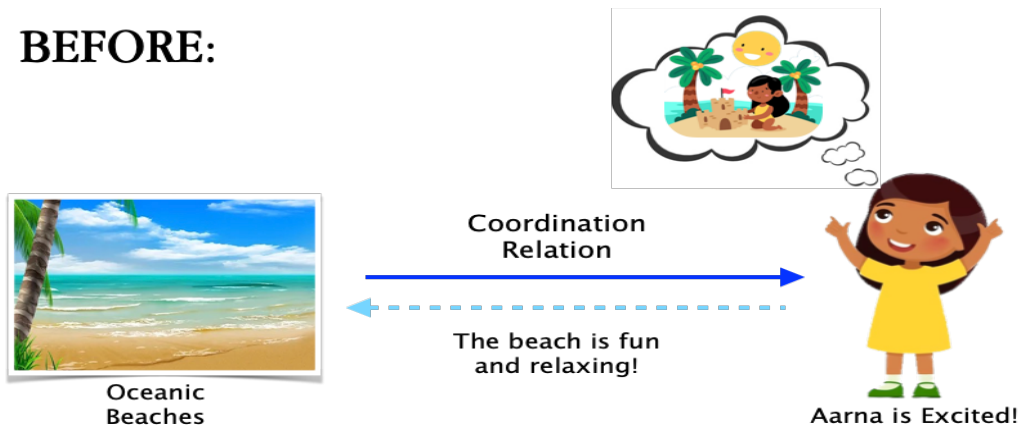
DRR also involves a property known as the transfer or transformation of stimulus functions, wherein stimuli acquire functions consistent with their relations to other stimuli (see Figure 9). For example, if Stimulus 'C' functions as a reinforcer and is equivalent to Stimulus 'A,' then 'A' may also become an effective reinforcer (Dougher et al., 2007). To illustrate, consider Evie, who has learned to identify a car in both Spanish and French. Now, when she travels to regions where these languages are spoken, she will be able to at least nod 'yes' to both the words 'coche' and 'voiture' when seeking to hire a car when she travels to regions of the world that primarily speak Spanish or French, respectively.

Once DRR is established, humans can relate stimuli in a multitude of ways referred to as relational frames (Hayes, Fox et al., 2001). These relations include frames of coordination which encompass equivalence (e.g., naming and labelling) and similarities (e.g., baseball is similar to cricket; they both involve wooden bats and complex rules) as well as frames of opposition (e.g., planning ahead is wise while procrastinating brings surprise). There are also frames of distinction, which share similarities with frames of opposition as they both involve differences along a specific dimension but are more ambiguous in terms of the appropriate response. For example, if your co-worker handed you a cup from a local café and only said, "This is not coffee," then you would be left wondering if it is a different morning beverage or perhaps an incognito lager instead. Humans can further relate stimuli through frames of comparison such as size, speed, height, and other comparable qualities or quantities (e.g., a U.S. gallon is larger than a litre; the metric system is more intuitive than the Imperial system). Additionally, they may establish hierarchical frames (e.g., dad-jokes are an example of humour) and explore conditional relations (e.g., If I eat too many ghost pepper chicken wings, then I will surely experience the fiery wrath of my digestive system).

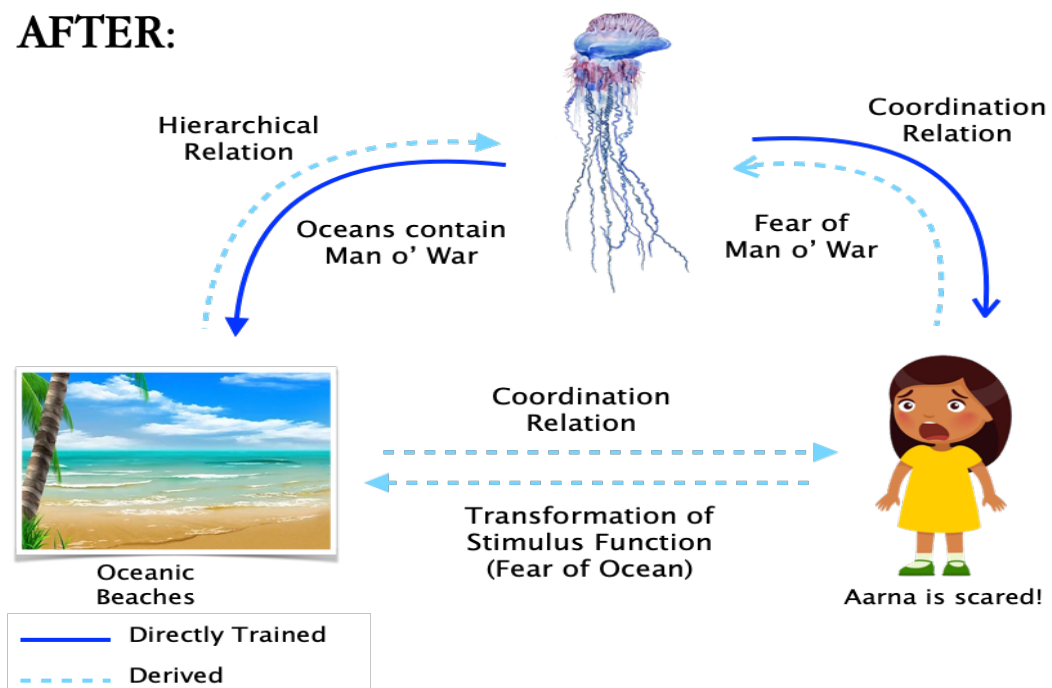
Figure 12

Illustrated Example of Transformation of Stimulus Function

BEFORE:



AFTER:



Note. This figure illustrates the concept of the Transformation of Stimulus Functions. In each image, the solid line indicates a relation that was directly trained while the dashed line indicates a relation that was derived. In this example, in the top image labelled “BEFORE” Aarna is excited to go to the beach with her family for some fun and relaxing sandcastle building time. However, in the bottom image labelled “AFTER” Aarna has learned from her loving sibling that oceans contain the lethally venomous Portuguese Man o’ War. As a result, the function of the ocean and oceanic beaches for Aarna has transformed and now elicits a fearful avoidance response instead of a positive anticipatory response.

In addition, people may use spatial relations (e.g., The cat is sitting on the toilet and hissing at me), temporal relations (e.g., First I will shake the cat treats, provide the treats, and then I should be able to use the toilet), and cause-and-effect relations (e.g., The cat ignored the treats, but he begrudgingly moved when I brought out the vacuum cleaner).

Notably, the relationship between any two or more stimuli or events cannot solely be attributed to the inherent properties of those events; rather, it is subject to the influence of contextual cues, often abbreviated C_{REL} (Contextual Cues for Relations). For instance, the word “boot” can take on different meanings, referring to either tall footwear or the storage compartment of an automobile. The determination of which functions are applicable to a given context is guided by contextual cues, abbreviated as C_{FUNC} (Contextual Cues for Functions). To exemplify this, let’s consider the request “Could you help me get my dog in the boot?” Assuming the listener is familiar with both uses of the word “boot,” they would likely rely on contextual cues such as the speaker’s accent, the surrounding environment, the reasonableness of the request, the current or anticipated weather conditions, or even the plurality of the word to discern the intended meaning of the question and respond appropriately.

In this way, RFT provides an account of verbal control, revealing the complex and flexible nature of human relational responding. As the complexity of verbal antecedents increases, so does the propensity for rule-following, thereby shedding light on the multifaceted processes that underlie human language comprehension and expression.

Rule-Governed Behaviour. In the analysis of human behaviour, it is essential to differentiate between two fundamental types of behaviour: contingency-shaped behaviour and rule-governed behaviour. Rule-governed behaviour refers to a behaviour that is

controlled by stimuli that specify anticipated contingencies (Skinner, 1969). These behaviours are often less sensitive to contingency alterations (Alessandri & Cançado, 2017; Hayes et al., 1986; Matthews et al., 1977; Shimoff et al., 1981; Skinner, 1969). This phenomenon highlights the contrasting paths through which behaviour is acquired. While contingency-shaped behaviour is learned through direct experience with consequences, such as learning not to touch the hot burner of a hob after being burned, rule-governed behaviour emerges from verbal descriptions and instructions regarding the potential consequences. It is an instance of behaviour guided by rules and verbal cues (Skinner, 1969). This distinction is important as it helps in the understanding of how individuals respond to instructions and adapt their behaviours based on verbal cues, even when these instructions contradict prior experiences with contingencies (Alessandri & Cançado, 2017). Understanding rule-governed behaviour provides valuable insights into how language and social norms influence human behaviour across various domains, from education and therapy to intergroup dynamics and everyday decision-making (Alessandri & Cançado, 2017; Hayes et al., 1986). Zettle and Hayes (1982) identified three functional categories of rule-governed behaviour: *pliance*, *tracking*, and *augmentals*.

Pliance. Pliance refers to the rule-governed behaviour influenced by a history of socially mediated reinforcement, requiring coordination between a behaviour and antecedent verbal stimuli. In this process, reinforcement is delivered based on a frame of coordination between the rule and the behaviour. It involves following a rule and the verbal community's recognition that the rule and behaviour align (Barnes-Holmes et al., 2001). For instance, let us consider a cat owner who wants to prevent his mischievous feline, Rorschach, from walking on the kitchen countertop. The owner decides that whenever he

sees Rorschach jumping onto the countertop, he will firmly say, “Rory, no countertop adventures!” while playfully spritzing a little water from a spray bottle in Rorschach’s direction. Startled by the unexpected spray, Rorschach jumps down from the countertop. The owner repeats this response every day, and with repeated associations between the consequence and the verbal stimuli, Rorschach begins to understand that he should resist his temptations for countertop adventures if he wants to avoid getting wet. In this scenario, if Rorschach’s behaviour of resisting temptation is elicited in response to the owner’s verbal instruction with a history of reinforcement for doing so, it can be termed as *pliance*.

Tracking. Tracking involves behaviour that is guided by natural contingencies and environmental cues. In this context, behaviour corresponds with the environment while being influenced by one’s learning history and the perceived significance of the consequences (Barnes-Holmes et al., 2001). To illustrate, consider the adage, 'Practice makes perfect' (or more accurately, 'Practice makes better'). If a teacher explains to a student that completing their history homework will enhance their ability to discuss complex topics like the cantilever principle and the Forth Rail Bridge, the student may be motivated to follow the rule and complete the assignment. Importantly, the consequence of improved discussion ability is a potential outcome of engaging in the behaviour, and it is not directly enforced by the speaker, eliminating the aspect of compliance.

Furthermore, a track does not necessarily require the involvement of a speaker; the rule can be present in various forms, such as written instructions provided by navigation software giving driving directions or in a book (e.g., a mathematical formula). The contingencies in tracking are established based on the nonarbitrary properties of the

behaviour, such as the form, frequency, or situational sensitivity of the relevant behaviour, leading to the specified or implied consequences in the rule.

It is important to note that tracking is distinct from pliance. Tracking entails behaviour that is shaped by coordinated interactions between the rule and the verbal community, while pliance refers to behaviours where social mediation and direct enforcement by the verbal community play a role. Understanding the difference between tracking and pliance provides valuable insights into how verbal behaviour is shaped by rules and environmental factors.

Augmentals. Augmenting refers to rule-governed behaviour resulting from relational networks that alter the magnitude to which a consequential event following a behaviour has reinforcing or punishing properties and may occur in tandem with tracking or pliance (Harte & Barnes-Holmes, 2022; Hayes, Barnes-Holmes, & Roche, 2001; Zettle & Hayes, 1982). There are two types of augmentals: *motivative* and *formative*.

Motivative augmentals temporarily alter the degree to which established consequences function as reinforcers or punishers (Barnes-Holmes et al., 2001). For example, a simple motivative augmental could be someone saying, ‘Hey, wouldn’t winning the lottery be awesome? Imagine all the pizzas you could eat guilt-free!’ If this statement influences the behaviour of buying a lottery ticket, it functions as a verbal establishing stimulus rather than a verbal discriminative stimulus. This is because winning the lottery would establish the availability of money, and thus, pizza would be readily available whenever desired, regardless of the presence of the specific rule prompting the purchase of the lottery ticket. Motivative augmentals seem to influence behaviour by presenting some sensory or perceptual functions of a consequence, similar to reinforcer sampling. In the

case of the example above, the words “winning the lottery” and “pizzas you could eat guilt-free” may serve as motivating operations by evoking mental imagery of the desirable outcome and influencing the person to engage in the target behaviour. This process is well-established to increase instrumental behaviour that produces such consequences.

Formative augmentals are verbal statements or rules that establish new consequences as reinforcers or punishers for behaviour (Harte & Barnes-Holmes, 2022; Hayes, Barnes-Holmes, & Roche, 2001). For example, a sign at a zoo’s reptile building reads: ‘Meet our Ninja Chameleons – Masters of Disguise!’ A playful addition below the sign says, ‘Warning: They may challenge you to a staring contest!’ Visitors cannot help but laugh and eagerly approach the exhibit, ready to engage in a hilarious staring contest with the chameleons, thanks to the amusing formative augmentals. Just like that, the verbal statement on the sign has turned a regular visit to the reptile exhibit into an entertaining and memorable experience with the chameleons.

To summarize, rule-governed behaviour plays a crucial role in human behaviour regulation, enabling individuals to respond to verbal instructions and follow contingent relations between stimuli. This form of behaviour differs from contingency-shaped behaviour as it is acquired through verbal descriptions rather than direct experiences. There are three functional categories of rule-governed behaviour: pliance, tracking, and augmentals. Pliance involves behaviour shaped by socially mediated reinforcement and coordination between verbal stimuli and behaviour. Tracking is guided by natural contingencies and environmental cues without direct enforcement by the verbal community. Augmentals encompass rule-governed behaviours resulting from relational networks that alter the reinforcing properties of consequences. Understanding these

distinctions is essential for comprehending how verbal behaviour is influenced by rules and learning histories. For instance, in environments where cultural stereotypes are prevalent, individuals may internalize and track these rules, leading to the formation of preconceived notions and attitudes about specific groups. Additionally, individuals may find themselves adhering to prejudiced attitudes within certain social groups, even if they personally disagree with those beliefs, due to the fear of facing social consequences for non-compliance. Although understanding the influence of rule-governed behaviour is essential in comprehending how individuals perceive and interact with others, it is equally crucial to explore practical approaches for promoting psychological flexibility and well-being. To this end, insights derived from RFT research have been integrated into therapeutic practices like Acceptance and Commitment Therapy (ACT).

3.4.2 Acceptance and Commitment Therapy

ACT is a form of third-wave cognitive behavioural therapy developed by Hayes and colleagues (1999, 2012). The foundational premise of ACT resides not in self-control but in equipping clients with new skills to effectively navigate, manage, and embrace challenging behaviours. Rooted in the practice of mindfulness, ACT encourages individuals to embrace present-moment awareness, allowing for a profound shift in the way they relate to their thoughts and emotions. Through mindfulness and present-moment awareness, ACT helps clients identify freely chosen personal values as well as cultivate and maintain a commitment to the pursuit of those values (Hayes et al., 1999, 2012).

Central to the ACT approach is an array of innovative therapeutic techniques, strategically designed to instil and refine psychological flexibility – the capacity to adaptively respond to thoughts, emotions, and other private experiences (Hayes et al., 1999, 2012).

These methodologies empower individuals to disengage from counterproductive cognitive patterns, facilitating an authentic and adaptive engagement with their experiential landscape. By utilizing metaphors and semantic satiation among other techniques, practitioners engender a profound recalibration of how a client interprets and interacts with private experiences (Hayes et al., 1999, 2012; Masuda et al., 2004; Masuda et al., 2009).

The cornerstone of ACT is the psychological flexibility model (also known as the “Hexaflex”, see Figure 10), a set of six coherent overlapping and interdependent processes (each with their own counterpart, see Figure 11), which Hayes et al. (1999, 2012) proposed as a unified model of human functioning and adaptability.

Psychological Flexibility Model. The psychological flexibility model serves as a foundational construct within ACT (Hayes et al., 1999, 2012). Psychological flexibility has been used to predict and influence a variety of phenomena including depression, anxiety, as well as occupational performance and burnout (Fresco et al., 2006; Karekla et al., 2004; Kashdan et al., 2006; Kato, 2016; Onwezen et al., 2014; Puolakanaho et al., 2020). The model identifies six fundamental core processes that collectively foster psychological flexibility, enabling individuals to effectively navigate challenging private experiences and pursue freely chosen personal values (Hayes et al., 1999, 2012).

Central to the psychological flexibility model are processes that counteract psychological inflexibility. This rigidity often manifests as inflexible attention, often linked to rumination or fixation on the past or future, which hinders our ability to fully engage with the present moment. Additionally, when individuals become overly attached to a constructed self-image, it can lead to inflexibility and curtail their ability to adjust and respond adaptively. Furthermore, an inclination for inaction or impulsive reactions, coupled

with the practice of avoiding certain experiences, can further limit our range of effective responses in different situations (Hayes et al., 1999, 2012).

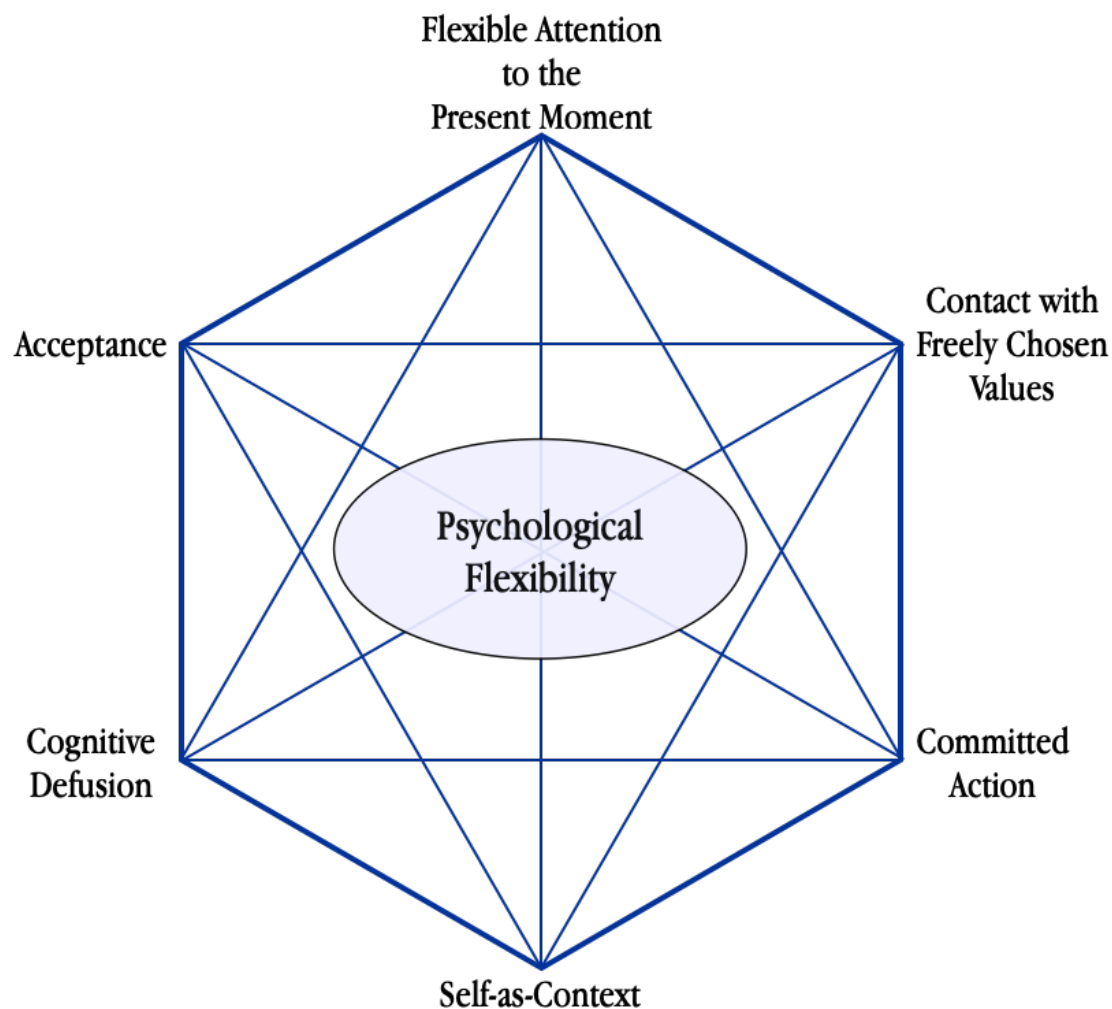
In contrast, the psychological flexibility model presents six core processes: cognitive defusion, acceptance, present moment awareness, self-as-context, values, and committed action. These processes work interdependently to cultivate psychological flexibility, enabling individuals to respond to difficult experiences with resilience and valued purpose. The psychological flexibility model highlights the intricate interplay among these processes, emphasizing their crucial role in alleviating psychological inflexibility, which is considered a central catalyst for human suffering and impaired functioning.

Cognitive Fusion and Defusion. Cognitive fusion refers to the tendency for internal verbal experiences, such as thoughts, to exert an undue influence on behaviour in an inflexible manner (Hayes et al., 1999, 2012). Fusion denotes the lack of healthy psychological distance from thoughts, wherein verbal processes such as assumptions and judgments become conflated with objective truths and reality. Consequently, behaviour becomes restricted or dominated by these cognitive events rather than sensitive to the broader context (Gillanders et al., 2014).

Yet within the psychological flexibility model, fusion lies on a continuum with cognitive defusion. Defusion does not represent an absolute state but rather the ongoing process of gaining needed distance from thoughts so that one may respond adaptively (Hayes et al., 2012). Psychological flexibility similarly entails the capacity to connect with the present moment openly without getting entangled in rigid verbal rules and evaluations (Kashdan & Rottenburg, 2010). Progress in flexibility thus manifests as greater sensitivity to context and values in shaping actions.

Figure 13

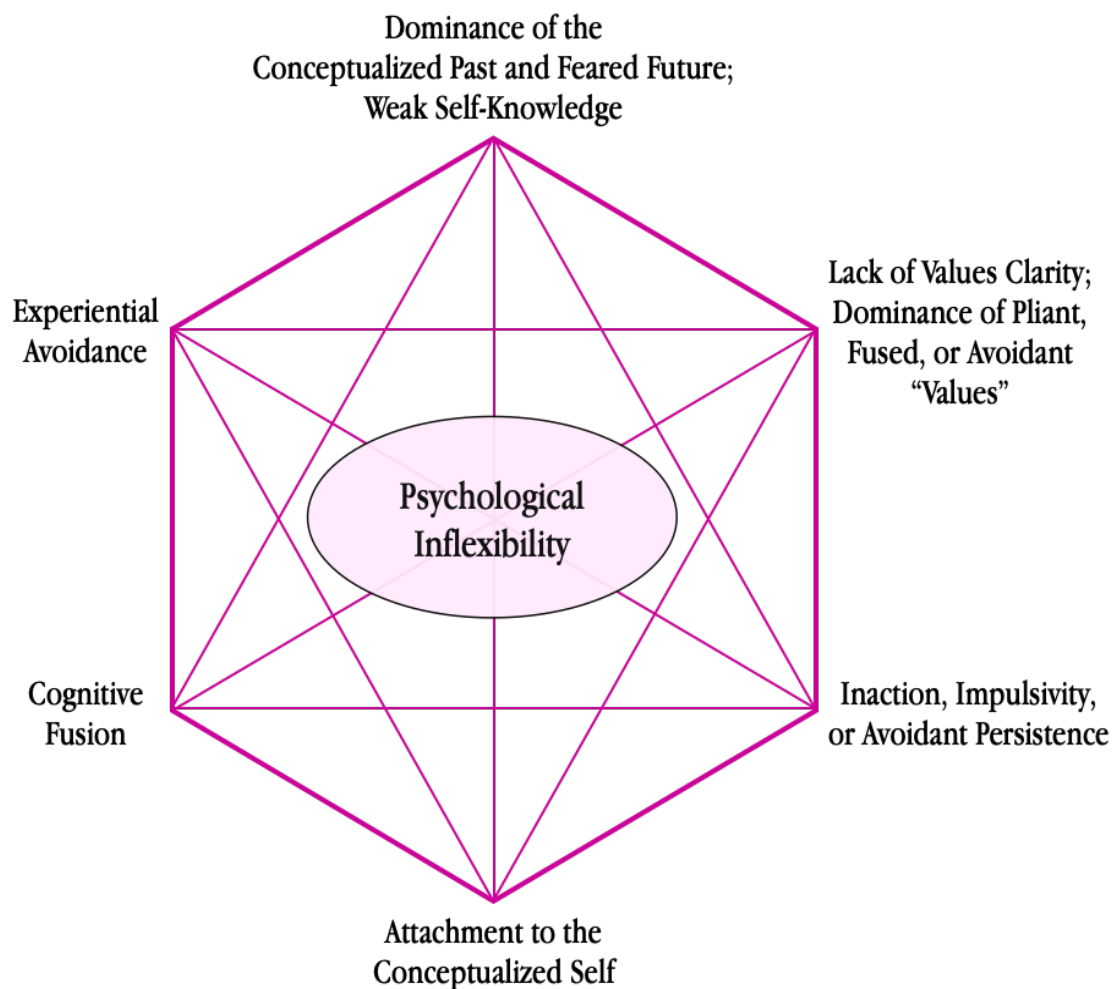
Psychological Flexibility Model



Note. The psychological flexibility model depicted as the “Hexaflex,” a visual representation often used to illustrate the interconnectedness of the six core processes of psychological flexibility. Adapted from source: *Hayes et al. (1999, 2012)*. Copyright © Steven C. Hayes. Used by permission.

Figure 14

Psychological Inflexibility Model



Note. Psychological inflexibility as a model of psychopathology. Psychological inflexibility is characterized by the rigid dominance of maladaptive responses to challenging private events hindering one’s ability to adapt and respond effectively. It involves a persistent avoidance of distressing thoughts and emotions, often at the cost of pursuing meaningful goals and values. This concept is rooted in the inability to remain open to experiences, accept internal discomfort, and engage in purposeful actions that align with one's core values. Adapted from sources: *Hayes et al. (2008)*; *Hayes et al. (2012)*. Copyright © Steven C. Hayes. Used by permission.

The counterpart to cognitive fusion, cognitive defusion, involves the practice of detaching from and objectively evaluating vexatious thoughts. This process enables individuals to consider the utility of these thoughts and their impact on the individual's behaviours. By honing the skill of cognitive defusion, individuals can navigate their mental landscape more effectively, gaining a broader perspective on their thoughts (Masuda et al., 2004). This newfound perspective allows them to perceive their thoughts within a broader context, transcending the immediate grasp on reality (Hayes et al., 1999, 2012).

For example, when a superstitious person has the fleeting thought about how a black cat encounter means bad luck, cognitive fusion would lead them to behave as if this were an inevitability. Yet defusing this thought by recognizing it as an unhelpful prediction rather than fact, they could consider the context more fully and choose to act in alignment with their goals for the day. Such fluid responding represents psychological flexibility even if complete defusion from the thought is not achieved. In this way, fusion, flexibility, and defusion interrelate as overlapping variables describing one's degree of functional autonomy from cognitive experiences.

The process of cognitive defusion is pivotal in cultivating greater psychological flexibility, enabling individuals to identify and confront unconstructive or distorted thoughts without becoming ensnared by them (Hayes et al., 1999, 2012). Empirical evidence supports the effectiveness of this approach, with studies demonstrating that changes in defusion-related measures mediate observable improvements in ACT interventions. These interventions have been applied successfully to address various conditions, including depression (Larsson et al., 2016; Masuda et al., 2010; Zettle & Hayes, 1987), counsellor burnout and stigma (Hayes et al., 2004), stress management (Donald et al.,

2017), as well as reduced hospitalization rates for psychosis (Bach & Hayes, 2002; Bach et al., 2013). The practical application of cognitive defusion techniques engenders a deliberate alignment between an individual's thoughts and their chosen actions, leading to improved well-being and informed decision-making (Hayes et al., 1999, 2012).

Acceptance and Experiential Avoidance. Within the psychological flexibility model, acceptance and experiential avoidance are emphasized as key processes in promoting one's well-being and the capacity for flexible responding (Hayes et al., 1999, 2012). In the context of mental health, acceptance may be misunderstood as passive resignation to one's unwanted thoughts and maladaptive behaviours. Instead, acceptance involves an open, engaged curiosity that enables individuals to observe their private experiences clearly, much like a scientist observing intriguing phenomena (Hayes et al., 1996). This perspective allows individuals to observe their private experiences without immediate reactivity. On the other hand, experiential avoidance refers to attempts to escape or alter aversive thoughts and emotions (Hayes et al., 1999, 2012). These two seemingly contradictory processes play an integral role in understanding how people engage with their private experiences as these processes exist along a spectrum that determines psychological flexibility or inflexibility.

Total avoidance and total acceptance represent unrealistic absolutes. Rather, people tend to fluctuate between these polar opposites throughout contexts (Hayes et al., 2012). For instance, a football player may exhibit open acceptance after scoring a goal but reactively avoid difficult emotions after making a critical error in their play. Their flexibility varies accordingly. Progress lies not in the elimination of experiential avoidance but gaining awareness around its triggers and skillfully widening one's tolerance through exposure methods (Luciano et al., 2014).

When confronted with discomfort, it is common for individuals to engage in behaviours such as distraction, thought suppression, or physical avoidance of triggering situations (Hayes et al., 1999, 2012). These behaviours may provide short-term relief but can inadvertently exacerbate conditions like PTSD and anxiety, among other negative outcomes (Chawla & Ostafin, 2007). This avoidance pattern is negatively reinforced by the temporary reduction in distress, creating a self-perpetuating cycle that makes it particularly resistant to extinction (Luciano et al., 2013; Luciano et al., 2014).

Avoidance patterns are closely intertwined with cognitive fusion. This fusion amplifies the aversion of distressful experiences, fuelling the urge to escape uncomfortable thoughts and emotions (Hayes et al., 1999, 2012). Consider a person that despite outwardly rejecting prejudice and discrimination, grapples with anxiety during intergroup contact due to the fear of being perceived as prejudiced (Stephan & Stephan, 1985). Paradoxically, this discomfort might lead them to avoid intergroup contact, inadvertently reinforcing perceptions of prejudice (MacInnis & Page-Gould, 2015; Richeson & Shelton, 2005).

Rather than succumbing to this cycle, working towards acceptance of these private experiences and deliberately confronting this discomfort through active participation in these interactions could open avenues to diverse perspectives and empower individuals to more adeptly support social movements advocating for an inclusive and equitable society. Embracing experiences in this way enables individuals to gain insights into the origins and patterns of their reactions, fostering greater self-awareness and psychological flexibility (Hayes et al., 1999, 2012).

Navigating acceptance and experiential avoidance requires addressing potential barriers that individuals encounter. Factors such as cultural influences, fear of discomfort, and conditioned responses can hinder the practice of acceptance (Hayes et al., 1996). Additionally, cognitive fusion can solidify avoidance patterns by inflating the perceived threat of internal experiences (Hayes et al., 1999, 2012). These steps gradually diminish cognitive fusion and promote a more open-minded perspective (Hayes et al., 1999, 2012).

To cultivate acceptance and address experiential avoidance, ACT offers practical exercises that empower individuals to develop mindfulness skills, practice cognitive defusion, and gradually confront avoided experiences through exposure techniques (Hayes et al., 1996; Hayes et al., 1999, 2012). These techniques foster greater psychological flexibility and allow individuals to engage in values-based actions despite discomfort (Hayes et al., 1996; Hayes et al., 1999, 2012).

Overall, acceptance, avoidance, and fusion represent overlapping constructs that explain fluctuations in psychological flexibility. None exist as all-or-nothing properties. Noting their variability highlights how context shapes their expression. This perspective clarifies opportunities for cultivating greater adaptability through targeting avoidance triggers, building tolerance, and fostering cognitive defusion skills based on each situation.

Fearful Future and Present Moment Awareness. Present moment awareness, closely related to mindfulness, plays a pivotal role in enhancing psychological flexibility and resilience (Hayes et al., 1999, 2012). Kabat-Zinn (2003) seminal definition of mindfulness – “the awareness that emerges through paying attention on purpose, in the present moment, and nonjudgmentally to the unfolding of experience moment by moment” – resonates with the essence of present moment awareness as described by Hayes et al. (1999, 2012). Yet as

Moran and Ming (2020) elucidated, mindfulness also serves as a purposeful method of stimulus control that undermines the domination of verbal processes over behaviour.

Fixating on the future or a reconstructed past can intensify the impact of traumatic memories, rumination, and pain as well as diminish one's sensitivity to the present moment (Grabbe & Miller-Karas, 2017; Kachadourian et al., 2021; Lopez et al., 2021). While on the other hand, practicing mindfulness daily can enhance emotional regulation and stress management, reduce anxiety, optimize sustainability of attention, and improve sleep quality (Desbordes et al., 2012; Donald et al., 2016; Hodgins & Adair, 2010; Hölzel et al., 2013; Rusch et al., 2019; Valentine & Sweet, 1999).

Still, total immersion in the present represents an unrealistic ideal. Moreover, dwelling in the present moment may even be dysfunctional at times. For instance, imagine smelling the roses in your garden, and suddenly, your child runs out into the street with an oncoming vehicle. In that moment, it would be preposterous and neglectful to remain in the present moment. Rather, it would be more appropriate to scream an expletive and lunge to pull your child back to safety. Situational awareness and urgency are often essential to our daily functioning. Flexibility is a critical aspect of this process within the psychological flexibility model. As individuals inevitably slide along a continuum between flexible awareness and allowing the mind to wander away from the present moment (Hayes et al., 1999, 2012). Recognizing these fluctuations highlights opportunities for purposeful redirection of attention to the current sensory experiences. Hayes et al. (1999, 2012) likened it to exercising a muscle, gradually strengthening one's capacity to handle distress without automatically resorting to avoidance tactics like distraction or suppressing discomfort.

At the intersection of present moment awareness and ACT within the framework of the Psychological Flexibility Model, the value of deliberate, non-judgmental attention to one's internal experiences becomes evident. Mindfulness practices act as the brushstrokes of an artist, empowering individuals to nurture psychological flexibility. This process paints a portrait of heightened well-being and contextually-responsive behaviour – a form of artistry that resonates harmoniously with the rhythm of each unique moment.

Conceptualized Self and Contextualized Self. The CBS framework offers a comprehensive view of the self, delineating three distinct dimensions: self-as-content, self-as-process, and self-as-context (Barnes-Holmes et al., 2001). These dimensions provide unique lenses through which individuals perceive and engage with their inner experiences.

The conceptualized self, or *self-as-content*, represents the personal narrative individuals meticulously weave about themselves, sculpted by their life experiences and interactions with the external environment, shaping how individuals categorize, describe, and evaluate themselves (Foody et al., 2012; Hayes et al., 1999, 2012). The development of one's self-story begins in childhood, as individuals learn the significance of articulating personal traits, abilities, preferences, and more, contributing to the formation of a coherent self-concept (Atkins & Styles, 2015). Yet, a rigidly conceptualized self can be detrimental, leading to heightened stress, negative affect, or even fostering maladaptive behaviours like prejudice (Atkins & Styles, 2016; Hayes et al., 1999, 2012). For example, if a child is persistently exposed to prejudiced beliefs about a particular racial or ethnic group from family, friends, and their broader verbal community, these beliefs may integrate into their self-concept over time. This inflexibility in the conceptualized self may manifest in avoidance or discrimination against members of the targeted group. Recognizing the role of

the conceptualized self in this context reveals how prejudice can become deeply embedded in an individual's self-identity due to socialization and environmental factors. Addressing such prejudice may necessitate reshaping the individual's self-narrative through education, exposure to diverse perspectives, and fostering empathy and understanding. It highlights the significance of intervention and awareness in combating prejudice, both on an individual and societal level.

In contrast to the static characteristics of the conceptualized self, the knowing self, or *self-as-process*, engages in present-moment awareness (Hayes et al., 1999, 2012). This form of self-awareness is characterized by its flexibility and receptiveness to changes in one's verbal self-knowledge (Moran et al., 2018). Through genuine connection with the present moment, individuals can discriminate between their ongoing sense of self and transient private events, enabling them to discern antecedents that influence their behaviours (Torneke, 2010). Reflecting upon and observing these private events becomes integral to a person's long-term well-being (Atkins & Styles, 2016). This mindful approach diminishes the verbal control exerted by the conceptualized self over one's behaviour and guides individuals towards values-oriented behaviours (Foody et al., 2012; Moran et al., 2018).

The observing self, or *self-as-context*, empowers individuals to transcend their immediate self and observe private events from an external vantage point, fostering acceptance of the content of these experiences (Atkins & Styles, 2016; Moran et al., 2018). This shift is facilitated by using deictic frames, which create a clear distinction between the constant "I" in the present moment and transient thoughts in the past or future (Foody et al., 2012). Hayes (2011) posits that self-as-context lays the foundation for theory of mind, empathy, compassion, and self-compassion. This transformative process permeates the

therapeutic journey and emerges as a pivotal factor in enhancing psychological flexibility (Hayes et al., 2012). Notably, improved access to self-as-context is predictive of lower depression and has demonstrated benefits in improving functioning and reducing depression in adults with chronic pain (Atkins & Styles, 2016; Yu et al., 2017).

In summary, Barnes-Holmes and colleagues' (2001) triadic framework sheds light on the multifaceted nature of the self. This model deepens our comprehension of psychological flexibility, revealing intricate connections between the conceptualized self and self-awareness.

Lack of Values Clarity and Values Awareness. In the field of social psychology, values are a subject of extensive research, examined both as socially influenced and personally chosen desires that significantly impact behaviour (Schwartz et al., 2012; Ponizovskiy et al., 2019). Schwartz's (1992) seminal theory introduced a comprehensive perspective on values, presenting them as fundamental guiding principles that play a pivotal role in shaping an individual's decision-making processes, perceptions, and behaviours. This theory posits that values should be understood as a spectrum of motivations rooted in universal human needs, encompassing biological necessities, social norms, and the welfare of social groups. This holistic approach underscores the ubiquity of values across diverse cultures and their essential role in understanding human behaviour.

Schwartz and colleagues (2012) further refined this theory by organizing values into a circular model (see Figure 12), which emphasizes the motivational continuum. Within this model, four higher-order values emerge: openness to change, self-transcendence, conservation, and self-enhancement, each with its own subcategories and more specific values (see Table 2). These values, ranging from fundamental principles to concrete

behaviours, are recognized as critical determinants of attitudes, beliefs, and behaviours across a wide array of contexts. Additionally, Ponizovskiy and colleagues' (2019) research has highlighted the profound influence of cultural values on decision-making processes, shedding light on how these values become deeply ingrained within societal norms and customs. These findings underscore the significance of values in shaping human motivation and behaviour within various cultural and social contexts.

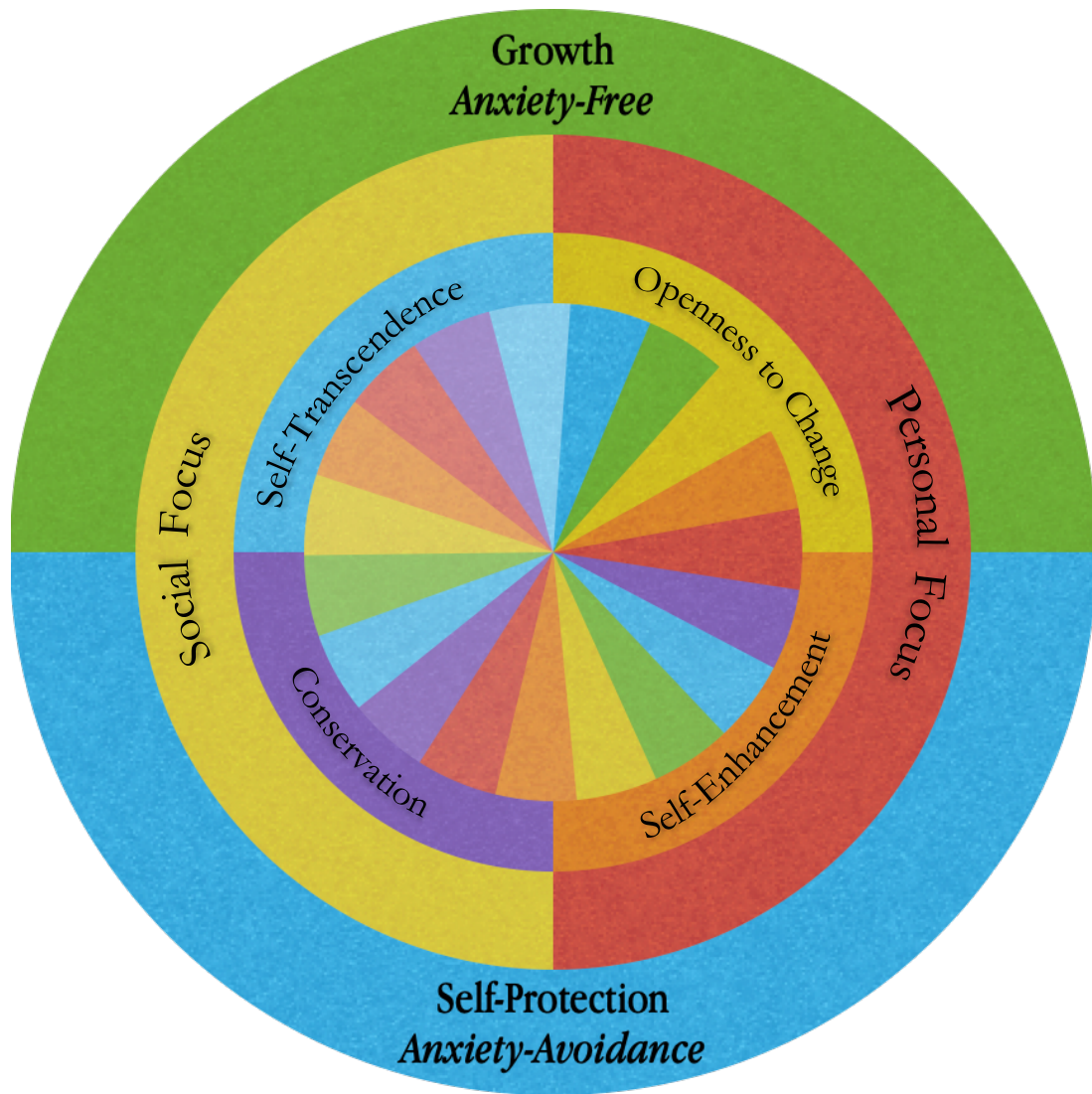
Within the framework of ACT, values are defined as “freely chosen verbally constructed consequences of ongoing, dynamic, evolving patterns of activity, which establish predominant reinforcers for that activity that are intrinsic in engagement in the valued behavioural pattern itself” (Wilson & DuFrene, 2009, p. 66). In other words, values represent deeply held motivations and beliefs that guide one's actions.

These values are consciously and independently chosen to serve as guiding principles for living a more meaningful and fulfilling life (Lundgren et al., 2012). The process of constructing one's values aims to shift the motivational focus from secondary external reinforcers, such as financial or social gains, to the inherent satisfaction and vitality one experiences when behaving consistently with chosen values (Long & Sanford, 2016).

Notably, values should not be chosen solely to address problems or assuage guilt; rather, they should be discovered through non-judgmental self-reflection on what provides a sense of meaning and purpose (Lundgren et al., 2012). A key tenet of ACT is the emphasis on actively and dynamically constructing values in the present moment as intrinsic motivators orienting current and future patterns of purposeful, values-congruent behaviour (Hayes et al., 1999, 2012). In this sense, values give context, direction, and meaning to one's actions, distinct from a problem-solving mindset (Lundgren et al., 2012).

Figure 15

Circular Motivational Continuum of Values



Note. The proposed circular model of motivational continuum of values developed by Schwartz et al. (2012). For the purposes of legibility, the 19 subcategories of values are not included in this figure. Within Self-Transcendence are the sub-categories of Humility, Universalism, and Benevolence. Openness to Change comprises Self-Direction and Stimulation. Self-Enhancement is divided into the subcategories including Hedonism, Achievement, Power, and Face. Conservation involves the subcategories of Security, Tradition, and Conformity. For further details, please refer to Table 2.
Source: *Schwartz et al. (2012).*

Table 2

Values in the Circular Motivational Continuum

Value	Conceptual Definitions in Terms of Motivational Goals
Self-Direction Thought	Freedom to cultivate one's own ideas and abilities
Self-Direction Action	Freedom to determine one's own actions
Stimulation	Excitement, novelty, and change
Hedonism	Pleasure and sensuous gratification.
Achievement	Success according to social standards
Power Dominance	Power through exercising control over people
Power Resources	Power through control of material and social resources
Face	Security and power through maintaining one's public image and avoiding humiliation
Security Personal	Safety in one's immediate environment
Security Societal	Safety and stability in the wider society
Tradition	Maintaining and preserving cultural, family, or religious traditions
Conformity Rules	Compliance with rules, laws, and formal obligations
Conformity Interpersonal	Avoidance of upsetting or harming other people
Humility	Recognizing one's insignificance in the larger scheme of things
Benevolence Dependability	Being a reliable and trustworthy member of the ingroup.
Benevolence Caring	Devotion to the welfare of ingroup members.
Universalism Concern	Commitment to equality, justice, and protection for all people
Universalism Nature	Preservation of the natural environment
Universalism Tolerance	Acceptance and understanding of people different from oneself

Note. Source: *Schwartz et al. (2012).*

Recent research by Chrystal et al. (2019) provides insights into the complex relationship among values, behaviours, and well-being. The researchers examined how perceived discrepancies between one's self-reported behaviours and ideal value-oriented behaviours impacted well-being outcomes. The findings revealed nuances in how different types of values influence perceived behavioural discrepancies, suggesting the content of one's values matter.

Chrystal et al. (2019) suggested that engaging in behaviours aligned with values that are considered meaningful within one's socio-cultural context may enrich well-being. Their results resonate with the core principles of ACT, emphasizing the central role of values in guiding behaviours (Hayes et al., 1999, 2012).

In the context of clinical practice, clarifying one's personal values can help individuals identify value-oriented behaviours that may lead to more positive clinical outcomes despite perceived obstacles (Hayes et al., 1999, 2012). By actively aligning one's behaviours with their chosen values, individuals can find purpose and direction, fostering psychological well-being and a profound sense of meaning in life (Hayes et al., 1999, 2012).

Although there is research that greater perceived disparities between chosen values and actual behaviours have been linked to increased levels of negative affect and stress, in addition to exacerbation of symptoms of depression and anxiety (Chrystal et al., 2019; Lundgren et al., 2012). It is important to reiterate the description of values as “ongoing, dynamic, evolving patterns of activity” within Wilson & DuFrene's (2009, p. 66) definition. In essence, values should not constrict individuals into rigid adherences to a fixed set of rules akin to a river guiding one relentless toward a fixed destination. When values ossify into inflexible regulations that limit behavioural options, distress and clinical symptoms can

emerge from perceived failures (Lundgren et al., 2012). Rather, values should emulate a gentle stream, adapting flexibly to obstacles and contextual shifts while steadily guiding the individual to consistently choose behaviour aligned with their values. The act of engaging in such behaviours becomes reinforcing, emphasizing the ongoing process rather than fixating on an ultimate destination (Hayes et al., 1999, 2012).

The power of values stems from illuminating chosen life directions, not avoiding mistakes. With this flexible orientation, obstacles become part of the journey rather than detours away from core principles. This dynamism ultimately sustains values-congruent behaviour and fuels psychological wellbeing.

Committed Action and Withdrawal. The concept of committed action represents a key process within contemporary behavioural science models of psychopathology, human functioning, and behaviour change (Wilson & Murrell, 2004). Specifically, committed action refers to flexible persistence in value-directed behaviour, even when faced with obstacles or distressful private events (Hayes et al., 1999, 2012).

One example of committed action is maintaining a challenging exercise routine despite physical discomfort and inconvenient weather. This committed action requires an open, focused, voluntary process of actively living one's life according to what matters most to the individual through concrete behaviour change. It entails an ongoing process of self-correction when behaviour strays from chosen values. For instance, apologizing to your partner after snapping due to work stress and intentionally enacting chosen values of kindness moving forward. Committed action is thus central to meaningful living.

Committed action serves as a counterbalance to rigid and ineffective responses associated with cognitive fusion, experiential avoidance, and the detachment from values. Each of these factors contribute to the narrowing of one's behavioural repertoire and impedes the ability to adapt to changing circumstances. This can manifest in several ways including inaction, apathy, withdrawal, procrastination, and unhealthy coping behaviours like substance abuse and self-harm (Gagnon et al., 2016; Hayes et al., 1999, 2012).

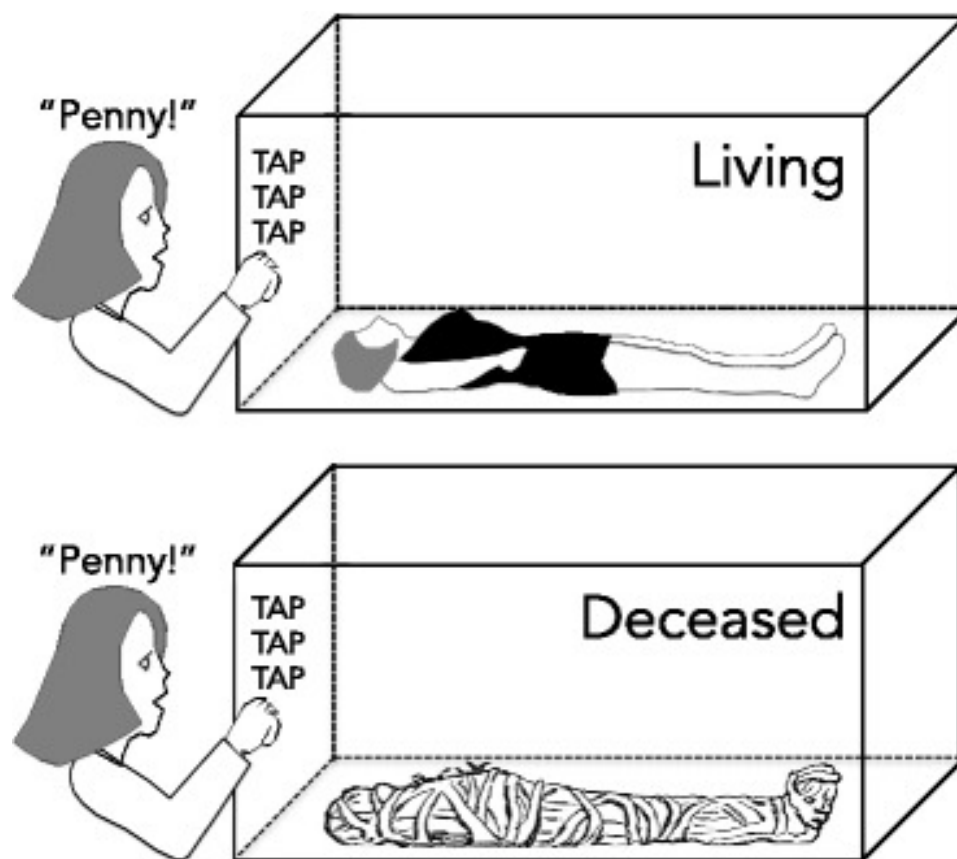
The benefits of committed action highlight the costs of avoidance and rigidity. Research has linked committed action to lower depression as well as improved social functioning and quality of life among chronic pain patients, even after accounting for pain intensity (McCracken et al., 2015). Moreover, it is negatively correlated with procrastination in undergraduate students while predicting academic values progress over and above psychological distress and other aspects of psychological flexibility (Gagnon et al., 2016).

Although avoidance provides short-term relief, ultimately it impedes meaningful behaviour change. Left unchecked, increasingly broad patterns of avoidance and rigidity emerge, leading to a narrowing repertoire of increasingly ineffective behavioural responses with profound personal cost (Hayes et al., 1999, 2012). Yet, as discussed previously, consistent progress towards one's chosen values is the ideal but not the expectation.

As Lindsley (1991) asserted, the complete elimination of maladaptive behaviours is an unrealistic goal, achievable only by the deceased; a claim that was empirically tested by Critchfield and Shue (2018) using Egyptian mummies (see Figure 13). Thus, the key lies not in perfection, but to establish flexible, values-directed behavioural patterns over time by setting achievable goals (Hayes et al., 1999, 2012; Wilson & DuFrene, 2009).

Figure 16

Illustration of an Experimental Design for the Dead Man's Test



Note. An illustration of the standardized conditions in Critchfield & Shue's (2018) experimental design used to empirically evaluate the Dead Man's Test (Lindsley, 1991). Source: Critchfield (2016).

In short, committed action involves the ongoing, moment-to-moment process of redirecting behaviour to maintain value-oriented behaviours. This dynamic process empowers individuals to flexibly adapt and grow in accordance with their deeply held values. Within ACT, committed action works in harmony with the other core processes of the psychological flexibility model, creating a comprehensive approach to durable, meaningful behaviour change.

Fundamentally, committed action means persistently and flexibly engaging in patterns of behaviour aligned with one's chosen values. It requires connecting with life's purpose and directing behaviour accordingly, even in the face of discomfort. Constructing and connecting with one's values provides this sense of overarching purpose and direction. As Viktor Frankl (1992) wrote, "When we are no longer able to change a situation, [...] we are challenged to change ourselves," (p. 135). Without purpose, the simplest inconvenience appears insurmountable. Yet when one knows their purpose – their 'why' – even if the path may be difficult and their feet may blister, obstacles become endurable, and they can persist.

Embracing Psychological Flexibility. Psychological flexibility can be defined as the inherent capacity to engage openly and wilfully with the present moment while fluidly adapting one's behaviour to be aligned with personally chosen values based on the situational context (Biglan & Hayes, 2016; Hayes et al., 1999, 2012). However, psychological flexibility is not a one-time achievement, but rather it is an ongoing, dynamic journey. The interplay among the core processes of the psychological flexibility model (see Figures 10) is essential for attaining psychological flexibility, as these processes do not hold significance in isolation (Hayes et al., 1999, 2012).

Consider a person who practices defusion techniques to distance themselves from their thoughts and emotions but lacks acceptance of these private experiences. In this scenario, this person might successfully detach from their thoughts but still resist or harbours aversion toward their emotional states. Here, defusion without acceptance becomes a superficial coping mechanism while the person's distressing thoughts and experiences remain unaddressed.

