# University of Southampton

Faculty of Environmental and Life Sciences

School of Psychology


**Upon The Moral Pedestal: How Self-Image and Self-Beliefs Fuel Social Action**


by

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Thesis for the degree of Doctor of Philosophy

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# Abstract

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In this thesis, I examine how moral outrage influences social action intentions through moral self-enhancement (i.e., self-image) and participative efficacy (i.e., self-beliefs). Although moral outrage is often framed as a powerful motivator for social action, it can also serve self-enhancing purposes by eliciting a sense of moral superiority. At the same time, the belief that one's actions can meaningfully contribute to collective outcomes, known as participative efficacy, is a key predictor of social action engagement. I integrate these constructs into a novel framework that traces the psychological pathway from moral outrage to social action, moving through moral self-enhancement and participative efficacy. In Studies 1a and 1b, participants engaged in downward social comparisons to moral wrongdoers, supporting the role of such comparisons in moral self-enhancement. In Study 2, higher levels of moral self-enhancement were associated with stronger participative efficacy beliefs. In Study 3, greater participative efficacy corresponded with increased social action intentions. Finally, Studies 4a and 4b provided evidence for the full serial mediation: moral outrage increased moral self-enhancement, which bolstered participative efficacy and, in turn, enhanced intentions to engage in a range of social actions. These findings contribute to a more nuanced understanding of how antecedents of social action are psychologically connected, with implications for both theory and the design of social change interventions.

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1. Dataset including .csv files of data for each of the 6 studies and participant information sheets for each of the 6 studies can be found at: https://doi.org/10.5258/SOTON/D3657

# Research Thesis: Declaration of Authorship

Print name: Chloe Webb

Title of thesis: Upon The Moral Pedestal: How Self-Image and Self-Beliefs Fuel Social Action

I declare that this thesis and the work presented in it are my own and has been generated by me as the result of my own original research.

I confirm that:

1. This work was done wholly or mainly while in candidature for a research degree at this University;
2. Where any part of this thesis has previously been submitted for a degree or any other qualification at this University or any other institution, this has been clearly stated;
3. Where I have consulted the published work of others, this is always clearly attributed;
4. Where I have quoted from the work of others, the source is always given. With the exception of such quotations, this thesis is entirely my own work;
5. I have acknowledged all main sources of help;
6. Where the thesis is based on work done by myself jointly with others, I have made clear exactly what was done by others and what I have contributed myself;
7. None of this work has been published before submission

Signature: Date: 04.09.2025

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# Chapter 1. Introduction

In the age of endless scrolling and algorithmic outrage, a stranger's injustice can feel as visceral as a personal affront. Why do people care so deeply about wrongs that do not affect them directly, and why are they so quick to express that anger, especially online? This emotional response, known as moral outrage, is triggered by perceived unfairness or harm, especially when it affects a third-party group or broader community (Batson et al., 2007; Haidt, 2003). Although moral outrage is timeless, the digital age has dramatically expanded its expression, rendering it more accessible, visible, and viral than ever (Cinelli et al., 2021; Crockett, 2017). Through social media, moral outrage does not merely echo - it accelerates, gaining speed and visibility with every swipe, like, and share (Brady et al., 2017; Spring et al., 2019). Given the contagious nature of emotion (Kramer et al., 2014), even a single post can spark collective outrage - fuelling movements, backlash, and everything in between.

Moral outrage now dominates mainstream discussions about injustice, politics, and social change, prompting headlines like *The Age of Rage* (Burkeman, 2019) and initiatives such as *The Outrage Project*, in which the magazine *Slate* documented everything people were outraged about for an entire year (Slate, 2014). At the same time, psychologists have increasingly turned attention to moral outrage's cognitive and behavioural outcomes (Jiménez-Leal & Cortissoz-Mora, 2021), recognising its critical social function. Humans rely on emotions to communicate and maintain social order (Izard, 2010; Wanders et al., 2021). When they witness unfairness or injustice, their moral outrage signals disapproval and a commitment to norm adherence. As such, some psychologists consider moral outrage a primarily selfless emotion - one that helps to sustain social cohesion and ultimately benefits society (Henrich, 2016; Henrich & Henrich, 2007; Mihailov et al., 2023).