It is important to note that at the core of psychological flexibility lies compassion. In the pursuit of psychological well-being, it becomes evident that each of the processes are skills and each one plays a pivotal role (Hayes et al., 1999, 2012). These skills encourage individuals to view negative self-evaluations not as irrefutable facts but as subjective judgments, fostering a compassionate stance toward oneself despite these critiques. In this context, love emerges not as a predefined goal but as an implicit value for those practicing psychological flexibility (Biglan & Hayes, 2016). The process of engaging in perspective-taking to gain a deeper understanding of oneself and the world by considering different viewpoints, allows a person to transcend their ego-centric perspective and recognize the shared human experience and feel connected to others on a deeper level. This transcendent sense of self is essential for embracing self-compassion because it allows individuals to view themselves with greater understanding and kindness. Rather than being overly identified with their thoughts and emotions, they can step back and observe their inner experiences with a compassionate and non-judgmental perspective. This self-compassion arises from the recognition that they, like all humans, are imperfect and deserving of love and care.

Once individuals have cultivated self-compassion and developed a transcendent sense of self, they naturally extend this compassion to others (Biglan & Hayes, 2016). This is because they no longer perceive themselves as separate from others but as part of a broader human experience. They can empathize with the struggles and suffering of others, recognizing that everyone shares the same fundamental vulnerabilities and desires for wellbeing. This extension of compassion to others is a consequence of the broader, more inclusive perspective gained through transcendent self-awareness.

Studies have shown that individuals possessing psychological functions like perspective-taking, empathy, and psychological flexibility are more inclined to care for others (Almada, 2015; Vilardaga et al., 2012). This empathy, combined with the willingness to experience emotions without avoidance, empowers individuals to take supportive actions when others are in distress highlighting the importance of love and compassion in daily interactions (Biglan & Hayes, 2016). Furthermore, the insights derived from the Psychological Flexibility Model can be applied to address issues related to prejudice and dehumanization. By helping individuals navigate and challenge their biases, promoting acceptance, and encouraging value-oriented behaviours, this model contributes to the development and nurturance of a more inclusive society.

3.5 Insights into Prejudice: A Functional Contextualist Approach

In the long history of the effort to understand and predict human behaviour and social dynamics, prejudice has been examined extensively from a variety of perspectives. Contextual Behavioural Science (CBS), known for its nuanced and comprehensive viewpoints, provides a profound lens for delving into these complex matters. Within the research traditions of CBS, prejudice has been analysed through multiple approaches. By exploring the diverse CBS approaches, we can unravel the intricacies surrounding prejudice and dehumanization, shedding light on their origins and potential solutions.

3.5.1 Rethinking Prejudice: A Relational Frame Theory Approach

Breaking Down Stereotypes (Reprise). Shortly following the initial proposal of Relational Frame Theory (RFT; Hayes, Barnes-Holmes, & Roche, 2001) to the broader research community in 1991 (Hayes, 1991), a ground-breaking extension of RFT's application was proposed into the domain of social psychology. In their pioneering work,

Kohlenberg and colleagues (1991) not only delved into the examination of contextual control through equivalence classes but also marked a significant departure from conventional behaviour analytic approaches to the understanding of social stereotyping and prejudice. By demonstrating how contextual control could be transferred through equivalence classes, they provided a novel perspective on the formation, maintenance, and influence of social stereotypes and prejudices by contextual cues. Consider the formation of an equivalence class in which negative attributes are associated with a specific group. This class has been established through exposure to negative information or experiences related to that group. If that person were to encounter another group who shares the same or similar characteristics, those negative associations may then transfer over. In essence, the transfer of contextual control through equivalence classes suggests that our perceptions and attitudes toward one group can influence how we perceive and evaluate other groups based on shared associations or similarities. Kohlenberg et al. (1991) used this illustrative example:

Consider the sentences ‘the woman complained and complained’ and ‘the man complained and complained.’ The word *woman* in the first sentence may serve as a context in which words like *nag* or *bitch* are related to the word *complain*. The word *man* in the second sentence may serve to relate *complain* with *assertive* or *forceful*.

This provides a model for understanding how prejudices might form and be influenced by the context in which we encounter different groups in society. It highlights the importance of examining the derived relations between stimuli and how these relations can contribute to social stereotyping. Furthermore, their findings also suggest that an intervention designed to modify contextual control over verbal relations or disrupt existing equivalence relations may be an effective means of mitigating prejudices, thereby offering practical insights into

addressing real-world social issues (Kohlenberg et al., 1991). However, further research was essential to further examine this promising avenue particularly a more in-depth analysis of how attitudes initially develop.

Attitudes. Within RFT, attitudes are conceptualized as complex relational networks influenced by both verbal and non-verbal stimuli (Grey & Barnes, 1996). Grey and Barnes (1996) trained participants to establish three separate equivalence classes and two classes of contextual cues using arbitrary stimuli. Following this training, participants were then presented with three brief clips from contemporary films recorded on video cassette tapes labelled with arbitrary stimuli from the equivalence classes. The clips included a dramatic religious scene, a romantic sexual scene, and a scene of rape. Subsequently, participants were required to categorize the video tapes as either 'GOOD' or 'BAD' based on provided contextual cues provided, such as 'moral content' or 'dramatic presentation.' Through this experimental design, Grey and Barnes (1996) demonstrated how people could form attitudes toward things that they had not directly experienced and how these attitudes could change based on the context. In a real-world context this approach emphasizes how attitudes are dynamic and socially determined, rather than purely psychometric, in their formation and change.

Roche et al. (1997) expanded on this by demonstrating that equivalence classes remained sensitive to contradictory information, leading to cognitive dissonance and attitude adjustments. This process is similar to how attitudes can evolve in response to incongruous contingencies to maintain internal consistency and coherence within one's relational frame of reference (Roche et al., 1997). Barnes-Holmes and colleagues (2000) further explored this concept, showing how emotional associations could be transferred to

different stimuli through classical conditioning, illustrating the complexity and flexibility of attitudes within relational networks. They also explored higher-order conditioning, where emotional responses and preferences extend to related concepts. Their research further showed how these conditioned attitudes can transfer across multiple layers of stimuli through stimulus equivalence (Barnes-Holmes et al., 2000). Together, this line of research suggests that attitudes are not isolated cognitive constructs, but instead are multifaceted and can ripple through layers of associations, illustrating the intricate interplay among language, emotions, and cognition, in shaping beliefs and evaluations. In essence, RFT views attitudes as emergent products of these relational networks, where stimuli acquire evaluative functions based on their context and their relationships with other stimuli. This perspective highlights the complexity and flexibility of attitudes, reflecting the dynamic nature of human cognition and behaviour.

Prejudice Formation. Building upon this foundation, RFT provides a unique perspective on the formation of prejudices. RFT proposes that although cultural influences or verbal communities may instil prejudices, an emotionally charged personal experience can profoundly transform stimulus functions across relational networks (Dixon et al., 2009; Hayes et al., 2002). For example, Dixon et al. (2003, 2006a, b, 2009) examined the effects of the 11th of September attacks in 2001 in which airline hijackers of Middle Eastern origin killed nearly 3,000 people. They theorized that as millions of people watched the horrific events of that day unfold, it triggered an emotional response that significantly contributed to a transformation of stimulus functions regarding Middle Eastern people (Dixon et al., 2003). This transformation of stimulus functions generalized to impact other minority

groups, as other communities like Sikh men experienced a significant increase in discrimination, violence, and profiling after the attacks (Ahluwalia & Pellettiere, 2010).

In their experiments, Dixon, Rehfeldt et al. (2006) noted the ease and rapidity of establishing equivalence classes between imagery of Middle Eastern men and terrorist stimuli. This finding highlights the remarkable ease with which such associations can be established, potentially contributing to the development of prejudice. Once established, influences from the verbal community and other environmental factors likely reinforce the rigidity of these equivalence classes (Dixon, Zlomke, & Rehfeldt, 2006; Watt et al., 1991). However, when participants matched neutral stimuli with terrorist imagery and American symbols, post-test reactions displayed fewer ingrained associations, indicating programmed reinforcement contingencies overrode previously established relational frames (Dixon, Rehfeldt et al., 2006; Dixon & Lemke, 2007).

Deictic Frames and Perspective Taking. A key factor in prejudice and dehumanization is lacking appreciation for outgroup perspectives, often tied to limitations in deictic relational skills (Almada, 2015; Haque & Waytz, 2012; Levin et al., 2016). Deictic frames refer to the verbal relations involving the perspective of the speaker such as I-YOU, HERE-THERE, and NOW-THEN (McHugh et al., 2004). Mastering deictic frames allows for coordination of viewpoints and is pivotal for empathy and examining a situation from multiple vantage points. Prejudiced individuals frequently display egocentrism and cognitive fusion in which they struggle seeing beyond their own perspective or fuse deictic frames in rigid ways (Bocian et al., 2020; Levin et al., 2016; Rowatt & Al-Kire, 2020). This inability to shift perspectives may manifest in false consensus effects, insensitive statements, victim

blaming, and a lack of empathy for disadvantaged minority groups (Bal & Bos, 2015; Berndsen et al., 2018; Buraschi et al., 2018; Pope, 2013).

Perspective-taking skills evolve through the repeated exposure to and understanding of deictic frames (McHugh et al., 2004). To examine these frames more thoroughly, McHugh et al. (2003) developed the Deictic Relations Task (see Table 3). This task was used to enhance perspective-taking by facilitating comprehension of the intricate relationships between an individual's own perspective and the perspectives of others (McHugh et al., 2004). By incorporating these deictic frames into the study of prejudice, researchers aim to cultivate and refine perspective-taking skills, a critical factor in addressing prejudicial attitudes and behaviours. This approach offers a unique lens through which to examine prejudice, emphasizing that empathy and perspective-taking are not solely reliant on abstract categorizations but are deeply rooted in how individuals frame their interactions with others (Vilardaga, 2009). As such, this perspective sheds new light on the verbal behaviour of prejudice, providing a promising avenue for a more comprehensive analysis.

In support of this approach, Almada (2015) used a variation of the Deictic Relations Task (McHugh et al., 2004) that included emotional cues (see Table 4). The findings of her studies suggested that the ability to take the perspective of others in emotional situations may be a crucial factor in predicting emotional (e.g., empathic concern, offering emotional support to alleviate distress) and altruistic prosocial behaviours (e.g., selflessness, aiding in emergencies, contributing to charitable causes).

Table 3

Examples from the Perspective-Taking Protocol.

Simple Relations	
I	I have a red brick and you have a green brick.
–	Which brick do I have?
YOU	Which brick YOU have?
HERE	I am sitting here on a blue chair, and you are sitting there on a black chair.
–	Where am I sitting?
THERE	Where are YOU sitting?
NOW	Yesterday you were watching television, today you are reading.
–	What were YOU doing then?
THEN	What are YOU doing now?
Reversed Relations	
I	I have a red brick and you have a green brick. If I was you and you were me.
–	Which brick would I have?
YOU	Which brick would YOU have?
HERE	I am sitting here on the blue chair, and you are sitting there on the black chair.
–	If here was there and there was here.
THERE	Where would YOU be sitting?
	Where would I be sitting?
NOW	Yesterday I was watching television, today I am reading. If now was then and then was now.
–	What was I doing then?
THEN	What would I be doing now?
Double Reversed Relations	
I	
–	I am sitting here on the blue chair, and you are sitting there on the black chair.
YOU	If I was you and you were me and if here was there and there was here.
–	
HERE	Where would I be sitting?
–	Where would YOU be sitting?
THERE	

Note. The Derived Relations Task consisted of 62 trials, which assessed responses across three perspective-taking frames (I-YOU, HERE-THERE, and NOW-THEN) and three levels of relational complexity (simple, reversed, and double reversed relations). Each frame was assessed at each complexity level. Source: *McHugh et al.* (2004).

In addition to perspective-taking, prejudice interventions informed by RFT also concentrate directly on addressing biased patterns of attribution. For example, the fundamental attribution error – the human tendency to attribute other peoples’ behaviours to internal, dispositional factors while downplaying the role of external, contextual factors (Jones & Harris, 1967; Ross, 1977). The fundamental attribution error is inextricably linked to prejudice. When influenced by the fundamental attribution error, they tend to attribute the behaviours they observe in members of targeted outgroups solely to stereotyped group traits, largely ignoring situational factors (Steele & Aronson, 1995). This patterned bias can

Table 4

Examples from the Deictic Relations Task with Emotions

Reversed Relations	
I – YOU	Lily feels happy and Dan feels frustrated. If Lily was Dan and Dan were Lily, How would Lily feel? How would Dan feel?
HERE – THERE	Yesterday, Tina was there studying statistics feeling hopeless. Today, Bill is here watching a film feeling bored. If here was there and there was here, What would Tina be feeling here? What would Bill be feeling there?
Double Reversed Relations	
HERE – THERE – NOW – THEN	Yesterday, Mia was there riding a crowded train and feeling irritated. Today, Liam is here preparing for a blind date and feeling nervous. If here was there and there was here, AND if now was then and then was now, What would Liam be feeling now? What would Mia be feeling then?

Note. The Derived Relations Task-Emotion consisted of 25 trials, which assessed responses across three deictic frames (I-YOU, HERE-THERE, and NOW-THEN) that included emotional states and two levels of relational complexity (reversed and double reversed relations). Each frame was assessed at each complexity level. Source: *Almada* (2015).

be further bolstered by just-world beliefs - in which the person believes the world to be a fair place and people get what they deserve – contributing to victim-blaming and overlooking systemic factors like discrimination (van Prooijen & van den Bos, 2009).

Hooper and colleagues (2015) had participants watch a video of an actor reading an essay either in favour or against the use of capital punishment after which they were prompted to infer the actor's attitude. Participants that had completed the pre-experimental Deictic Relations Task (McHugh et al., 2004) experienced a significant reduction in the fundamental attribution error compared to those in the control group. However, despite this progress, perspective-taking is not the primary driver in prejudice reduction. This has been exemplified by individuals that are aligned with nationalist ideology can elicit resistance to perspective-taking, leading to non-compliance and a division in public attitudes towards refugees (Berndsen et al., 2018).

Psychological Flexibility. Acceptance and Commitment Therapy (ACT; Hayes et al., 1999, 2012) has also been used to effectively reduce prejudice by enhancing openness to outgroup perspective and value-driven action. In one experiment, Hayes et al. (2004) utilized ACT to reduce substance abuse counsellors' stigma towards their clients. Compared to an education course and multicultural training, ACT group participants self-reported decreased stigma which continued improving at 3-month follow-up. Additionally, ACT group counsellors had lower occupational burnout. Similarly, Masuda et al. (2007) used ACT to reduce mental health stigma among college students. Again, compared to an educational seminar, ACT workshop students reported decreased stigma towards those with mental illness, maintained at 1-month follow-up.

To understand the prejudice reduction mechanisms underlying these ACT-based interventions, a measure assessing the relationship between psychological flexibility and stigma was developed (Levin et al., 2014). Using this scale, Levin and colleagues (2016) found that psychological inflexibility significantly predicted generalized prejudice, even while controlling for common prejudice predictors like Right-Wing Authoritarianism and Social Dominance Orientation.

Furthermore, Valdivia-Salas and colleagues (2021) showed that psychological flexibility with one's prejudicial thoughts allows for the development of empathic concern towards targeted outgroups and possibly prosocial behaviours. They also demonstrated that inflexibility with these thoughts may increase aggressive or discriminatory behaviours (Valdivia-Salas et al., 2021). However, another level of analysis may further elucidate these relationships among psychological flexibility and prejudice. Do people inflexible with prejudicial thoughts struggle with every psychological flexibility model component or is there a consistent deficiency pattern in a specific component? In this thesis, I directly examined the role of each component of the psychological flexibility model in maintaining specific forms of prejudice.

Chapter 4 – Titrating Tolerance: Navigating Prejudice to Flexible Understanding

4.1 Chapter Overview

The insidious issues of prejudice, discrimination, and dehumanization have proven notoriously resistant to intervention, persisting despite a myriad of attempts to foster more equitable intergroup relations. While existing efforts have shown some progress, their limitations highlight the need for novel avenues of inquiry to advance beyond incremental progress. This thesis postulates that examining the core psychological processes underlying biased cognition may illuminate promising new pathways for understanding intergroup discrimination. Building upon the foundational exploration of prejudice, discrimination and dehumanization in the preceding chapters, this chapter focuses on the empirical examination of the relationship between the core processes of psychological flexibility, prejudice, and dehumanization.

The opening section of this chapter provides a concise overview the foundational content discussed in the preceding chapters, focusing on the persistent challenges of prejudice, discrimination, and dehumanization. The review delves into prevalent interventions aimed at reducing prejudice, from the traditional approaches like Intergroup Contact Theory (Allport, 1954) to the rapidly expanding diversity training industry, examining their conceptual and practical shortcomings. Within these limitations, two recurrent themes are identified: intergroup anxiety and attitude rigidity. While proposed methods to alleviate anxiety in intergroup interactions are acknowledged, their efficacy and generalizability across contexts remains uncertain. However, the consistently observed association between the psychological flexibility model (Hayes et al., 1999, 2012) and reduced anxiety, suggests a promising avenue for research to bolster existing interventions

or influence future research efforts in the endeavour to create a more equitable and inclusive society.

Having laid the groundwork in the preceding chapters, this chapter then pivots its focus to the empirical investigations of the thesis, comprising three studies and outlining the design for a fourth. These studies aim to examine the relationships between specific forms of prejudice and components of the psychological flexibility model as well as their counterparts. Within this section, the purpose, scope, and aims of each study is presented in addition to a concise overview of the methodology, data analysis strategy, and power analyses, setting the stage for a detailed exploration of the empirical journey.

The cornerstone of these investigations rests on the methodological precision achieved through the careful selection of self-report measures, each serving as a vital instrument to ensure the robustness, reliability, and validity of the collected data. In the third section of this chapter, the rationale behind each measure is systematically explored within the context of the overarching research framework, clarifying their role as indispensable tools. This discussion aims to highlight how these chosen instruments effectively capture the intricate dynamics crucial for advancing our understanding of prejudice and dehumanization. The selected self-report measures stand out as pivotal instruments, poised to test the hypothesized relationships and contribute significantly to the scientific community's understanding of prejudice and dehumanization.

Lastly, the chapter culminates in a fastidious discussion of the ethical considerations integral to each study. The steadfast commitment to ethical practices stands as a cornerstone, recognizing its pivotal role in fostering trust between the research community and the broader population it serves. While upholding participant autonomy and dignity as

well as robust protocols for privacy protection are essential facets of ethical standards, one must also reflect upon the social value of each study as to demonstrate a responsible approach that not only adheres to ethical guidelines but also contributes meaningfully to the discourse on harmful intergroup biases.

4.2 Still Separate, Still Unequal, and Headed Back to the Drawing Board

Prejudice and the resulting discrimination have plagued civilizations for time immemorial and remain prevalent today. Prejudice refers to the subjective negative evaluations and judgments about others based on the groups they are perceived to belong to, rather than objective evidence (Allport, 1954; Stangor, 2016). When left unchecked and especially when endorsed by respected authorities, including popular media, prejudice can result in the dehumanization of outgroups (Haslam, 2006; Kteily et al., 2015; Leyens et al., 2003; Loughnan & Haslam, 2007). Dehumanization refers to the assumption that members of an outgroup lack the capacity for rational thought or secondary emotions beyond happiness and anger (Haslam, 2006). Across decades of research, researchers have identified various factors associated with prejudice and dehumanization, such as lack of intergroup contact, societal norms, and cognitive biases (Guffler & Wagner, 2017; Fiske et al., 2002; Osbourne et al., 2023; Pettigrew & Tropp, 2006; Sherman et al., 2000, 2005).

Although researchers have studied various interventions targeting prejudice reduction, each approach has hampered by conceptual and practical limitations. Intergroup Contact Theory (Allport, 1954), for example, does not account for contextual factors like pre-existing tension and power dynamics between groups. Studies have also shown that positive effects from intergroup contact can be tenuous. Among individuals that lack early

life experiences of intergroup contact, negative intergroup interactions can stifle any positive effects from previous interactions (Dhont & Van Hiel, 2009; Paolini et al., 2010).

Additionally, the burgeoning £7.4 billion global industry of diversity training is beset by its own persistent shortcomings (Global Industry Analysts, 2023). These limitations include inconsistent methodologies and a notable scarcity of research examining long-term outcomes. Consequently, the overall efficacy of this intervention style remains a subject of constant debate (e.g., Devine & Ash, 2022; Paluck, 2006, 2021).

Lastly, while there is agreement that biases beyond conscious control shape intergroup behaviour even for those explicitly rejecting prejudice, current measures of implicit bias lack predictive validity (Carlsson & Agerström, 2016; Greenwald & Banaji, 1995; Greenwald et al., 1998; Meissner et al., 2019; Sheeran & Webb, 2016). This lack of validity likely underlies the limitations of unconscious bias trainings as manipulation of these biases tend to be inconsistent, unreliable, and transient (Gawronski & Bodenhausen, 2011; Payne et al., 2017).

Within the spectrum of limitations, two recurrent themes emerge: intergroup anxiety and rigidity of attitudes (Brown & Hewstone, 2005; Pettigrew & Tropp, 2006; Stephan & Stephan, 1985; Chang et al., 2019). Research has indicated that increasing knowledge about the outgroup and promoting intergroup contact can mitigate intergroup anxiety and improve interpersonal connections (Pettigrew & Tropp, 2008). However, treading this path is precarious, as inadvertent displays of anxiety can taint interactions, potentially fostering negativity and increasing avoidance of future interactions (MacInnis & Page-Gould, 2015; Richeson & Shelton, 2005).

Recently, the psychological flexibility model (Hayes et al., 1999, 2012) has emerged as a promising framework for understanding prejudice (Levin et al., 2014, 2016). Robust evidence further links psychological flexibility to increased openness to experience and reduced symptoms of anxiety, including social anxiety (e.g., Dalrymple & Herbert, 2007; Fledderus et al., 2013; Gallego et al., 2020; Khoramnia et al., 2020; Kroska et al., 2020; Landi et al., 2020).

Psychological flexibility refers to the ability to fully contact the present moment and adapt behaviour accordingly, even when experiencing unpleasant thoughts, feelings, and sensations (Hayes et al., 1999, 2012). Conversely, psychological inflexibility involves experiential avoidance, cognitive fusion, and hesitation or inability to align behaviours with one's freely chosen values in the face of obstacles like challenging personal experiences (Hayes et al., 1999, 2012).

While research has indicated a link between psychological inflexibility and generalized prejudice, no studies have specifically examined its connection to prejudice and dehumanization targeting specific groups (Levin et al., 2016). Clarifying these relationships would further elucidate the verbal behaviour underlying prejudice and potentially support and strengthen existing prejudice reduction methodologies or inform more effective interventions aimed at reducing harm against marginalized communities.

4.3 Empirical Examination of Flexing Against Prejudice

In this thesis, I conducted three studies and proposed an experimental design for a fourth study to empirically investigate the unique relationships between specific forms of prejudice and each component of the psychological flexibility model as well as their corresponding counterparts. The first three studies utilized quantitative self-report

assessments (see Section 4.4) within an online cross-sectional paradigm. Each study makes a unique contribution towards understanding these relationships.

4.3.1 Study 1: A Pilot Test of Methods

The initial study was used to pilot measures and methods to examine correlations between psychological (in)flexibility and various forms of prejudice, such as sexism, racism, homophobia, dehumanization, and biases targeting the supporters of oppositional political ideologies. Psychological flexibility and inflexibility were assessed using two scales: the Multidimensional Psychological Flexibility Inventory (MPFI; Rolffs et al., 2016), along with piloting a brief version of the Acceptance and Action Questionnaire – Stigma (AAQ-S; Levin et al., 2014). Prejudicial attitudes were assessed using the Ambivalent Sexism Inventory (ASI; Glick & Fiske, 1996), Bayesian Racism scale (BRS; Uhlmann et al., 2010), Attitudes Towards Lesbians and Gay Men scale (ATLG; Herek, 1988), and a modified version of the Universal Measure of Bias (UMB; Latner et al., 2008) to assess political bias, while dehumanizing tendencies were measured using a scale designed by Haslam and colleagues (2005) based on the Dual Model of Dehumanization (Haslam, 2006).

The rationale for selecting these measures is rooted in their proven efficacy in measuring each of the dimensions of the psychological flexibility model (Hayes et al., 1999, 2012), inflexibility with stigmatizing attitudes, dehumanization, and various prejudices. Each measure was chosen based on its theoretical relevance and established psychometric properties. Descriptions and the reasoning for utilizing each of the measures will be elaborated upon in the next section of this chapter.

This study was designed to not only explore correlations but also to pilot the methodologies employed and determine the optimal length for subsequent studies.

Preliminary results, as discussed in the next section, shed light on the potential impact of psychological flexibility on various forms of prejudice, providing a foundation for further investigation and practical applications in future research and interventions.

Hypotheses. This pilot study also provided initial examination of the primary hypotheses for the first three studies. First, it was expected that psychological inflexibility, along with each of its processes, would positively correlate with prejudiced and dehumanizing attitudes (Levin et al., 2014). Second, due to the significance of social identity and self-categorization in prejudice, it was hypothesized that cognitive fusion and a rigid conceptualized self would be the inflexibility processes most closely linked to harmful intergroup views (Turner et al., 1979; Turner et al., 1987). Lastly, experiential avoidance may also relate to hostile attitudes toward marginalized groups as a means of escaping aversive emotions associated with them, such as intergroup anxiety (Hayes et al., 2002).

In contrast, psychological flexibility and its core processes were predicted to inversely correlate with prejudicial and dehumanizing tendencies. Mindful acceptance could enable people to witness their own problematic stereotypical reactions without believing or acting on them (Levin et al., 2014). Additionally, self-as-context, as a facilitator of perspective taking, empathy, and compassion, was anticipated to predict reduced prejudice (Hayes et al., 1999, 2012). Overall, analysing if psychological flexibility and inflexibility are related to prejudice and dehumanization, as theorized, then the relationship can further inform the scientific community's understanding of prejudice and aid efforts to create a more equitable and inclusive society.

Data Analysis Strategy. Analysis of the data was planned to progress through three main phases. In the initial data preparation phase, any participant that completed less than 80% of the critical prejudice, dehumanization, flexibility, and inflexibility measures was removed from the analyses to ensure a focused and attentive participant pool. Internal reliability for all scales and subscales was then evaluated through Cronbach's alpha values, with problematic items being eliminated if $\alpha < 0.7$. Data distributions were also assessed for normality at this stage, applying transformation as necessary. Finally, stringent criteria was utilized to identify and eliminate any univariate or multivariate outliers.

The second phase consisted of descriptive analyses, which includes calculated means, standard deviations, and ranges for all primary variables. This laid the foundation for formal hypothesis testing.

In the third phase, Pearson's correlation coefficients were calculated to directly address the stated hypotheses through the examination of correlations between flexibility and prejudice, inflexibility and prejudice, and identifying which specific subscales of the MPFI demonstrate the strongest relationships with each form of prejudice.

Power Analysis. An a priori power analysis was conducted using IBM SPSS Statistics version 29.0.1.1 to determine the minimum sample size required for the planned correlational analysis. The power analysis was based on an estimated medium effect size ($r^2 = 0.3$; Cohen's $d = 0.55$) with a significance criterion of $\alpha = .05$. To achieve a targeted power of 0.80 with these parameters, the power analysis indicated a sample size of 84 would be adequate to test the study hypotheses.

4.3.2 Study 2: The Return of the Prejudice Measures

Building upon the findings of the first study, Study 2 aimed to enhance the strength and reliability of this investigation by refining methods, revising measures, and improving the overall design to alleviate participant burden. Additionally, data was collected from crowdsourcing platforms to ensure a more diverse and representative participant pool.

In this iteration, the full version of the AAQ-S, as originally intended by Levin and colleagues (2014), was used in conjunction with the MPFI (Rolffs et al., 2016) to measure psychological flexibility and inflexibility. The measures for prejudice and dehumanization largely mirrored those in Study 1. However, due to non-normative distribution of responses in Study 1 that suggested potential issues with explicit wording, the ATLG (Herek, 1988) was replaced. To measure homonegativity in this study, the Modern Homonegativity Scale (MHS; Morrison & Morrison, 2003) was chosen as a replacement for negative attitudes toward lesbian women and gay men in subsequent studies. A description and rationale for the MHS as well as each of the measures used throughout this thesis is further discussed in the following section of this chapter.

Additionally, the modified version of the Universal Measure of Bias (UMB; Latner et al., 2008) was removed from the study following communication with participants. This communication indicated that the wording of the measure, in conjunction with the divisive political climate, potentially influenced participant responses in a way that could compromise the study's integrity. For a more detailed explanation and discussion of this topic is presented in the next chapter, which focuses on Study 1 in depth.

The decision to replace the homonegativity measure, remove political bias as a variable, and leverage crowdsourcing platforms was guided by a commitment to

methodological rigor and the continued refinement of the analytical approach. This strategic shift was deemed necessary to better align with the overall research goals and enhance the overall strength of this study.

Crowdsourcing platforms offer distinct advantages. For instance, relative to focusing recruitment efforts on university students, crowdsourcing platforms provide access to a diverse pool of participants with varied cultural backgrounds and offers an approach to recruitment that is time- and cost-effective. However, it is also crucial to acknowledge potential limitations associated with crowdsourcing data collection. One notable drawback is the lack of quality control, as respondents exhibit varying levels of motivation or attention to detail. This variability increases the risk of errors and inaccuracies in the obtained results.

By choosing this recruitment method, the aim was to capitalize on its benefits while remaining mindful of its limitations. This approach contributes to the continuous refinement of the research strategy, ensuring a robust and comprehensive examination of how the psychological flexibility model contributes to the maintenance of prejudice and dehumanization.

Hypotheses. Based on the limitations of Study 1, hypotheses in Study 2 explored the potential for psychological inflexibility to maintain prejudiced attitudes. First, it was posited that psychological inflexibility would be correlated positively with negative attitudes towards outgroups. This hypothesis was aligned with the premise that inflexibility fosters avoidance of uncomfortable experiences and rigid adherence to existing beliefs, and thus acts as a potential hinderance to the development of empathy for outgroups (Valdivia-Salas et al., 2021). Furthermore, it was anticipated that the specific inflexibility subcomponents of

‘Lack of Contact with the Present Moment’, ‘Cognitive Fusion’, and ‘Self-as-Content’ would play a particularly significant role in fuelling prejudice. Additionally, as demonstrated in Study 1, It was anticipated that psychological inflexibility, especially the subcomponents of ‘Lack of Contact with the Present Moment’ and ‘Cognitive Fusion’, would correlate positively with the tendency to deny qualities of human uniqueness to Muslims. Notably, this prediction hinges on similar findings from Study 1.

In stark contrast, hypotheses centred on psychological flexibility offered a more optimistic perspective. As psychological flexibility has been demonstrated to foster understanding and acceptance of oneself and others and thus would potentially reduce the need for rigid categorizations and biases, the study posited a negative correlation between psychological flexibility and prejudiced attitudes. It was further hypothesized that the specific subcomponents of ‘Acceptance,’ ‘Cognitive Defusion,’ and ‘Self-as-Context’ would play a more pronounced role in the reduction of prejudice.

Importantly, the study also acknowledged potential confounds and proposed that these correlations would hold even when demographic variables like age, gender, and ethnicity were controlled for. Confirmation of this hypothesis would strengthen the study’s internal validity and ensure that observed relationships were not simply reflectings of pre-existing societal biases.

Data Analysis Strategy. In the initial phase of data analysis, a comprehensive examination was conducted to ensure the quality of the responses. Participants who did not fulfil the criteria of at least 80% completion of the relevant scales or subscales were selectively removed. Afterwards, outliers in key variables were identified and addressed. Mahalanobis distance, z-scores, and scatterplots were employed to screen the data for

potential anomalies. Outliers that had the potential to distort correlations or regressions were systematically removed. This meticulous process was implemented to enhance the accuracy, validity, and reliability of subsequent analyses.

The second phase involved correlational analyses to explore the relationships between psychological flexibility, inflexibility, their respective subcomponents, and measures of prejudice and dehumanization. Pearson correlations were computed to rigorously test hypotheses 1 and 2 outlined in the study. The strength of correlations for each subcomponent was also carefully examined to assess the hypotheses 3 and 4 that pertained to the magnitude of these relationships.

In the third phase, regression analyses were performed for variables that exhibited significant correlations. Hierarchical regression models were utilized to identify the most robust predictors of prejudice and dehumanization. Demographic factors such as age, gender, and ethnicity were controlled for in the initial steps to evaluate the hypothesized relationships while demographics were accounted for. Subsequently, flexibility and inflexibility subcomponents were entered in Step 2 to discern their unique contributions. Rigorous tests for multicollinearity and the independence of residuals were conducted to ensure adherence to statistical assumptions.

In the final phase of the analysis, specific attention was given to the examination of hypotheses related to the dehumanization of Muslims. Targeted correlational and regression analyses were conducted, focused on the relevant flexibility and inflexibility variables. This comprehensive and phased approach, supported by rigorous statistical techniques, aimed to yield valid and reliable results. The inclusion criteria and outlier screening processes were integral in bolstering the overall accuracy and integrity of the study's findings.

Power Analyses. To ensure statistically robust results for the correlational analyses, a priori power analyses were conducted in SPSS (v29.0.1.1). The power analysis was based on an estimated medium effect size ($r^2 = 0.3$; Cohen's $d = 0.55$) with a significance criterion of $\alpha = .05$. To achieve a targeted power of 0.80 with these parameters, the power analysis indicated a sample size of 84 would be adequate to test the study hypotheses.

A second power analysis was conducted to determine the minimum sample size for the multiple linear regression analyses with two predictor variables. With the significance criterion of $\alpha = .05$ and power of 80% for detecting a medium effect, the minimum sample size needed with this effect size is $N = 78$. Accounting for a potential attrition rate of 35% as had occurred in Study 1, an additional 42 participants will be recruited. Thus, the sample size of $N = 120$ should be adequate to test the study hypotheses.

4.3.3 Study 3: Authoritarianism and Social Dominance Strike Back

In the data-driven progression of this thesis, guided by the insights gained in the second study, Study 3 was designed to incorporate two well-established predictors of prejudice and dehumanization: right-wing authoritarianism (RWA; Altemeyer, 1981) and social dominance orientation (SDO; Pratto et al., 1994; Sidanius & Pratto, 1999). Extensive prior research has consistently linked RWA and SDO with prejudicial and dehumanizing biases (e.g., Crawford et al., 2016; Duckitt, 2001; Golec de Zavala et al., 2017; O'Brien et al., 2013; Poteat & Mereish, 2012). Aside from the addition of RWA and SDO, the decision was made to exclude the psychological flexibility subscales of the MPFI from Study 3 due to insufficient support in the preceding two studies. Consequently, the primary aim of the third study was to scrutinize whether psychological inflexibility retained unique explanatory power as a predictor of prejudice and dehumanization.

Hypotheses. In Study 3, specific hypotheses were formulated as follows: Firstly, a positive correlation was anticipated between psychological inflexibility, as measured by the MPFI (Rolffs et al., 2016), and both prejudice and dehumanization. This correlation was expected to persist even when accounting for the variance explained by RWA and SDO. Additionally, it was hypothesized that inflexibility with thoughts pertaining to the stigmatization of others would be positively correlated with prejudice and dehumanization, remaining significant after controlling for RWA and SDO.

Finally, as it was hypothesized in the previous two studies, each of the core processes of psychological inflexibility would each demonstrate positive correlations with measures of prejudice and dehumanization, underscoring their significance within the overarching latent variable of psychological inflexibility.

Data Analysis Strategy. The data analysis for this study will progress through three main phases to robustly examine the relationships between psychological inflexibility, authoritarianism, social dominance, prejudicial attitudes, and dehumanization.

In the initial phase, as in the preceding studies, data cleaning procedures will be implemented. Participants will first be screened for inclusion based on whether they completed a minimum of 80% of the main study questionnaires. This criterion will ensure a focused participant sample for the analyses.

The second phase will involve obtaining descriptive statistics for all variables, including means, standard deviations and internal reliability coefficients. Zero-order Pearson correlations will then be conducted between all predictor variables (i.e., psychological inflexibility, inflexibility subscales, RWA, SDO) and all prejudice and

dehumanization outcomes. These correlational analyses will provide an initial examination of the relationships proposed in the hypotheses.

In the third phase, the primary hypothesis tests will be evaluated through hierarchical linear regression models conducted separately for each outcome variable. RWA and SDO will first be entered as a baseline model. Psychological inflexibility will then be added to evaluate whether it explains additional outcome variance. In a third step, the inflexibility subscale predictors will be entered. Resulting models will be interpreted to determine the unique effects of overall psychological inflexibility as well as its components.

Power Analyses. A priori power analyses were conducted using G*Power version 3.1.9.6 (Faul et al., 2007) to determine the required sample sizes to achieve 80% power for detecting anticipated medium-sized effects in the planned analyses. For the correlational analyses, results indicated that a sample size of $N = 21$ would provide sufficient power to detect a medium effect size ($r = 0.3$) based on a two tailed test with $\alpha = .05$.

For the multiple linear regression analysis with eight predictor variables, results showed that a sample size of $N = 124$ would provide 80% power for detecting a medium-sized f^2 effect of 0.15 at $\alpha = .05$. This suggests the final sample size will allow for adequately testing the study's hypotheses using the planned multiple regression model. In determining these sample size requirements, medium anticipated effect sizes were specified based on prior related research and study goals.

4.3.4 Study 4 Proposal: Mindfully Mitigating Misogyny

Finally, Study 4 was proposed to implement an experimental manipulation in a laboratory setting as an examination of the utility of a brief mindfulness intervention designed to increase psychological flexibility in the context of a specific form of prejudice.

This causal approach was based upon the consistent correlational findings that linked psychological inflexibility to sexism across the first three studies. This would serve as an initial test of the utility of Acceptance and Commitment Therapy (ACT; Hayes et al., 1999, 2012) in the reduction of prejudice within the general population.

Building upon the previous findings of the first three studies that linked psychological inflexibility to hostile sexism, an experimental design that would utilize randomized controlled trials (RCT) to examine the effectiveness of an ACT-based mindfulness intervention in the mitigation of sexist attitudes. Participants would first be assessed for their baseline levels of sexism and psychological flexibility. This pre-assessment phase will determine the eligibility of participants for subsequent phases of the study, based on mean scores on the Hostile Sexism subscale of the Ambivalent Sexism Inventory (ASI; Glick & Fiske, 1996).

Upon the participant's agreement to continue with the study, each individual will be randomly assigned to either the experimental condition with an ACT-based mindfulness intervention focused on increasing flexibility regarding sexist attitudes and stigma or a control condition with a lecture on the struggles for women's rights throughout history that will make no intentional effort to improve psychological flexibility or perspective-taking.

The impact of the intervention will be evaluated at three time points: immediately after, one week later, and one month later. The same measures used before the intervention will be repeated to assess changes in sexism and psychological flexibility. These measures include the ASI, Belief in Sexism Shift scale, Belief in Sexism Shift scale (BSS; Zehnter et al., 2021), Gender-specific System Justification scale (GSJ; Jost & Kay, 2005), Acceptance and Action Questionnaire – Stigma (Levin et al., 2014), a condensed version of the

Multidimensional Psychological Flexibility Inventory (MPFI; Rolffs et al., 2016). The rationale for using these specific measures and the study design will be further elaborated upon in the next section of this chapter.

Hypotheses. The proposed experimental methodology aims to investigate the impact of an ACT-based mindfulness intervention on reducing sexist attitudes. The first set of hypotheses predicts that participants in the ACT intervention condition will exhibit significantly greater reductions in sexist attitudes, as measured by the BSS and GSJ, compared to those in the workshop of the control condition. Additionally, it is hypothesized that participants in the intervention condition will demonstrate increased psychological flexibility with stigmatizing thoughts, as measured by the AAQ-S, as well as in general, as measured by the MPFI, relative to the control group. The study further posits that the reduction in sexism will be statistically mediated by improvements in psychological flexibility regarding sexist thoughts. Providing insights into the mechanism of change.

The second set of hypotheses focuses on the sustainability of intervention effects. It is expected that at 1-week and 1-month follow-ups, participants in the ACT condition will continue to show maintained benefits in terms of reduced sexism and increased psychological flexibility compared to the control group. This sustained effect over time would suggest that the ACT workshop has lasting positive effects on these outcomes.

Finally, the study aims to explore specific components of psychological inflexibility targeted in ACT, such as experiential avoidance and cognitive fusion. It is anticipated that these components will show greater improvements in the ACT condition compared to the control group from pre- to post-intervention.

Overall, these hypotheses seek to provide a comprehensive understanding of how targeting psychological flexibility through an ACT-based mindfulness approach can causally reduce harmful attitudes, such as sexism, thereby informing both theory and practical efforts to mitigate prejudice.

Data Analysis Strategy. Analysis of the data will progress through three main phases to provide a robust examination of the study hypotheses. The first phase will focus on data preparation, including assessing completion rates, evaluating distributions for normality, identifying potential outliers, and transforming variables if necessary. Participants with substantial missing data (less than 80% completion rate) on the main variables of interest will be excluded to promote accuracy of the results.

The second phase will comprise manipulation checks using repeated measures ANOVAs to verify the effectiveness of the ACT intervention in changing the key outcomes relative to the control condition over time. Specifically, changes in sexism (measured by the BSS and GSJ) and psychological flexibility (measured by the MPFI and AAQ-S) from pre- to post-test will be compared between the ACT and control groups. Significant condition by time interactions would confirm that the intervention impacted outcomes as expected.

The third phase will directly assess the stated hypotheses employing various statistical analyses. Differential reductions in sexism, as posited in the first hypothesis, will be assessed through ANCOVAs, controlling for pre-intervention levels. The second hypothesis concerning improved psychological flexibility will be examined utilizing ANCOVA on post-intervention MPFI and AAQ-S scores, controlling for baseline levels. The third hypothesis, which proposes psychological flexibility as the mechanism of change; this mediational model will be evaluated using the PROCESS macro. This macro

streamlines the estimation of indirect effects, tests their significance, and generates confidence intervals for mediation models.

Hypotheses 4 and 5, addressing the maintenance of benefits and targeting of inflexibility components, will be scrutinized using repeated measures ANOVAs and paired comparisons. Together, this three-phase analysis strategy will provide a methodologically rigorous investigation aligned to the research aims.

Power Analyses. A priori power analyses were conducted using G*Power version 3.1.9.6 (Faul et al., 2007) to ascertain the necessary sample sizes for achieving 80% power in detecting anticipated medium-sized effects with a significance level of $\alpha=0.05$ in the proposed analyses. For the planned repeated measures ANOVA to examine the pre- and post-test efficacy of the ACT condition relative to the control condition, the results indicated a sample size of 34 would be sufficient to achieve a medium effect ($\eta_p^2 = 0.06$; Cohen's $f=0.25$).

For the proposed ANCOVAs, to test differential effects on sexism and psychological flexibility, results of the power analysis recommended a sample size of 125 to detect a medium-sized effect ($\eta_p^2 = 0.06$; Cohen's $f=0.25$). According to the PROCESS macro for R version 4.3.2, this sample size ($N=125$) would achieve 87% power in detecting a medium effect in the mediation analysis of psychological flexibility as a mechanism of change in prejudice reduction.

Lastly, in conducting the power analysis for the repeated measures ANOVA to assess the maintenance of long-term outcomes, G*Power version 3.1.9.6 (Faul et al., 2007) was employed. The analysis, accounting for three post-experimental time points of measurement (immediate, one week, and one month), yielded a recommended sample size

of 38, ensuring an 95% probability of detecting a medium effect. As such, the maximal sample size recommended among this series of power analyses (N=125) will be rounded up to 130 for an even distribution of participants across groups. This adjustment is deemed sufficient to maintain at least 80% power across all proposed analyses even when pessimistically anticipating an attrition rate of 70% (Gustavson et al., 2012).

4.4 The Method to the Madness: Psychometric Gymnastics of Measure Selection

Across the course of these empirical chapters, each study provided unique insights into the complex interplay involving psychological (in)flexibility, prejudice, and dehumanization. However, the methodological robustness of these inquiries rested on the meticulous selection of self-report measures to ensure the reliability and validity of the collected data. In this section, a comprehensive explanation for the rationale behind the selection of each measure in the context of the overarching research framework will be presented. This discussion aims to illuminate how these measures functioned as invaluable tools, capturing the intricate dynamics pivotal to advancing the scientific community's understanding of prejudice and dehumanization. Overall, the selected self-report instruments offer psychometrically sound tools to test the hypothesized relationships between psychological (in)flexibility and various forms of harmful intergroup biases.

4.4.1 Measures of Psychological (In)flexibility

AAQ-S. Levin and colleagues (2014) developed the Acceptance and Action Questionnaire – Stigma (AAQ-S) as a measure of psychological flexibility with stigmatizing thoughts. The 21-item AAQ-S consists of two subscales assessing both psychological flexibility and inflexibility related to stigma. Some of the items were novel while others were

adapted from a general measure of psychological flexibility, the AAQ-II (Bond et al., 2011), and a prior pilot study of an ACT prejudice reduction intervention (Lillis & Hayes, 2007).

Compared to the more general AAQ-II, the stigma-focused AAQ-S demonstrated greater predictive validity for variables connected to stigma (Levin et al., 2014).

Additionally, in structural equation models, AAQ-S scores significantly predicted generalized prejudice even when controlling for relevant personality factors like RWA and SDO (Levin et al., 2016). This unique predictive relationship suggests the AAQ-S captures aspects of prejudice not reflected in those established measures.

Furthermore, both the psychological flexibility and inflexibility AAQ-S subscales demonstrated strong internal consistency and reliability (Levin et al., 2014). This indicates the AAQ-S is capturing coherent psychological constructs underlying stigma. The AAQ-S was also shown to be conceptually distinct from related measures like the need for predictability and structure in one's environment supporting its specificity in assessing flexibility and inflexibility with stigmatizing thoughts (Levin et al., 2016).

For research examining connections between intergroup discrimination and psychological rigidity, having a purpose-built measure of flexibility with stigmatizing thoughts is invaluable. Unlike general inflexibility assessments, the AAQ-S directly targets the cognitive patterns that drive stigma. Thus, for studies aiming to elucidate these processes, the AAQ-S presents clear advantages over more general measures for understanding this complex phenomenon.

MPFI. Rolffs et al. (2016) designed and validated the Multidimensional Psychological Flexibility Inventory (MPFI) as a precise and comprehensive self-report instrument to assess psychological flexibility and inflexibility. Grounded in the psychological flexibility model, the MPFI provides both targeted assessments of the 12 specific dimensions posited to underlie general psychological flexibility and inflexibility alongside higher order composites that quantify flexibility and inflexibility overall.

To address the inherent interrelatedness within the psychological flexibility model, Rolffs and colleagues (2016) employed rigorous psychometric methods. For instance, item response theory not only accounted for multicollinearity but also ensured optimal precision and specificity at both dimensional and composite levels. These analyses facilitated the identification of items sensitive to change over time and treatment effects. In contrast to existing measures like the AAQ-II (Bond et al., 2011) that focus narrowly on experiential avoidance, the MPFI provides a thorough assessment of functioning.

In other studies, the MPFI has demonstrated good reliability and validity in clinical and nonclinical samples (e.g., Rogge et al., 2019; Seidler et al., 2020; Stabbe et al., 2019). It has also exhibited excellent internal consistencies and generalizability across multiple demographic subgroups in addition to strong convergent and discriminant validity. From both a research and clinical perspective, understanding distinct aspects of psychological flexibility provides granular insights into the mechanisms of psychopathology and health.

As the foundational framework underlying ACT continues to accumulate empirical support, the MPFI equips researchers and practitioners alike with a more powerful tool for investigating and measuring the efficacy of ACT interventions. For these reasons, the MPFI serves as an ideal general barometer of psychological flexibility and inflexibility.

4.4.2 Measures of Prejudice and Dehumanization

Ambivalent Sexism. The Ambivalent Sexism Inventory (ASI; Glick & Fiske, 1996) is a valuable psychometric tool for measuring sexism against women, directly assessing respondents' levels of sexism across two dimensions: hostile sexism and benevolent sexism (for review, see Chapter 1, Section 1.4). Through exploratory and confirmatory factor analyses across six studies, Glick and Fiske (1996) established that contemporary sexism involves not only antipathy but also subjectively positive yet patronizing views instrumental in justifying and perpetuating gender inequality. This ambivalent construct acknowledges the coexistence of hostile attitudes characterizing women as incompetent inferiors with benevolent reverence for women in restricted domestic roles.

Both hostile and benevolent sexism share three key components: paternalism, gender differentiation, and heterosexuality (Glick & Fiske, 1996). Paternalism reflects the notion that women need protection and care, gender differentiation emphasizes traditional gender roles, and heterosexuality assumes a natural attraction between men and women. These components collectively contribute to a refined understanding of sexism as a multifaceted construct. In comparison to other measures of sexism, such as the Modern Sexism Scale (Swim et al., 1995), which focuses more on gender-related political attitudes, or the Gender Role Attitudes Scale (García-Cueto et al., 2015) which exclusively addresses traditional gender roles in contemporary society, the ASI provides deeper insights into the nuances of contemporary sexism.

With strong psychometric properties validated across student and non-student samples, the 22-item ASI provides a parsimonious measure with predictive validity. The internal consistency and reliability of the ASI was affirmed through acceptable alpha

coefficients averaging .80 or higher across all six studies for both composite and subscale scores (Glick & Fiske, 1996).

The ability of the ASI (Glick & Fiske, 1996) to discern between hostile and benevolent sexism has far-reaching implication for understanding the intricate nature of gender attitudes. The consistent factor structure underscores the stability of the ASI, making it an invaluable tool for researchers studying complex socio-ideological processes underlying gender relations and inequality. Its unique ability to differentiate between hostile derogation and subtle paternalism makes it well-suited for investigating correlations between ambivalent sexism and various behavioural variables. With a robust theoretical foundation and empirical validity across settings, the ASI provides detailed insights that continues to facilitate the advancement of contemporary understandings of sexism.

Belief in Sexism Shift. There is a widespread belief that the social advancement of women have resulted in a societal imbalance in which men are now the disadvantaged gender (Bosson et al., 2012; Kehn & Ruthig, 2013). Zehntner and colleagues (2021) argued that belief in this narrative of male victimization functionally conceals negative attitudes against women. The Belief in Sexism Shift scale (BSS; Zehntner et al., 2021) was designed to measure this belief by examining perceptions of a shift in gender discrimination on the surface-level as a novel way to subtly measure this contemporary form of sexism.

Although this belief centres on perceived disadvantages for men, Zehntner and colleagues (2021) cogently argued that the BSS scale meets established definitions of sexism in its negative positioning of women and its ultimate function of denying women equal status. By implying women have unfairly surpassed men through special favours, the BSS

scale discounts women's legitimate achievements and abilities. It also curtails support for women's advancement by making it seem unnecessary and detrimental to men.

The development of the BSS scale adhered to rigorous psychometric principles. To ensure that the final scale would be internally consistent and reflect a single, unified construct, Zehntner et al. (2021) utilized a data-driven approach across three studies. In the initial pilot study, they employed a principal components analysis to identify the underlying structure of the scale's items and reduce the initial list of items. In subsequent studies they completed factor analyses resulting in a 15-item scale with a unidimensional structure that examines beliefs in the male victimization narrative, specific manifestations of anti-male discrimination, and zero-sum beliefs about gender discrimination. This final version of the scale had strong convergent validity with established measures of sexism, discriminant validity, and test-retest reliability. Moreover, the results indicated a lack of significant correlation between the BSS scale and social desirability bias further supporting its discriminant validity.

Additionally, an analysis of measurement invariance demonstrated that the BSS scale operates similarly for both men and women, ensuring that observed differences in scores reflect genuine variations in BSS beliefs rather than measurement bias. This is critical for ensuring the accuracy and interpretability of the scale across diverse populations.

In conclusion, the BSS scale (Zehntner et al., 2021) presents a promising tool for measuring sexism targeting women disguised within the BSS framework. Though counterintuitive on its surface, ample evidence supports the BSS scale as a novel measure of contemporary sexism.

Racism. The Bayesian Racism Scale (BRS; Uhlmann et al., 2010) offers researchers a quantitative self-report tool for measuring contemporary racial bias focused on the perceived rationality and acceptability of discrimination based on racial stereotypes. In contrast from the widely used Modern Racism Scale (McConahay, 1986), the BRS specifically gauges the endorsement of racial stereotyping and discrimination grounded in the rationale of statistical probability – termed Bayesian racism.

The BRS is rooted in three theoretical concepts: (1) threatened egotism, where majority group members are more likely to use stereotypes to disempower groups perceived as threats to their self-image (Kunda & Spencer, 2003), (2) system justification, wherein stereotypes serve to justify inequalities and perpetuate existing social hierarchies (Crandall & Eshleman, 2003; Jost et al., 2004; Oldmeadow & Fiske, 2007; Sidanius & Pratto, 1999), and (3) accuracy motives, where the prioritization of accurate information diminishes reliance on stereotypes (Fiske, 2001; Uhlmann et al., 2010). These conceptual foundations suggest that the BRS probes a complex interplay of motives fuelling contemporary racism.

The focus of the BRS on the rationalization of racial discrimination based on stereotypes appears well attuned to elucidate the nuanced cognitive processes involved in contemporary expressions of racial bias. However, statistics supporting the validity and reliability of the measure were not originally provided by Uhlmann et al. (2010). Litam and Balkin (2021) later conducted a confirmatory factor analysis that determined the BRS has a unidimensional structure with good model fit indices, and adequate internal consistency. Additionally, scores on the BRS were positively correlated with prejudicial attitudes and the desire to maintain racial hierarchies while negatively correlated with attitudes towards statistics and rational thinking (Uhlmann et al., 2010).

In contrast, the predominant measure of racism, the Modern Racism Scale (McConahay, 1986), while more directly assessing racial prejudice is more susceptible to social desirability biases. McConahay (1986) asserted that people with contemporary racially prejudices had transitioned from the overt and aggressive expressions of racism seen during the Jim Crow era to a subtler form where they no longer perceived themselves as racist; instead, they rationalized their biases as accurate reflections of the current state of racial dynamics, often rooted in system justification. In the validation studies, respondents were more willing to respond to items such as “Over the past few years, Blacks have gotten more economically than they deserve,” relative to more blatant items like “It is a bad idea for Blacks and Whites to marry one another,” (McConahay, 1986). However, this alludes to the difficulty of measuring racism: it is unique within each nation and culture, social desirability is always a potential confounding variable, and the items must be constantly updated for relevance. The focus of the BRS on rationale rather than beliefs may better measure contemporary forms of racial bias.

Overall, the BRS offers a quantitative method of measuring a subtle form of racism couched in rational thought. This focus on the rationale underlying discrimination is advantageous. First, the BRS captures contemporary expressions of racial bias focused on perceived rationality of discrimination. Second, unlike the Modern Racism Scale (McConahay, 1986) which requires continual item updates to be relevant to unique study samples, the BRS items assess universal cognitive processes and justifications relevant across cultural contexts. This enhances conceptual relevance and enables examination of how Bayesian racism connects to established antecedents. Through its subtle focus, cross-cultural universality, and empirical links to theoretical drivers of bias, the BRS addresses

limitations of existing racism measures. Although continued validation work would be beneficial for the BRS, and adaptation may one day be needed, the BRS currently appears psychometrically and conceptually superior for quantifying racist attitudes grounded in seemingly rational stereotyping.

Homophobia. The Attitudes Toward Lesbians and Gay Men (ATLG) scale, developed by Herek (1988), has become a widely used and well-validated self-report measure of heterosexuals' attitudes toward gay men and lesbians. Its continued relevance stems from several key strengths.

First, the ATLG demonstrates strong psychometric properties that instill confidence in its ability to provide a reliable and valid assessment. Studies conducted across international contexts have found high levels of internal consistency reliability and excellent test-retest reliability (Herek & McLemore, 2011). Regarding validity, the ATLG correlates with theoretically related constructs including religious affiliation, gender role attitudes, and endorsement of anti-gay policies. It also shows good discriminant validity, with supporters of gay rights and non-heterosexual samples scoring lower than prejudiced individuals (Herek, 1988).

Second, the extensive use of the ATLG in various countries including Canada, Singapore, the Netherlands, Brazil, Chile, Turkey, and the United Kingdom highlights its cross-cultural applicability (Herek & McLemore, 2011). The translation of the scale into different languages, such as Spanish for a study involving California adults of Mexican descent, further exemplifies its adaptability, making it invaluable to researchers aiming to explore homophobia in diverse populations (Herek & Gonzalez-Rivera, 2006).

Beyond its reliability, the ATLG has demonstrated sensitivity to detecting individual differences in levels of homophobia. For example, Herek (1988) found that men were more likely to harbour hostile attitudes towards gay men than women. This provides valuable insights into the intersection of gender and homophobia. This nuanced understanding enhances the precision with which interventions and educational programs can be designed to address specific demographic groups (e.g., Baiocco et al., 2022).

In summary, the ATLG is a powerful tool for measuring homophobia. Its strong psychometric properties, ease of use, and comprehensive coverage of anti-gay bias make it an invaluable asset for researchers seeking to understand the complexities of homophobia and its influences on individuals and society. The ATLG offers a reliable and valid means of assessing homophobia, providing crucial data for researchers.

Homonegativity. After the results of the initial pilot study revealed ceiling and floor effects among respondents within the ATLG scale (Herek, 1988), the Modern Homonegativity Scale (MHS; Morrison & Morrison, 2003) was chosen as a replacement measure for negative attitudes toward lesbian women and gay men in subsequent studies. The MHS offers several advantages over the more established ATLG scale as a self-report measure of contemporary prejudice against homosexual individuals.

First, the MHS demonstrates strong and comparable psychometric properties to the ATLG, with higher internal consistency reliability ranging from .91-.95 across multiple studies and samples (Morrison & Morrison, 2003). Additionally, low susceptibility to floor effects allows for greater differentiations of scores. Confirmatory factor analysis supports its unidimensional structure.

Additionally, the MHS correlates significantly with theoretically relevant criteria including political ideology, religious beliefs and behaviours, and modern sexism. This evidence of construct validity suggests the MHS adequately measures the latent construct.

Another practical advantage of the MHS lies in its brevity – containing only 12 items, it can be easily included without overtaxing research participants. Conversely, the ATLG's length of 20 items could contribute to fatigue effects depending on the study design. The shorter length of the MHS lends itself well to use in broader attitudinal surveys.

Finally, the MHS addresses limitations associated with the ATLG in assessing modern prejudice. By capturing contemporary negativity toward homosexuality not rooted in traditional moral objections, the MHS avoids reference to outdated terminology around homosexuality as socially deviant. This framing enhances accuracy in measuring current manifestations of sexual prejudice.

In conclusion, with its strong psychometric properties, construct validity with related modern measures, concise length to minimize participant fatigue, and specificity to assessing contemporary homonegative attitudes, the MHS constitutes an appealing alternative to the ATLG scale. The MHS represents an efficient, valid, and updated measure for understanding modern homonegativity.

Dehumanization. An ideal measure of dehumanization should evaluate both blatant and subtle forms of denying the humanity of others. To accomplish this, Haslam and colleagues (2005) developed a scale based on the dual model of dehumanization (Haslam, 2006). The dual model of dehumanization operationalized two distinct senses of humanness – uniquely human and human nature traits (Haslam, 2006). Human uniqueness refers to attributes that are distinctly human and set humans apart from other species.

These attributes include self-awareness, cultural refinement, and advanced problem-solving skills (Loughnan et al., 2009). Human nature refers to behaviours that are essential to functioning as a human and define our fundamental nature. These characteristics include complex emotions, moral reasoning, and social cognition (Loughnan et al., 2009).

Compared to the Blatant Dehumanization Scale (Kteily et al., 2015) which is focused on more overt animalistic dehumanization, the dual model approach allows for a more nuanced analysis. It differentiates between the more extreme form of dehumanization evaluating the evolutionary progress of an outgroup versus more subtle, casual forms where targets are simply perceived as lacking degrees of humanness relative to the norm.

Furthermore, the scale has demonstrated predictive validity in numerous studies spanning diverse contexts related to prejudice, social exclusion, and intergroup relations (Bastian et al., 2013; Bastian & Haslam, 2010; Haslam et al., 2005; Loughnan et al., 2009). It has been useful for examining dehumanization from both the targets' self-perceptions as well as perceptions by others (Bastian & Haslam, 2010; Haslam et al., 2005). Given these psychometric properties and the well-documented links between dehumanization and attitudes and behaviours towards others (e.g., Bastian et al., 2013; Cuddy et al., 2007b), utilizing a scale that reliably captures the spectrum of humanness attribution could significantly contribute to elucidating these intricate mechanisms.

Political Bias. After an extensive search of the extant literature, at the time of designing the first empirical study of this thesis there were no measures of prejudice between opposing political factions. This was surprising given the extensive history of violence that has resulted from political and cultural divide (to verify, see any civil war).

Short of developing and validating a measure relevant on an international scale, I chose to use a variation of the Universal Measure of Bias (UMB; Latner et al., 2008).

The UMB (Latner et al., 2008) has strong psychometric properties that could be applicable to assessing partisan prejudice. The original study by Latner et al. (2008) demonstrated good internal consistency, clear factor structure, and construct validity across four variations of bias including weight stigma, homophobia, and islamophobia. The underlying factors of negative judgment, distance, attraction, and equal rights emerged consistently, indicating the UMB captures universal components of bias.

Critically, the UMB demonstrated independence from socially desirable responding (Latner et al., 2008). This was important for assessing the sincere prejudices that may exist between opposing political groups. Additionally, the UMB allows flexibility to insert different target groups, making it adaptable as a measure of partisan prejudice. With some minor modifications to the wording and validation in a politically diverse sample, the UMB could provide a psychometrically sound foundation from which to develop a measure of partisan bias.

The constructs assessed by the UMB – negative evaluations, discomfort with proximity, feelings of attraction, and beliefs about equal rights – directly parallel the ways that political prejudice can manifest. Feeling disgust towards an opposing political party, avoiding contact with opposing political party supporters, harbouring ingroup favouritism, and believing one's party deserves greater power and representation are clear expressions of political partisan prejudice.

In conclusion, the UMB (Latner et al., 2008) offered a rigorous starting point to assess the underlying dimensions of prejudice between political factions. With its strong

psychometric properties and flexible structure, a modified UMB provided the best available option for measuring political partisan prejudice at the time of initiating this program of research.

4.4.3 Measures of Individual Differences

SDO. The Social Dominance Orientation scale (SDO), developed by Pratto and colleagues (1994), is a psychometrically sound self-report measure that effectively examines individual differences in support for group-based hierarchy and inequality. Through testing across 13 diverse samples, the scale demonstrated strong internal reliability as well as predictive, convergent, and discriminant validity with regards to variables conceptually related to SDO.

Specifically, the SDO scale exhibits consistently high Cronbach's alpha coefficients above .80 across samples, indicating excellent internal consistency (Pratto et al., 1994). It also demonstrates test-retest reliability over both short and long intervals. Regarding validity, SDO scores correlate with diverse criterion measures including generalized prejudice, racism, sexism, empathy, support for wars of aggression, and hierarchy-enhancing policies, as well as the acceptance of hate speech (Bilewicz et al., 2017; Christopher & Mull, 2006; Kteily et al., 2011; Rowatt et al., 2005). SDO is also associated with relevant personality dimensions like right-wing authoritarianism and political conservatism (Roccato & Ricolfi, 2005; Wilson & Sibley, 2013). Most importantly, the scale predicts attitudes and behaviours related to intergroup domination independent regardless of outgroup presence, priming, or other contextual factors (Kteily et al., 2011).

In the 30 years since its development, the SDO scale (Pratto et al., 1994) has been widely used and validated across cultures and contexts. The abundance of accumulated

evidence supports the reliability and validity of this measure. Overall, the SDO scale provides a valuable tool for assessing individual differences in generalized preferences for group-based hierarchy.

RWA. Right-wing authoritarianism (RWA; Altemeyer, 1981) has long been a focal point in social psychology, particularly as a predictive factor contributing to discrimination and prejudice. The original 30-item RWA scale (Altemeyer, 1998) was meticulously designed to operationalize the essence of authoritarian personalities through its focus on key behavioural indicators such as conformity in thought and behaviours, deference to revered authority figures, and aggression directed on their behalf (Altemeyer, 1981, 1998).

The 15-item short version of the RWA scale (Zakrisson, 2005) offers a reliable, valid, and useful measure of authoritarian attitudes. While half the length of the original scale (Altemeyer, 1998), analyses showed it retained good internal consistency reliability with Cronbach's alpha levels between .72 and .80 across samples. Confirmatory factor analysis also revealed its alignment with the conceptual three-factor structure of authoritarianism: submission, aggression, and conventionalism (Zakrisson, 2005).

One notable strength of the short version of the RWA scale (Zakrisson, 2005) lies in its adaptability to changing societal norms. The authors acknowledge the potential impact of social and political climates on individuals' willingness to express authoritarian attitudes overtly. By incorporating more moderate wording in the items, the shorter version of the scale addressed concerns regarding the potential reluctance of respondents to endorse RWA openly.

Importantly, shortening the scale served to increase its independence from the related SDO construct and improved discriminant validity compared to the original scale

(Zakrisson, 2005). Removing items with higher correlations with SDO helped to ensure the RWA scale, minimized conceptual overlap, and allowed for a more precise assessment of the unique influence of RWA on individual attitudes and behaviours.

The scale also demonstrates strong convergent validity through moderate positive correlations with prejudiced attitudes like racism and sexism, even when controlling for SDO (Zakrisson, 2005). This comports with previous findings linking higher RWA to greater prejudice.

In sum, the short version of the RWA scale (Zakrisson, 2005) is a well-constructed and psychometrically sound instrument for measuring right-wing authoritarianism. Its internal consistency, adaptability to contemporary societal norms, independence from SDO and conceptual clarity enables clearer investigation of the distinct contributions of RWA to prejudiced attitudes and intergroup discrimination. For advancing theoretical understanding and applied work related to RWA and prejudice, this scale offers a well-validated and efficient option for advancing our understanding of this critical psychological construct.

Gender-Specific System Justification. Gender-specific system justification (GSJ) has emerged as a crucial concept in understanding the persistence of gender inequality and the mechanisms that contribute to its normalization in society. The GSJ scale developed by Jost and Kay (2005) examines how individuals, regardless of their gender, tend to defend and legitimize the existing cultural norms and structures, even when these perpetuate inequality. In the effort to identify contributing factors to sexism and discrimination against women, quantifying this specific ideological variable is imperative.

The concept of GSJ is firmly grounded in the broader framework of system justification theory which posits that individuals identify with the prevailing cultural norms,

even if those norms favour one group over another (Jost & Banaji, 1994; Jost & Kay, 2005). In the context of gender relations, both men and women may exhibit a tendency to justify and defend the existing gender system, contributing to the perpetuation of inequality.

Numerous studies provide empirical support for the relevance of the GSJ scale in capturing nuanced gender-specific system justification tendencies across contexts. For example, research consistently shows elevated gender-specific system justification among men, as they tend to endorse the perceived fairness of gender roles and relationships (Azevedo et al., 2017; Martini & De Piccoli, 2020). The scale's utility is further evidenced by the correlation between elevated GSJ and tolerance of sexual violence against women. Specifically, Chapleau and Oswald (2014) linked greater GSJ to increased rape myth acceptance and reduced moral outrage regarding sexual violence. The scale also has revealed gender differences suggesting that GSJ can influence women to challenge the status quo and increase bystander intervention behaviours when witnessing gender-based discrimination or sexual violence (Martini & De Piccoli, 2020).

Additionally, in the political domain, GSJ independently contributes to candidate evaluations and preferences, with supporters of the primary conservative political party in the U.S. tending to exhibit higher economic and GSJ (Azevedo et al., 2017). Taken together, these findings underscore the GSJ scale's capacity to advanced nuanced understanding of the psychological underpinnings and behavioural manifestations of gender-specific system justification across contexts.

The GSJ scale's reliability, validity, and sensitivity to measuring both dispositional and temporarily activated variability in gender-specific system justification tendencies make it an ideal self-report tool. It provides quantification of this distinct ideological variable,

enabling rigorous empirical examination of how the tendency to maintain the gender status quo might impact, intersect with, or arise from other psychological and contextual variables that allow gender inequality and discrimination against women to persist.

In conclusion, the GSJ scale (Jost and Kay, 2005) proves to be a valuable and versatile tool in unravelling the complexities of gender-specific system justification. Its application in diverse contexts, from reactions to sexual assault to political preferences, highlights its significance in comprehending the pervasive influence of system justification in perpetuating gender inequalities. The GSJ stands out as a reliable instrument in the examination of the intricate relationships among individual beliefs, societal norms, and prevailing gender disparities.

4.5 First, Do No Harm: Navigating the Ethics of Prejudice Studies

In the pursuit of these studies that examined the relationship between psychological (in)flexibility, prejudice, and dehumanization, a steadfast commitment to ethical considerations had guided the research process. Participants were provided with exhaustive information at the outset, ensuring a transparent understanding of the nature and purpose of the research, potential risks and benefits, and assurance that their consent to participate was voluntary and revocable without any repercussions at any point. The principles of coercion and undue influence were vigilantly addressed throughout, particularly in the intervention design of Study 4. In Study 4, special care was planned to mitigate any perception of pressure or obligation, especially considering the increasing demands over the course of the study.

The protection of participant privacy and confidentiality was also considered paramount and a non-negotiable aspect of this research. Any potentially identifying

information provided by participants, along with their responses to each measure, remained confidential. Meticulous steps were taken for de-identification of the data, data was password-protected at all points of access, deleted from the data collection website upon retrieval, and securely stored in a privately-owned, encrypted external hard disk drive. This protocol will persist in Study 4, where each participant will be assigned a randomized identification number solely for the purpose of connecting responses during data cleaning and analysis. Clear protocols for data security and explicit permission for long-term tracking will be established from the outset, with participant consent reaffirmed at each phase.

Moreover, given the sensitive nature of topics like prejudice and dehumanization, the study acknowledged the potential for harm and proactive steps were taken to minimize distress. Participant well-being remained a priority throughout each study. Participants were allowed to skip uncomfortable questions and were provided with publicly accessible resources including contact information for crisis hotlines as well as encouragement to seek psychological services for any amount of distress experienced.

Another integral ethical consideration in each of these studies is the fair compensation for participants' time and contributions. Recognizing the value of their involvement, participants were remunerated in a manner that reflects the commitment and effort involved in their participation. Fair compensation is not just a procedural requirement but is integral to respecting the autonomy and dedication of participants. Ethical compensation practices uphold the dignity of participants and contribute to the overall integrity of the study, fostering a collaborative and respectful research environment.

Additional ethical considerations were addressed for the intervention design of Study 4. Firstly, the principle of beneficence highlights the commitment to providing

potential benefits to participants beyond contributing to scientific knowledge. The mindfulness intervention, even if its efficacy for reducing prejudice is not fully established, is designed to offer some form of well-being value to participants. Simultaneously, the principle of non-maleficence underscores a careful approach to potentially distressing elements, such as the sexist article and discussed attitudes. Safeguards will be in place to prevent substantial harm or trauma, and the provision of mental health resources stands as a proactive measure to address any adverse effects.

Finally, each study was critically evaluated for its respective social value, ensuring that research goals justified participants' time and exposure to sensitive topics. The responsibility inherent in exposing individuals to potentially discomforting subjects were carefully considered and a conscientious evaluation of the societal benefits against the risk of findings being misused. This ethical reflection played a pivotal role in shaping the design of each study. The unwavering commitment to responsible and ethically sound practices, deeply rooted in an appreciation for the impact on participants, not only ensured adherence to ethical guidelines but also facilitated a meaningful contribution to the broader discourse within contextual behavioural science and prejudice research broadly.

In sum, the series of studies provided incremental contributions to the study of prejudice and dehumanization – the first study piloted methods, the second enhanced the methodology, the third accounted for established related constructs, and the fourth moved towards an experimental test. Together they further the literature on relations among psychological (in)flexibility, prejudice, and dehumanization.

Chapter 5 – Study 1

5.1 Chapter Overview

This chapter delves into the initial examination of the intricacies of how psychological flexibility and its antithesis, psychological inflexibility, interact with various forms of prejudice. The study employed self-report measures to assess facets of both flexibility and inflexibility, then compared them with scores on prejudice scales that targeted specific groups.

The findings revealed intriguing patterns. Acceptance, a cornerstone of flexibility, emerged as an antagonist to sexism as it exhibited a negative correlation. Similarly, acceptance and defusion, another flexibility facet, jointly countered the dehumanization of Muslims. Conversely, inflexibility, characterized by a lack of contact with the present moment and rigidity with social biases and judgments, predicted the tendency to dehumanize Muslims.

However, the study did not reveal significant correlations between psychological (in)flexibility and other prejudices like racism, homophobia, or political bias. This would suggest that the interplay between these constructs might be selective in how they impact the expression of prejudice dependent on the targeted group.

Limitations were acknowledged, including potential sampling biases, the possibility of social desirability biases, and insufficient statistical power. The extensive preliminary questionnaires were also identified as a potential contributor to respondent fatigue and potentially compromised data quality.

5.2 Introduction

In the tapestry of human experience, few threads are as intricately woven and tragically persistent as prejudice. It extends its influence across social landscapes, poisons relationships, distorts perceptions, and fosters discrimination against individuals and groups based on arbitrary lines of identity. Although the psychological roots of prejudice have been studied extensively, its impact persists. One promising avenue lies in exploring the role of psychological flexibility.

Psychological flexibility refers to an individual's adaptive capacity to navigate the complexities of internal experiences (e.g., thoughts, emotions, sensations) and external contexts, while pursuing meaningful and valued actions (Hayes et al., 1999, 2012; Kashdan & Rottenberg, 2010). Conversely, the pathological inverse addressed by this process, psychological inflexibility reflects a rigid tendency to avoid or control unwanted internal experiences, often leading to unhelpful behaviours (Klimczak & Levin, 2023). The lens of psychological flexibility offers a unique perspective on prejudice, suggesting that inflexible psychological processes may play a key role in its origin and maintenance.

Levin et al. (2016) provided compelling evidence for this connection. Their study investigated the potential link between psychological inflexibility and generalized prejudice. The results indicated that greater inflexibility concerning stigmatizing thoughts about others correlates with increased levels of prejudice. This research laid the groundwork for further exploration, highlighting the potential of psychological flexibility to aid in enhancing our comprehension of and efforts to mitigate prejudice.

Building upon the work of Levin et al. (2016), this thesis explores the potential for flexible connectedness – a facet of psychological flexibility and empathic concern – to act as

a buffer against these harmful biases (Vilardaga et al., 2012). This objective represents an incremental step in investigating the relationship, aiming to discern the specific contributions of psychological flexibility and its core processes to different manifestations of prejudice. The rationale for this investigation stems from a concerning gap in the existing literature. While research on the psychological underpinnings of prejudice is vast, studies specifically employed a behaviour analytic framework remain scarce (Matsuda et al., 2020). Matsuda et al. (2020) aptly point out this critical gap, urging for behaviour analysts to delve into the verbal behaviour of prejudice and to translate theoretical understanding into practical action.

The first study of this thesis served as a pilot to test measures and methods. Its aim was to examine correlations between psychological (in)flexibility and different forms of prejudice, including sexism, racism, homophobia, dehumanization, and biases against supporters of opposing political ideologies. Specific hypotheses were as follows:

- H₁:** Psychological inflexibility and each of the core processes would be positively correlated with prejudiced attitudes and dehumanizing tendencies.
- H₂:** Psychological flexibility and each of the core processes would be negatively correlated with prejudiced attitudes and dehumanizing tendencies.
- H₃:** Cognitive fusion, experiential avoidance, and self-as-content would exhibit the most robust positive correlations with prejudice and dehumanization.
- H₄:** Self-as-context would demonstrate the most pronounced negative correlation with prejudice and dehumanization.

5.3 Method

5.3.1 *Participants*

In the current investigation, 145 participants were recruited through various social networking websites, including Facebook, Reddit, and Twitter, primarily drawing from a convenience sample of researchers' associates. To ensure a diverse range of perspectives and experiences, participants were encouraged to share the recruitment message through any available communication method. The sole exclusion criterion for participation was age, participants were required to be 18 years or older.

5.3.2 *Procedure*

For those interested, participants accessed the study via a web link to Qualtrics, a survey hosting website. The survey was presented as an examination of individual behaviours and their potential correlation with social opinions (see Appendix A). Participants completed a demographic survey followed by a series of self-report measures of psychological (in)flexibility, prejudice, and dehumanization. Clear assurances were provided regarding the confidentiality of participant responses, and as an incentive, participants were given the opportunity to enter a prize draw for a £100 (or equivalent in respective currency) voucher redeemable at an online store of the winner's preference.

5.3.3 *Measures*

Demographic Questionnaire. Participants completed a comprehensive 14-item demographic questionnaire (see Appendix B) encompassing various demographic factors. Specifically, participants provided information regarding their age, gender, sexual orientation, religious affiliation, ethnicity, marital status, educational attainment, employment status, nationality, household income, and postal code (for economic

contextualization). Additionally, in relation to one of the prejudice measures, participants indicated their political orientation on a numerical scale reflecting the political spectrum, categorizing themselves as generally more left-wing (supporting liberal policies), centrist, or generally more right-wing (supporting conservative policies).

Multidimensional Psychological Flexibility Inventory. Rolffs et al. (2016) developed the MPFI (see Appendix C) to evaluate each of the 12 core processes of the psychological flexibility and psychological inflexibility models (Hayes et al., 1999, 2012). This instrument employs five-item subscales for each component. Participants were directed to assess statements concerning the two weeks preceding their participation, utilizing a six-point Likert-type scale ranging from 1 (“Never True”) to 6 (“Always True”). In this study both the psychological flexibility composite ($\alpha = .96$) and psychological inflexibility composite ($\alpha = .94$) had excellent internal consistency.

The psychological flexibility subscales comprised Acceptance ($\alpha = .92$; ex. “I was receptive to observing unpleasant thoughts and feelings without interfering with them.”), Present Moment Awareness ($\alpha = .90$; ex. “I was in touch with the ebb and flow of my thoughts and feelings.”), Self as Context ($\alpha = .95$; ex. “I carried myself through tough moments by seeing my life from a larger viewpoint.”), Defusion ($\alpha = .93$; “When I was upset, I was able to let those negative feelings pass through me without clinging to them.”), Values ($\alpha = .91$; ex. “Even when it meant making tough choices, I still tried to prioritize the things that were important to me.”), and Committed Action ($\alpha = .91$; ex. “I didn’t let my own fears and doubts get in the way of taking action toward my goals.”). Each had excellent internal consistency.

The psychological inflexibility subscales included Experiential Avoidance ($\alpha = .95$; ex. “When I had a bad memory, I tried to distract myself to make it go away.”), Lack of Contact with the Present Moment ($\alpha = .94$; ex. “I went through most days on autopilot without paying much attention to what I was thinking or feeling.”), Self as Content ($\alpha = .93$; ex. “I believed some of my thoughts are abnormal or bad and I shouldn’t think that way.”), Fusion ($\alpha = .94$; ex. “It was very easy to get trapped into unwanted thoughts and feelings.”), Lack of Contact with Values ($\alpha = .91$; ex. “When life got hectic, I often lost touch with the things I value.”), and Inaction ($\alpha = .94$; ex. “Negative feelings easily stalled out my plans.”). Each of the inflexibility subscales also had excellent internal consistency.

Ambivalent Sexism Inventory. The ASI (Glick & Fiske, 1996) is a 22-item scale utilized in this study to assess sexism against women (see Appendix D). As previously discussed in the first chapter (Section 1.4), Glick and Fiske (1996) posited that sexism differs from other prejudices by constituting a multidimensional construct characterized by ambivalence, rather than a constant and entrenched aversion toward all women. There are two primary dimensions of ambivalent sexism: hostile sexism and benevolent sexism.

The benevolent sexism subscale could be divided into three subdimensions: protective paternalism (e.g., “Men should be willing to sacrifice their own well-being in order to provide financially for the women in their lives.”), heterosexual intimacy (e.g., “No matter how accomplished he is, a man is not truly complete as a person unless he has the love of a woman.”), and complementary gender differentiation (e.g., “Women, compared to men, tend to have a superior moral sensibility.”). The hostile sexism subscale, on the other hand, was unidimensional and included items such as “Many women are actually seeking special favours, such as hiring policies that favour them over men, under the guise of asking

for ‘equality.’” Participants responded to each item on a six-point Likert-type scale that ranged from 0 (“Disagree strongly”) to 5 (“Agree strongly”). In this study, the hostile sexism and benevolent sexism subscales exhibited internal consistencies of $\alpha = .88$ and $\alpha = .76$, respectively. The overall scale demonstrated an internal consistency of $\alpha = .86$.

Bayesian Racism. The Bayesian Racism scale (BRS; Uhlmann et al., 2010) employed in this study is a succinct six-item scale designed for cross-cultural measurement of racism (see Appendix E). Uhlmann et al. (2010) conceptualized Bayesian racism as the belief that stereotypes regarding racial outgroups serve as valid justification for the systemic discrimination against individuals within those groups. Sample items include, “If you want to make accurate predictions, you should use information about a person’s ethnic group when deciding if they will perform well,” and “Law enforcement officers should pay particular attention to those social groups more heavily involved in crime, even if this means focusing on members of particular ethnic groups.” Respondents rated each item on a five-point Likert-type scale that ranged from 1 (“Strongly disagree”) to 5 (“Strongly agree”). Mean participant scores were computed and utilized for subsequent analyses. In this study, the Bayesian Racism scale demonstrated a modest internal consistency of $\alpha = .49$.

Homophobia. The Attitudes Toward Lesbians and Gay Men Scale (ATLG; Herek & McLemore, 2011) employed in this study comprises 10 items designed to assess homophobic attitudes (see Appendix F). Sample items include “Sex between two men is just plain wrong” and “I think lesbians are disgusting.” Respondents rated each item on a five-point scale ranging from 1 (“Strongly Disagree”) to 5 (“Strongly agree”). The ATLG demonstrated robust internal consistency in this study, with a coefficient alpha of $\alpha = .97$.

Dehumanization. An eight-item measure developed by Haslam et al. (2005) was employed to assess two distinct manifestations of dehumanization: the denial of human uniqueness and the denial of human nature (see Appendix G). Within this scale, four items were dedicated to gauging the denial of human nature (e.g., “lacking self-restraint, like animals”), while the remaining four focused on the denial of human uniqueness (e.g., “mechanical and cold, like robots”). The measure was presented randomly to participants twice – once inquiring about the accuracy of these descriptors for British people as a group and, separately, for Muslims as a group. Muslims were selected as the target group for this scale due to their portrayal in news media and popular culture as terrorists (Nickerson, 2019). Respondents rated each item based on its applicability to each group on a seven-point Likert-type scale ranging from 1 (“Not at all”) to 7 (“Extremely so”). In terms of internal consistency, the denial of human nature subscale yielded $\alpha = .79$, while the denial of human uniqueness subscale exhibited an internal consistency of $\alpha = .74$.

Political Biases. The Universal Measure of Bias (UMB; Latner et al., 2008) was employed in this study to assess attitudes toward people with oppositional political stances (see Appendix H). Participants who identified as “generally more left-wing” in the demographic questionnaire were presented with a version of the UMB focusing on individual who identified as “generally more right-wing,” and vice versa. Those identifying as “centrist” utilized the measure to express their attitudes toward individuals from both political orientations. Example items from each scale respectively included “People that are more [Left-Wing] have bad hygiene,” and “I don’t enjoy having a conversation with a [Right-Wing] person.” Participants provided responses on a seven-point Likert-type scale of

1 (“Strongly disagree”) to 7 (“Strongly agree”). The UMB demonstrated a robust internal consistency in this study, with a coefficient alpha of $\alpha = .89$.

5.3.4 Data Analysis Strategy

The data analysis encompassed three distinct phases. In the initial data preparation phase, participants who completed less than 80% of the primary measures were excluded to ensure a focused and attentive participant pool. Cronbach’s alpha values were then utilized to assess internal reliability for all scales and subscales. Additionally, data distributions were examined for normality, applying transformation as necessary.

The second phase involved descriptive analyses, calculation of means, standard deviations, and ranges for all primary variables. Subsequently, a correlation matrix will be constructed to elucidate basic relationships between flexibility, inflexibility, and the prejudice and dehumanization measures.

In the third phase, Pearson’s correlation coefficients between psychological (in)flexibility, prejudice, and dehumanization were calculated and examined. This phase also involved the identification of the specific subscales of the MPFI that exhibited the strongest relationships with each form of prejudice.

5.3.5 Power Analysis

An a priori power analysis was conducted using IBM SPSS Statistics (v29.0.1.1) to determine the minimum sample size required for the planned correlational analysis. The power analysis was based on an estimated medium effect size ($r^2 = 0.3$; Cohen’s $d = 0.55$) with a significance criterion of $\alpha = .05$. To achieve a targeted power of 0.80 with these parameters, the power analysis indicated a sample size of 84 would be adequate to test the study hypotheses.

5.4 Results

5.4.1 Demographics

The initial sample comprised 145 participants, however, to uphold data quality standards, individuals that completed less than 80% of the study were excluded from further analysis. Consequently, the final dataset consisted of 95 participants – an attrition rate of 34.48% ($n = 50$). The demographic of the final sample was predominantly comprised of women ($n = 65$; 68.42%), followed by men ($n = 28$; 29.47%), and a smaller representation of non-binary individuals ($n = 2$; 2.11%). The sample was predominantly White ($n = 75$; 78.95%), with Asian ($n = 8$; 8.42%), Hispanic/Latino ($n = 6$; 6.32%) and individuals of mixed heritage or other ethnicities ($n = 6$; 6.32%) contributing to the diversity. Geographically, most participants resided in the United States ($n = 48$; 50.53%), followed by the United Kingdom ($n = 31$; 32.63%), and Canada ($n = 3$; 3.16%), in addition to other nations represented by two or fewer participants each ($n = 13$; 13.68%). Age distribution ranged from 19 to 75 years ($M_{\text{AGE}} = 37.66$, $SD = 14.45$), exhibiting a slightly positively skewed distribution with a skewness of 0.83 ($SE = 0.25$) and kurtosis of 1.20 ($SE = 0.49$). Detailed demographic characteristics are presented in Table 5 for reference.

Political Spectrum. To assess participants' political orientation, a slider question ranging from 0 to 100 was utilized, where scores between 45 and 55 denoted a centrist orientation, scores below 45 indicated a generally liberal orientation, and scores above 55 suggested a generally conservative orientation. Analysis of the political spectrum scores ($M = 31.16$, $SD = 23.25$) indicated an overall left-wing tendency among participants ($n = 74$, 77.89%), while 17 (17.89%) identified as conservative, and 4 (4.21%) as centrist.

Table 5*Study 1 Demographic Characteristics*

Characteristic	<i>N</i> (95)	%
Gender		
Female	65	68.42
Male	28	29.47
Non-Binary	2	2.11
Sexuality		
Heterosexual	67	70.53
Bisexual	15	15.79
Homosexual	7	7.37
Asexual	4	4.21
Pansexual	2	2.11
Ethnicity		
White/Caucasian	75	78.95
Asian	8	8.42
Hispanic/Latino	6	6.32
Mixed/Other	6	6.32
Religion		
Atheism	39	41.05
Christianity	32	33.68
Agnosticism	15	15.79
Judaism	4	4.21
Buddhism	1	1.05
Other	4	4.21
Marital Status		
Single	27	28.42
Married/Partnered	64	67.37
Divorced	4	4.21
Highest Educational Level		
Doctoral Degree	18	18.95
Postgraduate Degree	26	27.37
Undergraduate Degree	22	23.16
Some College/Post-Secondary Education	14	14.74
Vocational Training	6	6.32
Secondary Education	8	8.42
Employment		
Full-Time Employment	43	45.26
Part-Time Employment	20	21.05
Student/Unemployed	27	28.42
Retired	5	5.26
Nation of Current Residence		
United States	48	50.53
United Kingdom	31	32.63
Canada	3	3.16
Other	13	13.68

Note. *N* = 95. Participants were on average 37.66 years old (*SD* = 14.45).

5.4.2 Descriptive Statistics

For a summary of all descriptive statistics, please refer to Table 6.

MPFI. In the examination of psychological flexibility composite scores ($M = 3.94$, $SD = 0.82$), participants revealed a central tendency in their responses. The distribution curve had a slightly positive skew of .09 ($SE = 0.49$) and a slightly flattened peak (kurtosis = -.21, $SE = 0.49$), indicating a propensity for higher flexibility scores with a broader range without the presence of extreme outliers.

Analysis of psychological inflexibility scores ($M = 2.71$, $SD = 0.77$) also revealed a central tendency in the sample's responses with a moderate level of variability. The distribution curve exhibited a positive skew of .56 ($SE = 0.25$) and a flatter peak compared to psychological flexibility scores (kurtosis = -.69, $SE = 0.49$), indicating a broad range of values with a tendency for higher scores without extreme outliers.

ASI. In the analysis of Ambivalent Sexism Inventory scores ($M = 1.08$, $SD = 0.69$), respondents exhibited a central tendency with moderate variability. The distribution curve of the composite scores showed a positive skew of .60 ($SE = 0.25$) with a slightly flattened peak (kurtosis = -.40, $SE = 0.49$) suggesting higher values with a broad range of scores.

In the exploration of the ASI subscales revealed a mean Benevolent Sexism score of 1.22 ($SD = 0.77$) and a mean Hostile Sexism score of 0.93 ($SD = 0.87$). Benevolent Sexism scores displayed a positively skewed distribution with a skew of .31 ($SE = 0.25$) and a flattened peak (kurtosis = -.92, $SE = 0.49$), indicating variability with moderately higher scores. In contrast, Hostile sexism scores exhibited a positively skewed distribution (skewness = 1.11, $SE = 0.25$) and a steeper peak (kurtosis = 0.73, $SE = 0.49$), suggesting notably higher scores with a narrower range.

Table 6*Descriptive Statistics for All Study 1 Variables*

Variable	N	M	SD	Variance	Skewness		Kurtosis	
					Stat	SE	Stat	SE
Psych Flexibility	95	3.94	0.82	.68	.09	.25	-.21	.49
Acceptance	95	3.45	1.14	1.29	.14	.25	-.25	.49
Present Moment	95	3.98	0.93	.86	-.26	.25	.08	.49
Self as Context	95	4.19	1.09	1.19	-.21	.25	-.10	.49
Cognitive Defusion	95	3.51	1.09	1.19	.24	.25	-.75	.49
Values	95	4.23	0.98	.97	-.10	.25	-.57	.49
Commitment	95	4.27	0.93	.87	-.10	.25	-.48	.49
Psych Inflexibility	95	2.71	0.77	.59	.56	.25	-.69	.49
Exp Avoidance	95	3.22	1.32	1.74	.13	.25	-.89	.49
Lack Present Moment	95	2.55	0.97	.93	.64	.25	.07	.49
Self as Content	95	2.70	1.25	1.55	.78	.25	-.02	.49
Cognitive Fusion	95	3.00	1.16	1.35	.39	.25	-.80	.49
Lack Contact Values	95	2.44	.96	.93	.58	.25	-.10	.49
Inaction	95	2.34	1.04	1.07	.70	.25	-.21	.49
Ambivalent Sexism	95	1.08	0.69	.47	.60	.25	-.40	.49
Hostile Sexism	92	0.85	0.75	.57	.83	.25	-.32	.50
Benevolent Sexism	95	1.22	0.77	.59	.31	.25	-.92	.49
Bayesian Racism	92	2.59	0.60	.36	.51	.25	.01	.50
ATLG	95	2.72	1.62	2.62	.27	.25	-1.60	.49
Dehuman British Nature	82	1.72	0.67	.45	.54	.27	-.28	.53
Dehuman British Unique	83	1.94	0.86	.74	.53	.26	.09	.52
Dehuman Muslim Nature	93	1.57	0.78	.61	.40	.25	-.30	.50
Dehuman Muslim Unique	93	1.55	0.81	.66	.35	.25	-.64	.50
Political (UMB)	94	4.16	0.91	.83	.25	.25	.44	.49
Anti-Conservative	75	4.27	0.85	.72	.44	.28	.46	.55
Anti-Liberal	21	3.48	0.71	.50	-.64	.50	.39	.97

Further scrutiny of the hostile sexism scores involved a visual examination of a boxplot, which identified potential outliers among women. Three individual data points, with scores of 3.82, 3.27, and 3.18, were deemed outliers as they fell outside the typical range of hostile sexism among other female participants. The decision to treat these points as outliers followed the standard criterion of being more than 1.5 times the interquartile range beyond the upper or lower quartiles. Upon exclusion, the mean Hostile Sexism score

was 0.85 ($SD = 0.75$). The adjusted distribution curve displayed a positive skew of 0.83 ($SE = 0.25$) and a slightly flattened peak (kurtosis = -0.32, $SE = 0.50$), indicating higher hostile attitudes with a broader range without extreme outliers.

Bayesian Racism. In the examination of Bayesian Racism scores, participants exhibited a mean score of 2.59 ($SD = 0.60$), signifying a central tendency in the sample's responses with a moderate level of variability. The distribution curve displayed a positive skew of .51 ($SE = 0.25$) with a near-normal peak (kurtosis = .01, $SE = 0.50$), indicating a distribution that is relatively close to a normal curve.

Homophobia. A considerable level of variability was observed among ATLG scores ($M = 2.72$, $SD = 1.62$). The distribution curve had a slightly positive skew of .27 ($SE = 0.25$), suggesting a tendency for some participants to endorse higher levels of positive attitudes towards LGBTQ+ individuals. The kurtosis was -1.60 ($SE = 0.49$), indicating a distribution that is moderately platykurtic, with a flatter peak compared to a normal distribution (see Figure 14).

Dehumanization. In the analysis of dehumanization scores across different groups, participants were assessed using two subscales: Denial of Human Nature and Denial of Human Uniqueness targeting two separate groups: White British people and Muslims, in general. Among participants, the mean score for the denial of human nature among White British people was 1.79 ($SD = 0.76$). The distribution curve displayed a positive skew of .99 ($SE = 0.26$) with a leptokurtic peak (kurtosis = 1.54, $SE = 0.52$) indicating a distribution with relatively more scores clustered around the mean.

Visual analysis of a box plot identified three potential outliers with values of 3.00, 3.25, and 4.75. Upon exclusion, the mean score for denial of human nature targeting White

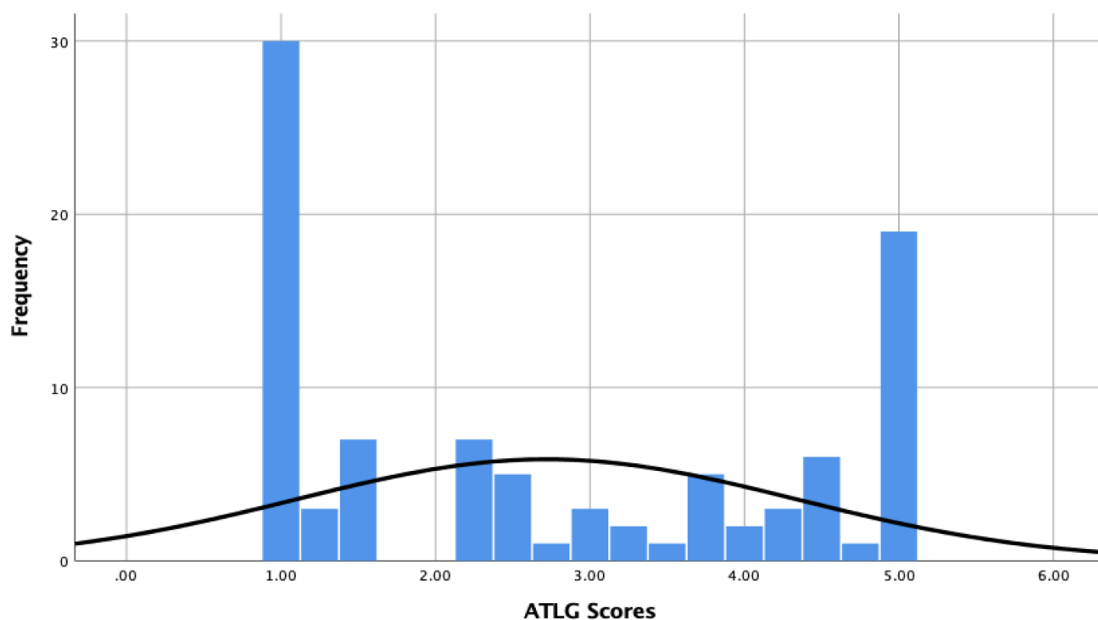
British was 1.72 ($SD = 0.67$). The adjusted distribution curve displayed a positive skew of 0.54 ($SE = 0.27$) and a mildly platykurtic, flatter peak (kurtosis = $-.28$, $SE = 0.53$) indicating a broader range of scores.

For the denial of human uniqueness targeting White British people, the mean score was 1.94 ($SD = 0.86$). The distribution had a positive skew of .53 ($SE = 0.26$) and a mesokurtic peak (kurtosis = $.09$, $SE = 0.52$), indicating a distribution that is closer to a normal curve.

In comparison, the mean score for the denial of human nature targeting Muslims scores was 1.57 ($SD = 0.78$) indicative of a central tendency with a moderate level of variability. The distribution curve displayed a positive skew of .40 ($SE = 0.25$) and a mildly platykurtic peak (kurtosis = $-.30$, $SE = 0.50$), suggesting a broad range of scores.

Figure 17

Frequency Histogram of ALTG Scores



Note. This figure shows the distribution of participant responses on the ATLQ.

For the denial of human uniqueness targeting Muslims, the mean score was 1.55 ($SD = 0.81$), representing a central tendency with a moderate level of variability. The distribution showed a positively skewed pattern (skewness = .35, $SE = 0.25$) and a mildly platykurtic peak (kurtosis = -.64, $SE = 0.50$), indicating a distribution with a flatter peak and a broader range of scores.

Political Bias. In the analysis of political bias scores, participants exhibited a mean score of 4.16 ($SD = 0.91$), indicative of the central tendency in the sample's responses with a moderate level of variability. The distribution curve had a slightly positive skew of .25 ($SE = 0.25$) and a moderate peak with a kurtosis of .44 ($SE = 0.49$). This distribution indicates a subtle tendency for increased political bias among participants, but with a relatively typical range of scores.

Psychological Flexibility ↔ Inflexibility. A correlational analysis examined components of psychological flexibility and psychological inflexibility. The analysis revealed the robust network of correlations among the six core processes, as well as their opposite counterparts representing inflexibility (see Table 7).

As expected, acceptance displayed positive correlations with all six flexibility components, ranging from moderate to strong. This finding aligns with the core tenet of Acceptance and Commitment Therapy (ACT) that acceptance is a cornerstone of psychological flexibility. Notably, the strongest correlations were observed with present moment awareness ($r = .57, p < .001$), self-as-context ($r = .49, p = .04$), and cognitive defusion ($r = .49, p < .001$), suggesting that these processes are particularly crucial for fostering acceptance.

Table 7*Study 1: Correlations Within the Flexibility Network*

Variable	1	2	3	4	5	6	7	8	9	10	11	12
1 Acceptance	—											
2 Present Moment Awareness	.57**	—										
3 Self-as-Context	.49**	.62**	—									
4 Cognitive Defusion	.49**	.59**	.65**	—								
5 Contact with Values	.39**	.68**	.71**	.53**	—							
6 Committed Action	.37**	.53**	.65**	.63**	.71**	—						
7 Experiential Avoidance	-.24*	-.02	-.09	-.06	.02	-.04	—					
8 Lack Contact Present Moment	-.26*	-.48**	-.26*	-.31*	-.41**	-.42**	.12	—				
9 Self-as-Content	-.22*	-.21*	-.30*	-.55**	-.17	-.35**	.35**	.27*	—			
10 Cognitive Fusion	-.21*	-.21	-.39**	-.67**	-.28*	-.46**	.30*	.20*	.74**	—		
11 Lack of Contact with Values	-.03	-.36**	-.40**	-.34**	-.52**	-.58**	.09	.39**	.39**	.34**	—	
12 Inaction	-.19	-.28**	-.50**	-.55**	-.48**	-.65**	.22*	.28*	.59**	.64**	.62**	—

Note. * $p \leq .05$, ** $p \leq .001$.

Present moment awareness also demonstrated positive correlations with all other flexibility components. The strongest associations observed relationships were with values contact ($r = .68, p < .001$) and committed action ($r = .53, p < .001$). This suggests that being present in the moment facilitates engagement with one's values and taking meaningful action towards them. Interestingly, it did not correlate with experiential avoidance, indicating that present moment awareness alone may not be sufficient to overcome avoidance tendencies.

The remaining flexibility components – self-as-context, contact with values, and committed action – showed strong intercorrelations, ranging from $r = .53$ to $.71$ ($p < .001$). This suggests that these processes are closely related and work synergistically to promote overall psychological flexibility. Notably, defusion and contact with values displayed particularly strong associations with all other components, highlighting their central role in the flexibility framework.

Prejudice Scales. A comprehensive correlational analysis was conducted to examine the relationships among various prejudice scales (see Table 8). Ambivalent sexism exhibited strong positive correlations with Bayesian racism ($r = .48, p < .001$). Sexism was also strongly associated with the dehumanization of Muslims, both in the denial of qualities associated with human nature ($r = .38, p < .001$) and uniqueness ($r = .37, p < .001$). Likewise, Bayesian racism was also related to the denial of human nature ($r = .35, p < .001$) and uniqueness ($r = .30, p < .001$). These findings aligned with theories that posit prejudiced individuals tend to generalize their negative biases towards various outgroups, creating a broader sense of social division (Akrami et al., 2011).

Table 8*Study 1: Correlations Among the Prejudice Scales*

Variable	1	2	3	4	5	6	7	8	9	10
1 Ambivalent Sexism	—									
2 Hostile Sexism	.86**	—								
3 Benevolent Sexism	.82**	.41**	—							
4 Bayesian Racism	.48**	.42**	.38**	—						
5 Homophobia	.18	.13	.17	.04	—					
6 British - Human Nature	.05	.07	.00	.23*	.00	—				
7 British - Human Uniqueness	.19	.21	.11	.21	.04	.64**	—			
8 Muslim - Human Nature	.38**	.34**	.30**	.35**	-.03	.56**	.52**	—		
9 Muslim - Human Uniqueness	.37**	.27*	.36**	.30**	-.02	.41**	.43**	.75**	—	
10 Political Prejudice	-.22*	-.25*	-.11	-.13	.00	.17	.03	.09	.14	—

Note. * $p \leq .05$, ** $p \leq .001$.

Notably, neither homophobia, as measured by the ATLG (Herek, 1988) or the dehumanization of White British people was significantly correlated with any other measure of prejudice. Overall, these findings highlight the complex interplay among various forms of prejudice and allude at nuanced relationships that extend beyond the traditionally studied associations. The strong correlations within and between prejudice scales highlight the need for further research to explicate the underlying mechanisms driving these patterns and their implications for understanding societal attitudes and biases.

5.4.3 Correlational Analyses

Psychological Inflexibility, Prejudice, and Dehumanization. It was predicted that psychological inflexibility and each of its components, as measured by the MPFI (Rolffs et al., 2016), would be positively correlated with prejudiced attitudes and dehumanization (**H₁**). To test this hypothesis, correlation coefficients between psychological inflexibility and each scale of prejudice and dehumanization were calculated and examined. Relatedly, it was also anticipated that cognitive fusion, experiential avoidance, and self-as-content would exhibit the most robust positive correlations with prejudice and dehumanization (**H₃**).

Ambivalent Sexism. Correlational analyses were conducted to examine associations between the ASI (Glick & Fiske, 1996), including its hostile sexism and benevolent sexism subscales, and psychological inflexibility as well as each of its subcomponents. The correlation between ambivalent sexism and lack of contact with the present moment approached a small effect in magnitude ($r = .19$) but did not reach statistical significance ($p = .06$). All other correlations between ambivalent sexism and facets of psychological inflexibility were negligible in magnitude and nonsignificant (see Table 9). Similarly small,

nonsignificant correlations were observed between psychological inflexibility and its component processes and both hostile sexism and benevolent sexism.

Taken together, these results fail to provide evidence for linear relationships between sexist attitudes and psychological inflexibility in this sample. Overall, the findings reject the hypotheses that anticipated a positive correlation between psychological inflexibility and its subcomponents and ambivalent, hostile, and benevolent sexism.

Table 9

Study 1 Correlations: Psychological Inflexibility and Ambivalent Sexism

Variable	1	2	3	4	5	6	7
Ambivalent Sexism	.12	.19	.13	.06	-.06	-.09	.09
Hostile Sexism	.06	.20	.11	.05	.02	-.04	.09
Benevolent Sexism	.14	.13	.11	.06	-.12	-.11	.06

Note. Numbers refer to MPFI subscales: 1. Experiential Avoidance, 2. Lack of Contact with the Present Moment, 3. Self as Content, 4. Cognitive Fusion, 5. Lack of Contact with Values, 6. Inaction, 7. Psychological Inflexibility composite score.

Bayesian Racism. Correlational analyses examined linear relationships between Bayesian Racism (Uhlmann et al., 2010) and psychological inflexibility along with its component processes. As shown in Table 10, negligible, nonsignificant correlations emerged between Bayesian racist attitudes and overall psychological inflexibility, as well as each of its specific facets. These negligible effect sizes and nonsignificant results do not provide evidence for substantial linear associations between Bayesian racist beliefs and psychological inflexibility, or its components, in this sample. Overall, the findings do not support the hypotheses that anticipated a positive correlation between psychological inflexibility and its subcomponents and Bayesian racism.

Table 10*Study 1 Correlations: Psychological Inflexibility and Bayesian Racism*

Variable	1	2	3	4	5	6	7
Bayesian Racism	.06	.12	-.05	-.04	.07	-.11	.01

Note. Numbers refer to MPFI subscales: 1. Experiential Avoidance, 2. Lack of Contact with the Present Moment, 3. Self as Content, 4. Cognitive Fusion, 5. Lack of Contact with Values, 6. Inaction, 7. Psychological Inflexibility composite score.

ATLG. The bivariate Spearman correlations between ATLG scores and measures of psychological inflexibility did not reach statistical significance (see Table 11). Thus, the data did not support the primary hypothesis that greater psychological inflexibility and its core subprocesses would be positively associated with greater self-reported homophobia.

Table 11*Study 1 Correlations: Psychological Inflexibility and Homophobia*

Variable	1	2	3	4	5	6	7
ATLG	-.07	-.06	.01	-.01	-.03	.01	-.03

Note. Numbers refer to MPFI subscales: 1. Experiential Avoidance, 2. Lack of Contact with the Present Moment, 3. Self as Content, 4. Cognitive Fusion, 5. Lack of Contact with Values, 6. Inaction, 7. Psychological Inflexibility composite score.

Political Bias. The correlations between political bias, as measured by a modified version of the UMB (Latner et al., 2008), and psychological inflexibility, along with its core processes, revealed no statistically significant associations at the conventional .05 alpha level (see Table 12). The strongest correlation occurred between political bias and experiential avoidance ($r = .18, p = .09$). Though not reaching statistical significance according to conventional standards, this suggests a potential positive trend between negative attitudes about others with oppositional political orientations and the tendency to avoid unwanted internal experiences. Overall, the current results provide limited initial evidence for the hypothesized relationships between psychological inflexibility and political biases.

Table 12*Study 1 Correlations: Psychological Inflexibility and Political Prejudice*

Variable	1	2	3	4	5	6	7
UMB - Political	.18	-.04	.02	.10	-.12	-.02	.05

Note. Numbers refer to MPFI subscales: 1. Experiential Avoidance, 2. Lack of Contact with the Present Moment, 3. Self as Content, 4. Cognitive Fusion, 5. Lack of Contact with Values, 6. Inaction, 7. Psychological Inflexibility composite score.

Dehumanization. The current study also examined relationships between psychological inflexibility, its core processes, and the dehumanization of White British and Muslim outgroups. Results provided partial support for the hypotheses that inflexibility and its subprocesses would positively correlate with dehumanization (see Table 13).