Although moral outrage can serve other-focused and prosocial aims like defending victims or promoting justice, it may also reflect self-focused motives concerned with managing one's moral reputation. Expressing outrage can bolster individuals' sense of moral self-worth (Green et al., 2019; Jordan & Rand, 2020; Sedikides et al., 2025) and may motivate them to seek out situations that elicit outrage as a way to enhance their self-image (Bouvier, 2020; Ditum, 2014; Green et al., 2019). An emerging, yet untested, perspective further suggests that witnessing moral violations allows individuals to compare themselves to perceived wrongdoers, reinforcing self-enhancement through downward social comparison (Sedikides et al., 2025).

Moral outrage plays a vital role in driving social action and promoting social change. Without it, movements for social justice would struggle to gain momentum (Jasper, 1998; 2014). Yet, as Lazarus (1991) argued, emotion does not automatically lead to action. Instead, it activates cognitive structures that give rise to meaning and shape behaviour. Moral outrage is no exception. One such structure is moral self-enhancement, which refers to the bolstering of one's self-image through the perception of oneself as a virtuous and principled person. Self-enhancement increases the belief that one is a capable and valuable moral agent, and encourages consistency between one's moral self-image and behaviour (Blasi, 1983). The consequences of self-enhancement may contribute to transforming outrage into a desire to act in morally aligned ways. Another key structure is participative efficacy, or the belief that one's actions can meaningfully contribute to collective goals. This belief is essential for turning emotion into engagement (Van Zomeren et al., 2012). Together, moral self-enhancement and participative efficacy may explain how the emotional experience of outrage becomes a catalyst for social action.

Building on this foundation, I begin by reviewing the literature on moral outrage and consider whether it qualifies as a moral emotion, particularly considering its association with moral self-enhancement. I then examine how individuals engage self-enhancement and propose that downward social comparison, triggered by the presence of moral transgressors, is a key mechanism. Following this, I turn to social action and participative efficacy, with a focus on how efficacy beliefs operate in a digital age. Here, I explore the possibility that moral self-enhancement strengthens participative efficacy by reinforcing a sense of personal value and capability. Rather than functioning as parallel antecedents of social action, moral outrage and participative efficacy are psychologically linked through moral self-enhancement. Understanding these interconnections can deepen insight into the dynamics of social movements, conflict resolution, and policymaking (Jasper, 2014; Salerno et al., 2010; Skitka et al., 2004).

## 1.1 Moral Outrage

Moral outrage is a form of anger triggered by a perceived violation of fairness and justice that harm a third-party group of people or a community (Haidt, 2003; Hoffman, 2000). To understand how moral outrage influences self-image, self-beliefs, and behavioural outcomes, it is essential to recognise its social nature and differentiate it from other forms of anger and

other moral emotions. However, its relation to the self has sparked debate over whether it can genuinely be considered a moral emotion (Jiménez-Leal & Cortissoz-Mora, 2024).

## The Social Nature of Emotions

Emotions permeate people's thoughts, behaviours, relationships, and social interactions, constituting a fundamental aspect of human experience (Van Kleef et al., 2016; Van Zomeren & Dovidio, 2018). Historically, emotions were viewed as internal, personal reactions to perceived changes, threats, or opportunities related to one's self-interest (Frank, 1988). As a result, early emotion researchers focused primarily on the individual, locating emotions within the mind and body of the person experiencing them (Parkinson, 1996). Psychologists studied how emotions influence cognition, motivation, and behaviour (Forgas, 1995), often examining the underlying cognitive and physiological processes (Van Kleef et al., 2016). Experimental research typically involved lone, passive participants engaging with non-social stimuli (Parkinson, 1996). Although this work advanced understanding of intrapersonal processes, it largely overlooked the interpersonal functions of emotion, which are thought to emerge through the "medium of interaction" (Parkinson, 1996, p. 680). Over the past three decades, however, a growing body of research has shown that emotions are deeply social. This aligns with evolutionary theory, which views emotions as superordinate programs shaped to solve adaptive problems - many of which were inherently social in nature, such as alliance formation, status negotiation, and threat detection (Cosmides & Tooby, 2000). The social nature of emotion can be understood through several core functions that illustrate how emotions are shaped by, expressed through, and directed towards others.