There were no significant associations between psychological inflexibility and the denial of human nature or human uniqueness regarding White British people. However, significant positive relationships emerged between multiple core processes and the dehumanization of Muslim outgroup members. Inflexibility demonstrated a small, positive correlation with the denial of human nature ($r = .20, p = .06$) and a significant correlation with denial of human uniqueness ($r = .22, p = .04$) among Muslims. At the subprocess level, lack of contact with present moment ($r = .25, p = .02$) significantly correlated with denying Muslims' human nature, while experiential avoidance ($r = .22, p = .04$), lack of contact with the present moment ($r = .26, p = .01$), and cognitive fusion ($r = .26, p = .01$) each significantly correlated with denying Muslims' human uniqueness.

Additional positive, non-significant correlations emerged between the denial of human uniqueness regarding Muslims and self-as-content ($r = .18, p = .08$) as well as cognitive fusion ($r = .19, p = .06$). Though not reaching statistical significance according to

conventional standards, this suggests a potential positive trend between dehumanization of Muslims and fusion with the conceptualized self.

In summary, these results reveal a consistent pattern in which multiple components of psychological inflexibility selectively correlate with dehumanizing attitudes targeting Muslims but not White British people. This suggests that inflexibility processes may play a stronger role in prejudicial attitudes toward certain social groups.

Table 13

Study 1 Correlations: Psychological Inflexibility and Dehumanization

Variable	1	2	3	4	5	6	7
British - HN	.04	-.02	.00	.09	-.03	-.02	.02
British - HU	-.05	-.04	.13	.06	.08	.04	.05
Muslim - HN	.14	.25*	.14	.19	.00	.07	.20
Muslim - HU	.22*	.26*	.18	.26*	-.07	.01	.22*

Note. Numbers refer to MPFI subscales: 1. Experiential Avoidance, 2. Lack of Contact with the Present Moment, 3. Self as Content, 4. Fusion, 5. Lack of Contact with Values, 6. Inaction, 7. Psychological Inflexibility Model composite score. HN = Denial of Human Nature, HU = Denial of Human Uniqueness. * $p \leq .05$.

Psychological Flexibility, Prejudice, and Dehumanization. This study also investigated how different facets of psychological flexibility, as measured by the MPFI (Rolffs et al., 2016), may relate to specific forms of prejudice and dehumanization assessed through established scales. It was hypothesized that higher psychological flexibility (**H₂**), and each of its core processes, would be associated with lower scores on prejudice and dehumanization measures. It was also predicted that negative correlations between prejudice and dehumanization measures and the self as context component (**H₄**) would be particularly robust. If supported, this would suggest that the ability to detach from rigid thought patterns and engage with diverse perspectives might play a crucial role in fostering more inclusive and positive intergroup dynamics. To test these hypotheses, correlation

coefficients between psychological flexibility as well as its components, and each scale of prejudice and dehumanization were calculated and examined.

Ambivalent Sexism. The current study tested hypotheses that psychological flexibility and its subprocesses would demonstrate negative associations with sexist attitudes targeting women. Results provided limited support for this premise (see Table 14). Of the flexibility components, acceptance exhibited the only significant correlation, demonstrating a small negative relationship with ambivalent sexism composite scores ($r = -.21, p = .04$) as well as hostile sexism ($r = -.21, p = .04$). None of the other flexibility processes, including the psychological flexibility composite scores were significantly correlated with any dimension of ambivalent sexism.

In summary, acceptance emerged as the sole flexibility component negatively related to hostile sexism and ambivalent sexism, broadly. This suggests potential significance in targeting this specific process. However, contrary to predictions, the psychological flexibility composite scores and most other subprocesses, including self as context, did not significantly correlate with sexist attitudes. Overall, the findings diverge from the hypotheses, which anticipated negative correlations between psychological flexibility, its subcomponents, and sexism.

Table 14

Study 1 Correlations: Psychological Flexibility and Ambivalent Sexism

Variable	1	2	3	4	5	6	7
Ambivalent Sexism	-.21*	-.13	.05	-.11	.03	.06	-.07
Hostile Sexism	-.21*	-.12	.06	-.10	.06	.06	-.06
Benevolent Sexism	-.15	-.09	.02	-.08	-.01	.04	-.06

Note. Numbers refer to MPFI subscales: 1. Acceptance, 2. Present Moment Awareness, 3. Self as Context, 4. Cognitive Defusion, 5. Values, 6. Committed Action, 7. Psychological Flexibility composite score. * $p \leq .05$.

Bayesian Racism. In examining the relationship between Bayesian Racism (Uhlmann et al., 2010) and psychological flexibility, along with its core processes, the analysis revealed no significant correlations (see Table 15). The results, therefore, do not support the hypotheses that psychological flexibility and its core processes, including self-as-context, are negatively correlated with racism.

Table 15

Study 1 Correlations: Psychological Flexibility and Bayesian Racism

Variable	1	2	3	4	5	6	7
Bayesian Racism	-.03	-.14	.09	.02	-.03	.07	.00

Note. Numbers refer to MPFI subscales: 1. Acceptance, 2. Present Moment Awareness, 3. Self as Context, 4. Cognitive Defusion, 5. Values, 6. Committed Action, 7. Psychological Flexibility composite score.

ATLG. Bivariate Spearman correlation coefficients were calculated to examine the relationships between psychological flexibility and its core processes and self-reported homophobia (see Table 16). Counter to predictions, ATLG prejudice scores and both the flexibility composite and all subprocess subscales failed to reach statistical significance. Additionally, each correlation observed were positive rather than the hypothesized negative direction. These results fail to support the hypothesis that greater flexibility relates to lower homophobia.

Table 16

Study 1 Correlations: Psychological Flexibility and Homophobia

Variable	1	2	3	4	5	6	7
ATLG	.12	.10	.06	.09	.05	.15	.11

Note. Numbers refer to MPFI subscales: 1. Acceptance, 2. Present Moment Awareness, 3. Self as Context, 4. Cognitive Defusion, 5. Values, 6. Committed Action, 7. Psychological Flexibility composite score.

Political Bias. The examination of correlations between political bias, assessed through a modified version of the UMB (Latner et al., 2008), and psychological flexibility, alongside its core processes, did not yield statistically significant results (see Table 17). None of the flexibility components, including the composite score, exhibited significant correlations with political bias. Additionally, most of the observed relationship were positive rather than the predicted negative direction.

These findings fail to support the hypotheses that greater scores in self-as-context and psychological flexibility, in general, would predict lower political prejudice. The consistency of near-zero positive correlations suggests sample variability in flexibility and prejudice may have been inadequate to detect relationships in the current sample.

Table 17

Study 1 Correlations: Psychological Flexibility and Political Prejudice

Variable	1	2	3	4	5	6	7
UMB - Political	-.02	.14	.05	.11	.11	.01	.08

Note. Numbers refer to MPFI subscales: 1. Acceptance, 2. Present Moment Awareness, 3. Self as Context, 4. Cognitive Defusion, 5. Values, 6. Committed Action, 7. Psychological Flexibility composite score.

Dehumanization. The presented data revealed mixed findings regarding the relationship between psychological flexibility and dehumanization towards different groups. While hypotheses regarding the overall negative correlation between flexibility and homophobia were not fully supported, specific facets of the construct showed promise.

When White British people were the targeted group, no significant correlations emerged between any of the psychological flexibility processes and either denial of human nature or uniqueness (see Table 18). This seemingly contradicts the hypothesized negative

correlation between psychological flexibility and dehumanization, suggesting alternative factors might drive dehumanization in this context.

However, when people of Muslim faith were targeted, a different picture emerged. Here, acceptance ($r = -.27, p = .01$) and cognitive defusion ($r = -.21, p = .04$) displayed significant negative correlations with the denial of human uniqueness, supporting the primary hypothesis. Although self-as-context did not reach statistical significance as hypothesized, it did trend in the expected direction. Overall, these findings suggest that acceptance of diverse experiences and defusing from rigid thoughts may play a crucial role in combating prejudice against marginalized groups.

Table 18

Study 1 Correlations: Psychological Flexibility and Dehumanization

Variable	1	2	3	4	5	6	7
British - HN	.04	.13	-.12	-.12	.08	-.04	-.01
British - HU	-.01	.00	-.01	-.15	-.07	-.03	-.06
Muslim - HN	-.18	-.03	-.17	-.19	-.02	-.09	-.14
Muslim - HU	-.27*	-.12	-.12	-.21*	-.07	-.01	-.18

Note. Numbers refer to MPFI subscales: 1. Acceptance, 2. Present Moment Awareness, 3. Self as Context, 4. Cognitive Defusion, 5. Values, 6. Committed Action, 7. Psychological Flexibility composite score. HN = Denial of Human Nature, HU = Denial of Human Uniqueness. * $p \leq .05$.

5.4.4 Exploratory Analysis

Inflexibility Processes as Predictors of Dehumanization. An initial multiple regression analysis was conducted to identify potential predictor variables for further examination. The analysis included each of the psychological inflexibility subcomponents (i.e., experiential avoidance, attachment to conceptualized self, lack of contact with the present moment, cognitive fusion, lack of values clarity, inaction) as predictors of denying qualities of human uniqueness to Muslim outgroup members. Variable selection was guided

by the ‘Enter’ method, wherein all the selected predictor variables were entered into the model simultaneously. This method was chosen to explore the simultaneous contributions of the considered variables to the dehumanization of Muslims.

The overall model was statistically significant, $F(6, 86) = 3.67, p = .003$, indicating that the set of predictor variables collectively contributed to explaining variance in the dehumanization of Muslims (see Table 18). The analysis provided valuable insights into the individual contributions of each predictor variable, as ‘Lack of Contact with the Present Moment’ ($\beta = .30, t(86) = 2.81, p = .01$) and ‘Cognitive Fusion’ ($\beta = .37, t(86) = 2.39, p = .02$) emerged as statistically significant predictors.

Table 19

Inflexibility and the Denial of Human Uniqueness: Variable Selection and Regression

	Predictor	<i>b</i>	<i>SE</i>	β	<i>t</i>	<i>F</i> (<i>df</i> 1, <i>df</i> 2)	Adj. <i>R</i> ²	Diff. (ΔR^2)
1	(Constant)	.65	.32		2.06*			
	Exp. Avoid	.08	.06	.13	1.26			
	LC Present	.25	.09	.30	2.81*			
	Self-Content	-.02	.10	-.03	-0.18			
	Cog Fusion	.26	.11	.37	2.39*			
	LC Values	-.15	.11	-.17	-1.33			
	Inaction	-.17	.12	-.21	-1.40			
						3.67* (6, 86)	.148	
2	(Constant)	.63	.29		2.17*			
	LC Present	.19	.09		2.14*			
	Cog Fusion	.15	.07		2.13*			
						5.58* (2, 90)	.091	-.057

Note. Parts of the above predictor variables are abbreviated for formatting purposes.

‘Exp. Avoid’ = Experiential Avoidance, Cog = Cognitive, LC = Lack of Contact * $p \leq .05$.

Based on the findings of the initial analysis, a subsequent multiple regression analysis was conducted with a focus on the selected predictor variables, 'Lack of Contact with the Present Moment' and 'Cognitive Fusion'. The overall model remained statistically significant, $F(2, 90) = 5.58, p = .005$ and is a better overall fit, however, Model 1 explained more of the variation in the dependent variable ($\Delta R^2 = .057$). Interestingly, the coefficients for both 'Lack of Contact with the Present Moment' ($\beta = .22, t(90) = 2.14, p = .03$) and 'Cognitive Fusion' ($\beta = .22, t(90) = 2.14, p = .04$) were similar in magnitude and significance, highlighting their independent yet equally impactful roles in shaping outgroup perceptions.

5.5 Discussion

The initial study aimed to investigate relationships between psychological (in)flexibility, prejudice, and dehumanization. The results revealed some notable findings, though several hypotheses were not fully supported.

Regarding psychological inflexibility, the data did not confirm predictions that it would positively correlate with sexist, racist, homophobic, or political biases. However, significant positive correlations did emerge between psychological inflexibility, as well as two subcomponents – experiential avoidance and lack of contact with the present moment – and the denial of human uniqueness for Muslims. This suggests inflexibility may play a selective role depending on the target outgroup.

For psychological flexibility, acceptance negatively correlated with ambivalent and hostile sexism, partially confirming hypotheses. However, flexibility and most subcomponents did not correlate with racism, homophobia, political bias, or the dehumanization of White British people. Again, correlations were selective depending on

the targeted group – acceptance and defusion negatively correlated with the dehumanization of Muslims when denying qualities of human uniqueness.

The non-significant correlations between the different forms of prejudice and the subcomponents of both psychological flexibility and inflexibility suggest that simple linear relationships may not fully capture the complexities of the interaction between prejudice and inflexibility. This discrepancy aligned with contextual behavioural science (CBS) principles. CBS posits that psychological phenomena, like prejudice, are contextually and dynamically driven. Theoretically, prejudices have emerged from a confluence of factors, including social learning, experiential histories, and reinforcement contingencies, rather than solely from rigid cognitive or emotional processes.

CBS models have suggested that prejudice may be maintained by various behavioural contingencies, not just inflexible avoidance of unwanted thoughts or feelings. For example, sexist behaviours or attitudes may be reinforced by social approval within prejudiced environments or provide access to desired resources (e.g., in-group acceptance). Conversely, challenging these attitudes may lead to social disapproval, conflict, or loss of privilege. Targeting specific inflexibility mechanisms relevant to specific manifestations of prejudice could lead to more effective interventions.

For instance, both ‘Lack of Contact with the Present Moment’ and ‘Cognitive Fusion’ emerged as independent yet equally significant predictors of the dehumanization of Muslims through the denial of qualities of human uniqueness. This finding highlighted the nuanced interplay between inflexibility mechanisms. Being mindful of and accepting present-moment experiences, including discomforting thoughts about the targeted group, seems crucial for resisting rigid categorization and dehumanization. Additionally, defusing

from rigid cognitive biases and judgments about Muslims helps prevent their reduction to abstract concepts rather than recognizing their full humanity.

While psychological inflexibility exhibited selective relationships with prejudice and dehumanization depending on the target outgroup, the findings regarding psychological flexibility dimensions reveal important insights into the multidimensional nature of flexible and inflexible psychological processes more broadly. The examination of the nuanced relationships between the subprocesses of psychological flexibility and inflexibility would further understanding of how these processes interact and provide pathways for human flourishing versus suffering. This multidimensional perspective allows for greater specificity in understanding the development and maintenance of prejudice, psychopathology, or wellbeing. Overall, the differential findings for inflexibility and flexibility underscore the value of contextual behavioural models that account for the contextual and multifaceted nature of human psychological phenomena.

5.5.1 I Think, Therefore I Avoid: The Multifaceted Nature of Rigidity & Flexibility

Psychological flexibility encompasses a set of interrelated components that play a crucial role in an individual's ability to adapt to situational demands, maintain balance in life domains, and act in accordance with deeply held values. Research shows flexibility is associated with greater wellbeing, while inflexibility is linked to various forms of psychopathology (Kashdan & Rottenberg, 2010).

The study reveals important insights into the multidimensional nature of psychological flexibility and inflexibility. The observed correlations among the flexibility dimensions align with contextual behavioural science models highlighting the interrelated components of flexibility (Hayes et al., 1999, 2012). At the same time, the unique variances

indicate these are distinct processes that contribute uniquely to adaptation, wellbeing, and values-based action. This allows models of flexibility to avoid multicollinearity and account for nuances (Rolffs et al., 2016).

Additionally, the negative correlations found between acceptance and inflexibility components, although not as strong in magnitude as the positive correlations with flexibility, suggest acceptance may facilitate by counteracting rigid, avoidant patterns. This aligns with conceptualizations of acceptance as allowing inner experiences without unnecessary defence, thereby reducing the influence of experiential avoidance and cognitive fusion (Hayes et al., 2012).

Of note, experiential avoidance exhibited non-significant correlations with multiple inflexibility components, indicating it may be a distinct facet of inflexibility not directly tied to disconnect from the present moment, the rigidity of self-narratives, or cognitive entanglement. This has important implications for contextual behavioural models and suggests experiential avoidance may arise and persist through pathways distinct from other inflexibility processes. Additional research is needed to further unpack these relationships.

Overall, these findings highlight the value of examining psychological flexibility and inflexibility from a multidimensional perspective. This allows for greater specificity in understanding the development and maintenance of human suffering and flourishing.

5.5.2 Much Ado About Nothing? The Risk of Type I and Type II Errors

The interpretation of findings examining psychological flexibility and prejudice required careful consideration of potential false positives from multiple comparisons. Conducting numerous statistical tests increased the chance of Type I errors. To mitigate

this, stricter alpha levels, multiple comparison corrections (e.g., Bonferroni), and larger sample sizes would have been helpful.

In this study, the risk of Type I errors was present because many hypotheses were tested without adjustments for multiple comparisons. However, the predominance of null findings also indicated a risk of Type II errors occurring. Specifically, several of the correlational analyses yielded mostly small, non-significant relationships between psychological flexibility, inflexibility, and measures of prejudice. With the modest sample size ($N=95$ after attrition), the statistical power to detect small to moderate correlations was likely inadequate. Low power increased the probability of Type II errors, and the likelihood that true relationships went undetected. Had the sample been larger, additional correlations may have emerged.

Furthermore, the restricted variability of prejudice measures in this sample (e.g., low sexism and homophobia scores) may have obscured relationships. Had the variability and spread of scores on prejudice measures been greater, true relationships may have emerged more readily. Overall, these factors likely increased the occurrence of false negatives in this study – a Type II error pattern that suggests that meaningful flexibility-prejudice links may still exist but require larger, more diverse samples to reveal.

In summary, while the null findings should be interpreted cautiously due to limitations of sample size and restricted variability, this study provided valuable opportunities for future research. Specifically, using larger diverse samples, stricter alpha levels, multiple comparison corrections, and maximizing variability in prejudice measures could have helped mitigate Type I and Type II errors. Doing so would have enhanced the interpretability of findings and further elucidated the interplay between psychological

(in)flexibility and prejudice. Although considerations of Type I and Type II errors were important for interpretation of the findings, this study had several other limitations.

5.5.3 Limitations

Although this initial investigation offered valuable preliminary insights, the study had several limitations that should be considered. First, the reliance on online convenience sampling may have introduced sampling biases compared to the recruitment of a localized in-person sample or the utilization of a crowdsourced data collection website. The sample of the current study was primarily White, well-educated, politically progressive women residing in occidental nations, which may have limited the generalizability of the findings.

Additionally, the use of explicit self-report measures to assess prejudicial attitudes may have been susceptible to social desirability biases. Such biases could have potentially obscured the relationships between psychological flexibility and measures of prejudice. Moreover, the validity of the responses to self-report measures, in general, were dependent not only on participant honesty but also on their introspective ability to respond accurately.

It should also be noted that certain participants who identified as generally more right-wing proactively contacted the research team to express concerns about potential biases within the design of the study. They conveyed apprehensions that the study aimed to accuse the politically conservative population of being predisposed to prejudice. Despite explicit clarification within the informed consent that emphasized the research team's commitment to a neutral, scientifically objective approach and the disavowal of any intention to single out a specific group as more likely to be prejudiced, and the guarantee of participant anonymity, concerns persisted. Nevertheless, there remained a possibility that despite these assurances, some participants may have responded disingenuously, possibly

driven by a perceived need to shield their ingroup from potential accusations. This dynamic highlights how participant expectations and perceived study objectives may interact and potentially influence the authenticity of responses.

Another limitation pertains to the exclusion of two measures from the analyses. First, an unpiloted brief version of the Acceptance and Action Questionnaire – Stigma (AAQ-S; Levin et al., 2014) that consisted of 11 items was excluded from the analysis due to its questionable internal consistency ($\alpha = .30$). While the brevity of this version was initially considered, the suboptimal reliability compromised its utility as a valid measure of psychological flexibility in the context of stigma. Future iterations of this study should use validated measures with known psychometric properties. The second measure to be excluded was the 26-item brief version of the World Health Organization Quality of Life survey (WHOQOL-BREF). This decision was grounded in its relative irrelevance to the primary objective of this thesis to examine the role of each component of psychological flexibility and inflexibility in the perpetuation of specific forms of prejudice. Although this exclusion was made to streamline the study focus and mitigate respondent burden, it is important to acknowledge that the absence of these measures may have implications for the breadth of the data collected and the subsequent interpretation of the results.

The study was further limited by the extensive length of the demographic questionnaire which may have contributed to respondent fatigue. In this study, the demographic questionnaire consisted of 14 questions distributed across four pages and preceded any of the scales that were directly relevant to the study hypotheses. The length of the questionnaire likely exceeded an optimal length and resulted in the reduction of

participant motivation and engagement, as evidenced by the considerable attrition rate during this section ($n = 21$) (Herzog & Bachman, 1981; Rolstad et al., 2011).

To mitigate respondent burden, future iterations of this study should streamline the demographic questionnaire by including only a few essential items, such as age and gender, or alternatively, deferment of its administration to the end of the study. This strategic approach could optimize participant engagement and mitigate the risk of attrition associated with prolonged preliminary assessments.

The sequential order of study measures must also be considered as a factor in the enhancement of participant engagement. Participants in this study were required to complete the demographics questionnaire, the MPFI (Rolffs et al., 2016), the brief version of the AAQ-S (Levin et al., 2014), and the WHOQOL-BREF (Harper et al., 1998) – a total of 112 items – prior to prejudice assessments. This sequencing likely contributed to participant fatigue and diminished motivation, as the initial questionnaires did not align with the expectations set in the recruitment advertisements (Yan et al., 2019). To rectify this design flaw, in future iterations of this study, the measures of prejudice should be randomly mixed among the independent variables.

5.5.4 Conclusion

In conclusion, while this initial investigation offered preliminary insights into the relationships between psychological flexibility, inflexibility, prejudice, and dehumanization, the study had several notable limitations. The online convenience sampling method introduced potential biases, and the reliance on explicit self-report measures of prejudice was susceptible to social desirability effects. Additionally, the extensive demographic questionnaire and measures of independent variables likely contributed to respondent

fatigue, diminished data quality, and inflated attrition. Furthermore, the modest sample size restricted statistical power to detect small to moderate effects. Given these limitations, any conclusions drawn from this study must be tentative.

Moving forward, modifications to the research design have been suggested to optimize data quality and strengthen the validity of findings in subsequent studies. These include a shortened demographic questionnaire, use of the full version of the AAQ-S (Levin et al., 2014), and employment of crowdsourcing data collection websites to increase respondent diversity and enhance generalizability. With these adjustments implemented, it was anticipated that the follow-up study would provide more conclusive insights into the nuanced relationships between psychological flexibility, inflexibility, and varied manifestations of prejudice. Though this initial investigation had flaws, it highlighted valuable directions to refine methodological rigor and garner clearer understanding of contextual behavioural factors that may selectively perpetuate prejudicial biases.

Chapter 6 – Study 2

6.1 Chapter Overview

Although the aim of Study 2 was the same as the preliminary investigation presented in the previous chapter, there was an emphatic focus on the fortification of methodological rigor to broaden the generalizability of findings of any connection between psychological (in)flexibility and prejudice. Acknowledging the shortcomings of Study 1, this refined iteration incorporated methodological improvements to strengthen the internal and external validity of the results.

This study investigated the connections between various facets of psychological flexibility and inflexibility, as well as their relationships with different types of prejudice, including sexism, racism, homonegativity, and the dehumanization of Muslims. Study 2 employed a correlational design using different measures of psychological flexibility, inflexibility, prejudice, and dehumanization.

The results revealed that specific aspects of inflexibility were significantly correlated with various forms of prejudice. However, psychological flexibility, in general, did not consistently relate to prejudice, with some exceptions and nuances depending on the specific type of prejudice and flexibility component. Notably, ‘Lack of Contact with Values’ emerged as a consistent predictor across genders and prejudice manifestations. Additionally, specific flexibility components like ‘self-as-context’ and ‘present moment awareness’ showed intriguing correlations with different types of prejudice and dehumanization.

Importantly the influence of inflexibility on prejudice, while statistically relevant, remained moderate to low, suggesting the influence of other factors in shaping discriminatory attitudes. This complexity underscored the need for targeted interventions

that address specific inflexibility components rather than aiming for a generalized boost in psychological flexibility. By unravelling the nuanced interplay between psychological processes and social judgment, this study paved the way for future research to explore the mechanisms underlying these connections and ultimately inform practices that foster acceptance and combat prejudice in its various forms.

6.2 Current Study

Building upon the initial investigation, Study 2 aimed to strengthen and refine the examination of psychological (in)flexibility as a factor in intergroup discrimination. Acknowledging the limitations identified in Study 1, this iteration implemented methodological improvements, revised measures, and adopted a more efficient recruitment strategy to enhance the robustness and generalizability of the findings.

First, to address potential biases associated with an online convenience sample, data collection transitioned from active recruitment to crowdsourcing platforms (e.g., Prolific). The aim of this shift in strategy was to recruit a more diverse and representative participant pool. Although this approach comes with its own set of drawbacks, particularly potential concerns related to quality control, the decision to opt for crowdsourcing platforms was driven by the benefits of increased accessibility and cost-effectiveness when compared to alternative recruitment strategies (e.g., traditional student samples).

Second, the study measures were revised to enhance reliability and validity. For instance, the full version of the Acceptance and Action Questionnaire – Stigma (AAQ-S; Levin et al., 2014) replaced the brief, unpiloted version used in Study 1. In an effort to address potential issues with wording, the Modern Homonegativity Scale (MHS; Morrison & Morrison, 2003) was chosen to assess homonegativity to address the potentially

problematic wording in the Attitudes Towards Lesbians and Gay Men scale (ATLG; Herek, 1988). Additionally, the modified Universal Measure of Bias (UMB; Latner et al., 2008) in addition to its relevant dependent variable, political bias, was removed in response to participant feedback and concerns about potential bias contamination. Lastly, the WHOQOL-BREF (Harper et al., 1998) was removed due to its relative irrelevance to the overall purpose of the thesis and to relieve respondent burden.

Third, in an additional effort to reduce respondent burden, the study design was streamlined. The lengthy 14-item demographic questionnaire used in Study 1 was reduced to five items, divided into two phases presented at the beginning and conclusion of the study. Moreover, aside from the MPFI (Rolffs et al., 2016) which was presented first, the sequence of all the other variables were randomized to enhance participant engagement.

Consistent with Study 1, the purpose of the current study was to examine the roles of psychological flexibility and inflexibility along with their respective subcomponents in the explicit behaviours and biases associated with prejudice and dehumanization. Specific hypotheses were as follows:

- H₁:** Psychological inflexibility (AAQ-S and MPFI) and its subcomponents (experiential avoidance, lack of contact with the present moment, self-as-content, lack of contact with values, inaction) would be positively correlated with sexist, racist, and homonegative attitudes and dehumanizing tendencies.
- H₂:** Psychological flexibility (AAQ-S and MPFI) and each of its subcomponents (acceptance, present moment awareness, self-as-context, cognitive defusion, committed action) would be negatively correlated with sexist, racist, and homonegative attitudes and dehumanizing tendencies.

H₃: The relationships hypothesized in H₁ would be strongest for the subcomponents of ‘Lack of Contact with the Present Moment’, ‘Cognitive Fusion’, and ‘Self-as-Content’.

H₄: The relationships hypothesized in H₂ would be strongest for the subcomponents of ‘Acceptance’, ‘Cognitive Defusion’, and ‘Self-as-Context’.

H₅: Psychological flexibility and inflexibility would correlate with the dehumanization of Muslims when denying human nature and uniqueness.

H₆: Relationships will remain when controlling for key demographic variables like age, gender, and ethnicity.

6.3 Method

In Study 2, the design and proposed data analyses closely mirrored those employed in the preceding study. However, aside from the revised measures, there were three notable distinctions between the two studies. First, this study incorporated a substantially abbreviated demographics questionnaires. Second, it omitted the assessment of quality-of-life, a variable previously included in the initial study. Third, Study 2 did not incorporate a measure of political prejudice. In the following section, additional disparities between the two studies have been delineated.

6.3.1 Participants

A total of 269 participants were recruited from the United Kingdom, United States, and Canada through online platforms: Facebook ($n = 59$), Reddit ($n = 5$), Prolific ($n = 64$), and Amazon Mechanical Turk (MTurk; $n = 144$). To ensure data quality, participants who completed less than 80% of specific study components were excluded, which resulted in an

attrition rate of 9.67% ($n = 49$). The final analyses were conducted with 220 participants (81.78% of the initial sample).

6.3.2 Measures

To address the limitations of the previous study, Study 2 implemented several changes. First, the Attitudes Towards Lesbians and Gay Men scale (ATLG; Herek, 1988) was replaced with the Modern Homonegativity Scale (MHS; Morrison & Morrison, 2003) and the AAQ-S (Levin et al., 2014) was administered in its full, validated form instead of the brief version created for Study 1. Second, the WHOQOL-BREF (Harper et al., 1998) and modified Universal Measure of Bias (UMB; Latner et al., 2008) were excluded from the study entirely. And lastly, the demographics questionnaire was shortened significantly. Aside from these modifications, core measures from the first study including the Ambivalent Sexism Inventory (ASI; Glick & Fiske, 1996), Bayesian Racism scale (Uhlmann et al., 2010), Dual Model of Dehumanization scale (Haslam et al., 2005), and Multidimensional Psychological Flexibility Inventory (MPFI; Rolffs et al., 2016) were retained. In this section, any modifications to the measures, if applicable, are briefly described and internal consistencies from the present sample are reported.

Demographics Questionnaire. In an effort to balance participant retention with data collection, demographic questions were partitioned into two sections: three questions – gender identity, sexual orientation, and ethnicity - were positioned at the study outset, which allowed for prompt initiations of scales directly relevant to the research hypotheses. Age and nationality were then gathered at the study’s conclusion. This dual-phase approach aimed to optimize participant engagement while securing essential participant information.

MPFI. In this sample, responses to both the psychological flexibility ($\alpha = .85$) and

inflexibility subscales ($\alpha = .88$) of the MPFI (Rolffs et al., 2016) demonstrated good internal consistency. Among the flexibility subscales: acceptance ($\alpha = .87$), present moment awareness ($\alpha = .91$), self as context ($\alpha = .91$), cognitive defusion ($\alpha = .93$), values ($\alpha = .90$), and committed action ($\alpha = .92$), each exhibited good or excellent internal consistencies.

Likewise, each of the psychological inflexibility subscales: experiential avoidance ($\alpha = .93$), lack of contact with the present moment ($\alpha = .95$), self as content ($\alpha = .94$), cognitive fusion ($\alpha = .95$), lack of contact with values ($\alpha = .94$), and inaction ($\alpha = .96$), manifested excellent internal consistency.

AAQ-S. The current study used the full 21-item version of the AAQ-S (Levin et al., 2014) to assess participants' levels of flexibility and inflexibility with internal experiences related to the stigmatization of others. Within this sample, the psychological flexibility subscale demonstrated a reliability coefficient of $\alpha = .81$, while the psychological inflexibility subscale exhibited a higher reliability with a $\alpha = .88$. Overall, both subscales showed acceptable levels of internal consistency, which provided evidential support that participants' scores accurately measured their flexibility versus inflexibility with stigma, with minimal influence from random measurement error.

Sexism. The ASI (Glick & Fiske, 1996) was used to assess participants' endorsement of hostile and benevolent sexist attitudes toward women. In the current study, both the hostile ($\alpha = .93$) and benevolent sexism ($\alpha = .88$) subscales demonstrated high internal consistencies. This provides confidence that participants' scores represent their true levels of endorsement of hostile and benevolent sexist attitudes, rather than being influenced by random measurement error.

Racism. The BRS (Uhlmann et al., 2010) was utilized to measure participants'

willingness to adopt a Bayesian decision-making approach to assessing racism. It presents respondents with ambiguous social scenarios and measures the extent to which they make anti-minority judgments based in the perceived statistical likelihood of stereotype accuracy. In the current sample, the BRS demonstrated good internal consistency reliability with a Cronbach's alpha coefficient of .81. The reliability of the BRS in this study further supports its use as a valid research tool for assessing contemporary forms of racism.

Homonegativity. The 12-item Modern Homonegativity Scale (MHS; Morrison & Morrison, 2003) was used in this study demonstrated excellent internal consistency reliability ($\alpha = .96$). The MHS was designed to assess contemporary prejudicial attitudes toward gay and lesbian individuals, as opposed to traditional homonegativity based on cultural or religious norms. In particular, the MHS focused on the beliefs that: (1) homosexuals are making unnecessary demands for social change, (2) homophobia no longer exists in modern society, and (3) the emphasis on sexual orientation needlessly creates division with heterosexuals.

As the original MHS (Morrison & Morrison, 2003) contained references to its nation of development, Canada, in several items, the wording was modified for this study to ensure international applicability. Respondent rated each item on a Likert-type scale that ranged from 1 ("Strongly disagree") to 5 ("Strongly agree"), with higher scores indicative of greater modern homonegativity. The high Cronbach's alpha of the MHS with this sample provided confidence that scores represented participants' accurate homonegative attitudes.

Dehumanization. This study utilized Dual Model of Dehumanization scale (Haslam et al., 2005) to assess the tendency to deny that the average Muslim person has the capacity for qualities considered definitively or uniquely human. These characteristics were

rated on a Likert-type scale that ranged from 1 (“Not at all”) to 7 (“Extremely so”). In the current study, Muslims were the only target group.

The scale consisted of eight items divided equally between two subscales. Both the human nature subscale ($\alpha = .74$), which assessed traits like emotional responsiveness, warmth, openness, agency, and depth and the human uniqueness subscale ($\alpha = .72$) which measured traits like civility, rationality, maturity, and moral sensibility demonstrated adequate internal consistency. These alpha coefficients indicated that the items for each subscale showed reasonable inter-relatedness in the assessment of tendencies to dehumanize Muslims among these respondents. Overall, the internal consistency estimates provided evidence that participants’ dehumanization scores accurately assess their tendencies to deny human traits to Muslims, with minimal influence of random measurement error.

6.3.3 Data Analysis Strategy

In the initial data preparation phase, responses were screened for completion rates, with participants that did not complete a minimum of 80% of the relevant scales or subscales selectively removed to enhance result accuracy. Additionally, key variables were evaluated for outliers through the visual inspection of boxplots. Detected outliers that were considered a high risk for distortion of correlational or regression analyses were removed.

The second phase involved the calculation of Pearson correlations between measures of psychological flexibility, inflexibility and their respective subcomponents to each prejudice and dehumanization scale. This provided an initial test of hypotheses 1 and 2 which posited the positive and negative relationships between manifestations of prejudice, dehumanization, flexibility, and inflexibility respectively. The relative strengths of the

correlations for each subcomponent were also scrutinized to evaluate hypotheses 3 and 4 which predict the strongest relationships among the subcomponents.

In the third phase, hierarchical regression analyses were conducted for any significant correlations to identify the best predictor models of prejudice and dehumanization outcomes. Demographic variables like age, gender, and ethnicity were entered in Step 1 to control for their effects. The predictor variables of interest, including flexibility and inflexibility subcomponents, were then entered in Step 2 to determine which explained unique incremental variance. Tests for multicollinearity and residual independence were used to help ensure regression assumptions were met.

Finally, targeted correlational and regression analyses were performed between relevant flexibility and inflexibility variables and the dehumanization of Muslims subscales. This provided a direct test of hypothesis 5.

Together, this phased approach applied rigorous statistical techniques to thoroughly test each hypothesis in a systematic manner while validity and reliability were optimized through careful data preparation.

6.3.4 Power Analysis

To ensure statistically robust results for the correlational analyses, a priori power analyses were conducted in SPSS (v29.0.1.1). The power analysis was based on an estimated medium effect size ($r^2 = 0.3$; Cohen's $d = 0.55$) with a significance criterion of $\alpha = .05$. To achieve a targeted power of 0.80 with these parameters, the power analysis indicated a sample size of 84 would be adequate to test the study hypotheses.

A second power analysis was conducted to ensure adequate power for the multiple linear regression analyses with two predictor variables. The targeted power was set to .80 to

detect medium effects with a significance criterion of $\alpha = .05$, the minimum sample size was $N = 78$. However, to account for a potential attrition rate of 35%, based on Study 1, the plan was to recruit an additional 42 participants for a final sample size of $N = 120$. This robust sample size should provide sufficient power to test the study hypotheses.

6.4 Results

6.4.1 Demographics

The sample ($N = 220$) leaned towards young middle-aged adults ($M_{AGE} = 39.03$, $SD = 13.35$) with a slight rightward skew of .77 ($SE = .16$), and a flatter than normal distribution (kurtosis = -.29, $SE = .33$). The majority identified as female ($n = 112$, 50.9%), followed closely by men ($n = 107$, 48%), and a single non-binary individual. Within the sample, there was a moderate diversity in sexual orientation and a broader representation of ethnicities. Notably, national origin skewed heavily towards North America with 138 participants from the United States and 4 from Canada, although representation from the United Kingdom ($n = 71$) was also substantial. Overall, the sample offered a potentially rich tapestry for psychological research but was limited in geographical diversity. See Table 20 for a summary of the demographic characteristics.

6.4.2 Descriptive Statistics

For a summary of all dispersion and distribution statistics, please refer to Table 21.

MPFI. In this sample, the distribution of psychological inflexibility scores ($M = 2.73$, $SD = 1.01$) had a positive skew of 0.39 ($SE = .16$) with a platykurtic curve (kurtosis = -.71, $SE = .33$), which indicated that there were more individuals with higher scores with fewer extreme values. In contrast, the distribution of psychological flexibility

scores ($M = 4.19$, $SD = .81$) had a slightly negative skew of $-.13$ ($SE = .16$) and a nearly normal curve with a kurtosis of $-.03$ ($SE = .33$) indicative of more frequent lower scores.

Table 20

Study 2 Demographic Characteristics

Characteristic	<i>N</i> (220)	%
Gender		
Female	112	50.91
Male	107	48.64
Non-Binary	1	0.45
Sexual Orientation		
Heterosexual	185	84.09
Bisexual	19	8.64
Homosexual	10	4.55
Asexual	6	2.73
Ethnicity		
White/Caucasian	171	77.73
Black	12	5.45
Hispanic/Latino	9	4.09
Asian	8	3.64
Mixed/Other	20	9.09
Nation of Current Residence		
United States	138	50.53
United Kingdom	71	32.63
Canada	4	3.16
Other	7	13.68

Note. Mixed/other ethnicity referred to participants that selected more than one ethnicity as well as ethnicities with only two representatives each, these include American Indian, Jewish, and Middle Eastern people. As in Study 1, the “Other” category under Nation of Current Residence references nations with two or fewer representatives. These nations are Australia ($n = 2$), France ($n = 2$), Germany ($n = 1$), Ireland ($n = 1$), and Pakistan ($n = 1$).

Initial visual inspection of boxplots revealed no outliers among the psychological inflexibility subscales. However, numerous outliers were identified within several subscales of psychological flexibility. Specifically, six outliers were detected within the Present Moment Awareness scores: three males with values of 1.00, 1.60, and 1.40, and three females with values of 1.80, 2.00, and 2.20. Additionally, two female outliers were identified

within the Self-as-Context scores, both with values of 1.00. Lastly, two other female participants were excluded from the 'Values' and 'Committed Action' analyses with the same score for each subscale: 1.20.

The decision to treat these data points as outliers followed the standard criterion of being more than 1.5 times the interquartile range beyond the upper or lower quartiles. Upon exclusion, psychological flexibility composite scores ($M = 4.22$, $SD = .90$) had a perfectly symmetrical distribution (skewness = .00, $SE = .16$) with a slightly flattened curve (kurtosis = -.21, $SE = .33$) indicative of an approximately normal curve.

AAQ-S. Examination of psychological flexibility and inflexibility with thoughts of stigmatizing others, as measured by the AAQ-S (Levin et al., 2014), revealed that moderate level of inflexibility among the participants. On the inflexibility subscale, respondents yielded a mean score of 3.16 ($SD = 1.03$). The skewness of .30 ($SE = .17$) suggested a slight positive skew toward higher levels of inflexibility but with a flatter distribution curve than normal (kurtosis = -.26, $SE = .33$), which would indicate that the data exhibited relatively fewer extreme values than would be expected in a normal distribution. Conversely, on the psychological flexibility subscale, participants demonstrated a marginally higher mean score of 3.20 ($SD = .85$). The distribution of scores had a mild positive skew of .13 ($SE = .17$) which revealed a subtle tendency for participants to endorse higher levels of psychological flexibility. Additionally, the kurtosis value of -.08 ($SE = .33$) would indicate a near-normal platykurtic distribution which would similarly suggest a relatively low incidence of extreme values.

Table 21

Study 2: Descriptive Statistics for All Variables

Variable	<i>N</i>	<i>M</i>	<i>SD</i>	Variance	Skewness		Kurtosis	
					Stat	<i>SE</i>	Stat	<i>SE</i>
Psych Flexibility	218	4.22	.78	.61	.00	.16	-.21	.33
Acceptance	219	3.61	1.16	1.34	-.13	.16	-.31	.33
Present Moment	215	4.51	.91	.82	-.34	.17	-.31	.33
Self as Context	218	4.34	1.04	1.07	-.32	.16	-.45	.33
Cognitive Defusion	219	3.94	1.21	1.47	-.05	.16	-.69	.33
Values Clarity	218	4.46	.90	.81	-.16	.16	-.82	.33
Commitment	218	4.45	.98	.96	-.28	.16	-.35	.33
Psych Inflexibility	220	2.73	1.01	1.03	.39	.16	-.71	.33
Exp Avoidance	220	3.56	1.21	1.47	-.21	.16	-.67	.33
Lack Present Moment	220	2.53	1.21	1.47	.46	.16	-.76	.33
Self as Content	220	2.53	1.26	1.60	.50	.16	-.81	.33
Cognitive Fusion	220	2.83	1.36	1.85	.34	.16	-.82	.33
Lack Contact Values	219	2.42	1.19	1.41	.61	.16	-.59	.33
Inaction	219	2.53	1.43	2.05	.63	.16	-.85	.33
AAQ-Stigma	220	3.17	.68	.46	-.29	.16	-.44	.33
AAQ-S Flexibility	214	3.20	.85	.72	.13	.17	-.10	.33
AAQ-S Inflexibility	217	3.16	1.03	1.07	.30	.17	-.26	.33
Ambivalent Sexism	220	1.92	.95	.90	-.32	.17	-.84	.33
Hostile Sexism	220	1.93	1.21	1.47	.07	.17	-.71	.33
Benevolent Sexism	220	1.93	1.04	1.08	.01	.17	-.75	.33
Bayesian Racism	220	3.14	1.45	2.12	.33	.17	-.58	.33
Homonegativity	220	2.86	1.14	1.30	-.02	.17	-1.08	.33
Dehumanization								
Muslim - Human Nature	212	2.21	1.37	1.89	.52	.17	-.03	.33
Muslim - Human Unique	216	2.23	1.40	1.96	.41	.17	-.10	.33

Conversely, on the psychological flexibility subscale, participants demonstrated a marginally higher mean score of 3.20 ($SD = .85$). The distribution of scores had a mild positive skew of .13 ($SE = .17$) which revealed a subtle tendency for participants to endorse higher levels of psychological flexibility. Additionally, the kurtosis value of $-.08$ ($SE = .33$) would indicate a near-normal platykurtic distribution which would similarly suggest a relatively low incidence of extreme values.

ASI. Composite ambivalent sexism scores ($M = 1.92$, $SD = .95$) suggested a relatively moderate endorsement of both benevolent and hostile attitudes towards women. Interestingly, both hostile ($SD = 1.21$) and benevolent sexism ($SD = 1.04$) displayed remarkably similar mean scores of 1.93 which would imply a potentially balanced endorsement of these contrasting attitudes.

Respondent scores for hostile sexism were distributed with a positive skew of .07 ($SE = .17$) indicative of a slight tendency towards higher values and a flatter curve than normal (kurtosis = -.84, $SE = .33$). While the distribution curve for benevolent sexism scores was also flat (kurtosis = .75, $SE = .33$), it was otherwise close to symmetrical, as indicated by the skewness of .01 ($SE = .17$). Overall, these patterns displayed a reduced concentration of scores at the central tendency and broader dispersion across the range, which would indicate the potential heterogeneity in participants' levels of sexism.

Racism. Responses to the Bayesian Racism scale (Uhlmann et al., 2010) had a mean score of 3.14 ($SD = 1.45$), reflective of a moderate tendency to justify racism based on a perceived statistical likelihood rooted in stereotypes. The observed variance of 2.12 suggested a considerable degree of dispersion in participants and thereby a diversity of attitudes within the sample. The slightly positive skewness of .33 ($SE = .17$) and leptokurtic distribution (kurtosis = -.58, $SE = .33$) indicated a higher frequency of extreme values than would be expected in a normal distribution.

MHS. Within this sample, homonegativity scores ($M = 2.86$, $SD = 1.14$) had a variance of 1.30 which suggested a moderate degree of diversity in attitudes. The skewness of the distribution curve was near-normal (skewness = -.02, $SE = .17$) with a negligible tendency for asymmetry in responses toward more negative attitudes. However, the peak

was moderately platykurtic (kurtosis = -1.08, $SE = .33$) which would suggest a relative scarcity of extreme values in the data compared to a normal distribution.

Dehumanization. Examination of the respondents' willingness to dehumanize Muslims revealed a slightly greater tendency to deny qualities of human uniqueness ($M = 2.23$, $SD = 1.40$) than denying their human nature ($M = 2.21$, $SD = 1.37$) within this sample. The slight positive skew of 0.41 ($SE = .17$) in the distribution of respondent ratings of human uniqueness qualities highlighted a subtle inclination for participants to deny qualities considered uniquely human. Yet the slightly negative kurtosis of -.10 ($SE = .33$) would suggest that the distribution may be slightly flatter than a normal distribution, with potentially fewer individuals that gravitated to the extremes. Similarly, the distribution curve for the denial of human nature had a positive skew of .52 ($SE = .17$) and a slightly negative kurtosis of -.03 ($SE = .33$). These statistics likewise indicated that there was a trend toward higher scores, but fewer individuals with extreme scores.

Correlations within Psychological (In)Flexibility. Moderate to strong positive correlations were observed among the six facets of psychological flexibility as measured by the MPFI (Rolffs et al., 2016), with correlation coefficients that ranged from .39 to .72 ($p < .001$) (see Table 22). Likewise, each of the subcomponents of psychological inflexibility were positively correlated with each other, with correlation coefficients that ranged from .20 to .81 ($p < .001$). Consistent with Acceptance and Commitment Therapy (ACT) research (Hayes et al., 1999, 2012), this suggested a meaningful degree of interconnectedness among these processes.

However, significant negative correlations were observed between the MPFI's flexibility subscales and the flexibility subscale of the AAQ-S (Levin et al., 2014), with

correlation coefficients that ranged from $-.22$ to $-.38$ ($p < .001$). These findings would not be consistent with the underlying theory of the psychological flexibility model, however, there were a few possible reasons for this discrepancy.

One possible reason was that the MPFI assessed flexibility across various domains (e.g., emotions, thoughts, situations), while the AAQ-S was domain-specific to stigmatizing thoughts. This difference in scope could contribute to negative correlations, as flexibility in one domain (stigma) may not have translated directly to flexibility in broader realms. Another possibility was that the study sample was not representative of the target population and introduced bias in the correlations. For example, if the sample skewed towards individuals with high levels of self-reported prejudice, their negative evaluations of stigmatizing thoughts may not be associated with lower scores on the broader MPFI flexibility subscales due to potential suppression or defensiveness.

Overall, the significant negative correlations between the AAQ-S flexibility subscale and the MPFI flexibility subscales deserve further investigation to understand the underlying reasons and their implications for the theory and practice of ACT.

Prejudice Scales. A correlational analysis examined the relationships among each of prejudice scales used in this study. The results revealed numerous significant positive correlations among each of the measures (see Table 23). Every measure of prejudice and dehumanization was significantly, positively correlated with each other with correlation coefficients that ranged from $.28$ to $.87$ ($p < .001$). This pattern would suggest that individuals that endorse one form of prejudice were likely to endorse others, highlighting the interconnected nature of prejudiced attitudes across multiple dimensions.

Table 22*Study 2: Correlations Among the (In)flexibility Processes and the AAQ-S*

Variable	1	2	3	4	5	6	7	8	9	10	11	12	13
1 Acceptance	—												
2 Present Moment	.53**	—											
3 Self-as-Context	.44**	.50**	—										
4 Cognitive Defusion	.39**	.39**	.71**	—									
5 Values Clarity	.26**	.57**	.60**	.53**	—								
6 Committed Action	.22**	.41**	.58**	.59**	.72**	—							
7 Experiential Avoidance	.04	.13*	.14*	.01	.11	.00	—						
8 LC Present Moment	.02	-.15*	-.24**	-.19**	-.26**	-.36**	.20**	—					
9 Self-as-Content	.13	-.03	-.07	-.24**	-.14*	-.24**	.39**	.53**	—				
10 Cognitive Fusion	.06	.01	-.24**	-.47**	-.23**	-.39**	.35**	.51**	.73**	—			
11 LC Values	.17*	-.09	-.17*	-.22**	-.29**	-.46**	.27**	.70**	.64**	.67**	—		
12 Inaction	.12	-.05	-.23**	-.31**	-.31**	-.47**	.30**	.65**	.71**	.78**	.81**	—	
13 AAQ-S Psych Flex	-.22**	-.31**	-.28**	-.24**	-.38**	-.37**	-.01	.13*	.12	.05	.17**	.12	—
14 AAQ-S Psych Inflex	.24**	.03	-.03	-.13	-.11	-.20**	.26**	.53**	.54**	.55**	.69**	.61**	.04

Note. The abbreviation “LC” is short for “Lack of contact with” [Present Moment/Values]. * $p \leq .05$, ** $p \leq .01$.

Table 23

Study 2: Correlations Among the Prejudice Scales

Variable		1	2	3	4	5	6
1	Ambivalent Sexism	—					
2	Hostile Sexism	.87**	—				
3	Benevolent Sexism	.81**	.42**	—			
4	Bayesian Racism	.61**	.64**	.37**	—		
5	Homonegativity	.79**	.80**	.52**	.67**	—	
6	Muslim - Human Nature	.52**	.58**	.28**	.60**	.55**	—
7	Muslim - Human Uniqueness	.55**	.59**	.32**	.57**	.61**	.84**

Note. * $p \leq .05$, ** $p \leq .001$.

6.4.3 Correlational Analyses

Psychological Inflexibility and Prejudice/Dehumanization. It was predicted that psychological inflexibility and each of its components, as measured by the MPFI (Rolffs et al., 2016) and AAQ-S (Levin et al., 2014), would be positively correlated with prejudiced attitudes and dehumanization (H_1). To test this hypothesis, correlation coefficients between psychological inflexibility and each scale of prejudice and dehumanization were calculated and examined. Relatedly, it was also anticipated that ‘Lack of Contact with the Present Moment’, ‘Cognitive Fusion’, and ‘Self-as-Content’ would exhibit the most robust positive correlations with prejudice and dehumanization (H_3).

Sexism. Among men, a robust association emerged between ambivalent sexism and all six measures of psychological inflexibility (see Table 24). Notably the strongest correlations were observed with the inflexibility composite score from the AAQ-S inflexibility subscale ($r = .51, p < .001$) and the MPFI ($r = .31, p = .001$). This would suggest that ambivalent sexism may be closely linked to a resistance to challenging rigid and stigmatizing beliefs about gender roles.

Hostile sexism also demonstrated significant, albeit slightly weaker, correlations with most of the inflexibility measures. This indicated that both ambivalent and hostile sexism share some common ground in their relationship with inflexibility, potentially reflecting an underlying tendency towards rigidity in thinking and behaviour.

Benevolent sexism, however, showed weaker and less consistent correlations with inflexibility measures. While significant correlations with some inflexibility measures were observed, particularly with the AAQ-S inflexibility subscale ($r = .35, p < .001$), the overall pattern indicated a weaker association compared to other sexism subtypes. This would

indicate that benevolent sexism, despite being a form of sexism, may not be as strongly linked to psychological rigidity as the other two subtypes.

Table 24

Study 2 Correlations: Ambivalent Sexism Inventory and Psychological Inflexibility

Variable	1	2	3	4	5	6	7	8
Ambivalent Sexism								
Men	.26**	.20*	.24*	.23*	.27**	.26**	.31**	.51**
Women	.23*	.38**	.42**	.37**	.50**	.35**	.47**	.52**
Combined	.24**	.27**	.32**	.26**	.35**	.27**	.36**	.50**
Hostile Sexism								
Men	.19	.21*	.23*	.20*	.26**	.23*	.28**	.46**
Women	.17	.34**	.35**	.36**	.46**	.29**	.41**	.51**
Combined	.18**	.26**	.28**	.25**	.33**	.23**	.32**	.47**
Benevolent Sexism								
Men	.23*	.11	.15	.16	.17	.18	.21*	.35**
Women	.26**	.32**	.40**	.28**	.42**	.36**	.43**	.42**
Combined	.24**	.19**	.26**	.19**	.26**	.24**	.28**	.37**

Note. Numbers 1-8 refer to the MPFI subscales: 1. Experiential Avoidance, 2. Lack of Contact with Present Moment, 3. Self as Content, 4. Cognitive Fusion, 5. Lack of Contact with Values, 6. Inaction, 7. MPFI Psychological Inflexibility composite scores, 8. AAQ-S Psychological Inflexibility. * $p < .05$. ** $p < .01$.

In the examination of ambivalent sexism and inflexibility among women, the results revealed a striking difference. All three sexism subtypes displayed stronger and more pervasive correlations with all inflexibility measures relative to men. This pattern suggested that, for women, sexism of any form may be deeply intertwined with psychological inflexibility. Notably, the strongest correlations were observed with lack of contact with the present moment, self-as-content, and cognitive fusion. This would indicate a potential link between sexism and difficulties in mindful awareness, acceptance of internal experiences, and defusion from rigid thought patterns.

Although the strength of these correlations vary across different manifestations of sexism, these findings provide support for hypothesis 1. Moreover, these findings also support hypothesis 3, as the relationships between psychological inflexibility and sexism were indeed strongest for the subcomponents of ‘Lack of Contact with the Present Moment,’ ‘Cognitive Fusion,’ and ‘Self-as-Content.’

Bayesian Racism. The results revealed a pattern of weak to moderate correlations between Bayesian racism and psychological inflexibility. Experiential avoidance demonstrated a negligible association with Bayesian racism ($r = .05, p = .49$). However, a more robust correlation emerged with ‘Lack of Contact with the Present Moment’ ($r = .24, p < .001$). This finding would suggest that individuals who struggle to remain present in their experience may exhibit greater reliance on pre-existing beliefs or assumptions about the outgroup when new information is encountered. The correlation with self-as-content ($r = .17, p = .01$) further evidenced this notion, which would suggest that individuals who struggle to deconstruct their internal experiences may be more likely to conflate prejudiced beliefs with factual truths.

Notably, robust correlations were observed between Bayesian racism and ‘Lack of Contact with Values’ ($r = .26, p < .001$) and ‘Inaction’ ($r = .22, p < .001$). These findings would suggest that individuals who struggle to connect with their values and engage in value-oriented behaviours may be more susceptible to the maintenance of prejudice.

Finally, correlations between Bayesian racism and the inflexibility composite score of the MPFI ($r = .24, p < .001$) as well as the AAQ-S inflexibility subscale ($r = .42, p < .001$) were examined. Both measures demonstrated significant correlations with Bayesian racism

to provide further evidence that general inflexibility and specific inflexibility with stigmatizing thoughts may be linked to the maintenance of prejudiced beliefs.

These findings provide empirical support for Hypothesis 1, which in this analysis posited that psychological inflexibility and its subcomponents would be positively correlated with racism. The results elucidated the multifaceted nature of this relationship and showcased the varying strengths of association across different dimensions of inflexibility.

Table 25

Study 2 Correlations: Psychological Inflexibility and Bayesian Racism

Variable	1	2	3	4	5	6	7	8
Bayesian Racism	.05	.24**	.17*	.19**	.26**	.22**	.24**	.42**

Note. Numbers refer to MPFI subscales: 1. Experiential Avoidance, 2. Lack of Contact with Present Moment, 3. Self as Content, 4. Fusion, 5. Lack of Contact with Values, 6. Inaction, 7. Psychological Inflexibility composite, 8. AAQ-S Psych Inflexibility. * $p < .05$. ** $p < .01$.

Hypothesis 3, which proposed that the relationships hypothesized in hypothesis 1 would be strongest for the subcomponents of ‘Lack of Contact with the Present Moment,’ ‘Cognitive Fusion,’ and ‘Self-as-Content,’ found partial support in the data. While ‘Lack of Contact with the Present Moment’ demonstrated the strongest correlation, cognitive fusion and self-as-content exhibited significant, yet substantially weaker correlations with racism.

Homonegativity. The correlational analysis unveiled significant associations between psychological inflexibility and homonegativity, as outlined in Table 26. Experiential avoidance exhibited a marginal positive correlation with homonegativity ($r = .13, p = .06$). More notably, the other subcomponents of psychological inflexibility, namely ‘Lack of Contact with the Present Moment’ ($r = .26, p < .001$), ‘Self-as-content’ ($r = .27, p < .001$), ‘Cognitive Fusion’ ($r = .24, p < .001$), ‘Lack of Contact with Values’ ($r = .30, p < .001$), and ‘Inaction’ ($r = .26, p < .001$), all displayed statistically significant positive correlations with

homonegativity. Furthermore, both the composite score of inflexibility derived from the MPFI ($r = .30, p < .001$) and the inflexibility subscale of the AAQ-S ($r = .48, p < .001$) demonstrated robust linear relationships with scores on the MHS. These findings suggested that the influence of inflexibility on homonegativity involved more than stigma-related inflexibility; it encompassed aspects such as misalignment with personal values, and the maintenance of a rigid conceptualized self.

This analysis tested two hypotheses. Hypothesis 1 posited that psychological inflexibility and its subcomponents would be positively correlated with homonegativity. The results supported this hypothesis and emphasized the relevance of psychological inflexibility in the comprehension of homonegative attitudes.

Hypothesis 3 suggested that relationships hypothesized in hypothesis 1 would be strongest for the subcomponents of ‘Lack of Contact with the Present Moment,’ ‘Cognitive Fusion,’ and ‘Self-as-Content.’ The findings of this analysis supported this hypothesis and highlighted the particular significance of these subcomponents.

Table 26

Study 2 Correlations: Homonegativity and Psychological Inflexibility

Variable	<i>n</i>	1	2	3	4	5	6	7	8
Homonegativity	217	.13	.26**	.27**	.24**	.30**	.26**	.30**	.48**
Heterosexuals	182	.11	.23**	.26**	.27**	.27**	.25**	.30**	.46**
Men	95	.08	.14	.23*	.21*	.13	.17	.21*	.45**
Women	87	.16	.35**	.30**	.34**	.42**	.34**	.41**	.47**

Note. Numbers refer to MPFI subscales: 1. Experiential Avoidance, 2. Lack of Contact with Present Moment, 3. Self as Content, 4. Cognitive Fusion, 5. Lack of Contact with Values, 6. Inaction, 7. Inflexibility composite, 8. AAQ-S Psych Inflexibility. * $p < .05$ ** $p < .01$.

Dehumanization. The results of this correlational analysis provided partial support for hypothesis 1 (see Table 27). While some relationships materialized as anticipated, others deviated from expectations which highlighted the complexity at play. ‘Experiential Avoidance’, contrary to predictions, exhibited weak and statistically non-significant correlations (Human Nature: $r = -.03, p = .64$; Human Uniqueness: $r = -.004, p = .95$). This would suggest that the avoidance of internal experiences did not directly translate to the dehumanization of others.

Table 27

Study 2 Correlations: Dehumanization of Muslims and Inflexibility

Variable	1	2	3	4	5	6	7	8
Deny Human Nature	-.03	.20**	.13	.07	.21**	.16*	.15*	.27**
Deny Human Uniqueness	.00	.17*	.13	.13	.23**	.19**	.18**	.27**

Note. Numbers refer to MPFI subscales: 1. Experiential Avoidance, 2. Lack of Contact with Present Moment, 3. Self as Content, 4. Fusion, 5. Lack of Contact with Values, 6. Inaction, 7. Psychological Inflexibility composite, 8. AAQ-S Psych Inflexibility. * $p < .05$. ** $p < .01$.

However, ‘Lack of Contact with the Present Moment’ emerged as a significant factor. Moderate correlations were observed with both models of dehumanization (Human Nature: $r = .20, p = .004$; Human Uniqueness: $r = .17, p = .01$).

The strong relationships between dehumanization and ‘Lack of Contact with the Present Moment’, ‘Cognitive Fusion,’ and ‘Self-as-Content,’ as predicted in hypothesis 3, received mixed support. While ‘Cognitive Fusion’ (Human Nature: $r = .07, p = .34$; Human Uniqueness: $r = .13, p = .06$) demonstrated weak, statistically non-significant correlations and ‘Self-as-Content’ (Human Nature: $r = .13, p = .05$; Human Uniqueness: $r = .13, p = .06$) was only significantly associated with the denial of human nature, ‘Lack of Contact with the Present Moment’ emerged as an important factor that exhibited substantial associations

with both the denial of human nature ($r = .20, p < .001$) and uniqueness ($r = .17, p = .01$).

This finding aligned with the notion that mindfulness and acceptance of present-moment experiences, including potentially uncomfortable ones, would be crucial for the reduction of biases and recognition of the inherent humanity in others.

The most striking result resided in the AAQ-S inflexibility subscale. It demonstrated equally robust correlations ($r = .27, p < .001$) with both the denial of human nature and uniqueness. These correlations exceeded the significant correlations observed with the broader measure of psychological inflexibility built into the MPFI with both the denial of human nature ($r = .15, p = .03$) and uniqueness ($r = .18, p = .01$). This highlighted the importance of specifically addressing inflexibility in specific domains especially in the enhancement of flexibility with stigmatizing thoughts and beliefs.

Psychological Flexibility and Prejudice/Dehumanization. As opposed to inflexibility, for psychological flexibility and each of its components, as measured by the MPFI (Rolffs et al., 2016) and AAQ-S (Levin et al., 2014), negative correlations with each measure of prejudice (H_2) and dehumanization (H_5) was predicted. Additionally, it was also anticipated that ‘Acceptance,’ ‘Cognitive Defusion,’ and ‘Self-as-Context,’ would exhibit the most robust negative correlations with each measure of prejudice and dehumanization (H_4).

Sexism. Among men ($n = 106$), the scores for hostile ($M = 2.01, SD = 1.22$), benevolent ($M = 2.04, SD = 1.09$), and ambivalent sexism composite scores ($M = 2.03, SD = .93$) displayed non-significant correlations with all assessed measures of psychological flexibility (see Table 28). As such neither of the tested hypotheses were supported. These findings were cautiously interpreted to suggest that for men that endorsed sexist attitudes – regardless of their positive or negative valence – difficulties with processes of psychological

flexibility may not be relevant in this context. However, the effect sizes of these correlations were all very small, which would indicate that even if statistically significant relationships were present, their practical significance would be negligible.

Table 28

Study 2 Correlations: Flexibility and Ambivalent Sexism

Variable	1	2	3	4	5	6	7	8
Ambivalent Sexism								
Men	-.01	.02	-.03	.03	.01	-.03	.01	.06
Women	.09	-.01	.26**	.02	.10	-.09	.08	.13
Combined	.03	.00	.12	.04	.06	-.05	.05	.10
Hostile Sexism								
Men	-.07	.04	-.02	.02	.03	.00	.00	.02
Women	.12	-.07	.22*	-.05	.08	-.11	.04	.05
Combined	.02	-.02	.10	-.01	.05	-.04	.03	.04
Benevolent Sexism								
Men	.05	.00	-.03	.04	-.01	-.05	.01	.08
Women	.07	.09	.25**	.13	.10	-.05	.12	.19*
Combined	.05	.04	.10	.09	.04	-.04	.07	.14*

Note. Numbers refer to MPFI subscales: 1. Acceptance, 2. Present Moment Awareness, 3. Self-as-Context, 4. Cognitive Defusion, 5. Values Clarity, 6. Committed Action, 7. MPFI Psychological flexibility composite scores, 8. AAQ-S Psychological flexibility.

* $p < .05$. ** $p < .01$.

Conversely, women's ($n = 109$) ambivalent sexism scores ($M = 1.82$, $SD = .96$) exhibited a moderate positive correlation with self-as-context ($r = .26$, $p = .007$). Similarly, both hostile ($M = 1.82$, $SD = .96$) ($r = .22$, $p = .02$) and benevolent sexism ($M = 1.82$, $SD = .99$) ($r = .25$, $p = .01$) displayed significant, albeit slightly weaker, correlations with self-as-context. This positive correlation between self-as-context and sexism in women presented a nuanced and perplexing finding. While self-as-context is thought to offer valuable mental health benefits, these findings suggested that it may lead to unintended consequences within a sexist society.

Furthermore, benevolent sexism demonstrated a moderately positive correlation with the flexibility subscale of the AAQ-S ($M = 3.18, SD = .84$) ($r = .22, p = .02$). This may suggest that for women, holding benevolent sexist beliefs may be associated with a reluctance to challenge societal norms and expectations surrounding gender roles. This would align with critical analyses of benevolent sexism, which have argued that it can perpetuate harmful gender stereotypes while masking its insidious effects under the guise of positive regard (Dardenne et al., 2007; Jost & Kay, 2005; Lau et al., 2008).

Bayesian Racism. In this analysis, the findings did not support either of the tested hypotheses (see Table 29). None of the individual subcomponents of psychological flexibility, nor the composite score of the MPFI and flexibility subscale of the AAQ-S, showed statistically significant correlations with Bayesian Racism scores. This suggest that, within the limitations of the study, psychological flexibility, as conceptualized and measured here, does not play a significant role in the direct mitigation of Bayesian racism.

Table 29

Study 2 Correlations: Bayesian Racism and Psychological Flexibility

Variable	1	2	3	4	5	6	7	8
Bayesian Racism	.05	.01	.01	-.03	.04	.02	.02	.01

Note. Numbers refer to MPFI subscales: 1. Acceptance, 2. Present Moment Awareness, 3. Self as Context, 4. Cognitive Defusion, 5. Contact with Values, 6. Commitment, 7. Psychological Flexibility composite scores, 8. AAQ-S Psychological Flexibility.

Homonegativity. Across the entire sample, neither the AAQ-S flexibility subscale ($r = -.02, p = .68$) nor the flexibility composite score of the MPFI ($r = .08, p = .21$) scores showed significant correlations with homonegativity. Similarly, each of the individual subcomponents of psychological flexibility yielded null findings.

However, intriguing patterns emerged when specific subgroups were examined. Among heterosexual participants ($n = 217$), cognitive defusion displayed a moderate, negative correlation with homonegativity ($r = -.24, p = .02$). This suggests that the ability to detach from and observe negative thoughts and emotions about LGBTQ+ individuals might play a specific role in the reduction of homonegativity among heterosexuals. Further exploration revealed gender-specific nuances within the heterosexual group. Heterosexual women ($r = -.23^*, p < .05$) exhibited a negative correlation between homonegativity and committed action. This finding suggests the presence of potential gender disparities in the endorsement of values, and consequently, the manifestation of value-oriented behaviour. These distinctions may be attributed to variances in the socialization processes experienced by men and women, thereby influencing their perspectives on and engagement with value-oriented behaviours.

Table 30

Study 2 Correlations: Homonegativity and Psychological Flexibility

Variable	<i>n</i>	1	2	3	4	5	6	7	8
Homonegativity	217	.00	.00	.11	.00	.07	-.01	.04	.07
Heterosexuals	182	-.11	-.02	.02	-.15*	.03	-.05	-.07	.05
Men	95	-.14	.10	-.07	-.12	-.01	.08	-.05	-.02
Women	87	-.07	-.15	.14	-.19	.07	-.23*	-.11	.13

Note. Numbers refer to MPFI subscales: 1. Acceptance, 2. Present Moment Awareness, 3. Self as Context, 4. Defusion, 5. Contact with Values, 6. Commitment, 7. Psychological Flexibility composite scores, 8. AAQ-S Psychological Flexibility. * $p < .05$.

Dehumanization. The investigation into the potential link between the dehumanization of Muslims and psychological flexibility yielded several intriguing, albeit nuanced, results. While the hypothesized negative correlations only received partial support, glimpses of meaningful associations emerged within specific facets of both constructs.

Both the denial of human nature ($r = -.16, p < .05$) and uniqueness ($r = -.17, p < .05$) in Muslims demonstrated modest, yet statistically significant, negative correlations with present moment awareness (see Table 31). Furthermore, the denial of human nature ($r = -.14, p < .05$) and uniqueness ($r = -.16, p < .05$) exhibited similar negative correlations with values clarity. It is noteworthy, however, that while the denial of human nature did not yield a significant correlation with psychological flexibility composite scores, the denial of human uniqueness did ($r = -.15, p < .05$).

Yet two significant findings that undermine and contradict that other correlations is the significant positive correlations between the psychological flexibility subscale of the AAQ-S and the dehumanization of Muslims (Human Nature: $r = .18, p < .01$; Human Uniqueness ($r = .23, p < .01$). These findings raised the possibility that stigma flexibility might ironically be associated with increased dehumanization in certain contexts. Regardless, these findings warrant further examination in future research.

Table 31

Study 2 Correlations: Psychological Flexibility and the Dehumanization of Muslims

Variable	1	2	3	4	5	6	7	8
Deny Human Nature	-.02	-.16*	-.07	-.01	-.14*	-.07	-.10	.18**
Deny Human Uniqueness	-.04	-.17*	-.09	-.11	-.16*	-.13	-.15*	.23**

Note. Numbers refer to MPFI subscales: 1. Acceptance, 2. Present Moment Awareness, 3. Self as Context, 4. Defusion, 5. Contact with Values, 6. Commitment, 7. Psychological Flexibility composite scores, 8. AAQ-S Psychological Flexibility. * $p < .05$.

6.4.4 Regression Analyses

Given the limited rationale for an in-depth exploration of the associations between the psychological flexibility model and the various measures of prejudice and dehumanization, the focus for additional analyses was directed solely towards the

subprocesses of psychological inflexibility. This approach allowed for a more nuanced exploration that emphasized a comprehensive understanding of the role of the psychological inflexibility processes in relation to the maintenance of different manifestations of prejudice and dehumanization.

Psychological Inflexibility and Sexism. The study utilized partial correlational analyses to examine the associations between ambivalent sexism and psychological inflexibility while accounting for age. The results revealed notable gender-specific patterns, as shown in Table 32. For men, while several correlations remained significant, cognitive fusion lost its initial positive correlation ($r = .20, p = .04$) with hostile sexism, after controlling for age ($r = .18, p = .07$). Similarly, experiential avoidance, originally correlated with benevolent sexism ($r = .23, p = .02$) among men, also lost significance when accounting for age ($r = .18, p = .07$).

In contrast, women displayed a different pattern. Both manifestations of sexism, along with ambivalent sexism composite scores, remained significantly correlated with each component of psychological inflexibility for women. Taken together, these results provide partial support for Hypothesis 6, which predicted that associations between ambivalent, hostile, and benevolent sexism and psychological inflexibility would persist after controlling for key demographic factors such as age.

The partial correlations prompted a forward selection multiple linear regression analysis to examine the association between psychological inflexibility subprocesses and ambivalent sexism among each gender. Among men, two significant models emerged (see Table 32), showing that even when controlling for other variables, men with higher

Table 32*Study 2 Partial Correlations: Inflexibility and Sexism While Controlling for Age*

Control	Variable	1	2	3	4	5	6	7	8
Age	Ambivalent Sexism								
	Men	.21*	.24*	.22*	.22*	.26**	.26**	.30**	.50**
	Women	.22*	.42**	.46**	.38**	.52**	.38**	.50**	.53**
	Combined	.21**	.29**	.32**	.26**	.35**	.28**	.36**	.50**
	Hostile Sexism								
	Men	.16	.21*	.20*	.18	.23*	.21*	.25**	.44**
	Women	.17	.37**	.38**	.37**	.48**	.31**	.43**	.52**
	Combined	.16**	.27**	.27**	.25**	.32**	.23**	.31**	.47**
	Benevolent Sexism								
	Men	.18	.16	.15	.17	.18	.21*	.22*	.36**
	Women	.25**	.36**	.44**	.30**	.45**	.39**	.46**	.43**
	Combined	.21**	.23**	.27**	.20**	.27**	.26**	.30**	.38**

Note. Numbers 1-8 refer to the MPFI subscales: 1. Experiential Avoidance, 2. Lack of Contact with Present Moment, 3. Self as Content, 4. Cognitive Fusion, 5. Lack of Contact with Values, 6. Inaction, 7. MPFI Psychological Inflexibility composite scores, 8. AAQ-S Psychological Inflexibility. * $p < .05$ ** $p < .01$.

ambivalent sexism tended to lack contact with the present moment (Model 1: $p = .005$; Model 2: $p = .03$). Additionally, Model 2 identified experiential avoidance as a significant predictor of ambivalent sexism ($p = .04$). Although both Model 1, $F(1, 104) = 8.05, p < .001$, and Model 2, $F(1, 103) = 6.38, p < .001$, were statistically significant, the overall variance explained was relatively small (Model 1: *Adj.* $R^2 = .06$; Model 2: *Adj.* $R^2 = .09$), suggesting the influence of additional factors.

Among women, only one significant model emerged (see Table 34), which was statistically significant, $F(1, 105) = 34.09, p < .001, Adj. R^2 = .24$. This model retained 'Lack of Contact with Values' as the sole predictor, suggesting it provided moderate explanatory power for ambivalent sexism in women.

Table 33*Psychological Inflexibility and Ambivalent Sexism Among Men*

	Predictor	<i>b</i>	<i>SE</i>	β	<i>t</i>	<i>F</i> (<i>df</i> 1, <i>df</i> 2)	Adj. <i>R</i> ²	Diff. (ΔR^2)
1	(Constant)	1.57	.18		8.58**			
	LC Values	.21	.07	.27	2.84**			
						8.05** (1, 104)	.06	
2	(Constant)	1.14	.27		4.21**			
	LC Values	.17	.08	.21	2.19*			
	Exp Avoidance	.15	.07	.20	2.11*			
						6.38 (1, 103)	.09	.03

Note. Some of the predictor variables are abbreviated for formatting purposes. ‘Exp. Avoid’ = Experiential Avoidance, LC = Lack of Contact * $p \leq .05$ ** $p \leq .01$.

Table 34*Psychological Inflexibility and Ambivalent Sexism Among Women*

	Predictor	<i>b</i>	<i>SE</i>	β	<i>t</i>	<i>F</i> (<i>df</i> 1, <i>df</i> 2)	Adj. <i>R</i> ²
1	(Constant)	.73	.20		3.59**		
	LC Values	.41	.07	.50	5.84**		
						34.09** (1, 105)	.24

Note. Some of the predictor variables are abbreviated for formatting purposes. LC = Lack of Contact ** $p \leq .01$.

A similar analysis examined the relationship between psychological inflexibility components and hostile sexism in men. One statistically significant model emerged, $F(1, 105) = 7.40, p = .008, Adj. R^2 = .06$ (see Table 35), retaining 'Lack of Contact with Values' as the sole predictor. However, the low variance explained indicated other influential factors.

Table 35

Psychological Inflexibility and Hostile Sexism Among Men

Predictor		<i>b</i>	<i>SE</i>	β	<i>t</i>	F (<i>df</i> 1, <i>df</i> 2)	Adj. R^2
1	(Constant)	1.43	.24		5.93**		
	LC Values	.27	.10	.26	2.72**		
						7.40** (1, 104)	.06

Note. Some of the predictor variables are abbreviated for formatting purposes. LC = Lack of Contact ** $p \leq .01$.

The same held true for women, with one significant model, $F(1, 106) = 28.24, p < .001, Adj. R^2 = .20$ (see Table 36), retaining 'Lack of Contact with Values' to predict hostile sexism. This provided moderate explanatory power for hostile sexism variance among women.

Finally, for benevolent sexism and inflexibility in women, a single significant model emerged, $F(1, 106) = 23.15, p < .001, Adj. R^2 = .17$ (see Table 37), again with 'Lack of Contact with Values' as the sole predictor. In summary, while psychological inflexibility subprocesses predicted ambivalent sexism in men and women, 'Lack of Contact with Values' specifically emerged as the primary explanatory factor for hostile and benevolent sexism among women, in particular.

Table 36*Psychological Inflexibility and Hostile Sexism Among Women*

	Predictor	<i>b</i>	<i>SE</i>	β	<i>t</i>	F (<i>df</i> 1, <i>df</i> 2)	Adj. R^2
1	(Constant)	.58	.26		2.19*		
	LC Values	.48	.09	.46	5.31**		
						28.24 (1, 106)	.20

Note. Some of the predictor variables are abbreviated for formatting purposes. LC = Lack of Contact ** $p \leq .01$.

Table 37*Psychological Inflexibility and Benevolent Sexism Among Women*

	Predictor	<i>b</i>	<i>SE</i>	β	<i>t</i>	F (<i>df</i> 1, <i>df</i> 2)	Adj. R^2
1	(Constant)	.87	.22		3.99**		
	LC Values	.36	.07	.42	4.81**		
						23.15 (1, 106)	.17

Note. Some of the predictor variables are abbreviated for formatting purposes. LC = Lack of Contact ** $p \leq .01$.

Psychological Inflexibility and Racism. Partial correlational analyses examined the previously demonstrated correlations between Bayesian racism and each psychological inflexibility subprocess (see Table 38). When controlling for age, the associations persisted and even strengthened in some cases. These findings fully supported the hypothesis that the relationships would remain with age as a control.

Table 38

Study 2 Partial Correlations: Bayesian Racism and Inflexibility Controlling for Age

Variable	1	2	3	4	5	6	7	8
Bayesian Racism	.04	.26**	.20**	.22**	.29**	.26**	.26**	.45**

Note. Numbers refer to MPFI subscales: 1. Experiential Avoidance, 2. Lack of Contact with Present Moment, 3. Self as Content, 4. Fusion, 5. Lack of Contact with Values, 6. Inaction, 7. Psychological Inflexibility composite, 8. AAQ-S Psych Inflexibility. ** $p < .01$.

A forward selection multiple linear regression analysis then examined the association between psychological inflexibility and Bayesian racism in the sample (see Table 39). One statistically significant model emerged, $F(1, 213) = 15.52, p < .001, Adj. R^2 = .06$, which retained only ‘Lack of Contact with Values’ as the predictor. However, this model accounted for relatively little variance in Bayesian racism within the sample.

Table 39

Psychological Inflexibility and Bayesian Racism

Predictor	<i>b</i>	<i>SE</i>	β	<i>t</i>	F (<i>df</i> 1, <i>df</i> 2)	Adj. R^2
1 (Constant)	2.38	.22		10.99**		
LC Values	.32	.08	.26	3.94**		
					15.52 (1, 213)	.06

Note. Some of the predictor variables are abbreviated for formatting purposes. LC = Lack of Contact ** $p \leq .01$.

Psychological Inflexibility and Homonegativity. Similarly, partial correlations of psychological inflexibility and homonegativity remained largely intact when controlling for age, gender, and sexuality (see Table 40). This fully supported the hypothesis that these relationships would persist despite controls.

Table 40*Study 2 Partial Correlations: Homonegativity and Psychological Inflexibility*

Variable	<i>n</i>	1	2	3	4	5	6	7	8
Homonegativity	217	.11	.28**	.28**	.24**	.30**	.27**	.31**	.49**
Heterosexuals	182	.10	.25**	.27**	.27**	.28**	.26**	.31**	.47**
Men	95	.06	.15	.22*	.20*	.14	.17	.20*	.46**
Women	87	.15	.39**	.34**	.35**	.45**	.37**	.44**	.48**

Note. Numbers refer to MPFI subscales: 1. Experiential Avoidance, 2. Lack of Contact with Present Moment, 3. Self as Content, 4. Cognitive Fusion, 5. Lack of Contact with Values, 6. Inaction, 7. Inflexibility composite, 8. AAQ-S Psych Inflexibility. * $p < .05$ ** $p < .01$.

Among heterosexual men, based on the partial correlations, only ‘Self-as-Content’ and ‘Cognitive Fusion’ were entered into the multiple regression analysis (see Table 41). One significant model emerged, $F(1, 93) = 5.12, p = .03$, which only retained ‘Self-as-Content’ as a predictor. However, this model explained relatively little variance (*Adj. R*² = .04), potentially indicating unaccounted factors or limited predictive power.

Table 41*Psychological Inflexibility and Homonegativity Among Heterosexual Men*

Predictor	<i>b</i>	<i>SE</i>	β	<i>t</i>	<i>F</i> (<i>df</i> 1, <i>df</i> 2)	Adj. <i>R</i> ²
1 (Constant)	2.38	.25		9.50**		
Self-as-Content	.23	.10	.23	2.26*		
					5.12 (1, 93)	.04

Note. * $p \leq .05$, ** $p \leq .01$.

For heterosexual women, one significant model emerged, $F(1, 85) = 18.62, p < .001$, with moderate explanatory power (Adjusted *R*² = .17). As with other models, only ‘Lack of Contact with Values’ was retained as the singular predictor (see Table 42).

Table 42*Psychological Inflexibility and Homonegativity Among Heterosexual Women*

Predictor		<i>b</i>	<i>SE</i>	β	<i>t</i>	<i>F</i> (<i>df</i> 1, <i>df</i> 2)	Adj. <i>R</i> ²
1	(Constant)	1.83	.27		6.82**		
	LC Values	.41	.09	.42	4.32**		
						18.62 (1, 85)	.17

Note. Some of the predictor variables are abbreviated for formatting purposes. LC = Lack of Contact ** $p \leq .01$.

Psychological Inflexibility and Dehumanization. Partial correlations examined the relationships between psychological inflexibility and dehumanization of Muslims while accounting for respondent age. All previously demonstrated correlations remained intact, if not stronger (see Table 43).

Table 43*Study 2 Partial Correlations: Dehumanization of Muslims and Inflexibility*

Variable	1	2	3	4	5	6	7	8
Deny Human Nature	-.03	.21**	.15*	.11	.24**	.18**	.18**	.32**
Deny Human Uniqueness	.00	.19**	.16*	.18**	.26**	.23**	.21**	.33**

Note. Numbers refer to MPFI subscales: 1. Experiential Avoidance, 2. Lack of Contact with Present Moment, 3. Self as Content, 4. Fusion, 5. Lack of Contact with Values, 6. Inaction, 7. Psychological Inflexibility composite, 8. AAQ-S Psych Inflexibility. * $p < .05$. ** $p < .01$.

Based on these findings, a multiple linear regression analysis using forward entry examined which inflexibility processes predicted the denial of human nature qualities in Muslims. 'Lack of Contact with Values' and 'Lack of Contact with the Present Moment' were entered in Step 1, followed by 'Inaction' and 'Self-as-Content' in Step 2 (see Table 44). Only 'Lack of Contact with Values' was retained in a statistically significant model, $F(1, 207)$

= 10.71, $p < .001$. However, this model explained relatively little variance (Adjusted $R^2 = .05$) within the sample.

Table 44

Psychological Inflexibility and the Denial Human Nature

	Predictor	<i>b</i>	<i>SE</i>	β	<i>t</i>	F (<i>df</i> 1, <i>df</i> 2)	Adj. R^2
1	(Constant)	1.61	.21		7.65**		
	LC Values	.26	.08	.22	3.27**		
						10.71 (1, 207)	.05

Note. Some of the predictor variables are abbreviated for formatting purposes. LC = Lack of Contact ** $p \leq .01$.

A similar forward-entry regression analysis was computed for the denial of human uniqueness towards Muslims (see Table 45). 'Lack of Contact with Values' and 'Inaction' were entered in Step 1, followed by 'Lack of Contact with the Present Moment' and 'Cognitive Fusion' in Step 2, and 'Self-as-Content' in Step 3. This resulted in two significant models.

Model 1, $F(1, 211) = 12.61, p < .001$, retained only 'Lack of Contact with Values' as the predictor, again with low explanatory power ($Adj. R^2 = .05$). Model 2, $F(1, 210) = 6.31, p = .002, Adj. R^2 = .05 (\Delta R^2 = -.004)$ retained 'Lack of Contact with Values' and 'Self-as-Content.' However, Model 1 showed a better overall fit with higher F-statistics and lower p-value compared to Model 2. Both models accounted for little variance within the sample. However, given the slightly higher Adj. R^2 and substantially higher F-statistics with a lower p-value, Model 1 is considered a better overall fit compared to Model 2. Regardless, both models provide relatively little explanatory power for the variance within this sample.

Table 45*Psychological Inflexibility and Ambivalent Sexism Among Men*

	Predictor	<i>b</i>	<i>SE</i>	β	<i>t</i>	<i>F</i> (<i>df</i> 1, <i>df</i> 2)	Adj. <i>R</i> ²	Diff. (ΔR^2)
1	(Constant)	1.57	.21		7.43**			
	LC Values	.28	.08	.24	3.55**			
						12.61 (1, 211)	.052	
2	(Constant)	1.60	.23		6.97**			
	LC Values	.30	.10	.25	2.92**			
	Self-as-Content	-.03	.10	-.02	-0.27			
						6.31 (1, 210)	.048	-.004

Note. Some of the predictor variables are abbreviated for formatting purposes. LC = Lack of Contact. ** $p \leq .01$.

6.5 Discussion

This study investigated the intricate relationships between the various facets of psychological flexibility as well as their inflexibility counterparts and prejudicial attitudes including sexism, racism, homonegativity, and the dehumanization of Muslims. The findings revealed a nuanced landscape, where specific aspects of inflexibility demonstrated significant correlations with various types of prejudice while psychological flexibility and its core processes, with few exceptions, did not. This may be, in part, explained by the wording of the psychological flexibility items in each of the scales. As it is aversive to acknowledge one's own prejudices, it may have been difficult for participants to be introspective of one's own flexibility with both positive and negative personal experience while simultaneously assessing personal levels of racism, sexism, homonegativity, and dehumanizing behaviours (Dovidio & Gaertner, 2004).

The study revealed noteworthy parallels in how psychological inflexibility fosters both hostile sexism and racism. Robust positive correlations between facets of inflexibility like ‘Lack of Contact with the Present Moment,’ ‘Cognitive Fusion,’ and ‘Self-as-Content,’ with sexism, racism, and homonegativity indicated a shared link between rigid thinking, an inflexible self-story, and outdated social norms. Individuals who struggle to detach from entrenched beliefs and fully engage with the present may be inclined to adhere to pre-existing stereotypes, particularly when those stereotypes are aligned with deeply ingrained societal expectations. This resistance to change and adaptation could impede the integration of new information and experiences that challenge prejudiced perspectives.

In sum, unwavering maintenance of traditional gender roles, social hierarchies, and outdated social standards may obstruct full engagement with the present moment and recognition of the fluid nature of social constructs. While acknowledging that these imbalanced social constructs can afford a sense of comfort and belonging to some, this resolute adherence to these norms may contribute to a restricted and inflexible understanding of intergroup dynamics. This has the potential to hinder critical self-reflection and impede the capacity for perspective-taking.

Benevolent sexism also correlated with inflexibility but in a more nuanced, gender-specific manner. For men, the sole correlation found was with inaction, which would suggest a passive endorsement of traditional gender roles. This passivity may stem from a desire to avoid conflict or challenge established norms, perpetuating benevolent sexism through a conspicuous absence of opposition. Conversely, in women, a complex picture emerged. Every inflexibility component correlated strongly with benevolent sexism. Inflexibility, characterized by avoidance, fusion with thoughts and feelings, and a struggle to

adjust behaviour to changing demands, could manifest as the internalization and defence of traditional gender roles. This internalization could stem from a variety of factors, including societal pressures, personal experiences, or even a misguided attempt to reclaim agency within a sexist framework.

6.5.1 Lack of Contact with Values Predicting Prejudice

Across genders and prejudice manifestations, ‘Lack of Contact with Values’ consistently emerged as a significant predictor, suggesting that a perceived misalignment between values and behaviours may have contributed to prejudiced attitudes. One possibility is that the perception of a value discrepancy could trigger cognitive dissonance, a state of psychological discomfort that arises from holding conflicting beliefs or attitudes (Festinger, 1957). To alleviate this discomfort, individuals may engage in prejudiced behaviours or attitudes towards the dissonant group, aiming to restore perceived value coherence (Jost & Banaji, 1994).

For example, Vasquez et al. (2019) demonstrated that people were less critical of their own prejudiced behaviours when evaluated alongside others’ similar actions, implying a self-justification mechanism. This mechanism involved adjusting self-perception to maintain a consistent and positive self-image, even if it entailed reinforcing prejudiced attitudes. However, the overall explanatory power of inflexibility remained moderate to low across most manifestations of prejudice and thus should be interpreted cautiously.

While ‘Lack of Contact with Values’ held broad explanatory power, specific manifestations revealed additional nuanced predictors. For instance, ‘self-as-content’ emerged as a significant predictor of homonegativity among heterosexual men, indicating the clash between a rigid self-image and acceptance of LGBTQ+ identities. Similarly,

‘Cognitive Fusion’ in conjunction with ‘Lack of Contact with Values’ predicted the denial of human uniqueness for Muslims, revealing a tendency to rigidly fuse prejudiced thoughts with reality.

Despite statistically significant associations, the models generally explained a relatively small portion of the variance in prejudice. This suggests the influence of other factors, such as social context, economic disparities, and historical power dynamics, in shaping and sustaining discriminatory attitudes.

6.5.2 Psychological Flexibility and the Null Findings

Contrary to initial expectations, no uniform link between the psychological flexibility model, or its core processes, emerged across each measure of prejudice and dehumanization. Despite the absence of consistent relationships, intriguing nuances within and between specific prejudice types and flexibility components warrant further discussion.

For instance, within sexism, self-as-context exhibited surprising positive correlations with both hostile and benevolent forms among women. Although the ‘self-as-context’ aspect of psychological flexibility typically fosters positive mental health, this positive correlation would suggest otherwise. One possible explanation for this paradoxical relationship may be the internalization of patriarchal norms. Enhanced self-as-context could allow them to observe these internalized thoughts without judgment, potentially mitigating their negative impact. However, this detachment might also lead to a sense of resignation or acceptance of sexist norms, manifesting as benevolent sexism.

Additionally, the dehumanization of Muslims exhibited complex associations with psychological flexibility. Present moment awareness and values clarity were linked to reduced dehumanization, which would suggest a potential connection between mindful

engagement and recognition of shared humanity, even among outgroup members.

However, the overall psychological flexibility composite score did not significantly correlate with the denial of human nature but did with the denial of human uniqueness. This suggests that psychological flexibility, while promoting general acceptance, might not equally address both distinct dehumanization mechanisms.

Adding further complexity, a surprising positive correlation emerged between the AAQ-S flexibility subscale and both forms of dehumanization. One possible explanation for this finding involves moral licensing. Acceptance and flexibility with stigmatizing thoughts might influence individuals to grant themselves license to engage in prejudice against other stigmatized groups, akin to ‘paying their dues’ for not discriminating against other groups. This would align with the observed phenomenon where prosocial acts can precede transgressions (Mazar & Zhong, 2010). Or the relationship may be moderated by contextual factors. For example, in context where discrimination and prejudice are prevalent, respondents that reported high flexibility with stigmatizing thoughts may have been considering their interactions with another outgroup versus Muslims, in particular.

Lastly, the study revealed a negative correlation between commitment to value-oriented behaviours and homonegativity among women but not men, which would further emphasize the importance of exploring gender differences in prejudice manifestation and maintenance. Socialization processes may instil distinct values sets in men and women. Traditional masculinity norms that have emphasized stoicism and emotional inhibition, may impact men’s engagement with values like compassion and social justice. In contrast, women’s socialization may have placed greater emphasis on empathy, interpersonal connection, and community, which would greatly align with values that promote inclusivity.

Although none of the measures used in this study explicitly assessed empathy, women – even in anonymity – often portray themselves as more empathic in self-report measures (Baez et al., 2017). Additionally, empathy has been demonstrated to be a predictor of an increased willingness to engage in perspective taking and prejudice reduction (Gutsell & Inzlicht, 2010; Mestre et al., 2009; Miklikowska, 2018).

Moreover, women’s ‘committed action’ may manifest more readily in interpersonal contexts, challenging discriminatory remarks, fostering dialogue, and supporting LGBTQ+ individuals. ‘Committed action’ for men, on the other hand, may be more focused on individual actions like self-education, rather than directly impacting societal change.

However, gender alone may not fully explain the ‘committed action’ and homonegativity relationship. Intersectional factors such as race, class, and religion could further influence values and actions. Future research should consider how these overlapping identities might interact and contribute to observed gender disparities.

However, it is also important to consider the limitations of the research design and measurement tools. The study might not have fully captured the complexities of self-as-context or sexism or ‘committed action’ and homonegativity, leading to spurious correlations.

6.5.3 Limitations

While this study offered valuable insights into the relationships between various forms of prejudice and psychological (in)flexibility, it is not without limitations. Consideration of these limitations, primarily centred on methodology and sample characteristics, should impose constraint and signal caution in the interpretation of findings and the formulation of broader conclusions.

As the study solely on self-reported data, this introduced potential biases related to honesty, introspective ability, and social desirability. Participants may have intentionally misrepresented their attitudes or unintentionally provided inaccurate responses due to limitations in self-awareness. Additionally, the uncontrolled environment in which participants completed the questionnaires (e.g., work, home, etc.) could have further influenced responses and potentially introduced external factors beyond the scope of the study. This lack of control over the testing environment limited the generalizability of the findings.

Additionally, the recruitment of participants through Amazon Mechanical Turk (MTurk) and Prolific Academic presented potential vulnerabilities to the integrity of the data. First, the use of both platforms increased the risk of duplicate participation potentially compromising data validity. Research by Peer et al. (2017) indicated that individuals on crowdsourcing platforms may engage in tasks across multiple services, potentially inflating sample sizes and introducing biases. Second, while these platforms offer access to a broader and potentially more diverse sample than traditional university student pools, concerns arise regarding data quality. Studies have shown that crowdsourced samples may include participants who provide low-quality responses, often motivated by a desire to swiftly complete tasks to maximize earnings (Casler et al., 2013; Johnson & Borden, 2012).

In the case of MTurk, the payment structure, offered a fixed amount regardless of completion time, which may incentivize hasty responses that prioritize speed over thoughtful engagement (Goodman et al., 2013). Although Prolific Academic compensated participants based on estimated time spent, the potential impact of both compensation models on response quality warrants further investigation. Despite attempts in this study to

mitigate issues by offering compensation equivalent to minimum wage, it remains uncertain if this approach effectively incentivized participants to prioritize quality over speed.

The cross-sectional nature of the study also posed limitations. Causal inferences cannot be drawn from the observed relationships between variables, as the data captured a single snapshot in time. Longitudinal research designs may be necessary to establish temporal precedence and disentangle cause and effect within the complex interplay of psychological factors that contribute to prejudice and dehumanization.

Finally, although this study presented a more diverse and representative sample than Study 1, the sample remained geographically limited. Most participants resided in North America and potentially restricted the generalizability of findings to broader global populations. Future research incorporating participants from diverse geographic regions is necessary to assess the cross-cultural applicability of the observed relationships.

In sum, while the present study contributed valuable insight into the multifaceted nature of prejudice and dehumanization, it is crucial to acknowledge its limitations. Reliance on self-report measures, potential duplicate participation, concerns regarding data quality in crowdsourcing platforms, the cross-sectional nature of the design, and limited geographical representation necessitate cautious interpretation of the findings and call for further research employing robust methodologies to address these shortcomings and deepen the scientific community's understanding of these complex social phenomena.

6.5.4 Implications and Future Directions

The findings of the current study hold significant implications for the understanding of intergroup prejudice and dehumanization, particularly regarding the nuanced roles of

psychological inflexibility and its components. While acknowledging the limitations inherent in the study design, the results provided several key avenues for future research.

First, the inconsistent relationship between the overall psychological flexibility model and prejudice highlighted the need for a more in-depth investigation into the specific mechanisms within this multifaceted construct. The study underscored the possibility that individual components might differentially impact prejudice manifestation, depending on the type of prejudice and the broader context. Future research employing process-oriented methodologies, such as mediation and moderation analyses, could elucidate the specific psychological processes through which specific facets of flexibility influence discriminatory attitudes and behaviours.

Second, the gender differences observed in this study, particularly regarding benevolent sexism and homonegativity, necessitate further exploration. Understanding the distinct socialization processes and value sets instilled in men and women could shed light on these observed disparities. Cross-cultural research incorporating diverse geographical regions and populations would allow for a more comprehensive understanding of how cultural norms and societal context interact with flexibility and prejudice across genders.

Third, the adaptation of existing assessment tools like the MPFI (Rolffs et al., 2016) holds immense potential. By explicitly specifying the targeted stigmatizing attitudes within each item, a revised MPFI could offer a more fine-grained understanding of the specific prejudices held by individuals. This would not only enhance research precision but also inform the development of tailored interventions that address specific facets of prejudice with greater efficacy.

Fourth, the study's reliance on self-report measures introduced potential biases that warrant consideration in future iterations. Employing behavioural measures of prejudice in conjunction with self-reported attitudes could provide a more holistic picture of individuals' internalized biases and their relationship to psychological (in)flexibility. For example, the inclusion of physiological measures, such as heart rate variability or skin conductance, could offer valuable insights into the emotional and physiological correlates of prejudice and their potential modulation by flexibility components.

Moreover, the limitations associated with self-reported measures underscore the necessity for more refined assessments of prejudice. In line with Contextual Behavioural Science (CBS) principles, which emphasize the direct observation and measurement of behaviours relevant to the target problem, future research could pioneer novel prejudice measures. These measures could focus on discriminatory actions in real-world scenarios or gauge physiological responses to outgroup members. By transcending reliance on self-report data, these measures could offer a more objective and reliable depiction of individual prejudice. Such advancement would not only enhance the precision of research findings but also contribute to the refinement of interventions aimed at addressing prejudice.

Fifth, the cross-sectional nature of the study limits its ability to establish causal relationships. Longitudinal research designs employing repeated measures over time would be crucial for disentangling the complex interplay between flexibility, prejudice, and dehumanization and establishing temporal precedence. Investigating how changes in flexibility over time influence prejudice development and expression could yield valuable insights for intervention and prevention efforts.

Finally, the study's focus on prejudice and dehumanization within specific demographic groups could be expanded to encompass other forms of intergroup bias and discrimination. Examining how flexibility components relate to prejudice directed towards marginalized groups based on factors such as religion, ability, or socioeconomic status would further broaden the scientific community's understanding of the multifaceted nature of psychological (in)flexibility and its role in intergroup relations.

6.5.5 Conclusion

Study 2 explored the intricate relationships between psychological (in)flexibility and diverse forms of prejudice and dehumanization. While valuable preliminary insights were provided, several limitations constrained the generalizability of the results. Notably, inconsistent associations with the overall flexibility model and observed gender differences underscored the need for further investigation. This, in turn, called for a more in-depth examination of potential underlying factors that may be shaping these intricate relationships.

Right-wing authoritarianism (RWA) and social dominance orientation (SDO) hold significant promise in this endeavour. RWA, characterized by order preference, traditional values, and in-group favouritism, consistently links to prejudice and dehumanization (Altemeyer, 1981). Similarly, SDO, characterized by a desire to maintain and justify hierarchical social structures, often manifests in discriminatory attitudes towards subordinate groups (Sidanius & Pratto, 1999).

Therefore, Study 3 aimed to refine the findings of Study 2 through the explicit examination of the interaction between psychological inflexibility, RWA, SDO, and various forms of prejudice and dehumanization. By comprehensively investigating these

interactions, Study 3 was designed to shed further light on the intricate mechanisms underlying intergroup bias and dehumanization. With a more refined theoretical framework and targeted methodology, this research can contribute to the refinement of theoretical models and the identification of key leverage points for intervention, ultimately informing the development of strategies to promote equitable and inclusive societies.

Chapter 7 – Study 3

7.1 Chapter Overview

This study examined the relationships between psychological inflexibility, right-wing authoritarianism (Altmeyer et al., 1981), social dominance orientation (SDO; Sidanius & Pratto, 1999), and various measures of prejudice and dehumanization. A sample of 99 participants from the UK and the U.S. completed online surveys that assessed RWA, SDO, ambivalent sexism, Bayesian racism, homonegativity, the dehumanization of Muslims, and psychological inflexibility which included specific components and inflexibility within the context of stigmatization. It was hypothesized that psychological inflexibility and its components would exhibit positive correlations with all prejudice and dehumanization measures, even after controlling for RWA and SDO. Multiple regression analyses were conducted to test whether psychological inflexibility explained additional variance in prejudicial attitudes beyond these established predictors.

Results revealed that several facets of psychological inflexibility were significant predictors for hostile sexism, benevolent sexism, and Bayesian racism, even after accounting for RWA, SDO, age, and gender. However, psychological inflexibility was not significantly correlated with homonegativity or the dehumanization of Muslims after controlling for covariates.

As expected, RWA demonstrated consistent positive relationships with most forms of prejudice and SDO was strongly linked to hostile sexism, racism, and dehumanization. For hostile sexism, lack of contact with the present moment and values explained additional variance beyond SDO. The results highlight the psychological inflexibility as an influential factor in the maintenance of prejudicial attitudes, particularly those linked to gender and

race. However, the lack of significant correlations for some outcomes suggests a need for further research on the nuanced role of inflexibility in intergroup bias and dehumanization.

7.2 Current Study

Right-wing authoritarianism (RWA) and social dominance orientation (SDO) represent dual ideological attitudes implicated in intergroup prejudice and dehumanization (Duckitt, 2001). RWA is characterized by obedience to authority, moral absolutism, and conformity (Altmeyer, 1981). Individuals high in RWA tend to submit to leaders they perceive as legitimate, adhere rigidly to social conventions, and aggress against norm violators and deviant outgroups (Duckitt & Bizumic, 2013). Whereas SDO expresses preferences for group hierarchies and domination over lower-status groups (Pratto et al., 1994). Those exhibiting heightened RWA and SDO tend to hold biased attitudes toward minority groups, justifying oppression through moral absolutism and desires for in-group superiority (Cohrs & Asbrock, 2009; Duckitt & Sibley, 2010).

Substantial evidence has linked RWA and SDO with prejudicial biases and dehumanization across contexts (Bruneau & Kteily, 2017; Cohrs et al., 2012; Costello & Hodson, 2014; Crawford et al., 2016; Duckitt, 2001; Golec de Zavala et al., 2013; Hodson & Dhont, 2015; O'Brien et al., 2013; Poteat & Mereish, 2012). Those elevated on RWA tend to hold prejudiced attitudes toward minority groups perceived as threatening conventional norms, whereas individuals high in SDO exhibit generalized preferences for intergroup hierarchies across contexts (Duckitt, 2001; Duckitt & Sibley, 2010). Furthermore, RWA and SDO promote dehumanization of marginalized groups through moral exclusion and desires for intergroup dominance (Costello & Hodson, 2014; Kteily et al., 2011). Together, RWA and SDO constitute dual pathways that facilitate

dehumanization, prejudice, and discrimination toward marginalized groups (Craig & Richeson, 2014; Sidanius et al., 1994; Thomsen et al., 2008).

Given their robust associations with prejudicial and dehumanizing biases, accounting for RWA and SDO is critical for the isolation of the unique contributions of psychological inflexibility to outgroup attitudes. As such, the purpose of Study 3 was to incorporate measures of RWA and SDO to scrutinize whether psychological inflexibility explained additional variance in prejudice and dehumanization above these established ideological predictors.

Specific hypotheses were as follows:

H₁: Psychological inflexibility (as measured by the AAQ-S and MPFI) and its subcomponents would be positively correlated with each prejudice and dehumanization scale, even when controlling for RWA and SDO.

H₂: RWA (as measured by the RWA scale) would be positively correlated with prejudice and dehumanization, consistent with past research. However, the relationships between psychological inflexibility, prejudice, and dehumanization would remain significant even when controlling for RWA, suggesting psychological inflexibility explains additional variance.

H₃: Social dominance orientation (as measured by the SDO scale) would be positively correlated with prejudice and dehumanization, consistent with past research. However, the relationships between psychological inflexibility, prejudice, and dehumanization would remain significant even when controlling for SDO, again suggesting psychological inflexibility has utility above and beyond traditional predictors.

H₄: The psychological inflexibility components of experiential avoidance, lack of contact with the present moment, self as content, fusion, lack of contact with values, and inaction would each demonstrate positive relationships with prejudice and dehumanization measures, highlighting their importance within the overall latent variable of psychological inflexibility.

Data Analysis Strategy. The data analysis for this study will progress through three main phases to robustly examine the relationships between psychological inflexibility, authoritarianism, social dominance, prejudicial attitudes, and dehumanization.

In the initial phase, as in the preceding studies, data cleaning procedures will be implemented. Participants will first be screened for inclusion based on whether they completed a minimum of 80% of the main study questionnaires. This criterion will ensure a focused participant sample for the analyses.

The second phase will involve obtaining descriptive statistics for all variables, including means, standard deviations and internal reliability coefficients. Zero-order Pearson correlations will then be conducted between all predictor variables (i.e., psychological inflexibility, inflexibility subscales, RWA, SDO) and all prejudice and dehumanization outcomes. These correlational analyses will provide an initial examination of the relationships proposed in the hypotheses.

In the third phase, the primary hypothesis tests will be evaluated through hierarchical linear regression models conducted separately for each outcome variable. RWA and SDO will first be entered as a baseline model. Psychological inflexibility will then be added to evaluate whether it explains additional outcome variance. In a third step, the

inflexibility subscale predictors will be entered. Resulting models will be interpreted to determine the unique effects of overall psychological inflexibility as well as its components.

Power Analyses. SPSS (v29.0.1.1) was used to conduct power analyses to determine the required sample to achieve 80% power for detecting anticipated medium-sized effects in the planned analyses based on the findings of Study 2. As the purpose of the study is to calculate partial correlations while controlling for four variables, the results indicated that a sample size of $N = 88$ would provide sufficient power to detect a medium effect size ($r = .30$) based on a two tailed test with $\alpha = .05$.

For the multiple linear regression analysis with eight predictor variables, results showed that a sample size of $N = 88$ would provide 80% power for detecting a medium-sized f^2 effect of 0.15 at $\alpha = .05$. This suggests the final sample size would allow for adequately testing the study's hypotheses using the planned multiple regression model. In determining these sample size requirements, medium anticipated effect sizes were specified based on the results of Study 2.

7.3 Method

The design of Study 3 was similar to Study 2. The primary changes were the addition of scales measuring RWA and SDO to control for these variables during correlational and regression analyses. Additionally, to avoid respondent fatigue, the psychological flexibility subscales of the MPFI were removed due to lack of support for their continued assessment.

7.3.1 Participants

For this study, a total of 100 people were recruited through the crowdsourcing website, Prolific Academic. Participants resided in the United Kingdom ($n = 50$) and the United States of America ($n = 50$). However, one participant from the UK was removed for completing less than 80% of the study, leaving a final sample of 99.

Interested participants followed a Qualtrics web link to complete self-report measures of prejudice, dehumanization, and psychological variables hypothesized to relate to intergroup relations. Anonymity was guaranteed and no identifying information was associated with responses. In compensation, participants were paid £6 ($\cong$ \$8.00 USD at time of recruitment) per hour.

7.3.2 Measures

Demographics Questionnaire. At the end of the study, participants responded to the five demographic questions. Participants self-reported their age, nationality, gender identity, sexual orientation, and ethnicity.

Multidimensional Psychological Flexibility Inventory. In the current study, the MPFI (Rolffs et al., 2016) (Appendix C) was reduced from the original 60-item format that measured all 12 dimensions of the psychological flexibility and psychological inflexibility models (Hayes et al., 1999, 2011) to the 30-items that pertained to the core processes of the psychological inflexibility model. The decision to remove the subscales measuring the core processes of the psychological flexibility model was made due to the lack of significant correlations between psychological flexibility and most of the measures of prejudice — with the exception of dehumanization — used in the previous study. As in the two previous

studies, participants responded to each statement on a six-point Likert-type scale that ranged from 1 ("Never True") to 6 ("Always True").