Firstly, individuals rarely experience emotions in isolation from others' thoughts, feelings, and behaviours. Others are considered "probably the most important objects in anyone's environment" and are the most common trigger of emotions (Parkinson, 1996, p. 664). The field of social psychology itself is built on the profound impact that the actual, imagined, or implied presence of others has on people's thoughts, feelings, and behaviours (Allport, 1954). For example, people feel happiness when connected to others (Hudson et al., 2020), jealousy in response to threats to social relationships (DeSteno et al., 2006; Kelley et al., 2015), and nostalgia when they recollect fond memories involving close others (Sedikides & Wildschut, 2019). One study found that three-quarters of 600 self-reported emotional experiences centred on the individual's relationship with others (Shaver et al., 1992).

Secondly, people express emotions outwardly to communicate with others (Izard, 2010). Emotional expression plays two key roles: physiological regulation and social communication (Al-Shawaf & Lewis, 2017; Izard, 2010; Shariff & Tracy, 2011). For example, disgust is expressed through specific muscular patterns - contracted eyebrows, a raised upper lip, and wrinkled nose - that constrict the nostrils and reduce inhalation, helping to prevent the intake of noxious substances (Chapman et al., 2009; Kunz et al., 2013). This muscular tension causes constriction of the nostrils and a reduction of inhalation, protecting the organism from inhaling potentially dangerous or toxic stimuli (Chapman et al., 2009). These expressions also function as recognisable social signals that communicate important information (Shariff & Tracy, 2011). Expressing emotion is, therefore, essential for navigating and coordinating interpersonal interactions (Keltner & Kring, 1998; Keltner et al., 2019). People learn, both implicitly and explicitly, how to express different emotions appropriately across social contexts (Parkinson, 1996). These expressions often involve coordinated facial movements, gestures, posture, and vocalisations. For instance, expressing sympathy may include a gentle touch, oblique eyebrows, forward body posture, and soft vocal cues, all of which provide comfort to the receiver (Goetz et al., 2010).

Thirdly, emotional experience and expression are shaped by social norms - shared standards that guide behaviour. People regulate their emotions in ways that align with cultural expectations (Van Kleef et al., 2016). Social norms are key to maintaining social cohesion; when they are violated, the stability of interpersonal environments is threatened (Wanders et al., 2021). As such, norms are enforced through informal social sanctions (Fehr & Fischbacher, 2003), and emotional reactions to norm violations communicate that such behaviour is unacceptable, thus promoting social cooperation (Crockett, 2017).

Fourthly, people feel emotions on behalf of others. A substantial portion of emotional life involves reacting to events that do not directly involve the self (Haidt, 2003; Wildschut et al., 2018; Wondra, 2020). This is referred to as vicarious emotion - feeling an emotion for another person without necessarily sharing group membership or being personally affected. Unlike empathy, the vicarious emotion experienced does not need to match the emotion felt by the observed individual (De Vignemont & Singer, 2006; Wondra, 2020).

Together, these insights highlight that emotions are not merely internal states but are embedded in social contexts, shaped by interactions with others, and instrumental in regulating relationships and group dynamics. Emotions are often elicited by others, expressed for others, shaped by social norms, and even felt on behalf of others. Within this broader

landscape, certain emotions stand out as distinctly social. These emotions are rooted in how people perceive and respond to others' thoughts, actions, and social norms (Hareli & Parkinson, 2008). Shame, guilt, jealousy, and empathy exemplify this category. Anger, too, frequently arises in response to perceived social or moral violations, making it particularly relevant for understanding how emotions contribute to collective responses and moral judgment.

## Defining and Differentiating Moral Outrage

Anger is typically perceived as negative, because it is triggered by undesired or unpleasant events (Harmon-Jones, 2004). Such events involve a violation or goal-blockage of what the observer thinks ought to be (Berkowitz, 1993; Frijda, 1986). For example, individuals respond angrily to being intentionally hurt or slighted by another person (Frijda, 1986) or to being provoked by threatening or aversive stimuli (Alia-Klein et al., 2020). Both neural and behavioural evidence suggest that anger, as an approach-oriented emotion, drives individuals to act in order to restore their disrupted goals (Harmon-Jones & Gable, 2017; Harmon-Jones & Segilman, 2001; Murphy et al., 2003). Anger promotes a tendency to verbally confront or physically attack the anger-evoking target (Berkowitz, 1993; Mackie et al., 2000; Roseman et al., 1994). Therefore, anger is often conflated with aggression and assumed to lead to aversive outcomes (Tagar et al., 2011), However, this is not always the case, as cognitive processes (e.g., rumination) can inhibit or amplify the pathway from anger to aggression (Kelley et al., 2013; Pedersen et al., 2011; Lazarus, 1991).