In this sample, the psychological inflexibility model ($\alpha = .96$) had excellent internal consistency. Each of the subscales: Experiential Avoidance ($\alpha = .91$), Lack of Contact with the Present Moment ($\alpha = .96$), Self as Content ($\alpha = .94$), Fusion ($\alpha = .96$), Lack of Contact with Values ($\alpha = .95$), and Inaction ($\alpha = .97$) also had excellent internal consistency.

Acceptance and Action Questionnaire - Stigma. In this study, as in the previous study, the full 21-item version of the AAQ-S (Levin et al., 2014) (Appendix J) was used. Participants responded to each statement using a seven-point Likert-type scale ranging from 1 ("Never True") to 7 ("Always True") to statements about their psychological flexibility and inflexibility related to stigmatizing attitudes towards others. In the current study, the full AAQ-S ($\alpha = .81$), the psychological inflexibility subscale ($\alpha = .87$), and flexibility subscale ($\alpha = .80$) each had good internal consistency.

Ambivalent Sexism. As in each of the previous studies, participants responded to the ASI (Glick & Fiske, 1996) (Appendix D) using a six-point Likert-type scale ranging from 0 ("Strongly Disagree") to 5 ("Strongly Agree"). In this study, the overall ASI ($\alpha = .81$) and the benevolent sexism subscale ($\alpha = .81$) had good internal consistency while the hostile sexism subscale ($\alpha = .91$) had excellent internal consistency.

Bayesian Racism. The Bayesian Racism scale (Uhlmann et al., 2010) (Appendix E) was once again used to measure each participant's willingness to justify systemic discrimination based on stereotypes. Participants responded to six items on a five-point Likert-type scale ranging from 1 ("Strongly Disagree") to 5 ("Strongly Agree"). In this study, the scale ($\alpha = .79$) had acceptable internal consistency.

Homonegativity. The MHS (Morrison & Morrison, 2003) was once again used to measure negative attitudes toward people that identify as homosexual. As in the previous study, the original scale was slightly altered (Appendix K) into a 12-item measure that assessed discrimination against “gay people” rather than gay men and lesbian women separately. Participants used a five-point Likert-type scale that ranged from 1 (“Strongly Disagree”) to 5 (“Strongly Agree”) to respond to each statement. In this study, the MHS had an excellent internal consistency of $\alpha = .95$.

Dehumanization. The dehumanization scale (Bastian et al., 2013) (Appendix G) was used to assess each participant’s willingness to deny qualities of humanness to other groups, particularly Muslims. In this sample, the denial of human nature ($\alpha = .64$) and denial of human uniqueness ($\alpha = .69$) had questionable internal consistencies.

Social Dominance Orientation. In this study, the 16-item version of the SDO (Pratto et al., 1994) (Appendix L) was used to assess participant’s preferences for the domination and superiority of their in-group over outgroups. Items were rated on a seven-point Likert-type scale that ranged from 1 (“Very Negative”) to 7 (“Very Positive”). In this study, the internal consistency of the SDO was excellent ($\alpha = .92$).

Right-Wing Authoritarianism. The shortened 15-item version of the RWA (Zakrisson, 2005) (Appendix M) is an assessment of how rigidly a person maintains the belief that others should obey authority figures and wilfully follow the traditional norms of a society as to uphold a religiously conservative morality. Participants rated items on a seven-point Likert-type scale that ranged from 1 (“Very Negative”) to 7 (“Very Positive”). In this study, the internal consistency of the RWA was $\alpha = .80$.

7.4 Results

7.4.1 Demographics

The sample was consisted of 59 men and 40 women aged 18 to 72 ($M_{AGE} = 40.09$, $SD = 13.80$). The vast majority identified as White or Caucasian ($n = 91$), while others identified as American Indian ($n = 3$), Black or of African descent ($n = 3$), Hispanic or Latino ($n = 1$), and Jewish ($n = 1$). Additionally, 96% identified as heterosexual, 3% as bisexual, and 1% as homosexual.

7.4.2 Descriptive Statistics

For a summary of all dispersion and distribution statistics, please refer to Table 46.

Table 46

Study 3: Descriptive Statistics for All Variables

Variable	<i>N</i>	<i>M</i>	<i>SD</i>	Variance	Skewness		Kurtosis	
					Stat	<i>SE</i>	Stat	<i>SE</i>
Psych Inflexibility	99	2.95	1.00	.99	.17	.24	-.29	.48
Exp Avoidance	99	3.92	1.24	1.54	-.52	.24	-.29	.48
Lack Present Moment	99	2.98	1.30	1.70	.54	.24	-.52	.48
Self as Content	99	2.80	1.29	1.66	.41	.24	-.83	.48
Cognitive Fusion	99	3.00	1.36	1.86	.30	.24	-.86	.48
Lack Contact Values	99	2.55	1.30	1.70	.69	.24	-.29	.48
Inaction	99	2.46	1.34	1.79	.80	.24	-.11	.48
AAQ-Stigma	98	3.16	.69	.48	-.44	.24	-.12	.48
Ambivalent Sexism	99	2.34	.81	.66	-.02	.24	-.27	.48
Hostile Sexism	99	2.49	1.09	1.19	-.12	.24	.09	.48
Benevolent Sexism	99	2.20	.99	.98	.01	.24	-.40	.48
Bayesian Racism	99	3.73	1.33	1.77	-.16	.24	-.70	.48
Homonegativity	220	2.86	1.14	1.30	-.02	.17	-1.08	.33
Dehumanization								
Muslim - Human Nature	212	2.21	1.37	1.89	.52	.17	-.03	.33
Muslim - Human Unique	216	2.23	1.40	1.96	.41	.17	-.10	.33

MPFI. In this sample, the distribution of psychological inflexibility scores ($M=2.95$, $SD=1.00$) had a positive skew of 0.17 ($SE=.24$) indicative of a slightly longer tail towards higher scores. The kurtosis of -.29 ($SE=.48$) suggested a platykurtic curve, meaning there were fewer extreme values than in a normal distribution.

AAQ-S. Analysis of psychological inflexibility regarding thoughts of stigmatizing others revealed that participants scored somewhat lower than previously observed, with a mean of 3.16 ($SD=.69$). Although the distribution showed a slight negative skew of -.44 ($SE=.24$), suggesting a tendency towards lower inflexibility scores, it was steeper than a normal distribution. This is reflected in the slightly negative kurtosis of -.12 ($SE=.48$), which indicated a slightly higher concentration of scores around the mean compared to a normal distribution.

ASI. Composite ambivalent sexism scores ($M=2.34$, $SD=.81$) revealed a somewhat higher level of endorsement of both benevolent and hostile attitudes towards women compared to previous observations. While the means for both subscales were slightly elevated, they remained relatively close (hostile sexism: $M=2.49$, $SD=1.09$; benevolent sexism: $M=2.20$, $SD=0.99$). This pattern suggested a potentially balanced, yet high, endorsement of these contrasting attitudes.

Examining the individual subscales, hostile sexism scores leaned towards higher values with a slight positive skew (-0.12, $SE=0.24$), but the distribution itself exhibited a near-normal shape (kurtosis = 0.09, $SE=0.48$). This suggests a relatively even spread of scores across the range, with perhaps a small cluster towards the higher end. Conversely, benevolent sexism displayed a slight negative skew (0.01, $SE=0.24$) and a platykurtic curve

(-0.40, $SE = 0.48$). This pattern indicated a somewhat flatter distribution relative to a normal curve, with fewer extreme values and a concentration around the mid-range.

Racism. Responses to the Bayesian Racism scale (Uhlmann et al., 2010) revealed a higher tendency to justify racism based on perceived likelihoods rooted in stereotypes. The mean score of 3.73 ($SD = 1.33$) indicated a predominantly endorsing attitude within the sample. Notably, the distribution deviated from normality with a skewness of -.16 ($SE = .24$) suggesting a slight leaning toward lower scores and a kurtosis of -.70 ($SE = .48$) indicative of a platykurtic curve. This translates to a reduced concentration of scores around the mean and potentially wider range of individual attitudes towards Bayesian racism than a normal distribution would imply.

MHS. Despite a seemingly higher average homonegativity score ($M = 3.38$, $SD = 1.02$) compared to previous observations, closer examination revealed a nuanced picture within this sample. While the variance of 1.04 indicated moderate variability, the distribution offered further insights into the nature of these attitudes. The skewness of -.48 ($SE = .24$) suggested a slight skew towards lower scores, indicating a potential underrepresentation of individuals with extremely negative views. However, the kurtosis of -.40 ($SE = .48$) exhibited a flatter peak compared to a normal distribution. Together, this suggest a relative scarcity of both highly negative and highly positive attitudes, with the bulk of respondents clustering around the central tendency.

Dehumanization. An examination of participants' willingness to dehumanize Muslims revealed a concerning pattern of elevated scores on both measures. The current sample displayed a pronounced tendency to deny both human nature ($M = 3.45$, $SD = 1.21$) and qualities of human uniqueness ($M = 3.55$, $SD = 1.21$).

Both subscales displayed a positive skew, with scores leaning towards the higher end. This indicated that while most respondents denied humanness to some degree, there were fewer individuals with extremely high scores. This pattern is further reflected in the kurtosis values. The denial of human uniqueness had a moderately platykurtic curve (kurtosis = .76, SE = .48), suggesting a slightly flatter peak compared to a normal distribution. This implied a relative scarcity of extreme scores on both ends. The denial of human nature, however, had a leptokurtic curve (kurtosis = .22, SE = .48), indicating a slightly sharper peak around the mean. This suggests a somewhat higher concentration of scores in the middle range, with fewer individuals falling into the extreme categories.

Right-Wing Authoritarianism. In this study, right-wing authoritarianism scores ($M = 3.96$, $SD = 0.86$) revealed a moderately high average level of authoritarian attitudes. This suggests a somewhat stronger endorsement of these beliefs compared to potentially expected norms. The variance of 0.74 further indicates a moderate degree of variability among participants, implying a range of individual differences in authoritarian tendencies.

Examining the distribution of scores in more detail, a slight positive skew of .19 ($SE = .24$) pointed towards a subtly higher frequency of individuals scoring towards the upper end of the scale. This aligned with the elevated mean score and suggested a potential prevalence of authoritarian attitudes. However, the kurtosis of .75 ($SE = 0.48$) hinted at a leptokurtic curve, meaning a somewhat sharper peak around the mean compared to a normal distribution. This pattern implied that while there may be a higher concentration of individuals with moderate to strong authoritarian beliefs, the data may not exhibit a significant number of extreme outliers.

Social Dominance Orientation. In this study, there was a moderate level of SDO ($M = 3.10, SD = 1.18$). This mean score suggested that, on average, participants held neither particularly strong nor weak preferences for hierarchical social structures and group-based dominance.

Examination the distribution curve further, the near-symmetrical skewness of $-.08$ ($SE = .24$) pointed towards a balanced distribution around the mean. This suggested that there were roughly equal numbers of individuals scoring above and below the average level of endorsement. However, the platykurtic curve (kurtosis = $-.44, SE = .48$) hinted at a flatter peak compared to a normal distribution. This pattern implied that there were fewer individuals with extreme scores on either end of the spectrum, meaning the majority of participants clustered around the central tendency.

Correlations Among Predictor Variables. Strong internal correlations were observed within the psychological inflexibility framework (see Table 47). Lack of contact with the present moment, self-as-content, cognitive fusion, and lack of contact with values all displayed moderate to strong positive correlations with each other ($r = .50 - .76$), suggesting their interconnectedness. Furthermore, each subcomponent correlated with the psychological inflexibility composite score ($r = .24 - .31$), highlighting their individual contributions to the overall construct.

However, the picture differs greatly in the consideration of external variables. RWA and SDO show weak and non-significant correlations with each psychological inflexibility component as well as the composite score. This suggests that, in this sample, psychological inflexibility operated largely independent of these specific ideological orientations. Notably, RWA and SDO do exhibit a moderate positive correlation ($r = .31, p < .01$).

Table 47*Study 3: Correlations Among the Predictor Variables*

Variable	1	2	3	4	5	6	7	8	9
1 Experiential Avoidance	—								
2 LC Present Moment	.28**	—							
3 Self-as-Content	.29**	.55**	—						
4 Cognitive Fusion	.31**	.55**	.74**	—					
5 LC Values	.24**	.59**	.58**	.54**	—				
6 Inaction	.15	.50**	.64**	.75**	.66**	—			
7 Psychological Inflexibility	.49**	.76**	.83**	.86**	.79**	.82**	—		
8 AAQ-S	.41**	.46**	.51**	.43**	.41**	.38**	.57**	—	
9 RWA	.04	.08	.09	-.02	.02	-.15	.01	.02	—
10 SDO	.11	.05	.24*	.09	.09	-.01	.13	.18	.31**

Note. The abbreviation “LC” is short for “Lack of contact with” [Present Moment/Values]. ** $p \leq .01$.

Prejudice Scales. Correlational coefficients were computed to examine the relationships between ambivalent sexism, its subcomponents (hostile and benevolent sexism), and other prejudicial attitudes towards outgroups (see Table 48).

Ambivalent sexism, encompassing both hostile and benevolent attitudes towards women, exhibited robust intra-construct correlations ($r = .80-.75, p < .01$). This internal coherence supported the unified ideological framework where both the subjugation and protection of women are deemed desirable, albeit for potentially distinct motives. Notably, ambivalent sexism also significantly correlated, albeit weaker, with Bayesian racism ($r = .45, p < .01$), homonegativity ($r = .53, p < .01$), and even the denial of human nature and uniqueness ($r = .35-.32, p < .01$). This pattern suggested a potential shared underlying mechanism, possibly rooted in a need for social dominance and group-based justifications for discrimination.

Further analysis also revealed the pivotal role of dehumanization in this network. The denial of human nature and uniqueness exhibited a strong internal correlation ($r = .79, p < .01$) and moderate connections to other forms of prejudice. This suggested that dehumanization might serve as a common thread, paving the way for discrimination and violence by stripping targeted groups of their inherent human value.

Overall, this study provided compelling evidence for the interconnectedness of various forms of social prejudice. Understanding these interconnections is crucial for developing effective interventions to combat prejudice, promote social justice, and foster a more inclusive society. By unravelling the complex web of bias and discrimination, we can work towards a future where all individuals are valued and respected for their inherent human worth, regardless of their social group affiliation.

Table 48

Study 3: Correlations Among the Prejudice Scales

Variable		1	2	3	4	5	6
1	Ambivalent Sexism	—					
2	Hostile Sexism	.80**	—				
3	Benevolent Sexism	.75**	.21*	—			
4	Bayesian Racism	.45**	.43**	.26*	—		
5	Homonegativity	.53**	.53**	.29**	.36**	—	
6	Muslim - Human Nature	.35**	.48**	.05	.34**	.29**	—
7	Muslim - Human Uniqueness	.32**	.44**	.04	.33**	.25*	.79**

Note. * $p \leq .05$, ** $p \leq .001$.

7.4.3 Correlational Analyses

Measures of Prejudice. The primary hypotheses of this study predicted that psychological inflexibility and its subcomponents would be positively correlated with each scale of prejudice and dehumanization, even when controlling for RWA and SDO. As a first step to testing this hypothesis, correlational coefficients were calculated for each measure of prejudice in relation to psychological inflexibility and each of its components.

Sexism. Among men, ambivalent sexism displayed statistically significant positive correlations with most facets of psychological inflexibility except cognitive fusion and inaction (see Table 49). Hostile sexism, in contrast, demonstrated stronger significant correlations with every facet of psychological inflexibility: experiential avoidance ($r = .27, p = .04$), lack of contact with the present moment ($r = .58, p < .001$), self-as-content ($r = .47, p < .001$), cognitive fusion ($r = .46, p < .001$), lack of contact with values ($r = .53, p < .001$), and inaction ($r = .30, p = .02$). These findings suggest that for men, harbouring hostile attitudes about women is associated with psychological rigidity and a tendency for avoidant, impulsive behaviours.

For women, the picture is considerably different. No significant correlations emerged between any of the inflexibility components and ambivalent or hostile sexism. This suggests that, in women, the contradictory attitudes characteristic of ambivalent sexism may not be directly linked to the psychological processes underlying inflexibility. Hostile sexism, however, displayed a moderately statistically significant, positive association with experiential avoidance ($r = .39, p = .01$) while benevolent sexism ($r = .37, p = .02$). This finding suggests a possible, albeit limited, link between avoidance and inaction with sexism.

Table 49*Study 3 Correlations: Sexism and Inflexibility*

Variable	1	2	3	4	5	6	7	8
Ambivalent Sexism								
Men	.27*	.58**	.40**	.24	.41**	.22	.44**	.48**
Women	.25	-.10	.23	.15	.08	.19	.19	.09
Combined	.21*	.28**	.34**	.20	.29**	.23*	.34**	.34**
Hostile Sexism								
Men	.27*	.63**	.47**	.46**	.53**	.30*	.55**	.46**
Women	.39*	-.19	.10	.02	-.07	-.01	.05	.06
Combined	.29**	.30**	.32**	.26**	.30**	.18	.36**	.31**
Benevolent Sexism								
Men	.11	.17	.08	-.14	.03	.01	.05	.22
Women	.00	.04	.31	.25	.23	.37*	.29	.10
Combined	.03	.14	.19	.03	.14	.17	.15	.22*

Note. Numbers refer to MPFI subscales: 1. Experiential Avoidance, 2. Lack of Contact with Present Moment, 3. Self as Content, 4. Cognitive Fusion, 5. Lack of Contact with Values, 6. Inaction, 7. Psychological Inflexibility composite, 8. AAQ-S Psychological Inflexibility. * $p < .05$, ** $p < .01$.

Overall, these findings provide partial support for the hypothesis that psychological inflexibility and its subcomponents would be positively correlated with each scale of prejudice and dehumanization (H₄).

Bayesian Racism. Both the MPFI ($r = .21, p = .03$) and the AAQ-S ($r = .29, p = .003$) revealed statistically significant positive correlations with Bayesian racism (see Table 50). This suggests that individuals who struggle with rigid thinking patterns, resist challenging their worldview, and find it difficult to tolerate negative emotions and internal experiences related to prejudice are prone to endorsing Bayesian-style prejudiced beliefs.

Overall, the findings provide some support for the Hypothesis 4, which posited positive relationships between specific components of psychological inflexibility and Bayesian racism. Support is found particularly regarding the role of rigid conceptualizations of the self and difficulty accepting negative internal states in relation to prejudice. However,

the non-significant relationships for other components suggest the need for further investigation to fully understand the specific mechanisms by which psychological inflexibility contributes to prejudice and dehumanization.

Table 50

Study 3 Correlations: Bayesian Racism and Inflexibility

Variable	1	2	3	4	5	6	7	8
Bayesian Racism	.22*	.14	.22*	.15	.17	.07	.21*	.29**

Note. Numbers refer to MPFI subscales: 1. Experiential Avoidance, 2. Lack of Contact with Present Moment, 3. Self as Content, 4. Cognitive Fusion, 5. Lack of Contact with Values, 6. Inaction, 7. Psychological Inflexibility composite, 8. AAQ-S Psychological Inflexibility.

* $p < .05$, ** $p < .01$.

Homonegativity. Contrary to expectations, the combined sample in the study revealed an absence of significant correlations between any of the assessed dimensions of psychological inflexibility and homonegativity, as measured by the Modern Homonegativity Scale (Morrison & Morrison, 2003) (see Table 51). This finding challenged the notion that rigid thinking, difficult with acceptance of internal experiences, and general avoidance tendencies necessarily contributed to negative attitudes towards LGBTQ+ individuals.

Table 51

Study 3 Correlations: Psychological Inflexibility and Homonegativity

Variable	1	2	3	4	5	6	7	8
Homonegativity	-.02	.06	.07	-.05	.06	-.05	.01	-.08
Heterosexuals	.00	.04	.05	-.08	.06	-.06	.00	-.04

Note. Numbers refer to MPFI subscales: 1. Experiential Avoidance, 2. Lack of Contact with Present Moment, 3. Self as Content, 4. Cognitive Fusion, 5. Lack of Contact with Values, 6. Inaction, 7. Psychological Inflexibility composite, 8. AAQ-S Psychological Inflexibility.

* $p < .05$, ** $p < .01$.

Dehumanization. The relationship between psychological inflexibility and dehumanization, assessed through the denial of human nature and denial of human uniqueness of Muslims, exhibited no significant correlations. Across all assessed dimensions of psychological inflexibility, the inflexibility composite score of the MPFI, and the AAQ-S, the correlations with either dehumanization subscale were statistically non-significant. This suggests that these facets of inflexibility, at least in isolation, may not play a significant role in shaping dehumanizing attitudes towards others.

Table 52

Study 3 Correlations: Dehumanization of Muslims and Inflexibility

Variable	1	2	3	4	5	6	7	8
Human Nature	.03	.10	.16	.11	.11	.03	.12	.00
Human Uniqueness	.00	.15	.17	.16	.14	.06	.15	.08

Note. Numbers refer to MPFI subscales: 1. Experiential Avoidance, 2. Lack of Contact with Present Moment, 3. Self as Content, 4. Cognitive Fusion, 5. Lack of Contact with Values, 6. Inaction, 7. Psychological Inflexibility composite, 8. AAQ-S Psychological Inflexibility.

* $p < .05$, ** $p < .01$.

Authoritarianism and Social Dominance. Building on past research that linked right-wing authoritarianism (RWA; Altmeyer, 1981) and social dominance orientation (SDO; Sidanius & Pratto, 1999) to both prejudice and dehumanization, it was also hypothesized these established predictors would exhibit positive correlations with each measure of prejudice (H_2 & H_3).

Correlations with Prejudice Scales. The analysis revealed robust correlations between RWA and all prejudice measures except benevolent sexism among women. Overall, there was robust support for the hypothesized positive correlations between RWA and SDO with various measures of prejudice and dehumanization.

Both RWA and SDO exhibited statistically significant correlations with most forms of prejudice. The only exceptions were non-significant correlations between RWA and hostile sexism among women and benevolent sexism with SDO among either gender. The qualities of RWA characterized by rigid adherence to traditional values are further evidenced by its robust correlation with homonegativity among heterosexuals ($r = .51, p < .001$). Likewise, SDO displayed strong correlations with hostile sexism among both genders ($r = .44, p < .01$), racism ($r = .55, p < .01$) and both forms of dehumanization (Denial of human nature: $r = .36, p < .01$; human uniqueness: $r = .31, p < .01$), suggesting a specific preference for dominance hierarchies and outgroup derogation.

Table 53

Study 3 Correlations: RWA, SDO, Prejudice, and Dehumanization

Var.	AS		HS		BS		Race	MHS		Dehuman	
	♂	♀	♂	♀	♂	♀		Hetero	Tot.	HN	HU
RWA	.53**	.35*	.35**	.29	.40**	.31*	.25**	.51**	.34**	.14	.19
SDO	.33**	.39**	.44**	.44**	.02	.20	.55**	.40**	.51**	.36**	.31**

Note. For formatting purposes, several shorthand notations were used in this table:

AS: ambivalent sexism, HS: hostile sexism, BS: benevolent sexism, MHS: Modern Homonegativity Scale, HN: human nature, HU: human uniqueness, SDO: social dominance orientation, RWA: right-wing authoritarianism, ♂: Men, ♀: women. * $p \leq .05$, ** $p \leq .01$.

7.4.4 Controlling for Socio-political Factors

In addition to the hypothesized positive correlations between RWA and SDO with various measures of prejudice and dehumanization. It was further postulated that even after controlling for the influential effects of RWA and SDO, psychological inflexibility would demonstrate unique, significant relationships with prejudice and dehumanization, suggesting its explanatory power extends beyond established predictors. This would imply that

promoting psychological flexibility could have independent value in combating prejudice and dehumanization, even among individuals with high RWA or SDO.

Sexism. This analysis investigated the relationships between psychological inflexibility and ambivalent, hostile, and benevolent sexism while controlling for two established predictors of prejudice: RWA and SDO as well as demographics (see Table 55). For the purposes of this analysis, the males were coded as '0' and females were coded as '1'.

For men, a robust pattern of correlations emerged between various inflexibility factors and hostile sexism, even after controlling for RWA and SDO. Measures of lack of present moment awareness ($r = .57, p < .001$), rigid self-concept ($r = .36, p = .004$), cognitive fusion ($r = .42, p < .001$), value disconnect ($r = .49, p < .001$), and inaction ($r = .35, p = .003$) exhibited the most robust correlations. These findings imply that, irrespective of SDO or RWA tendencies, men that exhibit heightened hostile attitudes towards women may display reduced sensitivity to women's experiences. Additionally, they may be less inclined to reconcile their adherence to traditional views with a desire to project egalitarian views, reflecting behaviours associated with psychological inflexibility.

Interestingly, no significant correlations were observed for women.

For benevolent sexism, only 'Inaction' ($r = .39, p < .05$) among women was significantly correlated. No other significant correlations were observed between inflexibility measures and benevolent sexism for either men or women.

Hostile Sexism. In the examination of hostile sexism, a forward hierarchical regression analysis was employed. The objective was to identify the optimal model fit involving psychological inflexibility variables while accounting for key covariates, specifically RWA, SDO, and demographic factors (age and gender). Based on the prior

partial correlational analysis, the regression model was executed in a stepwise fashion, Initially, RWA, SDO, age, and gender were entered in Step 1 as control variables. Subsequently, ‘Lack of Contact with the Present Moment’ was included in Step 2, followed by ‘Lack of Contact with Values’ in Step 3, ‘Inaction,’ ‘Self-as-Content,’ and ‘Cognitive Fusion’ were introduced in Step 4, and finally, ‘Experiential Avoidance’ in Step 5 (see Table 56 for summarized results).

Table 54

Study 3 Partial Correlations: Sexism and Inflexibility

Control	Variable	1	2	3	4	5	6	7	8
1. RWA	Ambivalent								
2. SDO	Men	.20	.52**	.23	.15	.29*	.27*	.36**	.23
3. Age	Women	.18	-.01	.16	.18	.08	.21	.19	-.11
4. Gender	Total	.19	.28**	.28**	.20*	.29**	.31**	.34**	.16
	Hostile								
	Men	.23	.57**	.36**	.42**	.49**	.35**	.53**	.19
	Women	.32	-.10	.00	.05	-.09	-.02	.03	-.12
	Total	.27**	.30**	.25**	.26**	.30**	.24*	.35**	.12
	Benevolent								
	Men	.02	.08	-.07	-.24	-.13	-.01	-.08	.10
	Women	-.05	.09	.27	.25	.24	.39*	.29	-.05
	Total	.01	.12	.17	.04	.13	.23*	.15	.12

Note. Numbers refer to MPFI subscales: 1. Experiential Avoidance, 2. Lack of Contact with Present Moment, 3. Self as Content, 4. Cognitive Fusion, 5. Lack of Contact with Values, 6. Inaction, 7. Psychological Inflexibility composite, 8. AAQ-S Psychological Inflexibility. Gender was entered as a control variable only for “Total” (combined sample) correlations. * $p < .05$, ** $p < .01$.

It should be noted that the identification and exclusion of outliers were rigorously conducted based on Mahalanobis, Cook’s, and Leverage distances. To ensure the robustness of the analytical framework, two outliers ($n = 97$) were deemed significant as they had surpassed at least two of the three calculated thresholds.

Table 55*Psychological Inflexibility and Hostile Sexism*

	Predictor	<i>b</i>	<i>SE</i>	β	<i>t</i>	<i>F</i> (<i>df</i> 1, <i>df</i> 2)	<i>Adj. R</i> ²	Diff. (ΔR^2)
1	(Constant)	1.32	.28		4.70**			
	SDO	.38	.08	.42	4.51**			
						20.37** (1, 94)	.169	
2	(Constant)	.58	.32		1.81			
	SDO	.35	.08	.39	4.41**			
	LCPM	.28	.07	.34	3.86**			
						19.15** (1, 93)	.276	.107
3	(Constant)	.48	.32		1.49			
	SDO	.33	.08	.37	4.22**			
	LCPM	.18	.09	.21	2.06*			
	LCV	.19	.09	.22	2.13*			
						14.76** (1, 92)	.303	.027

Note. LCPM = Lack of contact with the present moment, LCV = Lack of contact with values, SDO = Social dominance orientation. * $p \leq .05$, ** $p \leq .01$.

Model 1, $F(1, 94) = 20.37, p < .001, Adj. R^2 = .169$, revealed significant association between SDO and hostile sexism ($\beta = .42, p < .001$), indicating that higher levels of social dominance orientation were linked to increased endorsement of hostile sexist attitudes.

Expanding upon this model, Model 2, $F(1, 93) = 19.15, p < .001$, introduced the psychological flexibility component of 'Lack of Contact with the Present Moment' (LCPM). The results demonstrated that, even after accounting for SDO, LCPM was a significant predictor of hostile sexism ($\beta = .34, p < .001$). Model 2 had an *Adj. R*² of .276, suggesting an increased explanation of the variance ($\Delta R^2 = .107$) in hostile sexism.

In Model 3, $F(1, 92) = 14.76, p < .001$, 'Lack of Contact with Values' was introduced as an additional predictor based in psychological inflexibility. The findings indicated that, beyond the effects of SDO, both LCPM ($\beta = .21, p = .04$) and 'Lack of Contact with Values' ($\beta = .22, p = .04$) were independently associated with hostile sexism. Model 3 accounted for approximately 30.3% (*Adj. R*² = .303, $\Delta R^2 = .107$), signifying a more comprehensive understanding of the variance in hostile sexism.

Based on the adjusted R² values and the significance of predictors, Model 3 appeared to be the best fit among the presented models. Overall, it provided a more comprehensive understanding of the relationships between psychological inflexibility components, SDO, and hostile sexism.

Benevolent Sexism. A forward hierarchical regression analysis was also utilized to examine the relationships of psychological inflexibility components with benevolent sexism while accounting for RWA, SDO, and demographic factors (age and gender). Initially, RWA, SDO, age, and gender were entered in Step 1. Then based on the prior partial correlations (for review, see Table 55) only 'Inaction' was entered into Step 2, while the remaining inflexibility components were entered in Step 3. Based on Cook's and Leverage distances, two participants (remaining $N = 96$) were excluded from this analysis. Four statistically significant models emerged from the analysis (see Table 57 for results summary).

Based on Mahalanobis, Cook's, and Leverage distances. To ensure the robustness of the analytical framework, one outlier ($n = 98$) was deemed significant as she had surpassed at least two of the three calculated thresholds.

A total of four statistically significant models emerged from the analysis retaining three predictor variables. In Model 1, $F(1, 95) = 14.82, p < .001, Adj. R^2 = .126$, RWA emerged as a significant predictor of benevolent sexism ($\beta = .37, p < .001$). Model 2, $F(1, 95) = 14.82, p < .001, Adj. R^2 = .194$, expanded the analysis by incorporating gender as a predictor, revealed that, even after accounting for RWA, being female was associated with lower levels of benevolent sexism ($\beta = -.28, p = .003$). Model 2 accounted for an additional 6.8% of the variance in benevolent sexism ($\Delta R^2 = .068$).

In Model 3, $F(1, 95) = 14.82, p < .001, Adj. R^2 = .219, \Delta R^2 = .025$, the first psychological inflexibility component was added. This model demonstrated that 'Inaction' was a significant predictor of benevolent sexism ($\beta = .18, p = .05$). Model 4 then extended this analysis with the inclusions of Cognitive Fusion, revealing that higher levels of Cognitive Fusion ($\beta = -.35, p = .01$) were associated with decreased endorsement of benevolent sexist attitudes.

These findings support the hypothesis that, beyond the established predictors of RWA and SDO, psychological inflexibility components, in this case Inaction and Cognitive Fusion, contribute uniquely to the explanation of benevolent sexism.

Overall, the findings supported the hypothesis that, beyond the established predictors of RWA and SDO, psychological inflexibility components contributed significantly to the understanding of benevolent sexism.

Table 56*Psychological Inflexibility and Benevolent Sexism*

	Predictor	<i>b</i>	<i>SE</i>	β	<i>t</i>	<i>F</i> (<i>df</i> 1, <i>df</i> 2)	<i>Adj. R</i> ²	Diff. (ΔR^2)
1	(Constant)	.44	.47		.94			
	RWA	.45	.12	.37	3.85**			
						14.82** (1, 95)	.126	
2	(Constant)	.51	.45		1.14			
	RWA	.49	.11	.40	4.32**			
	Gender	-.56	.19	-.28	-3.01**			
						12.58** (1, 94)	.194	.068
3	(Constant)	.05	.50		.10			
	RWA	.51	.11	.42	4.60**			
	Gender	-.52	.19	-.26	-2.81**			
	Inaction	.14	.07	.18	2.00*			
						9.99** (1, 93)	.219	.025
4	(Constant)	.14	.49		.29			
	RWA	.56	.11	.46	5.08**			
	Gender	-.49	.18	-.24	-2.70**			
	Inaction	.33	.10	.45	3.29**			
	Cognitive Fusion	-.26	.10	-.35	-2.57**			
						9.59** (1, 92)	.264	.045

Note. * $p \leq .05$, ** $p \leq .01$.

Racism. A partial correlational analysis was conducted to examine the relationships between psychological inflexibility and Bayesian racism while controlling for RWA and SDO along with demographic factors. The results revealed noteworthy associations between racism and facets of psychological inflexibility (see Table 58).

Specifically, experiential avoidance ($r = .25, p = .02$) and lack of contact with values ($r = .20, p = .05$) exhibited significant positive correlations with Bayesian racism. This suggested individuals with higher experiential avoidance and greater value-behaviour discrepancies were more likely to justify discrimination based on stereotypes. Furthermore, the MPFI inflexibility composite scores ($r = .25, p = .01$) and AAQ-S ($r = .27, p = .01$) also showed significant correlations. Thus, greater psychological inflexibility regarding stigmatizing thoughts was linked to increased Bayesian racism. However, other aspects of psychological inflexibility did not significantly correlate with Bayesian racism. This indicates the relationship between inflexibility and racism may be nuanced, with certain elements demonstrating stronger associations.

Table 57

Study 3 Partial Correlations: Bayesian Racism and Inflexibility

Control	Variable	1	2	3	4	5	6	7	8
1. RWA									
2. SDO	Bayesian Racism								
3. Age		.25*	.18	.18	.16	.20*	.15	.25**	.27**
4. Gender									

Note. Numbers refer to MPFI subscales: 1. Experiential Avoidance, 2. Lack of Contact with Present Moment, 3. Self as Content, 4. Cognitive Fusion, 5. Lack of Contact with Values, 6. Inaction, 7. Psychological Inflexibility composite, 8. AAQ-S Psychological Inflexibility. RWA = Right-wing authoritarianism, SDO = Social dominance orientation.

* $p < .05$, ** $p < .01$.

To examine these relationships further, a hierarchical regression analysis was conducted with RWA, SDO, gender, and age in Step 1. Experiential avoidance and lack of contact with values were added in Step 2, followed by the remaining inflexibility components in Step 3. One outlier was excluded based on Mahalanobis, Cook's and Leverage distances surpassing calculated thresholds.

As outlined in Table 59, the analysis yielded one significant model, $F(1, 95) = 45.87$, $p < .001$, with SDO as the sole significant predictor ($\beta = .65$, $p < .001$). This model accounted for 31.9% of the variance in Bayesian racism ($Adj. R^2 = .319$).

Table 58

Psychological Inflexibility and Bayesian Racism

Predictor		<i>b</i>	<i>SE</i>	β	<i>t</i>	F (<i>df</i> 1, <i>df</i> 2)	<i>Adj. R</i> ²
1	(Constant)	1.68	.319		5.26**		
	SDO	.65	.10	.57	6.77**		
						45.87** (1, 95)	.326

Note. SDO = Social dominance orientation. * $p \leq .05$, ** $p \leq .01$.

Homonegativity. A partial correlational analysis examined relationships between psychological inflexibility and homonegativity. This analysis controlled for RWA, SDO, and demographic factors. Results showed no significant correlations between any facets of psychological inflexibility and homonegativity scores (see Table 60).

These null findings suggest that within the study's parameters, psychological inflexibility may not significantly influence anti-LGBTQ+ prejudicial attitudes. Thus, these results do not support the hypothesis that psychological inflexibility would demonstrate unique associations with prejudice and dehumanization after accounting for the effects of RWA and SDO (H_1).

Dehumanization. Contrary to hypotheses, the current study found no significant associations between any of the components of psychological inflexibility and either form of dehumanization while accounting for the potential influences of RWA, SDO, age and gender (see Table 61). Additionally, despite measuring global inflexibility and inflexibility related to stigmatization, no consistent links with dehumanization emerged.

Table 59

Study 3 Partial Correlations: Homonegativity and Inflexibility

Control	Variable	1	2	3	4	5	6	7	8
1. RWA									
2. SDO	Modern								
3. Age	Homonegativity	.03	.05	.05	.00	.10	.08	.07	-.17
4. Gender									

Note. Numbers refer to MPFI subscales: 1. Experiential Avoidance, 2. Lack of Contact with Present Moment, 3. Self as Content, 4. Cognitive Fusion, 5. Lack of Contact with Values, 6. Inaction, 7. Psychological Inflexibility composite, 8. AAQ-S Psychological Inflexibility. RWA = Right-wing authoritarianism, SDO = Social dominance orientation.

* $p < .05$, ** $p < .01$.

Table 60

Study 3 Partial Correlations: Dehumanization and Inflexibility

Control	Variable	1	2	3	4	5	6	7	8
1. RWA	Human								
2. SDO	Nature								
3. Age	Human								
4. Gender	Uniqueness	.18	.14	.14	.18	.16	.12	.18	.03

Note. Numbers refer to MPFI subscales: 1. Experiential Avoidance, 2. Lack of Contact with Present Moment, 3. Self as Content, 4. Cognitive Fusion, 5. Lack of Contact with Values, 6. Inaction, 7. Psychological Inflexibility composite, 8. AAQ-S Psychological Inflexibility. RWA = Right-wing authoritarianism, SDO = Social dominance orientation.

* $p < .05$, ** $p < .01$.

7.5 Discussion

The present study offered valuable insights into the complex relationships between psychological inflexibility, authoritative ideologies, and prejudicial intergroup attitudes. Leveraging robust statistical analyses, the findings highlight both the potential utility and limitations of targeting psychological flexibility in interventions aimed at reducing discrimination and promoting social justice.

Theoretically, the study makes an important contribution in elucidating the connections between psychological inflexibility and specific forms of prejudice. The significant positive relationships observed between facets of inflexibility and hostile sexism align with prior research linking psychological inflexibility with generalized prejudice, social dominance orientation (SDO) and right-wing authoritarianism (RWA) (Levin et al., 2016). The present results extend this empirical base by demonstrating that even after accounting for the effects of SDO, lack of contact with the present moment and values displayed robust explanatory power in the prediction of hostile sexist attitudes. These findings suggested that psychological inflexibility may mechanistically underlie the expression of SDO-related sexism.

Difficulty engaging and aligning behaviours with personal values might exacerbate the bias ingrained in individuals high in SDO, leading to increased hostility towards women and unchallenged expressions of hostile sexism. Openness to mindful self-reflection, enhanced attention to one's internal experiences, has been demonstrated to enhance perspective-taking and potentially reduce maladaptive automatic responses to social stimuli and overall prejudice (Fuochi et al., 2023). Yet in the absence of mindful awareness and in the context of perceived group threat, biases rooted in SDO may be enhanced and operate

automatically to influence thoughts, feelings, and behaviours without conscious examination (Ligneul et al., 2017; Morrison & Ybarra, 2008; Thomsen et al., 2008). As SDO is defined by a rigid preference for social hierarchies that favour the ingroup, coupled with a notable proclivity to categorize other people as members of outgroups rather than recognizing their unique individuality, individuals high in SDO may view women as inferior and deserving of their subordinate status (Christopher & Wojda, 2008; Pratto et al., 1994; Sidanius & Pratto, 1999; Thomsen et al., 2008).

Conceptually, this pattern resonated with the notion that hostility towards women may be fuelled by psychological rigidity and reactive anger when male privilege is challenged (Bosson & Vandello, 2011; Estruch et al., 2017; Hellmuth & McNulty, 2008; Murnen et al., 2002; Sibley et al., 2007). The relationships between psychological inflexibility and benevolent sexism, however, proved more equivocal. The significance of inaction as a predictor variable comports with the view of benevolent sexism as motivated by traditional gender role adherence (Glick & Fiske, 1996). However, the negative association with cognitive fusion warrants further investigation to disentangle this unexpected relationship.

Beyond sexism, the links between experiential avoidance, value disconnection, and Bayesian racism also aligned with theoretical perspectives on psychological flexibility. The findings suggested that individuals prone to avoidance of internal experiences and disconnection from values may cling more rigidly to racist beliefs rooted in perceived statistical likelihoods. This aligns with the view that psychological inflexibility entails openness to information that challenges prejudices, along with a willingness to act in accordance with values of equity and inclusion despite discomfort (Levin et al., 2014).

However, the lack of significant relationships with homonegativity and Muslim dehumanization after controlling for RWA and SDO raised questions about the bounds of psychological inflexibility's theoretical utility. On one hand, the ideological underpinnings of anti-LGBTQ+ prejudice and Islamophobia likely differ from sexism and racism. On the other hand, some researchers posit psychological inflexibility constitutes a generalized risk factor applicable across prejudices (Levin et al., 2016). The heterogeneous findings highlight the need for nuanced theoretical development attending to the contextual nature of intergroup attitudes.

7.5.1 Strengths and Limitations

Methodologically, the study boasted several strengths supporting the validity of the results. The use of established psychometrically sound measures mitigated threats to construct validity. Rigorous preliminary data screening procedures and multiple validity checks during inferential tests protected against outliers and enabled robust analyses. The deliberate focus on a general population sample from two culturally similar nations: the UK and the U.S. allowed for the reduction of cultural differences as a confounding variable. Controlling for age, gender, RWA, and SDO via partial correlations and hierarchical regressions isolated the unique effects of each component of psychological inflexibility.

However, some limitations should be considered when interpreting the results. The reliance on self-report measures introduced potential biases associated with social desirability, memory limitations, and individual differences in introspective ability. Participants may have unintentionally misrepresented their experiences or beliefs, leading to inaccurate data. Additionally, the study's implementation within an uncontrolled online environment introduced the possibility of extraneous variables, such as environmental

distractors or external opinions that may influence participant responses. These factors may limit the generalizability of the findings to different contexts. The absence of control over the online setting may influence participant engagement and responses, raising concerns about the internal validity of the study.

Furthermore, the cross-sectional nature of the design precluded causal inferences. To disentangle the intricate mechanisms that underlie these associations and understand how psychological inflexibility exerts its influence independently of or alongside other factors like social dominance orientation and right-wing authoritarianism, future research employing longitudinal designs is crucial. Such designs would enable researchers to track changes over time and establish temporal precedence, unveiling the dynamic relationships between these variables. This nuanced understanding would not only solidify the causal role of psychological inflexibility but also shed light on the specific mechanisms through which it shapes prejudice and dehumanization, opening doors for targeted interventions and ultimately promoting a more equitable and inclusive society.

Additionally, the non-replication of the previous study's (Study 2) findings raised additional concerns extending beyond the inherent limitations associated with cross-sectional designs and reliance on self-report measures. This observed discrepancy necessitated scrutiny of the study's statistical procedures with a particular focus on the pre-planned power analyses. The potential for a mathematical error in the power calculations cannot be dismissed, as inaccurate estimates may artificially inflate the perceived significance of findings, increasing the risk of false positives and the formulation of spurious conclusions (Type I errors). Concurrently, an underpowered study, has a lower probability of identifying a genuine effect even when present in the population, increasing

the risk of failing to reject a false null hypothesis (Type II error). If the power analysis was accurate, the final sample of the study ($N = 99$) surpassed the recommended sample size for the primary analyses by only 11, a margin that may have somewhat tempered weaknesses inherent in the design but fell short of eliminating their effects.

Lastly, while the deliberate decision to exclusively recruit participants from the UK and U.S. aimed to concentrate on two similar occidental cultures and mitigate the impact of cultural variations in prejudice and dehumanization, this approach inherently precluded an examination of cross-cultural conceptualizations of prejudice and dominance. Consequently, caution is advised in extrapolating conclusions beyond the context occidental cultures. Additionally, recruiting participants exclusively from these two nations may have limited the sample diversity in terms of gender identity, sexual orientation, and ethnicity. Predominantly composed of heterosexual White men and women, the homogeneity of the sample restricted generalizability of findings and precluded analysis of how psychological inflexibility may manifest and function differently across diverse social groups.

7.5.2 Implications and Future Directions

Substantively, several key takeaways emerge from the study. The results clearly demonstrated psychological inflexibility is not a blanket predictor applicable to all manifestations of prejudice equally. While the relationships with sexism and racism conceptually align with theory, the lack of effects for homonegativity and dehumanization necessitate a more nuanced perspective. These discriminant findings suggest potentially meaningful differences in the nomological networks surrounding these constructs that warrant empirical attention.

Practically, the findings underscore the potential value of targeting psychological flexibility in prejudice reduction programs, with an important caveat. Fostering skills like mindfulness, acceptance, and values-congruent living may help counteract gender roles, racial stereotyping, anger reactivity and avoidance tendencies that underlie certain prejudices. However, the absence of broad effects highlights that flexibility-based interventions are not a panacea. Change also requires directly challenging the ideological content and historical roots of oppression.

This leads to a critical direction for future research. Further integration of psychological flexibility models with socio-cultural and feminist theories of prejudice is needed to guide effective, contextually sensitive interventions. Researchers should probe the contextual factors that strengthen or attenuate the relationships between facets of psychological inflexibility and specific prejudices. Studies blending implicit and explicit measures could provide deeper insight into these complex constructs. Longitudinal and experimental designs are crucial for elucidating causal pathways. Qualitative methods could capture nuanced perceptions linking flexibility processes, lived experiences, and prejudices.

In conclusion, this study made important empirical contributions to clarifying the relationships between inflexibility and prejudice. While psychological flexibility is not a blanket solution, fostering mindful acceptance and values-based skills may be a promising avenue in helping counteract the rigid thought patterns that perpetuate social biases. Yet further integration of socio-cultural contexts is critical for the development of a more profound understanding of when, how, and for whom flexibility proves instrumental in fostering diversity, equity, and inclusion. There remains vital work ahead, both empirically and socially, in the effort to build a world where all people can live freely and fully.

Chapter 8 – Study 4 Proposal

8.1 Chapter Overview

In this chapter, a formal proposal for a fourth empirical study is presented. This study aims to build upon the consistent relationships observed between psychological inflexibility and hostile sexism across the first three studies of this thesis. The proposed design transitions from a cross-sectional approach to a randomized controlled trial (RCT) that would employ a brief Acceptance and Commitment Therapy (ACT)-based mindfulness intervention to provide stronger causal evidence regarding psychological inflexibility as an underlying factor in the formation and maintenance of social biases.

The RCT will compare the effectiveness of the ACT intervention to a control condition, focusing on hostile sexism due to its robust association with psychological inflexibility and alignment with theoretical perspectives highlighting male tendencies towards anger and hostility when male privilege is challenged. The study will utilize a diverse international sample of men and women to ensure generalizability of the findings.

Several self-report measures will be employed, including the Ambivalent Sexism Inventory (ASI; Glick & Fiske, 1996) Belief in Sexism Shift scale (BSS; Zehnter et al., 2021) the Gender-specific System Justification scale (GSJ; Jost & Kay, 2005), the Acceptance and Action Questionnaire – Stigma (AAQ-S; Levin et al., 2014), and the Multidimensional Psychological Flexibility Inventory (MPFI; Rolffs et al., 2016). These measures will assess changes in sexist attitudes, psychological flexibility, and inflexibility with stigma.

A three-phase analysis strategy is proposed. The first phase will ensure data quality and completeness. The second phase will verify the effectiveness of the ACT intervention through repeated measures ANOVAs. The third phase will directly test the proposed

hypotheses, utilizing ANCOVAs, mediation analyses, and repeated measures ANOVAs with paired comparisons.

This study has the potential to significantly advance our understanding of the role of psychological flexibility in prejudice reduction, particularly in the context of hostile sexism. If successful, it will provide valuable insights for improving existing interventions based on social psychology as well as for the development and implementation of novel interventions to reduce social biases and promote more equitable and inclusive societies.

8.2 Introduction

Based on the consistent relationships observed between psychological inflexibility and hostile sexism across the first three studies, a fourth study was proposed to build upon these correlational findings through an experimental examination of a brief mindfulness intervention. This transition from a cross-sectional design to a randomized controlled trial would provide stronger causal evidence regarding psychological inflexibility as an underlying factor in the formation and maintenance of social biases. Specifically, Study 4 aimed to implement a brief Acceptance and Commitment Therapy (ACT)-based mindfulness exercised focused on increasing flexibility regarding sexist thoughts, compared to a control condition.

Several features of the correlational results justified an experimental approach focused on hostile sexism. Across the first three studies, psychological inflexibility demonstrated the most robust and consistent associations with hostile compared to benevolent sexism. This aligned with conceptual perspectives highlighting male tendencies towards anger and hostility when male privilege is challenged (Bosson & Vandello, 2011; Estruch et al., 2017). An experimental manipulation targeting flexibility regarding sexist

reactions extends this correlational evidence to test whether psychological inflexibility plays a functional, malleable role in hostile sexism.

Additionally, brief mindfulness and acceptance exercises grounded in ACT have shown promise in decreasing racial and ethnic biases in prior studies (Lillis & Hayes, 2007; Lueke & Gibson, 2015). Testing a similar intervention in the context of sexism could provide initial evidence for generalizability across prejudices. If effective, it would highlight the value of contextual behavioural science models in prejudice reduction applications.

Specific hypotheses were as follows:

H₁: Participants in the ACT-intervention would exhibit significantly greater reductions in sexist attitudes, as measured by the Belief in Sexism Shift scale (BSS; Zehnter et al., 2021) and the Gender-specific System Justification scale (GSJ; Jost & Kay, 2005) compared to those in the control condition.

H₂: Participants that complete the ACT-based intervention of the experimental condition would demonstrate increased psychological flexibility and reduced psychological inflexibility with stigmatizing thoughts, as measured by the Acceptance and Action Questionnaire (AAQ-S; Levin et al., 2014), relative to participants in the control group.

H₃: Participants that complete the ACT-based intervention of the experimental condition would demonstrate increased psychological flexibility and reduced psychological inflexibility, in general, as measured by the Multidimensional Psychological Flexibility Inventory (MPFI; Rolffs et al., 2016) compared to participants in the control group.

- H₄:** Reduction in sexism will be statistically mediated by improvement in psychological flexibility with stigmatizing thoughts.
- H₅:** Participants that complete the ACT-based intervention of the experimental condition would continue to demonstrate significant reductions in endorsement of sexist attitudes at 1-week and 1-month follow-ups, relative to the control condition.
- H₆:** Participants that complete the ACT-based intervention of the experimental condition would continue to demonstrate increased psychological flexibility and reduced psychological inflexibility with stigmatizing thoughts at 1-week and 1-month follow-ups, relative to the control condition.
- H₇:** Participants that complete the ACT-based intervention of the experimental condition would continue to demonstrate increased psychological flexibility and reduced psychological inflexibility, in general, at 1-week and 1-month follow-ups, relative to the control condition.
- H₈:** Significant improvements in specific components of psychological flexibility and inflexibility, as measured by the MPFI, would be observed among participants that complete the ACT-based intervention of the experimental condition relative to the control group from pre- to post-intervention.

8.3 Methods

8.3.1 *Participants*

A diverse international sample of men and women would be recruited from primarily English-speaking nations (e.g., Australia, Canada, South Africa, United States of America, United Kingdom). Those interested in participation would undergo a comprehensive battery of self-report measures as a pre-screening method to determine eligibility for subsequent phases of the study. Upon meeting the eligibility criteria, participants would be randomly assigned to either the control or experimental condition and scheduled for the corresponding virtual experimental session. This methodological approach would ensure a representative and diverse sample, contributing to the robustness and generalizability of the study's findings.

8.3.2 *Measures*

Demographic Questionnaire. Upon completion of the self-report measures of the pre-screening phase, a brief demographic survey will be provided. Sociodemographic items will include age, nationality, gender identity, sexual orientation, ethnicity, and a preferred name (real or fictitious) and contact information solely for the purposes of communication throughout the study. This information will be deleted from the dataset upon completion or discontinuation of participation at any point of the study.

AAQ-S. The Acceptance and Action Questionnaire – Stigma (AAQ-S; Levin et al., 2014) is a 21-item measure that directly assesses the psychological flexibility and inflexibility with stigmatizing thoughts about others. The AAQ-S has demonstrated superior predictive validity in relation to stigma-related variables compared to general measures of psychological flexibility and inflexibility.

MPFI. The Multidimensional Psychological Flexibility Inventory (MPFI), developed and validated by Rolffs et al. (2016), is grounded in the psychological flexibility model (Hayes et al., 1999, 2012). The MPFI offers targeted assessments of the 12 specific dimensions posited to underlie general psychological flexibility and inflexibility. Additionally, it provides higher-order composites that quantify overall flexibility and inflexibility. Rolffs and colleagues (2016) employed rigorous psychometric methods, including Item Response Theory, to simultaneously address the inherent interrelatedness of the psychological flexibility model components to mitigate multicollinearity and to discern the most precise scale items for each component.

Two versions of the MPFI will be utilized in this study. The full 60-item version will be deployed in the pre-screening phase, while the relatively concise 24-item version, also validated by Rolffs et al. (2016), will be employed in subsequent phases. The rationale behind this item reduction between phases is twofold: initially, to acquire a comprehensive assessment of psychological (in)flexibility among participants, and subsequently, to alleviate respondent burden and ideally reduce attrition rates. This strategic approach is aimed to enhance efficiency and participant engagement in the study.

Ambivalent Sexism. The Ambivalent Sexism Inventory (ASI; Glick & Fiske, 1996) is a 22-item self-report measure designed to assess contemporary sexism towards women. Developed by Glick and Fiske (1996), the ASI departs from traditional unidimensional approaches by recognizing the complex and often contradictory nature of sexist attitudes.

It measures two distinct, yet interrelated, dimensions of sexism: hostile sexism and benevolent sexism. Hostile sexism characterizes women as incompetent, competitive, and deserving of hostility or punishment. It reflects upon antagonism and prejudice towards

women. Benevolent sexism appears more favourable on the surface, portraying women as warm, nurturing, and deserving protection and care. However, it reinforces traditional gender roles and subtly justifies women's subordinate position in society.

Belief in Sexism Shift. The Belief in Sexism Shift (BSS) scale is a novel instrument designed to capture a contemporary manifestation of sexism targeting women, masked as a concern for men's well-being (see Appendix N). By insinuating that women have attained advancements through preferential treatment, this self-report measure delves into the nuanced belief that gender equality initiatives have unjustly favoured women to the detriment of men as well as the effort to undermine support for further progress.

Comprising 15 items, the BSS exhibits a robust, unidimensional structure encompassing three key aspects: (1) the male victimization narrative that asserts widespread discrimination against men; (2) beliefs in specific instances of unfair disadvantages faced by men due to gender equality efforts; (3) zero-sum perspective: the notion that advancements for women inevitably comes at the expense of men's rights. This comprehensive structure ensures a nuanced exploration of attitudes, contributing to a more detailed understanding of contemporary sexist beliefs.

System Justification. The Gender-Specific System Justification (GSJ) scale, developed by Jost and Kay (2005) is an eight-item self-report measure designed to quantify an individual's inclination to legitimize and defend existing gender norms and structures, even when they contribute to inequality (see Appendix O). Rooted in system justification theory, which posits that individuals identify with prevailing systems, even if they favour one group over another (Jost & Banaji, 1994; Jost & Kay, 2005). Firstly, it captures gender-specific tendencies, evaluating system justification in the context of the current gender

system, regardless of the individual's gender. Secondly, it considers both overt attempts to justify inequality and more subtle, paternalistic forms. Supported by demonstrated reliability and validity, the GSJ scale exhibits consistency, accuracy, and sensitivity to individual and situational variations in gender-specific system justification.

Reading Comprehension. At the outset of the second phase of the study, participants will read an article published in *Psychology Today* written by Saad (2018) that challenges the concept of 'toxic masculinity' from an evolutionary psychology perspective. Following the article, participants will complete a 10-item quiz (see Appendix Q) designed to assess their comprehension of the main arguments presented in the article. The questions cover key themes such as universal mating preferences, critiques of the term 'toxic masculinity', perspectives on the ideological critique of masculinity, Saad's (2018) miscomprehension of the concept of benevolent sexism, perceptions of 'toxic masculinity' in criminal behaviour, and the article's proposed alternative approach to understanding gender differences.

The purpose of the quiz is to evaluate participants' grasp of the article's arguments and the author's standpoint on the topic to optimally prime sexist attitudes. In cases where a participant scores below 75%, they will be sent to the article, kindly prompted to review the presented information, and subsequently complete a second version of the quiz, featuring similar questions. This iterative process is implemented to ensure a robust assessment of participants' comprehension and engagement with the content.

8.3.3 Procedure

Phase 1: Pre-Screening. In the initial phase, participants will complete a battery of measures to assess their psychological flexibility, generally and specific to stigma, as well as attitudes and beliefs regarding sexism against women. The measures will include the Ambivalent Sexism Inventory (ASI; Glick & Fiske, 1996), Belief in Sexism Shift scale (BSS; Zehnter et al., 2021), Gender-specific System Justification scale (GSJ; Jost & Kay, 2005), Acceptance and Action Questionnaire – Stigma (Levin et al., 2014), the Multidimensional Psychological Flexibility Inventory (MPFI; Rolffs et al., 2016), and the seven-item sociodemographic survey. This phase aims to establish a baseline understanding of participants' attitudes related to sexism and psychological flexibility.

Phase 2: Experimental Phase. After completing the pre-screening data collection and analysis, participants will be invited to the experimental phase and subsequent study phases. This invitation is extended if the individual participant's score on the Hostile Sexism subscale of the ASI (Glick & Fiske, 1996) exceeds the median score within the sample. Additionally, participants are eligible if their mean score surpasses the grand mean of the mean scores calculated for the Hostile Sexism subscale in Study 2 ($M = 1.93$, $SD = 1.21$) and Study 3 ($M = 2.49$, $SD = 1.09$) indicating a score of 2.21 or higher.

Upon participants' agreement to continue their participation, a five-digit number will be randomly assigned to each individual using a random number generator. Subsequently, these numbers will be inputted into a random group generator to determine whether participants are assigned to the experimental or control condition. Following this assignment, participants will be contacted and scheduled for their corresponding condition.

To ensure participants are well-prepared and to minimize any potential oversights, reminders will be sent via email or their preferred mode of communication at designated intervals (e.g., 2 weeks, 1 week, 3 days, and/or 24 hours prior to the scheduled day). On the scheduled day of the second phase, participants will receive a weblink to access a Psychology Today article containing sexist platitudes (Saad, 2018) aimed at priming sexist attitudes against women and belief in sexism shift. After this reading, participants will complete a comprehension quiz, assessing their understanding and engagement with the content. If a participant scores below 75% on the quiz, they will be prompted to review the article and respond to a second version of the quiz.

To mitigate unnecessary stress and frustration, participants, regardless of their performance on the second quiz, will be permitted to continue with the study. After completing the reading comprehension quiz, participants will repeat completion of the BSS (Zehnter et al., 2021), GSJ (Jost & Kay, 2005), AAQ-S (Levin et al., 2014), and the brief version of the MPFI (Rolffs et al., 2016). This process aims to gauge the immediate impact of the priming on participants' attitudes and beliefs.

Phase 3: Intervention and Control Conditions. Following the initial assessments, participants will then receive a weblink to a virtual meeting with the provider of the Acceptance and Commitment Therapy (ACT)-based mindfulness intervention or a lecture on women throughout history. The ACT-based intervention will focus on increasing psychological flexibility regarding sexist thoughts while the control group workshop will focus on the struggle for women's rights throughout history with no directed effort to practice mindfulness or enhance perspective-taking. The control condition is designed in this way to compare the ACT-based intervention to a perceived effort to reduce sexist

attitudes even without explicit intervention. An example transcript of an ACT-based intervention targeting sexism is presented in Appendix R.

Phase 4: Post-Intervention Assessments. Post-intervention effects on sexism and psychological flexibility will be assessed at three timepoints – immediately after the intervention, one week later, and one month later. At each timepoint, participants will repeat the BSS (Zehnter et al., 2021), GSJ (Jost & Kay, 2005), AAQ-S (Levin et al., 2014), and the condensed MPFI (Rolffs et al., 2016) to evaluate the sustained effects of the intervention over time.

8.3.4 Data Analysis Strategy

Analysis of the data will progress through three main phases to provide a robust examination of the study hypotheses. The first phase will focus on data preparation, including assessing completion rates, evaluating distributions for normality, identifying potential outliers, and transforming variables if necessary. Participants with substantial missing data (less than 80% completion rate) on the main variables of interest will be excluded to promote accuracy of the results.

The second phase will comprise manipulation checks using repeated measures ANOVAs to verify the effectiveness of the ACT intervention in changing the key outcomes relative to the control condition over time. Specifically, changes in sexism (measured by the BSS and GSJ) and psychological flexibility (measured by the MPFI and AAQ-S) from pre- to post-test will be compared between the ACT and control groups. Significant condition by time interactions would confirm that the intervention impacted outcomes as expected.

The third phase will directly assess the stated hypotheses employing various statistical analyses. Differential reductions in sexism, as posited in the first hypothesis, will be assessed through ANCOVAs, controlling for pre-intervention levels. The second hypothesis concerning improved psychological flexibility will be examined utilizing ANCOVA on post-intervention MPFI and AAQ-S scores, controlling for baseline levels. The third hypothesis, which proposes psychological flexibility as the mechanism of change; this mediational model will be evaluated using the PROCESS macro. This macro streamlines the estimation of indirect effects, tests their significance, and generates confidence intervals for mediation models.

Hypotheses 4 and 5, addressing the maintenance of benefits and targeting of inflexibility components, will be scrutinized using repeated measures ANOVAs and paired comparisons. Together, this three-phase analysis strategy will provide a methodologically rigorous investigation aligned to the research aims.

Power Analyses. A priori power analyses were conducted using G*Power version 3.1.9.6 (Faul et al., 2007) to ascertain the necessary sample sizes for achieving 80% power in detecting anticipated medium-sized effects with a significance level of $\alpha=0.05$ in the proposed analyses. For the planned repeated measures ANOVA to examine the pre- and post-test efficacy of the ACT condition relative to the control condition, the results indicated a sample size of 34 would be sufficient to achieve a medium effect ($\eta_p^2 = 0.06$; Cohen's $f=0.25$).

For the proposed ANCOVAs, to test differential effects on sexism and psychological flexibility, results of the power analysis recommended a sample size of 125 to detect a medium-sized effect ($\eta_p^2 = 0.06$; Cohen's $f=0.25$). According to the PROCESS

macro for R (v4.3.2), this sample size ($N = 125$) would achieve 87% power in detecting a medium effect in the mediation analysis of psychological flexibility as a mechanism of change in prejudice reduction.

Lastly, in conducting the power analysis for the repeated measures ANOVA to assess the maintenance of long-term outcomes, G*Power version 3.1.9.6 (Faul et al., 2007) was employed. The analysis, accounting for three post-experimental time points of measurement (immediate, one week, and one month), yielded a recommended sample size of 38, ensuring an 95% probability of detecting a medium effect. As such, the maximal sample size recommended among this series of power analyses ($N = 125$) will be rounded up to 130 for an even distribution of participants across groups. This adjustment is deemed sufficient to maintain at least 80% power across all proposed analyses even when pessimistically anticipating an attrition rate of 70% (Gustavson et al., 2012).

Chapter 9 – General Discussion

9.1 Restatement of Purpose

This program of research examined the relationships between psychological (in)flexibility, prejudicial attitudes, and dehumanization across three cross-sectional studies and proposed a fourth experimental study. Building on the understanding that inflexibility fosters a general tendency towards biased thinking and behaviour, regardless of the specific target group (Bäckstrom & Björklund, 2007; Levin et al., 2016), this research focused on exploring how this process manifests in the form of harmful intergroup attitudes like sexism, racism, homonegativity, and dehumanization as a potential outcome of inflexible responding.

The first study piloted measures and methods to explore correlations between various social biases and psychological (in)flexibility. The second study, which refined the design and used crowdsourced data, focused on how psychological inflexibility may maintain prejudices while flexibility could mitigate them. The third study incorporated Right-wing Authoritarianism (RWA; Altmeyer, 1981) and Social Dominance Orientation (SDO; Pratto et al., 1994; Sidanius & Pratto, 1999) as established predictors of prejudice and evaluated if psychological inflexibility explained additional variance within each measure of prejudice and dehumanization. Lastly, Study 4 was proposed to utilize a randomized control trial (RCT) to assess the efficacy of an Acceptance and Commitment Therapy (ACT; Hayes et al., 1999, 2012)-based mindfulness intervention in the reduction of sexism with psychological flexibility as a potential mechanism of change.

This research is grounded in the psychological flexibility model (Hayes et al., 1999, 2012), which refers to awareness of the present moment with openness to internal experiences and values-based action. Inflexibility conversely involves experiential avoidance, fusion with private experiences (e.g., thoughts and sensations), and rigid behavioural patterns. Previously, flexibility has been associated with reduced prejudice while inflexibility linked to generalized prejudice (Levin et al., 2016). This research aimed to address this gap through quantitative self-report assessments using validated measures of flexibility, inflexibility, sexism, racism, homonegativity, dehumanization, RWA, and SDO.

The incremental progression of studies responded to insights and limitations of earlier investigations to refine methodology. The overarching objective of this thesis was to elucidate connections of psychological flexibility and inflexibility to harmful intergroup biases and examine the specific behavioural processes that underlie these connections. This knowledge could inform efforts to foster equity. If inflexibility is robustly linked to various prejudices, acceptance and mindfulness-based interventions targeting it could mitigate social biases or promote support for anti-discriminatory efforts. The cross-sectional studies and proposed experiment tests this premise. By scrutinizing how flexibility principles shape perspectives toward marginalized groups, this research endeavoured to advance theoretical understanding in the effort to nurture societal inclusion.

9.1.1 50 Shades of Bias: Exposing Prejudice Through the Flexibility Lens

The work of Levin et al. (2016) established a pivotal connection between prejudice and psychological inflexibility, thereby opening a promising avenue for further research in intergroup relations. This program of research built upon that foundation and delved deeper into the intricate relationships between how we relate to our internal experiences

(flexibility vs. inflexibility) and our attitudes towards different groups of people. However, some research has cautioned against blanket application of ACT-based approaches, as unexpected increases in prejudice and burnout have been observed in certain contexts (Clarke et al., 2015; Kenny & Bizumic, 2016; Luoma et al., 2012). Yet Masuda et al. (2007) suggested that the effectiveness of stigma reduction interventions may depend on the participants' psychological characteristics particularly regarding specific facets within the framework of the psychological flexibility model. Recognizing these concerns, this research utilized the psychological flexibility model, rooted in ACT, but focused on specific behavioural mechanisms and potential moderators that underlie the dynamic multifaceted relationship between flexibility and prejudice.

Levin and colleagues (2016) highlighted the potential of the Acceptance and Action Questionnaire – Stigma (AAQ-S; Levin et al., 2014) to predict general prejudice. This research was expanded upon by Davis et al. (2021), which examined the role of psychological flexibility in the active anti-discriminatory behaviours (e.g., anti-racism, anti-sexism) rather than focus on the targeted reduction of prejudice. This focus on the promotion of tangible actions provided valuable insights into the broader understanding of the complex interplay between attitudes, behaviours, and systemic factors in the perpetuation of discrimination and highlighted the need for interventions that go beyond addressing individual attitudes to actively promoting social justice and equity.

In alignment with this broader vision of a more equitable and inclusive society (Davis et al., 2021; Levin et al., 2016), this thesis diverges at a critical juncture – the AAQ-S (Levin et al., 2014). While valuable in measuring stigma-related inflexibility, the AAQ-S is focused on the degree to which individuals engage in experiential avoidance and cognitive

fusion regarding prejudiced thoughts and feelings. This emphasis presents a broad picture of the relationship with prejudice when relying solely on a composite inflexibility score. The presented research aimed to go beyond a holistic view. It examined specific components of flexibility and inflexibility, such as acceptance and values-behaviour congruency, to investigate their nuanced relationships with specific manifestations of prejudice, including sexism, racism, and homonegativity. This granular approach could reveal subtle variations in how different aspects of flexibility and inflexibility impact specific social biases.

As a metaphorical representation, consider prejudice as a prism that refracts the impact of flexibility and inflexibility into diverse manifestations. For example, as Lillis and Hayes (2007) suggested, cognitive fusion may intensify reliance on sexist stereotypes and influence biased interpretations of women's behaviours. In contrast, cognitive defusion could potentially dismantle these rigid cognitive schemas and foster more equitable judgments. Similarly, rigid adherence to values based in discrimination, such as those aligned with dominance-based ideologies like social dominance and authoritarianism, could further entrench prejudice and justify discrimination against marginalized groups.

Likewise, experiential avoidance may contribute to the amplification of racist anxieties or intergroup anxiety and drive prejudiced actions as a means to alleviate internal discomfort. Yet, the countervailing process of acceptance presents an alternative path, encouraging open exploration of these anxieties to foster non-judgmental engagement with internal states. This enables individuals to decouple from the automatic pull of prejudices and act in accordance with their values, laying the groundwork for more equitable intergroup interactions. This conceptualization offers a pragmatic lens through which to

examine the intricate dynamics of the relationships between different prejudices with psychological flexibility and inflexibility.

Beyond mere correlation, this research aimed to shed light on the possible causal processes underpinning the link between flexibility and prejudice. The incorporation of established predictors of prejudice like RWA and SDO in this research aligned with Lillis and Hayes (2007) and Masuda et al. (2007) emphasis on the importance of understanding how external factors and internal processes interact to influence intergroup attitudes and behaviours. The examination of how specific facets of inflexibility interacted with these ideologies to impact specific forms of prejudice. For instance, deeper examination of the finding that disconnect from the present moment and personal values interacted with SDO to explain hostile sexism could shed light on how individuals with high SDO scores navigate interactions with women. This comprehensive approach holds the potential to contribute to a deeper understanding of the behavioural processes at play in intergroup relations, inform strategies for fostering more inclusive and equitable societies, and advance the discourse on prejudice.

9.2 Integration of Findings

The three cross-sectional studies aimed to investigate the relationships between psychological (in)flexibility and various manifestations of prejudice, including sexism, racism, homonegativity, and dehumanization. Leveraging established measures of prejudice and psychological flexibility, the research explored whether fostering skills like mindfulness, acceptance, cognitive defusion, and values-congruent behaviour could potentially counteract discriminatory attitudes and behaviours.

Study 1 offered an initial examination of these associations within a predominantly white, well-educated, politically progressive sample. Results showed limited support for hypothesized correlations between psychological inflexibility and prejudice measures. However, acceptance negatively correlated with hostile sexism, suggesting potential utility in targeting this specific flexibility process. Additionally, experiential avoidance and lack of present moment awareness selectively correlated with the dehumanization of Muslims but not the White British people utilized as a baseline group relative to much of the study sample. This indicated potential differences depending on target group. Surprisingly, psychological flexibility also demonstrated limited relationships with prejudice measures, except for acceptance and cognitive defusion negatively correlating with Muslim dehumanization. Overall, Study 1 highlighted consistencies with the theoretical flexibility model but also raised questions about its boundaries and generalizability.

Building on these preliminary findings, Study 2 incorporated a larger, more diverse international sample to re-examine the prejudice-flexibility links. Here, psychological inflexibility demonstrated more consistent correlations with sexism, racism, and homonegativity as predicted. However, experiential avoidance did not correlate with most measures, suggesting it may be a distinct facet of inflexibility. Additionally, across prejudices, lack of contact with one's values consistently predicted higher prejudice, highlighting values-behaviour discrepancies. Furthermore, men and women exhibited notable differences, with women demonstrating stronger inflexibility-prejudice links. Regarding flexibility, components like acceptance, defusion, and values showed occasional negative relationships with sexism and dehumanization, but overall did not demonstrate the expected consistent pattern.

Finally, Study 3 extended this investigation by accounting for right-wing authoritarianism and social dominance orientation as established prejudice predictors. Here, inflexibility positively correlated with hostile sexism and racism even after controlling for those factors and demographics. Lack of contact with values and present moment awareness also independently predicted hostile sexism. However, inflexibility did not correlate with homonegativity or dehumanization. Overall, the findings provided mixed support for the utility of psychological flexibility in addressing varied prejudices.

Examination of patterns across the studies yielded several key takeaways. First, support for the inflexibility-prejudice link was inconsistent across targets and samples. While evidence emerged for relationships with hostile sexism and racism, suggesting connections to rigid gender roles and racial stereotyping, flexibility did not uniformly relate to homonegativity and dehumanization. This highlights the importance of target specificity and contextual influences. Perhaps specific forms of prejudice rely more heavily on inflexible thinking. To systematically dissect this quandary, future research could examine how cultural context moderates the effect and consider broader implications for other negative social phenomena linked to inflexibility.

Second, specific facets of inflexibility like lack of values contact, cognitive fusion, and present moment awareness exhibited the most robust predictive effects, underscoring the importance of targeting these skills. Disentangling the unique contributions of distinct facets of inflexibility proved insightful. Lack of values contact, cognitive fusion, and present moment awareness emerged as robust predictors of prejudice, aligning with the model's emphasis on these processes as primary targets for intervention. This suggests that

interventions aimed at fostering clarity of values, defusion from rigid beliefs, and mindful awareness of the present moment might hold promise for prejudice reduction.

Third, relationships between inflexibility and prejudice often differed across men and women, emphasizing the importance of considering gender socialization processes in future research. This aligns with previous research on gender differences in emotion regulation and cognitive biases, suggesting that flexibility interventions might need to be tailored to address gender-specific patterns of thinking and behaviour.

Fourth, psychological flexibility overall demonstrated limited ability to counteract varied prejudices, contradictory to hypotheses. Acceptance, present moment awareness and values-based skills occasionally negatively related to specific biases, but effects were selective, not universal. Fifth, established socio-ideological predictors like RWA and SDO displayed more consistent links to prejudice measures, re-affirming their explanatory power. Finally, samples varied substantially in diversity and prejudice level across studies. The predominantly white, educated female samples potentially restricted variability in scores and generalizability of the findings.

In summary, these cross-sectional investigations highlighted the potential promise but also boundaries of flexibility-based skills in addressing complex societal prejudices. While psychological inflexibility related to certain biases, flexibility failed to demonstrate the expected broader effects. Mixed findings illuminate the need to contextualize flexibility models within socio-cultural theories of prejudice. Longitudinal and experimental research, such as the proposed Study 4, is essential to establish causal mechanisms and clarify the directionality of effects. Furthermore, investigating potential interactions between flexibility-based interventions and explicit prejudice reduction approaches could yield

valuable insights for promoting diversity, equity, and social justice. Research should also examine the influence of demographic factors, such as cultural background and socioeconomic status, on the effectiveness of flexibility interventions.

Overall, fostering mindful acceptance and values congruence shows promise but requires integration with explicit prejudice reduction approaches to promote diversity, equity, and social justice. There remains vital work ahead, both empirically and socially, to unravel the intricate prejudices woven through society and nurture compassion and humanity in all people.

9.3 Judging a Book by its Cover: The Limitations of Self-Reported Attitudes

The three cross-sectional studies deployed similar methodologies, relying predominantly on online surveys to examine correlations between psychological (in)flexibility and varied manifestations of prejudice.

Study 1 employed a convenience sample of 95 participants recruited through social media to investigate the relationships between psychological flexibility, prejudice, and dehumanization. Participants completed self-report measures of psychological flexibility and inflexibility along with their respective core processes (MPFI; Rolffs et al., 2016), ambivalent sexism (ASI; Glick & Fiske, 1996), Bayesian racism (Uhlmann et al., 2010), homophobia (ATLG; Herek, 1988), political bias (UMB; Latner et al., 2008), and dehumanization through the denial of qualities associated with human nature and human uniqueness (Haslam et al., 2005). This cross-sectional design employed correlational analyses to examine the hypothesized relationships.

Study 2 replicated the methodology of Study 1 with key modifications: a larger, geographically diverse sample of 220 adults recruited online through Amazon Mechanical

Turk and Prolific Academic, a shortened demographics survey, and exclusion of political bias and quality-of-life measures. The measures included the MPFI, stigma-related psychological inflexibility (AAQ-S; Levin et al., 2014), ASI, Bayesian racism, homonegativity (MHS; Morrison & Morrison, 2003), and the dehumanization of Muslims using the dual model of dehumanization (Haslam et al., 2005; Haslam, 2006). Data analysis mirrored the first study with Pearson correlations with the addition of hierarchical regression for targeted analyses which examined the links between psychological flexibility and inflexibility facets with specific prejudices and the dehumanization of Muslims.

Study 3 replicated Study 2 with key refinements, a smaller, geographically constrained sample of 99 adults recruited through Prolific Academic, removal of psychological flexibility subscales due to weak prior correlations with prejudice, and inclusion of SDO (Pratto et al., 1994) and RWA (Zakrisson, 2005) measures to control for their influence on prejudice and dehumanization. Participants completed self-report measures of prejudice (sexism, racism, homonegativity), dehumanization (Muslims), psychological inflexibility, and socio-political factors (SDO, RWA). Data analysis strategy mirrored that of the second study with Pearson correlations, hierarchical regressions, and targeted analyses examining specific hypotheses concerning psychological inflexibility, prejudice and dehumanization, and the moderating influence of SDO and RWA.

9.3.1 Sampling Biases

While these methodologies offered valuable preliminary insights, it is important to acknowledge several limitations that have constrained the validity and generalizability of the findings. First, recruitment strategy employed in each study that utilized social media and crowdsourcing websites such as MTurk and Prolific Academic,

relied on non-probability sampling. This approach introduced the risk of overrepresentation of individuals attracted to these platforms and the concurrent underrepresentation of individuals without internet access and those from low-income communities. These communities, already disadvantaged by limited access to computers, have been adversely affected in various domains including employment, education, health, social services, socio-economic development, and have likely been increasingly underrepresented in psychological research (Molala & Makhubele, 2021; Sanders & Scanlon, 2021; Watson et al., 2022).

Although the deliberate avoidance of exclusively recruiting from a participant pool of university students was aimed at capturing a more diverse general population, it is crucial to acknowledge that crowdsourcing platforms tend to attract specific demographics, often skewed towards generally healthy, technologically active, and well-educated older adults (Peer et al., 2021). This could introduce selection bias, distort the representativeness of the sample, and lead to findings that generalize poorly to the broader population.

Potentially due to the platform bias, the studies' samples exhibited a notable lack of diversity and a limited range of prejudice levels. The lack of diversity in race, ethnicity, and gender curtailed the applicability of the findings to other demographic groups, potentially overlooking important variations in prejudice and psychological flexibility across different social identities. Furthermore, the studies may have inadvertently recruited participants with a relatively narrow range of prejudice levels, possibly due to the crowdsourcing platforms and self-selection tendencies inherent in online research. This limited variability likely increased the difficulty for detection of statistically significant correlations and weakened the analytical power to identify subtle effects.

To address these limitations, future investigation should prioritize employing more inclusive recruitment strategies to ensure a diverse and representative sample that encompasses a broad spectrum of social identities. Researchers should consider supplementing online platforms with methods that engage populations less accessible through digital means, such as community-based sampling or outreach initiatives. This deliberate diversification of recruitment methods has the potential to enhance inclusivity and breadth of representation among study participants.

Furthermore, a comprehensive analysis of the range of prejudice levels within the sample, along with a meticulous consideration of potential self-selection biases, is essential for a more accurate interpretation of the findings. This critical scrutiny is vital for advancing the understanding of prejudice and psychological flexibility and refining the methodology for subsequent research endeavours.

9.3.2 Self-Report Biases

The inherent limitations of self-report measures in prejudice research pose a significant challenge to accurately assessing the prevalence and drivers of bias. One key concern lies in the potential for social desirability bias, where participants distort their responses to appear less prejudiced, driven by a desire to avoid social disapproval. This is particularly pertinent in studies relying solely on explicit queries about prejudiced attitudes, where the explicit nature of the measures presents a clear opportunity for participants to consciously (or unconsciously) manipulate their responses to align with social desirable norms. Failure to address this bias could lead to an underestimation of the true prevalence of prejudice, hindering our understanding of its underlying mechanisms and perpetuating a distorted picture of intergroup relations.

Furthermore, self-enhancement tendencies can further confound the interpretation of self-reported prejudice. Individuals often overestimate their own positive qualities, including their level of tolerance and acceptance towards outgroups, in an effort to maintain a positive self-image. This tendency can manifest in research as participants reporting lower levels of prejudice than they actually hold, potentially obscuring the true extent of biased attitudes. Researchers must therefore be vigilant in recognizing the potential influence of self-enhancement on self-report data, and consider employing complementary measures, such as implicit bias assessments or behavioural observations, to cross-validate their findings and achieve a more nuanced understanding of prejudice.

However, even complementary measures like implicit bias tests have limitations. While they potentially delve deeper than self-report, they too may fall short of fully capturing the complexities of prejudice. A crucial limitation lies in the potential disconnect between unconscious biases and conscious awareness. Participants, due to lack of introspection, denial, or the very nature of implicit processes, may lack full understanding of how their biases manifest in subtle discriminatory behaviours. This discrepancy poses a significant challenge for researchers relying solely on self-report or implicit assessments. To gain a comprehensive picture, they must explore additional methodologies capable of capturing these non-conscious influences on behaviour. Such methodologies may include observational studies, experimental designs incorporating behavioural measures or even psychophysiological measures that tap into subconscious emotional responses.

The wording of questions and overall study design can influence responses, as evidenced by concerns expressed by right-wing participants about the research framing. This suggests potential bias in their responses, either due to defensiveness or strategic

alignment with perceived expectations. The framing of research and question wording can inadvertently influence responses, particularly among participants with pre-existing sensitivities or biases. Researchers should carefully design studies, use neutral language, and pilot measures with diverse groups to mitigate framing effects and ensure transparent research goals.

However, delving deeper into implicit influences presents its own challenges. The very wording of questions and the overall study design could inadvertently influence responses, as evidenced by concerns expressed by politically conservative participants about the research framing in the first study. This suggested potential bias in their responses, stemming from defensiveness or strategic alignment with perceived expectations.

The language used in research, from framing questions to designing tasks, can inadvertently influence responses, particularly among participants with pre-existing sensitivities or biases. Researchers must therefore tread carefully. Studies should be meticulously crafted and employ neutral language and piloting measures with diverse groups. These steps would serve to mitigate framing effects and ensure transparency in research goals. By employing a multifaceted approach that acknowledges the limitations of each method, researchers can gain a more comprehensive understanding of the complex interplay between prejudice, implicit processes, and behaviour.

Yet even the most carefully crafted research design may encounter limitations that potentially impede generalizability. This is particularly evident with research involving sensitive topics, such as prejudice. In this case, politically conservative participants may have felt alienated, accused, or discouraged from participating, introducing potential bias into the sample. Group identification and concerns about political correctness could further

dissuade individuals from accurately reporting prejudiced attitudes. This can lead to overestimating or underestimating prejudice in different contexts.

Beyond this potential for biased samples, observed correlations between self-reported prejudice and other variables do not necessarily imply causation. Unmeasured factors may be the true drivers of both prejudice and the seemingly correlated variables. Researchers must therefore be cautious in inferring causal relationships solely based on self-reported data and actively consider alternative explanations for observed associations. Acknowledging the limitations inherent in correlational analyses is crucial for a nuanced and accurate interpretation of study findings.

Although the cross-sectional design employed in many studies of prejudice offers valuable insights, it only provides a snapshot of relationships at a single point in time. As such the design is limited in its ability to capture the dynamic nature of prejudice and its changes over time. Causal relationships between psychological inflexibility and prejudice cannot be established with certainty using this design. Researchers should consider incorporating longitudinal designs to explore the temporal aspects of prejudice and identify potential causal mechanisms.

To overcome the limitations of self-reported measures, researchers should consider a multi-method approach. The combination of self-report measures with behavioural tasks, psychophysiological measures (e.g., cortisol), and observational assessments of real-world intergroup interactions could allow for a more comprehensive and nuanced understanding of prejudice. The incorporation of diverse methodologies would allow for a more robust examination of prejudice with the potential to capture not only the overt self-reported attitudes, but also unconscious biases that may operate outside of awareness and exert a

significant influence on behaviour, overall allowing for a more comprehensive and nuanced understanding of prejudice.

9.3.3 Data Quality

Self-report biases, an endemic concern in crowdsourced research, presented a formidable challenge to internal validity and data quality. This issue is particularly acute when monetary incentives are implemented, as the introduction of extrinsic rewards could trigger satisficing behaviour. In this scenario, participants prioritize expeditious completion over accurate and thoughtful responses, potentially leading to careless and random responses or ‘straight lining’ – consistent selection of the same option for all items. These behaviours significantly compromise data quality.

Additionally, the lack of control over participants' environments on crowdsourcing platforms introduces external influences that could significantly threaten internal validity. Participants may engage in collaborative responding, formulating answers together or consulting external resources. This behaviour bypasses the intended individual self-report and compromises the integrity of the data. Technical issues, such as glitches or errors on platforms like Amazon Mechanical Turk or Prolific Academic, can further compound these challenges, emphasizing the need for robust data quality control measures to uphold the integrity of research outcomes.

However, an additional layer of complexity was introduced by the absence of effective safeguards within crowdsourcing platforms against automated programs, commonly referred to as ‘bots’ (e.g., Moss et al., 2021; Storozuk et al., 2020). The potential infiltration of fraudulent responses by these ‘bots’ could not be dismissed. This prospect

not only undermines the quality and trustworthiness of the collected data but also complicates interpretations of the subsequent analyses.

Engagement and fatigue represented critical factors in understanding the limitations of self-report biases in crowdsourcing research. While attempts to counter participant fatigue, such as shortening scales or reducing question complexity, are well-intentioned, they may inadvertently compromise data quality. Abbreviated measures and simplified questions may fail to capture the nuances of psychological constructs, resulting in less precise and insightful data. The delicate balance between survey length and engagement underscores the challenge researchers face in maintaining participant interest without sacrificing the depth necessary for robust data collection.

In navigating these complexities, researchers must judiciously weigh the advantages and drawbacks of crowdsourcing against alternative methods, mindful of the unique considerations posed by self-report biases in this context.

9.3.4 Psychometric Limitations

Positive skewness manifested as a prominent issue in the examination of prejudice measures within the study. This phenomenon, where many participants scored lower on prejudice measures, disrupted the anticipated normal distribution of the data. Such skewness, particularly in the context of sexism, racism, and homonegativity measures, indicated that a substantial proportion of the sample exhibited low levels of prejudice. This skewness could significantly impact the reliability of the data and potentially inflated correlations between variables. The consequence of this positive skew is a potential misrepresentation of the strength of relationships between prejudice and other variables.

Further compounding this issue is the limited variability across the samples. The clustering of participant scores suggested reduced individual differences in prejudice levels. This diminished variability weakened the statistical power of analyses and impaired the ability to detect genuine relationships between prejudice and other variables. The consequence is an increased likelihood of overlooking meaningful findings, as the restricted variability may obscure true associations.

The combined effects of positive skew and limited variability contribute to a phenomenon known as range restriction. This indicates that the entire spectrum of possible prejudice scores is not adequately represented in the data. This limitation could mask relationships between prejudice and other variables that might exist if the full range of prejudice were captured. In practical terms, this means that the study may fail to detect nuanced associations, especially those characterized by nonlinear or curvilinear patterns. The consequence of range restriction is a potential underestimation of the true strength and nature of the relationships between prejudice and other variables, leading to a less comprehensive understanding of the phenomenon.

9.3.5 Confounding Variables

Research on prejudice and discrimination often faces the challenge of oversimplification. Failing to account for intersectionality and the nuanced interplay of various identities, such as race, gender, and sexual orientation could lead to a unidimensional understanding of individual experiences. For instance, the unique challenges faced by LGBTQ+ women of colour cannot be adequately addressed if research overlooks the intersectionality of these identities. This limitation is further compounded by the inherent challenges of self-report biases, where participants may struggle to articulate the

nuances of intersecting identities accurately. Thus, studies relying solely on self-reported data may inadvertently miss the intricate dynamics that shape an individual's encounters with prejudice and discrimination.

Beyond the limitations of self-report, diversity exposure is another critical contextual factor. Prejudice and flexibility are influenced not only by psychological factors but also by prior experiences with diverse groups. Research that neglects to capture participants' exposure to diversity risks failing to disentangle the effects of internal factors from the impact of these real-world experiences. A person's level of prejudice or flexibility may be significantly influenced by their interactions with individuals from various backgrounds, and neglecting this information could undermine the validity and generalizability of self-reported attitudes.

Further complications in the study of prejudice and dehumanization are found among the influences of cultural norms. Societal norms regarding intergroup relations and prejudice vary across cultures, subtly shaping individual attitudes and behaviours. Failure to account for these cultural nuances can hinder the generalizability of research findings and compromise the understanding of specific contextual factors shaping participants' responses. Self-report measures, in such cases, may inadvertently reflect socially desirable responses influenced by prevailing cultural norms, masking genuine attitudes and behaviours related to prejudice and flexibility.

Finally, the limitations of self-report biases are further compounded by the impact of cognitive abilities like reasoning and critical thinking. These psychological factors play a crucial role in influencing how individuals process information and form attitudes. Participants with varying cognitive abilities may interpret and respond to survey questions

differently, potentially misrepresenting their true attitudes and compromising the reliability of self-report data. For example, individuals with lower cognitive abilities might struggle to accurately articulate their complex views on prejudice, leading to inaccurate or incomplete data. Therefore, incorporation of measures of cognitive abilities could enhance the validity of self-report data and provide a more complete picture of the cognitive landscape underlying prejudice and its potential for change.

9.4 The Dilemma of Replicating the Mind

The three studies presented in this thesis offered valuable insights into the complex relationships between prejudice and the facets of psychological inflexibility. However, examining the replicability and generalizability of research is an essential component of the scientific process. For the current investigations, several factors warrant consideration regarding the replicability and external validity of the findings.

The very foundation of scientific knowledge rests on the ability to replicate findings. Yet, the field of behavioural science, particularly online surveys that assess complex psychological constructs, faces a significant challenge in achieving this fundamental element. While meticulous attention to protocols is paramount for the reproduction of findings, even the slightest of unintentional variations across research contexts can significantly impact results and cast doubt on the robustness of findings.

As highlighted by the Open Science Collaboration (OSC), the replication of findings in psychology has proven surprisingly challenging. In their large-scale attempt to reproduce the findings of 100 published psychological studies, the OSC (2015) revealed a stark reality in which only 36% of replications yielded statistically significant results, and the replication effects were approximately half the size of the original studies. This highlighted the

potential for inflated initial effect sizes, attributable to factors such as low-power designs and publication bias, where statistically significant findings are more likely to be published than non-significant ones. This notable discrepancy signified a concerning lack of replicability in psychology and prompted a closer examination of reproducibility and generalizability of the presented findings.

As discussed previously, the reliance on online self-report measures, while convenient and efficient, likely introduced biases due to self-selection, sampling limitations, and potential response distortions. While the observed relationships between specific facets of inflexibility and certain forms of prejudices were intriguing, the lack of consistent findings across all prejudices raised concerns about generalizability. Furthermore, the specific protocols and procedures employed, even if meticulously documented, might not perfectly translate to different laboratories, cultural contexts, or participant populations. This variability can lead to inconsistent findings, limit the generalizability of the results to broader populations, and raised concerns about the internal validity of the initial findings and their susceptibility to false positives.

Additionally, the limited diversity of the sampled populations in the present studies (predominantly white, heterosexual, cisgender female) also raised questions about the generalizability of the findings. Even if replications within similar samples were successful, these results might not translate to more diverse populations with different cultural contexts and socioeconomic backgrounds. This external validity limitation restricts the applicability of the findings to broader societal challenges of prejudice reduction.

To address these replication and generalizability challenges encountered in these studies on the relationship between psychological flexibility and prejudice would require a comprehensive and strategic approach. To enhance the reliability of findings, researchers should prioritize improved methodological rigor, pre-registration of protocols on Open Science Framework (<https://osf.io>), recruitment of larger and more diverse samples, and transparent data analysis practices. Open science practices, such as increased data sharing and collaborative replication efforts, have been embraced by the scientific community to bolster transparency and contribute to the cumulative knowledge base.

Moreover, recognition of the observed inconsistencies across the presented studies underscored the necessity for theoretical refinement in the conceptualization of psychological flexibility, accounting for nuanced contextual factors and individual differences in prejudice expression. Additionally, a deliberate focus on generalizability through replication of findings in diverse populations and cultural contexts should be emphasized to ensure the applicability of research outcomes in real-world settings. Acknowledgment of the limitations of the conducted research and the embracement of these strategies, would undoubtedly enhance the potential for future investigations to cultivate a more robust and widely applicable understanding of the intricate interplay between psychological flexibility and prejudice. This critical line of inquiry would not only advance academic knowledge but also holds significant promise for informing interventions and fostering inclusivity within our evolving societal landscape.

9.5 Consistent Inconsistencies

Across the three presented studies, several inconsistencies emerged regarding the relationships between facets of psychological flexibility, psychological inflexibility, and each of the various manifestations of prejudice. These mixed results highlighted the nuanced nature of these relationships and the need to consider contextual factors that may strengthen or weaken intervention effects.

The data revealed noticeable discrepancies in the links between the components of psychological flexibility and ambivalent sexism. While Study 2 found some significant correlations, Studies 1 and 3 showed a general lack of relationships, particularly for women. Potential explanation included differences in sample characteristics, average sexism levels, related gender beliefs, or limitations in statistical power that prevented some correlations from reaching significance.

Similarly, an inconsistency was evident for racism across each of the studies. Study 2 indicated several associations that were not present in Study 1 and disappeared in Study 3 after accounting for authoritarianism and social dominance orientation. This points either to variability in racist attitudes between samples or suppression effects that may have masked relationships found in less comprehensive analyses.

These inconsistencies illustrated the importance of examining related ideological constructs that may either facilitate or inhibit psychological flexibility's links to racism and sexism. These factors could include susceptibilities to social pressure, essentialism – convictions regarding the immutable characteristics of social categories, the belief in a just world where individuals generally receive their due in life, as well as the capacity for perspective-taking.

Regarding homonegativity, Study 2 revealed reduced anti-LGBTQ+ prejudice among heterosexual women higher in flexibility, while Studies 1 and 3 showed no significant effects. Although Study 1 used a different, more explicit questionnaire for these attitudes, the lack of significant correlations in Study 3 alludes to the role of differences between samples. The specificity of findings to women also indicated potential gender differences in prejudice manifestations that may be obscured in aggregated data. This highlighted the need to consider intersecting social identities that may alter the impact of psychological flexibility.

Lastly, the denial of human uniqueness and nature showed significant negative correlations in Studies 1 and 2, but no relationships in Study 3. While initially promising, authoritarian views assessed only in Study 3 may have suppressed effects. Issues with statistical power and sample variability may have also contributed to these inconsistencies in dehumanization findings. This underlies the importance of examining relevant complementary constructs that could alter connections in some contexts.

Overall, while initial research suggested a link between psychological flexibility and prejudice reduction, this connection proved nuanced and inconsistent across studies. This lack of uniformity indicated that even within the seemingly homogenous cultural context of occidental nations, contextual factors like social norms, gender composition, average prejudice levels, and related ideological beliefs likely moderated the effects. Single studies in isolation could be misleading; aggregating findings, even contradictory ones, provide a clearer picture of how context shapes relationships.

Though imperfect, these results collectively revealed valuable insights to guide future research and intervention development. With attention to sample specifics, statistical power, and potential suppressors, more consistent impacts may emerge that inform promoting diversity and social justice across varying situations.

In complex social environments, no single process will have universal impacts unaffected by real-world contextual factors. Embracing inconsistency by comparing findings across methodologically distinct studies with diverse samples reveals meaningful insights into how contextual moderators shape outcomes. While the promise of flexibility components remains, significant work lies ahead to untangle the intricate web of contextual factors that might strengthen or attenuate those impacts on prejudice and dehumanization.

9.6 Recommendations for the Proposed Experimental Study

The proposed Study 4 with randomized controlled trials builds upon the previous cross-sectional findings by addressing key gaps and leveraging insights to systematically investigate causal relationships between psychological inflexibility and hostile sexism.

The consistent links between psychological inflexibility and hostile sexism indicated psychological rigidity may play a functional role in gender-related anger and hostility. However, correlations alone cannot confirm causality and directionality. The proposed brief ACT-based intervention targeting sexist reactions extends this evidence by testing whether inflexibility is a malleable factor that influences sexist attitudes. Demonstrating experimental effects would confirm psychological inflexibility as an underlying mechanism and a viable target for change.

Additionally, the selective inflexibility relationships found highlight the need to isolate specific prejudices, rather than assuming blanket effects. This proposed study focuses specifically on hostile sexism, avoiding the ambiguities of benevolent sexism. The gender-specific hypotheses also allow testing differential effects for men and women.

Methodologically, the pre-screening recruitment approach will ensure obtaining a sample with adequate variability in sexism for intervention effects. The use of established and validated measures of sexism and psychological (in)flexibility promotes construct validity. Controlling for pre-test scores and utilizing multiple post-tests strengthens causal inferences and examines sustainability of benefits. Mediation analysis will also directly test psychological flexibility as the mechanism of change.

However, there are also several potential challenges to the successful implementation of this experimental study that warrant consideration. These challenges include participant attrition across the multi-phase design, alongside the risk of social desirability biases compromising the accurate reporting of sexist attitudes. Additionally, while the virtual modality of conducting sessions may broaden participant diversity on an international scale, it simultaneously introduces the drawback of underrepresentation of individuals with limited access to technology or those from low-income populations. Furthermore, the absence of a controlled experimental environment introduces the potential for diminished participant engagement and susceptibility to environmental distractions.

To address these concerns, a more localized, in-person implementation option should be explored, providing access to either computer facilities or paper-and-pencil questionnaire packets, with an in-person experimental or control session. To counteract

attrition and maintain participant engagement, a multi-pronged strategy will be implemented. This strategy includes reminder contacts at multiple time points, careful framing of the research as a significant contribution to society and the scientific community, and other reinforcing elements such as incrementally increased compensation for each phase of participation.

In conclusion, Study 4 offers a robust platform to experimentally investigate a causal link between psychological inflexibility and hostile sexism, addressing the limitations of previous cross-sectional findings. It prioritizes isolating specific prejudices, gender-specific hypotheses, and methodological rigor to achieve reliable and meaningful results. Despite potential challenges exist regarding mitigating participant attrition, social desirability biases as well as increasing accessibility and sustaining participant engagement across multiple phases, the study will be supported by meticulously strategy planning to mitigate the impact of these hurdles. If successful, this study has the potential not only to illuminate the underlying mechanisms of hostile sexism but could also solidify psychological inflexibility as a key mechanism driving gender-related hostility. Such insights could pave the way for effective, targeted interventions that promote healthier and more equitable social interactions, thereby contributing significantly to the field.

9.7 Conceptualization and Construction of Prejudice-Related Outcomes

While prior research has established the link between psychological flexibility and a broad tendency towards prejudice had been established previously (Levin et al., 2016), unpacking the intricacies of this relationship demanded a more fine-grained lens. Stepping beyond the umbrella of generalized prejudice, this program of research utilized a granular level of analysis to examine the subtle variations in how different aspects of psychological

flexibility and inflexibility influence specific social biases. This research was grounded in the functional contextualist philosophy of contextual behavioural science (CBS), which emphasizes the significance of understanding psychological phenomena through the detailed analysis of the *act-in-context* (Hayes, 1993; Hayes & Sanford, 2014). As such, rather than examining prejudice as a generalized latent variable, this program of research sought to unpack the multifaceted nature of intergroup bias by examining how specific facets of flexibility influence these biases.

The presented research conceptualized prejudice as a multifaceted construct with distinct causes, motivations, manifestations, and consequences. Moreover, specific targets of prejudice (e.g., race, religion, gender, sexual orientation) evoke different emotions along with varying degrees of animosity and are rooted in unique historical, social, and psychological factors. For example, prejudice towards immigrants might be driven by economic anxieties, while prejudice towards LGBTQ+ individuals might stem from religious beliefs. A generalized latent variable overlooks these specific motivations.

Instead, the presented research aligned with contemporary socio-cultural perspectives that emphasized the complexity of prejudice, acknowledging that biases are intricately shaped by societal power dynamics, historical contexts, and identity factors (Crandall & Eshleman, 2003; Fiske, 1998). The studies utilized established self-report measures to examine participants' explicit biases in thinking, feeling, and behaviour towards specific groups. However, as discussed previously, these studies were not without limitations as self-report measures failed to capture the full picture of prejudice. Additionally, the conceptualization of prejudice was restricted by its exclusive focus on explicit attitudes, neglecting the examination of discriminatory behaviours via behavioural

measures. Furthermore, the aggregated assessment of prejudices overlooked intersectional impacts on marginalized individuals.

These limitations underscored the need for greater contextual sensitivity in the conceptualization and measurement of prejudice. The expression and impacts of bias differ substantially based on situational factors like social norms, anonymity, and identity intersections (Crandall & Eshleman, 2003). Prejudice manifests diversely, through overt hostility, microaggressions, and systemic discrimination depending on the context. Therefore, a comprehensive, multimethod approach combining self-reports, implicit measures, observations of intergroup behaviour, and assessments of systemic biases is necessary for a contextualized understanding. This would provide a more complete picture of prejudice as a complex, contextually driven phenomenon.

Additionally, variations between samples and studies highlighted contextual moderators of prejudice-flexibility links. Relationships that emerged in one sample often disappeared in others, suggesting influences of average prejudice levels, gender composition, socio-political climates, and other cultural factors. This underscored the need to move beyond searching for main effects towards identifying contextual moderators that strengthen or weaken relationships. By embracing inconsistency and leveraging it to reveal contextual influences, researchers can gain crucial insights into prejudice manifestations across diverse situations.

Overall, while the presented research provided a valuable preliminary investigation, fully capturing prejudice requires recognizing it as a contextual, multidimensional construct. The studies highlighted the limitations of aggregated self-reports and the need for context-specific conceptualizations and measurements. Acknowledging these complexities is

imperative, both for methodological rigor and social justice impact. Nuanced prejudice research that embraces intersectionality and assesses systemic biases holds promise for informing structural reforms and nurturing diversity. Although conceptual challenges remain, contextual sensitivity can propel the field towards deeper insights that foster compassion and equity.

9.8 Conclusion

Expanding upon the established connection between psychological inflexibility and generalized prejudice demonstrated by Levin and colleagues (2016), this thesis delved into the intricacies of this relationship through three cross-sectional studies. Guided by the theoretical framework of Acceptance and Commitment Therapy (ACT; Hayes et al., 1999, 2012), this research aimed to uncover whether fostering psychological flexibility could potentially counteract discriminatory attitudes.

While the findings revealed nuanced links between specific facets of inflexibility and certain prejudices, the ability of flexibility to broadly mitigate social bias proved limited. Lack of present moment awareness, cognitive fusion, and the absence of values-behaviour congruency emerged as the most consistent predictors of hostile sexism and racism. This suggested links between rigid gender and racial attitudes and anger reactivity offering valuable insights into the cognitive and emotional underpinnings of prejudice. However, crucially, the ability of flexibility to broadly mitigate diverse biases was elusive. Relationships were selective and inconsistent across samples and targets while established constructs like authoritarianism and social dominance displayed more reliable prejudice links.

These mixed findings illuminated complexities often overlooked by main effect models and highlighted the importance of contextualizing flexibility principles within

socio-cultural theories of prejudice. The expression and impact of social biases are far from isolated phenomena; they are substantially shaped by situational factors like intersectional social identities, social norms, and power dynamics. These factors can amplify or attenuate the influence of individual-level traits like flexibility, rendering simplistic models inadequate. Therefore, nuanced measurements and analysis of these moderators are imperative to fully understand how flexibility interacts with the complex tapestry of prejudice.

The limitations of relying solely on self-reported data necessitate a shift towards multi-method designs that incorporate a wider range of data sources. Implicit measures, such as reaction time tasks and implicit association tests, can circumvent the pitfalls of social desirability bias and offer insights into unconscious biases. Behavioural observations, particularly in real-world settings, can provide valuable data on the dynamic interplay between flexibility and prejudice in action. Furthermore, longitudinal tracking allows for the investigation of how these interactions evolve over time, while physiological indicators like cortisol levels can shed light on the emotional and physiological underpinnings of prejudice-related behaviours. This multi-pronged approach, coupled with a more nuanced conceptualization of prejudice that embraces intersectionality and systemic discrimination, is essential for unlocking the full complexity of how flexibility interacts with the multifaceted phenomenon of prejudice.

This program of research underscored the challenges and inconsistencies inherent in examining complex psychological and social phenomena. However, the presented findings illuminate promising directions for future inquiry. Continued integration of flexibility principles with socio-cultural perspectives could inform tailored interventions to

promote diversity, equity, and compassion. Additionally, enhancing contextual sensitivity in research could propel the field towards greater ecological validity and social impact.

Although a nuanced understanding of prejudice remains difficult, contextualized research embracing multiplicity holds promise for nurturing inclusive societies. This conclusion is tentatively drawn with humility, acknowledging the inevitable oversights and limitations in this program of research. Yet if these studies spark deeper questioning and guide others towards greater wisdom, that is perhaps their most meaningful contribution. There remains vital work ahead, both empirically and socially in the pursuit of a more inclusive and equitable society.

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Appendix A - Study 1: Participant Information Sheet

Consent to Participate in an Experimental Study

Title: The Role of Individual Factors in Intergroup Relations

INVITATION

You are being asked to consent to participate in a study about intergroup relations. If you agree to participate, then you will complete a packet of questionnaires. These questionnaires will cover a series of controversial topics including questions regarding your beliefs and attitudes toward women, homosexuals, immigrants, and Muslims.

Although we are aware of the sensitivity of responding to questions on these topics, the goal of this study is to approach the topic from a neutral perspective and examine these attitudes as objectively as possible. Each of these measures are well validated and have been used in previous scientific experiments. If you have any concerns or questions regarding any of the attached questionnaires, please contact the investigator.

Please be assured that your anonymity is guaranteed. Although we collect demographics, the information that you will be asked to provide will not be sufficient to personally identify you. Neither your name nor your e-mail (nor reddit username, Facebook profile, or whatever means were used to recruit your participation) will be associated in any way with your responses. Additionally, the survey platform has been instructed not to collect any other identifying information. As such, any potential psychological or social risks are considered minimal, and we do not anticipate any other risks associated with participation.

Following the study, you will read a debriefing statement, in which you will review the purpose of the study in more detail. The study should take no more than 1 hour to complete.

If you have any questions prior to your participation, please e-mail Benjamin Ramos (listed above).

Cost and Payments

If you elect to participate in this study, you will be donating approximately 30 minutes of your time. In compensation, you will be entered into a prize draw for a £100 voucher for either Amazon, Apple, eBay, IKEA, Microsoft Xbox, Nintendo, Sony PlayStation, Steam (your choice). Or, if you desire, we can instead donate those £100 to a charity of your choice (subject to university approval).

Based on our participant recruitment goal, you will likely have a 1 in 700 chance of winning this prize. Upon completion of the study, each participant that enters will be assigned a number based on time of completion. The winner will then be selected using Google's random number generator and will be contacted via the e-mail provided at the end of the study.

Confidentiality

Please be aware that there will be no way to link your questionnaire responses with your name. Although you will be asked to provide potentially identifying information such as your gender, age, and ethnicity, we do not believe this information to be sufficient to identify you from your responses.

Statement of Consent

- I have read the above information.
- I have had the opportunity to ask any questions or express my concerns regarding the study using the e-mail listed above.
- I understand that the questionnaires ask about highly sensitive topics and that these questions in no way indicate the opinions, allegiance, or bias of the research team.
- I understand that I can stop answering at any time by closing my browser and the data already given may be used in the research study.

Study 1 – Debriefing

Whether it is based on another person's sex, gender, race, politics, religion, education, social class, age, disability, culture, sexuality, nationality, region of origin, physical appearance, mental illness, or even preferred sports team; people find an abundance of reasons to classify and derogate members of other groups. These prejudices affect the lives of millions of people in several life domains including employment, housing, interpersonal relationships, reduced access to services, and their overall quality of life. Effective interventions are needed that can reduce prejudice and behaviours. However, it is difficult to target prejudice because little is known about its origins and such a broad range of groups are prejudiced against.

The purpose of this study is to understand possible predictors of prejudice (both ambiguous and blatant) by assessing your sense of self as well as your beliefs regarding your culture, the culture of others, and political governance.

Please understand that we are not accusing you or anyone else of being racist, sexist, homophobic, or prejudiced in general. We are solely interested in approaching this extremely sensitive topic as neutrally as possible with a focus on an individual's behaviour rather than group dynamics.

Together, your responses on each of the questionnaires will help us determine if factors such as psychological (in)flexibility or quality of life contribute to the likelihood of maintaining prejudice. We will then use this information to help us understand how each of them contribute to or reduce prejudice and support future studies toward the understanding of prejudice as well as its origins.

If you need assistance because of distress, please do not hesitate to contact your general practitioner regarding the availability of counseling services. Participants residing within the United Kingdom can also search for the closest available psychological services by using this secure NHS search engine (for residents of [England](#) only; participants of Scotland, Wales, and Northern Ireland please contact your GP). Or if you are in need of urgent help, call Samaritans free on 116 123 or email jo@samaritans.org.

Thank you for your participation. If you have any questions or concerns about this study, please feel free to contact Benjamin Ramos via this e-mail: .

Appendix B - Study 1: Demographic Questionnaire

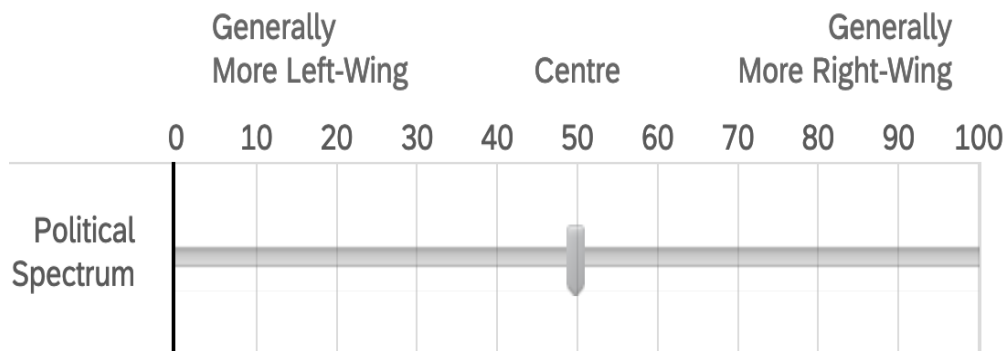
1. What is your age? (Years)
2. What gender do you identify as?
 - ☐ Man
 - ☐ Transgender Man
 - ☐ Decline to State
 - ☐ Woman
 - ☐ Transgender Woman
 - ☐ Other (Text Entry)
3. Which of the following terms best describes your sexual orientation?
 - ☐ Heterosexual (“Straight”)
 - ☐ Bisexual
 - ☐ Asexual
 - ☐ Gay or Lesbian
 - ☐ Queer
 - ☐ Other (Text Entry)
4. How were you recruited for this study?
 - ☐ E-mail
 - ☐ Reddit
 - ☐ Twitter
 - ☐ Facebook
 - ☐ University SONA System
 - ☐ Other (Text Entry)
5. What is your religious preference? (Text Entry)
6. What ethnicity do you most closely identify with?
 - ☐ African
 - ☐ American Indian
 - ☐ Asian
 - ☐ Indian
 - ☐ Middle Eastern
 - ☐ White/Caucasian
 - ☐ Afro-Caribbean
 - ☐ Alaska Native
 - ☐ Black or African American/Canadian/Other
 - ☐ Hispanic or Latino
 - ☐ Pacific Islander
 - ☐ Other (Please List/Specify)
7. What is your marital status?
 - ☐ Single
 - ☐ Engaged
 - ☐ Divorced
 - ☐ Widowed
 - ☐ Non-Marital Relationship
 - ☐ Married
 - ☐ Separated
 - ☐ Decline to State
8. What is the highest degree or level of school you have completed?
If currently enrolled, highest degree received. (Text Entry)

9. What is your current employment status?

☐ Full-Time Employment	☐ Student
☐ Unemployed and Looking for Work	☐ Homemaker
☐ Unemployed and Not Looking for Work	☐ Retired
☐ Part-Time Employment	☐ Disabled
☐ Unable to Work	☐

10. What nation do you currently reside in? (List of all World Nations)

11. On the scale below, where do you consider yourself on the (Left-wing to Right-wing) political spectrum?



[Following items were dependent on response to
“What nation do you currently reside in?”]

12. What state or territory of [Nation] do you currently reside in?

13. What is your annual household income?

14. Please enter your postal code.

This information is solely for economic comparison according to census data and will be deleted post-analysis.

Appendix C - Multidimensional Psychological Flexibility Inventory (MPFI)

FLEXIBILITY SUBSCALES

ACCEPTANCE

IN THE LAST TWO WEEKS...	Never TRUE	Rarely TRUE	Occasionally TRUE	Often TRUE	Very Often TRUE	Always TRUE
I was receptive to observing unpleasant thoughts and feelings without interfering with them.	0	0	0	0	0	0
I tried to make peace with my negative thoughts and feelings rather than resisting them.	0	0	0	0	0	0
I made room to fully experience negative thoughts and emotions, breathing them in rather than pushing them away.	0	0	0	0	0	0
When I had an upsetting thought or emotion, I tried to give it space rather than ignoring it.	0	0	0	0	0	0
I opened myself to all of my feelings, the good and the bad.	0	0	0	0	0	0

PRESENT MOMENT AWARENESS

IN THE LAST TWO WEEKS...	Never TRUE	Rarely TRUE	Occasionally TRUE	Often TRUE	Very Often TRUE	Always TRUE
I was attentive and aware of my emotions.	0	0	0	0	0	0
I was in tune with my thoughts and feelings from moment to moment.	0	0	0	0	0	0
I paid close attention to what I was thinking and feeling.	0	0	0	0	0	0
I was in touch with the ebb and flow of my thoughts and feelings.	0	0	0	0	0	0
I strived to remain mindful and aware of my own thoughts and emotions.	0	0	0	0	0	0

SELF AS CONTEXT

IN THE LAST TWO WEEKS...	Never TRUE	Rarely TRUE	Occasionally TRUE	Often TRUE	Very Often TRUE	Always TRUE
Even when I felt hurt or upset, I tried to maintain a broader perspective.	0	0	0	0	0	0
I carried myself through tough moments by seeing my life from a larger viewpoint.	0	0	0	0	0	0
I tried to keep perspective even when life knocked me down.	0	0	0	0	0	0
When I was scared or afraid, I still tried to see the larger picture.	0	0	0	0	0	0
When something painful happened, I tried to take a balanced view of the situation.	0	0	0	0	0	0

DEFUSION

IN THE LAST TWO WEEKS...

	Never TRUE	Rarely TRUE	Occasionally TRUE	Often TRUE	Very Often TRUE	Always TRUE
I was able to let negative feelings come and go without getting caught up in them.	☐	☐	☐	☐	☐	☐
When I was upset, I was able to let those negative feelings pass through me without clinging to them.	☐	☐	☐	☐	☐	☐
When I was scared or afraid, I was able to gently experience those feelings, allowing them to pass.	☐	☐	☐	☐	☐	☐
I was able to step back and notice negative thoughts and feelings without reacting to them.	☐	☐	☐	☐	☐	☐
In tough situations, I was able to notice my thoughts and feelings without getting overwhelmed by them.	☐	☐	☐	☐	☐	☐

VALUES

IN THE LAST TWO WEEKS...

	Never TRUE	Rarely TRUE	Occasionally TRUE	Often TRUE	Very Often TRUE	Always TRUE
I was very in-touch with what is important to me and my life.	☐	☐	☐	☐	☐	☐
I stuck to my deeper priorities in life.	☐	☐	☐	☐	☐	☐
I tried to connect with what is truly important to me on a daily basis.	☐	☐	☐	☐	☐	☐
Even when it meant making tough choices, I still tried to prioritize the things that were important to me.	☐	☐	☐	☐	☐	☐
My deeper values consistently gave direction to my life.	☐	☐	☐	☐	☐	☐

COMMITTED ACTION

IN THE LAST TWO WEEKS...

	Never TRUE	Rarely TRUE	Occasionally TRUE	Often TRUE	Very Often TRUE	Always TRUE
Even when I stumbled in my efforts, I didn't quit working toward what is important.	☐	☐	☐	☐	☐	☐
Even when times got tough, I was still able to take steps toward what I value in life.	☐	☐	☐	☐	☐	☐
Even when life got stressful and hectic, I still worked toward things that were important to me.	☐	☐	☐	☐	☐	☐
I didn't let set-backs slow me down in taking action toward what I really want in life.	☐	☐	☐	☐	☐	☐
I didn't let my own fears and doubts get in the way of taking action toward my goals.	☐	☐	☐	☐	☐	☐

INFLEXIBILITY SUBSCALES

EXPERIENTIAL AVOIDANCE

IN THE LAST TWO WEEKS...

	Never TRUE	Rarely TRUE	Occasionally TRUE	Often TRUE	Very Often TRUE	Always TRUE
When I had a bad memory, I tried to distract myself to make it go away.	☐	☐	☐	☐	☐	☐
I tried to distract myself when I felt unpleasant emotions.	☐	☐	☐	☐	☐	☐
When unpleasant memories came to me, I tried to put them out of my mind.	☐	☐	☐	☐	☐	☐
When something upsetting came up, I tried very hard to stop thinking about it.	☐	☐	☐	☐	☐	☐
If there was something I didn't want to think about, I would try many things to get it out of my mind.	☐	☐	☐	☐	☐	☐

LACK OF CONTACT WITH THE PRESENT MOMENT

IN THE LAST TWO WEEKS...

	Never TRUE	Rarely TRUE	Occasionally TRUE	Often TRUE	Very Often TRUE	Always TRUE
I did most things on "automatic" with little awareness of what I was doing.	☐	☐	☐	☐	☐	☐
I did most things mindlessly without paying much attention.	☐	☐	☐	☐	☐	☐
I went through most days on autopilot without paying much attention to what I was thinking or feeling.	☐	☐	☐	☐	☐	☐
I floated through most days without paying much attention.	☐	☐	☐	☐	☐	☐
Most of the time I was just going through the motions without paying much attention.	☐	☐	☐	☐	☐	☐

SELF AS CONTENT

IN THE LAST TWO WEEKS...

	Never TRUE	Rarely TRUE	Occasionally TRUE	Often TRUE	Very Often TRUE	Always TRUE
I thought some of my emotions were bad or inappropriate and I shouldn't feel them.	☐	☐	☐	☐	☐	☐
I criticized myself for having irrational or inappropriate emotions.	☐	☐	☐	☐	☐	☐
I believed some of my thoughts are abnormal or bad and I shouldn't think that way.	☐	☐	☐	☐	☐	☐
I told myself that I shouldn't be feeling the way I'm feeling.	☐	☐	☐	☐	☐	☐
I told myself I shouldn't be thinking the way I was thinking.	☐	☐	☐	☐	☐	☐

FUSION

IN THE LAST TWO WEEKS...

	Never TRUE	Rarely TRUE	Occasionally TRUE	Often TRUE	Very Often TRUE	Always TRUE
Negative thoughts and feelings tended to stick with me for a long time.	☐	☐	☐	☐	☐	☐
Distressing thoughts tended to spin around in my mind like a broken record.	☐	☐	☐	☐	☐	☐
It was very easy to get trapped into unwanted thoughts and feelings.	☐	☐	☐	☐	☐	☐
When I had negative thoughts or feelings it was very hard to see past them.	☐	☐	☐	☐	☐	☐
When something bad happened, it was hard for me to stop thinking about it.	☐	☐	☐	☐	☐	☐

LACK OF CONTACT WITH VALUES

IN THE LAST TWO WEEKS...

	Never TRUE	Rarely TRUE	Occasionally TRUE	Often TRUE	Very Often TRUE	Always TRUE
My priorities and values often fell by the wayside in my day-to-day life.	☐	☐	☐	☐	☐	☐
When life got hectic, I often lost touch with the things I value.	☐	☐	☐	☐	☐	☐
The things that I value the most often fell off my priority list completely.	☐	☐	☐	☐	☐	☐
I didn't usually have time to focus on the things that are important to me.	☐	☐	☐	☐	☐	☐
When times got tough, it was easy to forget about what I truly value.	☐	☐	☐	☐	☐	☐

INACTION

IN THE LAST TWO WEEKS...

	Never TRUE	Rarely TRUE	Occasionally TRUE	Often TRUE	Very Often TRUE	Always TRUE
Negative feelings often trapped me in inaction.	☐	☐	☐	☐	☐	☐
Negative feelings easily stalled out my plans.	☐	☐	☐	☐	☐	☐
Getting upset left me stuck and inactive.	☐	☐	☐	☐	☐	☐
Negative experiences derailed me from what's really important.	☐	☐	☐	☐	☐	☐
Unpleasant thoughts and feelings easily overwhelmed my efforts to deepen my life.	☐	☐	☐	☐	☐	☐

SCORING:

Subscales – To score the MPFI subscales, you assign responses point values from 1 to 6 (left to right as presented above) and then average the responses across the items of each scale so that higher scores reflect higher levels of the dimension being assessed by each set of items.

Global Composites – The averages of the 6 flexibility subscales can be averaged to create a composite representing global flexibility. Similarly, the averages of the 6 inflexibility subscales can be averaged to create a global inflexibility composite.

Shorter Global Composites – The first two items of each of the flexibility subscales can be averaged to create a shorter 12-item global flexibility composite. Similarly, the first 2 items of each of the inflexibility subscales can be averaged to create a shorter 12-item global inflexibility composite.

INTERPRETATION:

Normative Information – The research article developing the MPFI (Rolffs, Rogge, & Wilson, 2016; see citation below) presents basic normative data on its subscales (e.g., means and standard deviations by gender). That information will help to place individual scores into a larger context.

Appendix D - Ambivalent Sexism Inventory (ASI)

Below is a series of statements concerning men and women and their relationships in contemporary society. Please indicate the degree to which you agree or disagree with each statement using the following scale:

0	1	2	3	4	5	
Disagree Strongly	Disagree Somewhat	Disagree Slightly	Agree Slightly	Agree Somewhat	Agree Strongly	
1. No matter how accomplished he is, a man is not truly complete as a person unless he has the love of a woman.	0	1	2	3	4	5
2. Many women are actually seeking special favors, such as hiring policies that favor them over men, under the guise of asking for “equality.”	0	1	2	3	4	5
3. In a disaster, women ought not necessarily to be rescued before men.	0	1	2	3	4	5
4. Most women interpret innocent remarks or acts as being sexist.	0	1	2	3	4	5
5. Women are too easily offended.	0	1	2	3	4	5
6. People are often truly happy in life without being romantically involved with a member of the other sex.	0	1	2	3	4	5
7. Feminists are not seeking for women to have more power than men.	0	1	2	3	4	5
8. Many women have a quality of purity that few men possess.	0	1	2	3	4	5
9. Women should be cherished and protected by men.	0	1	2	3	4	5
10. Most women fail to appreciate fully all that men do for them.	0	1	2	3	4	5
11. Women seek to gain power by getting control over men.	0	1	2	3	4	5
12. Every man ought to have a woman whom he adores.	0	1	2	3	4	5
13. Men are complete without women.	0	1	2	3	4	5
14. Women exaggerate problems they have at work.	0	1	2	3	4	5
15. Once a woman gets a man to commit to her, she usually tries to put him on a tight leash.	0	1	2	3	4	5

0	1	2	3	4	5
Disagree Strongly	Disagree Somewhat	Disagree Slightly	Agree Slightly	Agree Somewhat	Agree Strongly
16. When women lose to men in a fair competition, they typically complain about being discriminated against.				0 1 2 3 4 5	
17. A good woman should be set on a pedestal by her man.				0 1 2 3 4 5	
18. There are actually very few women who get a kick out of teasing men by seeming sexually available and then refusing male advances.				0 1 2 3 4 5	
19. Women, compared to men, tend to have a superior moral sensibility.				0 1 2 3 4 5	
20. Men should be willing to sacrifice their own well-being in order to provide financially for the women in their lives.				0 1 2 3 4 5	
21. Feminists are making entirely reasonable demands of men.				0 1 2 3 4 5	
22. Women, as compared to men, tend to have a more refined sense of culture and good taste.				0 1 2 3 4 5	

Scoring Instructions

The ASI may be used as an overall measure of sexism, with hostile and benevolent components equally weighted, by simply averaging the score for all items after reversing the items listed below. The two ASI subscales (Hostile Sexism and Benevolent Sexism) may also be calculated separately. For correlational research, purer measures of HS and BS can be obtained by using partial correlations (so that the effects of the correlation between the scales is removed).

Reverse the following items (0 = 5, 1 = 4, 2 = 3, 3 = 2, 4 = 1, 5 = 0):
3, 6, 7, 13, 18, 21

Hostile Sexism Score = Average of the following items:
2, 4, 5, 7, 10, 11, 14, 15, 16, 18, 21

Benevolent Sexism Score = Average of the following items:
1, 3, 6, 8, 9, 12, 13, 17, 19, 20, 22

Appendix E - Bayesian Racism Scale

Below is a series of statements concerning your attitudes towards people of other races. Please indicate the degree to which you agree or disagree with each statement using the following scale:

1	2	3	4	5
Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
1. If you want to make accurate predictions, you should use information about a person's ethnic group when deciding if they will perform well.				
2. If your personal safety is at stake, it's sensible to avoid members of ethnic groups known to behave more aggressively.				
3. When the only thing you know about someone is their race, it makes sense to use your knowledge of their racial group to form an impression of them.				
4. Law enforcement officers should pay particular attention to those social groups more heavily involved in crime, even if this means focusing on members of particular ethnic groups.				
5. Law enforcement officers should act as if members of all racial groups are equally likely to commit crimes.				
6. It is always wrong to avoid someone because members of their racial groups are more likely to commit violent crimes.				

Appendix F - Attitudes Toward Lesbians and Gay Men Scale

Below is a series of statements concerning your attitudes towards people are sexually attracted to people of the same sex. Please indicate the degree to which you agree or disagree with each statement using the following scale:

1	2	3	4	5
Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree

Attitudes Toward Gay Men (ATG-R-S5) Subscale

1. Sex between two men is just plain wrong.	1	2	3	4	5
2. I think male homosexuals are disgusting.	1	2	3	4	5
3. Male homosexuality is a natural expression of sexuality in men. (Reverse scored)	1	2	3	4	5
4. Male homosexuality is a perversion.	1	2	3	4	5
5. Male homosexuality is merely a different kind of lifestyle that should not be condemned. (Reverse scored)	1	2	3	4	5

Attitudes Toward Gay Men (ATG-R-S5) Subscale

1. Sex between two women is just plain wrong.	1	2	3	4	5
2. I think female homosexuals (lesbians) are disgusting.	1	2	3	4	5
3. Female homosexuality is a natural expression of sexuality in women. (Reverse scored)	1	2	3	4	5
4. Female homosexuality is a perversion.	1	2	3	4	5
5. Female homosexuality is merely a different kind of lifestyle that should not be condemned. (Reverse scored)	1	2	3	4	5

Appendix G – Human Uniqueness and Human Nature Scale

Rate how well the following terms describe [Ethnic Group], as a group, in general.

1	2	3	4	5	6	7
Not at All	Slightly	Somewhat	Moderately	Frequently	Very Much	Extremely So
1. Refined and Cultured					1 2 3 4 5 6 7	
2. Rational and Logical					1 2 3 4 5 6 7	
3. Lacking Self-Restraint, like Animals					1 2 3 4 5 6 7	
4. Unsophisticated					1 2 3 4 5 6 7	
5. Mechanical and Cold, like Robots					1 2 3 4 5 6 7	
6. Open-Minded, Able to Think Clearly about Things					1 2 3 4 5 6 7	
7. Superficial, Lacking Depth					1 2 3 4 5 6 7	
8. Emotional; Responsive and Warm					1 2 3 4 5 6 7	

Appendix H - Universal Measure of Bias

1	2	3	4	5	6	7
Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
1. _____ people tend toward bad behavior.					1	2 3 4 5 6 7
2. _____ people are sloppy.					1	2 3 4 5 6 7
3. Sometimes I think that _____ people are dishonest.					1	2 3 4 5 6 7
4. _____ people have bad hygiene.					1	2 3 4 5 6 7
5. In general, _____ people don't think about the needs of other people.					1	2 3 4 5 6 7
6. I would not want to have a _____ person as a roommate.					1	2 3 4 5 6 7
7. I like _____ people.					1	2 3 4 5 6 7
8. I don't enjoy having a conversation with a _____ person.					1	2 3 4 5 6 7
9. I would be comfortable having a _____ person in my group of friends.					1	2 3 4 5 6 7
10. I would like having a _____ person at my place of worship or community center.					1	2 3 4 5 6 7
11. I find _____ people attractive.					1	2 3 4 5 6 7
12. _____ people make good romantic partners.					1	2 3 4 5 6 7
13. I find _____ people to be sexy.					1	2 3 4 5 6 7
14. _____ people are a turn-off.					1	2 3 4 5 6 7
15. I find _____ people pleasant to look at.					1	2 3 4 5 6 7

Appendix I - Study 2 and Study 3: Participation Information Sheet

Consent to Participate in an Experimental Study

Title: The Role of Individual Factors in Intergroup Relations

PURPOSE

You are being asked to consent to participate in a study about intergroup relations. Whether it is based on another person's sex, gender, race, politics, religion, or mental health; people find many reasons to classify each other. The purpose of this study is to examine intergroup relations and how a person's self-awareness and beliefs contributes to social behaviours with other groups.

PROCEDURES

If you agree to participate, then you will complete a packet of six (6) questionnaires and a brief demographics form. This study will take approximately 10 - 15 minutes to complete. These questionnaires will cover a series of controversial topics including questions regarding your beliefs and attitudes toward women, homosexuals, and people of other ethnicities.

Although we are aware of the sensitivity of responding to questions on these topics, **the goal of this study is to approach the topic from a neutral perspective and examine these attitudes as objectively as possible.** Each of these measures are well validated and have been used in previous scientific experiments. If you have any concerns or questions regarding any of the attached questionnaires, please contact the investigator.

POTENTIAL RISKS

We do not anticipate any serious risks associated with this project. However, some participants may experience discomfort and/or distress answering questions about their beliefs and attitudes. Please be assured that your anonymity is guaranteed. Although we collect demographics, the information that you will be asked to provide will not be sufficient to personally identify you. Neither your name nor your e-mail will be associated in any way with your responses. Additionally, the survey platform has been instructed not to collect any other identifying information. As such, any potential psychological or social risks are considered minimal, and we do not anticipate any other risks associated with participation. As for any potential distress, contact information for free mental health services available to you will be provided at the end of the survey.

POTENTIAL BENEFITS

There are no direct benefits for participation except that some participants may enjoy answering questions thoughtfully about themselves and their experiences. Some participants may feel satisfaction at knowing that they are contributing to the development of a better understanding of intergroup relations.

CONFIDENTIALITY

Please be aware that there will be no way to link your questionnaire responses with your identity. Although you will be asked to provide demographic information such as your gender, age, and ethnicity, we do not believe this information will be sufficient to identify you from your responses.

Although the results of this study may be published, no information that could identify you will be included. All responses are completely anonymous and will not be identified with you in any way. All data will be presented in aggregate form.

PARTICIPANT RIGHTS

Your participation in this study is completely voluntary. You can refuse to participate in the entire study or any part of the study without any negative effect on any current/future relations with the University of Edinburgh. You also have the right to skip any question that you do not wish to answer. This consent form is not a contract. It is a written explanation of what will happen during the study if you decide to participate. You will not waive any rights if you choose not to participate, and there is no penalty for stopping your participation in the study.

STATEMENT OF CONSENT

- I have read the above information.
 - I understand that the questionnaires ask about highly sensitive topics and that these questions in no way indicate the opinions, allegiance, or bias of the research team.
 - I understand that I can stop answering at any time by closing my web browser and data already given may be used in the research study.
- I have read the above information and I consent to participate in the study.
 - I **DO NOT** consent to participate in this study.

Study 2 and Study 3 – Debriefing

Whether it is based on another person's sex, gender, race, politics, religion, education, social class, age, disability, culture, sexuality, nationality, region of origin, physical appearance, mental illness, or even preferred sports team; people find an abundance of reasons to classify and derogate members of other groups. These prejudices affect the lives of millions of people in several life domains including employment, housing, interpersonal relationships, reduced access to services, and their overall quality of life. Effective interventions are needed that can reduce prejudice and behaviours. However, it is difficult to target prejudice because little is known about its origins and such a broad range of groups are prejudiced against.

The purpose of this study is to understand possible predictors of prejudice (both ambiguous and blatant) by assessing individual behaviours along with these attitudes.

Please understand that we are not accusing you or anyone else of being racist, sexist, homophobic, or prejudiced in general. We are solely interested in approaching this extremely sensitive topic as neutrally as possible with a focus on an individual's behaviour rather than group dynamics.

Together, your responses on each of the questionnaires will help us determine if factors such as psychological (in)flexibility contribute to the likelihood of maintaining prejudice. We will then use this information to help us understand how each behavior may contribute to the maintenance or reduction of prejudice and support future studies toward the understanding of prejudice as well as its origins.

If you need assistance because of distress (whether from responding to these questions or in your life in general) please do not hesitate to contact your general practitioner for mental health services.

Participants residing in the United Kingdom, if you need urgent help, please do not hesitate to call **111** (select **Option 2**) for the National Health Services' First Response Service for mental health crises and support. Or you can call Samaritans free at **116-123** or e-mail jo@samaritans.org.

You may also contact the Campaign Against Living Miserably (CALM). Available every day from 5PM to 12AM.

- CALM (Nationwide) can be reached at 0800 58 58 58
- CALM (London) can be reached at 0808 802 58 58
- CALM webchat can be found at <https://www.thecalmzone.net/help/get-help/>

For those who identify as LGBTQIA+, you can contact Switchboard, which provides information, support and referral services throughout the UK, by calling **0300 330 0630** (10am - 10pm, every day).

Participants residing in the United States, if you need urgent help, please do not hesitate to call (toll-free) the confidential suicide prevention hotline available to anyone in suicidal crisis or emotional distress.

- The National Suicide Prevention Lifeline can be reached at **1-800-273-8255**
- For a Crisis Responder that speaks Spanish, call **1-888-628-9454**
- For the Deaf or Hard of Hearing Options, call **1-800-799-4889**

If you prefer to communicate via text-message then you can contact the Crisis Text Line by texting "**HOME**" to **741-741**.

If you are a Military Veteran in need of help or someone to speak to, please call **1-800-273-8255** and Press "1".

For those who identify as homosexual, you can contact The Trevor Project by calling **1-866-488-7386** (available 24/7) or contacting TrevorChat by texting "**TREVOR**" to **1-202-304-1200** (available 7 days a week, 3pm - 10pm ET).

Additionally, for those who identify as transgender, please call the TransLifeline at **1-877-565-8860**.

Participants residing in Canada, if you need urgent help, please do not hesitate to call (toll free) the 24/7 Crisis Services (**1-833-456-4566**) or text "**HOME**" to the 24/7 Crisis Text Line at **686-868** to text with a trained Crisis Responder. They can also be reached by texting "**CONNECT**" (English) or "**PARLER**" (French).

If you identify as transgender, you may also call the Trans Lifeline (**877-330-6366**).

Participants residing in all other nations, we apologize that we were unable to create a comprehensive list for all mental health services available around the world. If you are in need of urgent help, please [follow this link](#) for a list of crisis and emergency services available to you within your respective nation.

Appendix J - AAQ-Stigma

Below you will find a list of statements. Please rate how true each statement is for you by selecting a number next to it. Use the scale below to make your choice.

1	2	3	4	5	6	7
never true	very seldom true	seldom true	sometimes true	frequently true	almost always true	always true
1. My biases and prejudices affect how I interact with people from different backgrounds.					1 2 3 4 5 6 7	
2. I feel that I am aware of my own biases.					1 2 3 4 5 6 7	
3. My negative thoughts about others are never a problem in my life.					1 2 3 4 5 6 7	
4. I need to reduce my negative thoughts about others in order to have good social interactions.					1 2 3 4 5 6 7	
5. When I evaluate someone negatively, I am able to recognize that this is just a reaction, not an objective fact.					1 2 3 4 5 6 7	
6. I stop doing things that are important to me when it involves someone I don't like.					1 2 3 4 5 6 7	
7. I have trouble letting go of my judgments of others.					1 2 3 4 5 6 7	
8. I feel that my prejudicial thoughts are a significant barrier to me being culturally sensitive.					1 2 3 4 5 6 7	
9. I have trouble not acting on my negative thoughts about others.					1 2 3 4 5 6 7	
10. I am aware when judgments about others are passing through my mind.					1 2 3 4 5 6 7	
11. It's OK to have friends that I have negative thoughts about from time to time.					1 2 3 4 5 6 7	
12. I don't struggle with controlling my evaluations about others.					1 2 3 4 5 6 7	
13. When I am having negative thoughts about others, I withdraw from people.					1 2 3 4 5 6 7	
14. When I'm talking with someone I don't like, I'm aware of my evaluations of them.					1 2 3 4 5 6 7	
15. When I have judgments about others, they are very intense.					1 2 3 4 5 6 7	

Continued on next page.

1	2	3	4	5	6	7
never true	very seldom true	seldom true	sometimes true	frequently true	almost always true	always true
16. When talking with someone I believe I should act according to how I feel about him/her, even if its negative.					1 2 3 4 5 6 7	
17. I'm good at noticing when I have a judgment of another person.					1 2 3 4 5 6 7	
18. I rarely worry about getting my evaluations towards others under control.					1 2 3 4 5 6 7	
19. I accept that I will sometimes have unpleasant thoughts about other people.					1 2 3 4 5 6 7	
20. I often get caught up in my evaluations of what others are doing wrong.					1 2 3 4 5 6 7	
21. The bad things I think about others must be true.					1 2 3 4 5 6 7	

Scale Scoring

Psychological Inflexibility with Stigmatizing Thoughts:

1, 4, 6, 7, 8, 9, 13, 15, 16, 20, 21

Psychological Flexibility with Stigmatizing Thoughts (reverse scored items):

2, 3, 5, 10, 11, 12, 14, 17, 18, 19

*Note that these subscales can be analyzed separately or combined into a total score.

Appendix K - Modern Homonegativity Scale (Modified)

Below is a series of statements concerning your attitudes towards people are sexually attracted to people of the same sex. Please indicate the degree to which you agree or disagree with each statement using the following scale:

1	2	3	4	5
Strongly DISAGREE	DISAGREE	I Don't Know	AGREE	Strongly AGREE
1. Gay people have all the rights they need.				1 2 3 4 5
2. Gay people have become far too confrontational in their demand for equal rights.				1 2 3 4 5
3. Gay people should stop shoving their lifestyle down other people's throats.				1 2 3 4 5
4. Gay men seem to focus on the ways in which they differ from heterosexuals, and ignore the ways in which they are similar.				1 2 3 4 5
5. Gay people who are "out of the closet" should be admired for their courage.				1 2 3 4 5
6. Many gay people use their sexual orientation so that they can obtain special rights and privileges.				1 2 3 4 5
7. Gay people no longer need to protest for equal rights.				1 2 3 4 5
8. In today's tough economic times, taxes shouldn't be used to support organizations for gay people.				1 2 3 4 5
9. The notion of universities providing degrees in gay and lesbian studies is ridiculous.				1 2 3 4 5
10. Gay people should stop complaining about the way they are treated in society, and simply get on with their lives.				1 2 3 4 5
11. Celebrations such as "Gay Pride Day" are ridiculous because they assume that an individual's sexual orientation should constitute a source of pride.				1 2 3 4 5
12. If gay people want to be treated like everyone else, then they need to stop making such a fuss about their sexuality/culture.				1 2 3 4 5

Reverse-score the following item: 5

Appendix L - 16-item Social Dominance Orientation (SDO) Scale

1	2	3	4	5	6	7
Very NEGATIVE	Moderately NEGATIVE	Slightly NEGATIVE	Neutral	Slightly POSITIVE	Moderately POSITIVE	Strongly POSITIVE
1. Some groups of people are simply inferior to other groups.					1 2 3 4 5 6 7	
2. In getting what you want, it is sometimes necessary to use force against other groups.					1 2 3 4 5 6 7	
3. It's OK if some groups have more of a chance in life than others.					1 2 3 4 5 6 7	
4. To get ahead in life, it is sometimes necessary to step on other groups.					1 2 3 4 5 6 7	
5. If certain groups stayed in their place, we would have fewer problems.					1 2 3 4 5 6 7	
6. It's probably a good thing that certain groups are at the top and other groups are at the bottom.					1 2 3 4 5 6 7	
7. Inferior groups should stay in their place.					1 2 3 4 5 6 7	
8. Sometimes other groups must be kept in their place.					1 2 3 4 5 6 7	
9. It would be good if groups could be equal.					1 2 3 4 5 6 7	
10. Group equality should be our ideal.					1 2 3 4 5 6 7	
11. All groups should be given an equal chance in life.					1 2 3 4 5 6 7	
12. We should do what we can to equalize conditions for different groups.					1 2 3 4 5 6 7	
13. Increased social equality.					1 2 3 4 5 6 7	
14. We would have fewer problems if we treated people more equally.					1 2 3 4 5 6 7	
15. We should strive to make incomes as equal as possible.					1 2 3 4 5 6 7	
16. No one group should dominate society.					1 2 3 4 5 6 7	

Items 9-16 should be reverse-coded.

Appendix M – Right-Wing Authoritarianism (RWA) Scale

1	2	3	4	5	6	7
never true	very seldom true	seldom true	sometimes true	frequently true	almost always true	always true
1. Our country needs a powerful leader, in order to destroy the radical and immoral currents prevailing in society today.					1 2 3 4 5 6 7	
2. <i>Our country needs free thinkers, who will have the courage to stand up against traditional ways, even if this upsets many people.</i>					1 2 3 4 5 6 7	
3. The “old-fashioned ways” and “old-fashioned values” still show the best way to live.					1 2 3 4 5 6 7	
4. <i>Our society would be better off if we showed tolerance and understanding for untraditional values and opinions.</i>					1 2 3 4 5 6 7	
5. God's laws about abortion, pornography and marriage must be strictly followed before it is too late, violations must be punished.					1 2 3 4 5 6 7	
6. <i>The society needs to show openness towards people thinking differently, rather than a strong leader, the world is not particularly evil or dangerous.</i>					1 2 3 4 5 6 7	
7. It would be best if newspapers were censored so that people would not be able to get hold of destructive and disgusting material.					1 2 3 4 5 6 7	
8. <i>Many good people challenge the state, criticize the church and ignore “the normal way of living”.</i>					1 2 3 4 5 6 7	
9. Our forefathers ought to be honoured more for the way they have built our society, at the same time we ought to put an end to those forces destroying it.					1 2 3 4 5 6 7	
10. <i>People ought to put less attention to the Bible and religion, instead they ought to develop their own moral standards.</i>					1 2 3 4 5 6 7	
11. There are many radical, immoral people trying to ruin things; the society ought to stop them.					1 2 3 4 5 6 7	
12. <i>It is better to accept bad literature than to censor it.</i>					1 2 3 4 5 6 7	
13. Facts show that we have to be harder against crime and sexual immorality, in order to uphold law and order.					1 2 3 4 5 6 7	
14. <i>The situation in the society of today would be improved if troublemakers were treated with reason and humanity.</i>					1 2 3 4 5 6 7	
15. If the society so wants, it is the duty of every true citizen to help eliminate the evil that poisons our country from within.					1 2 3 4 5 6 7	

Counter-balanced items in italics.

Appendix N – Belief in Sexism Shift Scale

How much do you agree with the following statements?						
1	2	3	4	5	6	7
Strongly DISAGREE	Somewhat DISAGREE	Slightly DISAGREE	Neutral	Slightly AGREE	Somewhat AGREE	Strongly AGREE
1. In the [insert nation], discrimination against men is on the rise.					1 2 3 4 5 6 7	
2. Men are not particularly discriminated against.					1 2 3 4 5 6 7	
3. If anything, men are more discriminated against than women these days.					1 2 3 4 5 6 7	
4. Giving women more rights often requires taking away men's rights.					1 2 3 4 5 6 7	
5. Under the guise of equality for women, men are actually being discriminated against.					1 2 3 4 5 6 7	
6. In the pursuit of women's rights, the government has neglected men's rights.					1 2 3 4 5 6 7	
7. Nowadays, men don't have the same chances in the job market as women.					1 2 3 4 5 6 7	
8. Feminism is about favoring women over men.					1 2 3 4 5 6 7	
9. Feminism does not discriminate against men.					1 2 3 4 5 6 7	
10. All in all, men have more responsibilities and fewer benefits.					1 2 3 4 5 6 7	
11. In today's society, women can say things that men are not allowed to say.					1 2 3 4 5 6 7	
12. It is evident that the media is biased against men.					1 2 3 4 5 6 7	
13. In today's society, men are often punished for acting manly.					1 2 3 4 5 6 7	
14. All in all, men are well respected in today's society.					1 2 3 4 5 6 7	
15. While women can use the "gender card" to get ahead, men can't.					1 2 3 4 5 6 7	

Note 1. Reverse-coded items: 2, 9, 14

Note 2. We recommend administering the items in a randomized order.

Appendix O - Gender Specific System Justification

Below are a series of statements concerning men and women and their relationships in contemporary society. Please indicate the degree to which you agree or disagree with each statement by selecting an option for each one.

1	2	3	4	5	6	7
Strongly DISAGREE	Somewhat DISAGREE	Slightly DISAGREE	Neutral	Slightly AGREE	Somewhat AGREE	Strongly AGREE
1. In general, relations between men and women are fair.					1 2 3 4 5 6 7	
2. The division of labour in families generally operates as it should.					1 2 3 4 5 6 7	
3. Gender roles need to be radically restructured.					1 2 3 4 5 6 7	
4. For women, the United Kingdom is the best country in the world to live in.					1 2 3 4 5 6 7	
5. Most policies relating to gender and the sexual division of labour serve the greater good.					1 2 3 4 5 6 7	
6. Everyone (male or female) has a fair shot at wealth and happiness.					1 2 3 4 5 6 7	
7. Sexism in society is getting worse every year.					1 2 3 4 5 6 7	
8. Society is set up so that men and women usually get what they deserve.					1 2 3 4 5 6 7	

Reverse coded items: 3, 7



Gad Saad Ph.D.
[Homo Consumericus](#)

Is Toxic Masculinity a Valid Concept?

On the dangers of pathologizing manhood

Posted Mar 08, 2018



Source: Nationaal Archief/Wikipedia

The two fundamental objectives in the evolutionary game of life are to first survive (natural selection) and then to mate (sexual selection). For sexually reproducing species, including humans, evolution has endowed

males and females with universal mating preferences that map onto sex-specific recurring challenges faced by each sex during our evolutionary history.

Female fiddler crabs and hens prefer males with extravagantly large claws and tails respectively. Ewes (female rams) will mate with the ram that wins the brutal intrasexual head-butting contest. They reward targeted aggression by granting sexual access. Needless to say, there are innumerable other examples of sexual selection that I might describe, but I suspect that you get the general gist.

Are rams exhibiting toxic masculinity? Are female fiddler crabs succumbing to antiquated notions of masculinity as promulgated by the crab patriarchy? Let's now apply the exact same evolutionary process (sexual selection) to humans. Evolutionary psychologists have documented universal patterns of mating preferences that are invariant across time and place. In no culture ever studied have women repeatedly preferred to mate with pear-shaped, low-status, tepid men possessing high-pitched, nasal voices. In no documented culture do women's sexual fantasies revolve around granting sexual access to unemployed, unambitious men who occupy the lowest stratum of the social hierarchy. Instead, women are attracted to "toxic" masculine male phenotypes that correlate with testosterone, and they are desirous of men who are socially dominant, who are strategically risk-taking in their behaviours, and who exhibit patterns of behaviours that will allow them to ascend the social hierarchy and defend their positions from encroachers. Of course, this does not imply that women are not attracted to intelligent, sensitive, kind, warm, and compassionate men. The ideal man is rugged and sensitive; masculine and caring; aggressive in some pursuits and gentle in others. Think of the male archetype in romance novels, which is a literary form almost exclusively read by women. He is a tall prince and a neurosurgeon. He is a risk-taker who wrestles alligators and subdues them on his six-pack abs, and yet is sensitive enough to be tamed by the love of a good woman. This archetype is universally found in romance novels read by women in Egypt, Japan, and Bolivia, precisely because it caters to women's universal evolved sexual fantasies. When engaging in sexual role-playing in the bedroom, few women ask that their male partners to wear their Google C++ programmer uniform. They ask for the fireman suit to make its presence. James Bond, the epitome of "toxic masculinity," does not cry at Taylor Swift concerts. His archetype is desired by women and envied by men.

The inimitable equity feminist Christina Hoff Sommers wrote a book back in 2002 titled, *The War Against Boys: How Misguided Feminism Is Harming Our*

Young Men (see our chat on my show **THE SAAD TRUTH_144**). How prescient she was! There has been a relentless ideological attack on masculinity, stemming from radical feminism, the most recent example of which is the bogus term “toxic masculinity.” It literally seeks to pathologize masculinity in ways that are profoundly harmful to the existential sense of self of young men. If a man witnesses a woman being attacked on the street, should he intervene? Well, according to the bogus feminist notion of benevolent sexism, it might be best to look away (see **THE SAAD TRUTH_38**). Male saviours are likely oozing toxic masculinity! I should add that male criminals are not exhibiting “toxic masculinity” any more than female adulterers are exhibiting “diabolical femininity.”

The great majority of men are attracted to feminine women who do not possess the body type of Michael Phelps. Beyoncé is desired not because of her “diabolical femininity,” but simply because of her femininity. Similarly, most of the traits and behaviours that are likely found under the rubric of “toxic masculinity” are precisely those that most women find attractive in an ideal mate! This is not a manifestation of “antiquated stereotypes.” It is a reality that is as trivially obvious as the existence of gravity, and no amount of campus brainwashing will ever alter these facts. Let us stop pathologizing masculinity. Instead, let us appreciate the endless ways by which men and women are similar to one another, as well as the important ways in which the two sexes differ.

About the Author



Gad Saad, Ph.D., is a professor of marketing at Concordia University and the author of *The Evolutionary Bases of Consumption* and *The Consuming Instinct*.

In Print: *The Evolutionary Bases of Consumption* (Marketing and Consumer Psychology Series)

Online: [University website](#), [Twitter](#), [Facebook](#), [LinkedIn](#)

Appendix Q – Reading Comprehension Quiz

This quiz is designed to assess your comprehension of the Psychology Today article. Read each question carefully and select the most appropriate answer from the provided options. Choose the option that best aligns with the information presented in the article. Pay attention to details, nuances, and the author's arguments. There is only one correct answer for each question. Once you have completed the quiz, review your answers to ensure accuracy.

-
- 1 What is the main argument presented in the article regarding the concept of 'toxic masculinity' and its relationship to evolutionary psychology?
 - a) Toxic masculinity is a valid concept based on cultural norms.
 - b) Evolutionary psychology supports the idea of toxic masculinity.
 - c) The term 'toxic masculinity' is criticized as harmful and unfounded.**

 - 2 According to the article, what are some universal patterns of mating preferences identified by evolutionary psychologists, and how do they relate to the concept of "toxic masculinity"?
 - a) Women prefer low-status men in all cultures.
 - b) Mating preferences are not influenced by evolutionary history.
 - c) Women are attracted to socially dominant, risk-taking men.**

 - 3 The article mentions sexual role-playing in the bedroom. How does the author use this concept to support their argument against the idea of "toxic masculinity"?
 - a) It demonstrates the need for toxic masculinity.
 - b) It illustrates women's preference for specific male traits.**
 - c) It highlights the irrelevance of evolutionary psychology.

 - 4 Describe the archetype of the ideal man in romance novels as presented in the article. How does this archetype cater to women's universal evolved sexual fantasies?
 - a) The ideal man is sensitive and nurturing.
 - b) The archetype combines masculine and caring traits.**
 - c) Romance novels portray ideal men as low-status individuals.

 - 5 What does the author criticize about the term "toxic masculinity," and how does the author argue that it is harmful to young men?
 - a) The term is embraced as positive reinforcement.
 - b) It pathologizes masculinity and harms men's self-perception.**
 - c) Toxic masculinity is seen as a necessary cultural construct.

- 6 According to the article, how does the author argue against the notion that traits and behaviours labelled as "toxic masculinity" are inherently negative, especially when compared to certain traits in females?
- a) **Females exhibit toxic traits more than males.**
 - b) Toxic masculinity is universally harmful.
 - c) The article does not make comparisons with female traits.
- 7 What is the author's perspective on the ideological attack on masculinity, particularly in the the book "The War Against Boys" by Christina Hoff Sommers?
- a) The attack on masculinity is justified.
 - b) **There is no attack on masculinity according to the author.**
 - c) The author supports the arguments made in "The War Against Boys."
- 8 How does the article discuss the concept of benevolent sexism and its potential implications for male intervention in situations where a woman is being attacked?
- a) Male intervention is always encouraged.
 - b) **Benevolent sexism might discourage male intervention.**
 - c) The article does not address benevolent sexism.
- 9 How does the article challenge the idea that male criminals are exhibiting "toxic masculinity"?
- a) Male criminals are indeed exhibiting toxic masculinity.
 - b) **The concept of toxic masculinity is irrelevant to criminal behaviour.**
 - c) Criminal behaviour is a manifestation of benevolent sexism.
- 10 Based on the conclusion of the article, what does the author suggest as an alternative approach to understanding and appreciating the differences between men and women?
- a) Continue pathologizing masculinity for social progress.
 - b) **Appreciate the ways men and women are different without judgment.**
 - c) Stop appreciating the differences and focus on similarities only.
-

Version 2 of Reading Comprehension Quiz

(Administered if participant does not complete Version 1 with at least 75% correct)

-
- 1 What is the primary focus of the article regarding evolutionary psychology and mating preferences?
 - a) Advocacy for the term toxic masculinity.
 - b) Critique of universal mating preferences.
 - c) **Challenge the concept of toxic masculinity from an evolutionary perspective.**

 - 2 How does the article describe the role of romance novels in shaping ideals related to masculinity and femininity?
 - a) Romance novels reinforce toxic masculinity.
 - b) Romance novels cater exclusively to male fantasies.
 - c) **Romance novels contribute to universal evolved sexual fantasies.**

 - 3 According to the conclusion of the article, what alternative approach does the author suggest for understanding gender differences?
 - a) Continue pathologizing masculinity.
 - b) Appreciate the endless ways men and women are different without judgment.
 - c) **Disregard gender differences for equality.**

 - 4 In what way does the article critique the application of evolutionary psychology to human mating preferences?
 - a) Evolutionary psychology is entirely irrelevant.
 - b) It argues against universal patterns in mating preferences.
 - c) **The article supports evolutionary psychology without reservations.**

 - 5 How does the article criticize the concept of benevolent sexism in the context of male intervention during an attack on a woman?
 - a) Benevolent sexism encourages male intervention.
 - b) Benevolent sexism is irrelevant to the discussion.
 - c) **Benevolent sexism might discourage male intervention.**

 - 6 According to the author, how does the article respond to the idea of an ideological attack on masculinity?
 - a) Supportive of the attack on masculinity.
 - b) Denies the existence of an attack on masculinity.
 - c) **Agrees with the attack on masculinity.**

 - 7 How does the article argue that the term "toxic masculinity" impacts the existential sense of self of young men?
 - a) It positively reinforces masculinity.
 - b) **It pathologizes masculinity and is harmful.**
 - c) It has no impact on young men.

- 8 According to the article, what is the appeal of feminine traits in women to the great majority of men?
- a) Feminine traits are universally undesirable.
 - b) Masculine traits are preferred in women.
 - c) **Beyoncé's appeal lies in her femininity.**
- 9 According to the article, which of the options below describes the ideal male archetype presented in romance novels?
- a) **The ideal man is always aggressive and dominant.**
 - b) The ideal man combines both masculine and caring traits.
 - c) The ideal man is exclusively sensitive and kind.
- 10 What does the article suggest as an alternative to pathologizing masculinity?
- a) Continue pathologizing masculinity for social progress.
 - b) **Appreciate the ways by which men and women are similar.**
 - c) Reject the concept of masculinity entirely for gender equality.
-

Appendix R - Study 4: Example Intervention Transcript

Try to relax yourself in the chair and get comfortable. When you're ready, I am going to invite you to downcast your eyes and listen to the sound of my voice. For now, focus your attention on your breath. Take one or two longer, slower breaths as if marking this moment in the stream of everyday life in which you are taking a pause. Try to feel the rise and fall of your stomach with each inhale and exhale. Notice how it feels to be slowing down, grounding yourself in the here and now.

This practice is not intended to quiet your mind or calm your body, but simply to help you cultivate the skill of observing what is showing up for you, right now. From this place of I, HERE, NOW see if you can bring to mind the paragraph that you read and wrote about earlier. Notice what is coming into your mind. Let yourself connect with your own response to that paragraph. If you could distil the essence of your into just one or two words, what would they be? Or perhaps you have an image or a felt sense that would be the essence of your response, what would that be? Let yourself be as open as you can to that. See if you can let yourself acknowledge your own reaction. Does this reaction have a familiar feeling to you? Does this kind of thinking or feeling been something that has influenced you during your lifetime? When this kind of feeling or thinking has influenced you, what has it made you do? How have your interactions with other people been shaped by this kind of thinking and feeling?

As best as you can, try to let go of any struggling with this thinking or feeling. It is a part of your history; it has been an influence. We are all made up of our own memories, history, and programming. We often follow ideas and rules that we have acquired through our life experience, from our culture, through conditioning and programming, messages

that we have acquired from parents or peers, from media and society, and our own efforts to make sense of the world. And yet sometimes those influences, if unquestioned, can lead us away from the person that we would most ideally like to be. See if you can think of a specific time when the influence of these thoughts and feelings, that you are in touch with now, has led to interactions that you regret; where they didn't serve you or other people well. Maybe these thoughts and feelings led you to act in ways that were not like the person that you would most want to be. Again, try to be as open to that as possible.

It takes real courage to recognize that some of the influences that we have internalized don't serve us well, that they lead us away from the person that we want to be. The tendency to retreat, to justify, to avoid discomfort is strong. And yet, if we really want to be a person who is in control of our own life then being open to challenging situations and to new learning is part of the path that we must walk. Courage is not the absence of fear or discomfort; it is knowing fear and stepping into the unknown with the fear or the discomfort. If any aspect of this is uncomfortable for you right now, see if you can breathe into that feeling. Recognize it. Give yourself a moment of acknowledging, this is a moment of discomfort. Try and let yourself be courageous enough to feel that discomfort, to not run from it, and yet to treat yourself gently, kindly. All human beings have thoughts and feelings that they don't like to have. Give yourself the chance to learn from your own reactions as best as you can.

Sometimes, it can be genuinely hard for us human beings to truly value and respect people who are different to us. Most primates are evolutionarily hardwired to cooperate first with those that we share kinship bonds with and to compete against those that are not extended kin. And yet, the most unique quality of human beings is our capacity to

cooperate beyond the boundaries of immediate family. Let yourself think of the network of people that you are in some way cooperating with. The people that you work with, other people that you have some connection with look after our children and teach them in school, there are other people who fix your car. Then there are other people who you don't even know who bake your daily bread, produce the milk for your tea or coffee, run the power station that delivers electricity, bank your money, drive the bus or the train that takes you to work. There are millions of ways in which our lives are connected in a network of cooperation and most of the time we take it for granted. And yet this capacity to cooperate as a species, beyond genetic lines, is rare in the animal kingdom. Because this capacity has evolved, we can experience a tension between attitudes and thoughts related to cooperating with people who are most like ourselves and our interactions with a broader and more diverse group of people.

Ask yourself, what are the qualities and characteristics that I would most want to embody if I were free to choose. Would you wish to be a person that others think of as fair and just, using your own authority and influence wisely, taking ownership of your own life, treating other people with fairness, allowing them to feel a sense of belonging and inclusion. If you could choose, would you want to be the kind of person who treats every human being with that same sense of justice and fairness, inclusion and equality? Would you choose to be a person who other people feel a sense of safety and trust around?

Coming back to the paragraph that you read earlier. As best as you can, let yourself notice that the paragraph describes the experiences of women in our world. Let yourself be as open as you can be to the experiences written about. Women often experience injustice, unfairness, disproportionate burden. Whilst it is certainly true that not all men overtly

contribute to that suffering, we all live within historical, social structures that have ingrained into them a pattern of differential treatment of women compared to men. This is not to say that men don't also have suffering and experience pain and hardship, though it is to recognize that the subtle and not so subtle discrimination against women is significantly greater. See if you can be open to this message as best as you can.

Coming back to the familiar thoughts and feelings that you connected with after reading and writing about the paragraph. Notice again how these thoughts have influenced your interactions with others. Remember that specific time that you contacted earlier. If the you that is here now, listening to this recording, could stop time and go back to speak to you that was there then, what encouragement might you give them? What might you say to help that earlier version of you to act in ways that truly represent fairness, justice, inclusion, and belonging? Let yourself imagine saying that to your earlier self. Imagine how it would be to embody those messages that you just gave yourself in your daily life now. Let yourself imagine, what small actions would flow if you could be guided by that and not so much influenced by the thoughts and attitudes that you connected with earlier after the vignette. See if you could think of one small step that you could take today that would help you cultivate these qualities and grow just as you would most want it to grow. See if you can notice if your mind or your heart or the world around you begins to put up barriers to growing in this area of your life and see if as best you can if you can meet those barriers with the same awareness, openness, and courage that you have been nurturing through this exercise and allow yourself to continue to take those small steps even if those barriers appear.

As we come towards the end of this exercise, allow yourself to gather up your own sense of the exercise itself. Try to let go of needing to get it right or striving to make something happen. Just allow yourself to notice and listen to your own direct experience. And let yourself gradually become more aware of the room around about you and whenever you feel ready to simply lift your eyes and continue with your day.