More recently, researchers have proposed that anger, as a widespread and enduring emotion, likely serves adaptive functions (Lench et al., 2023; see also Cosmides & Tooby, 2000). It is overly simplistic to categorise emotions as inherently good or bad, or positive or negative, given that their consequences depend on context and function (Spring et al., 2018). Some forms of anger, particularly when elicited by moral violations, can promote prosocial outcomes by motivating individuals to rectify injustice and engage in social action (Carver & Harmon-Jones, 2009; Harmon-Jones & Gable, 2017; Tagar et al., 2011). In this context, moral anger has been termed a prototypical moral emotion.

**Moral Emotions**. Haidt (2003) popularised the concept of moral emotions, which include pride, shame, guilt, compassion, gratitude, disgust, and anger. These emotions arise in response to behaviours that conform to or violate moral norms. However, the emotions differ by the contexts in which they arise. Self-evaluative moral emotions occur when individuals apply

moral standards to their own actions. For example, pride arises when one meets their own moral standards, whereas guilt and shame arise when they fall short. Other-evaluative moral emotions, on the other hand, occur when moral standards are applied to others. For instance, experiencing disgust or anger indicates that the observer has witnessed someone else violate a moral standard (Lefebvre & Krettenauer, 2019). As such, anger and guilt are often linked to moral violations - actions that contradict a society's ethical principles and cause harm to others (Sousa & Piazza, 2014).

Although the term disgust is sometimes used interchangeably with anger (Nabi, 2002; Olatunji et al., 2012), the two emotions differ in both their triggers and the strategies they motivate. Moral disgust typically arises in response to violations of purity or sanctity - such as sexual impropriety or disrespect toward sacred symbols - and often motivates indirect responses that preserve social boundaries, including gossip or exclusion (Giner-Sorolla et al., 2012; Molho et al., 2017; Rozin et al., 1999). In contrast, moral anger is more often triggered by perceived injustice, harm, or unfairness, and tends to motivate direct, confrontational responses aimed at restoring justice or accountability (Giner-Sorolla et al., 2012; Molho et al., 2017; Rozin et al., 1999). These distinct behavioural tendencies reflect the different social functions the emotions serve in regulating moral behaviour.

Although sometimes treated as overlapping, moral anger and moral outrage can be meaningfully distinguished by the scope of the moral violation and the degree of personal involvement. Moral anger typically arises from personal experiences of unfairness or harm, such as betrayal or interpersonal injustice (Jiménez-Leal & Cortissoz-Mora, 2024; Lomas, 2019). For example, one might feel moral anger when a colleague takes credit for one's work. Moral outrage, by contrast, is directed at violations of collective moral norms that primarily affect others rather than the self. These include instances such as discriminatory policies or the abuse of power by public officials (Jiménez-Leal & Cortissoz-Mora, 2024). Given that moral outrage is rooted in concern for others and broader social issues, it is especially relevant to understanding what motivates people to engage in social action - a central focus of this thesis.

**Is Moral Outrage Truly Moral?** Haidt's (2003) definition of moral emotions has stirred debate over whether psychologists can consider moral outrage as genuinely moral. He defined moral emotions as those "linked to interests or welfare of either society as a whole or at least of persons other than the judge or agent" (p. 853). He suggested that the more disinterested the observer is, the more moral the emotion. Therefore, psychologists usually regard moral outrage as a moral emotion, because it is triggered by perceiving harm to primarily third-party victims

and groups beyond than the self (Thomas et al., 2009a). This self-disinterested outrage appears genuine, as individuals are often willing to engage in costly actions to restore justice, even when they are not the victims (Fehr & Fischbacher, 2004; Thomas et al., 2009a). For example, people frequently speak out about perceived cruelty and punish wrongdoers on behalf of strangers (Hechler & Kessler, 2018; Mihailov et al., 2023). However, if moral outrage were entirely unrelated to the self, one would expect identical emotional reactions to moral violations in distant communities and when personally affected. This is not the case. Moral outrage is stronger when the victim of an injustice is a member of one's ingroup, even if the same immoral act is judged equally wrong regardless of the victim's nationality (Batson et al., 2009). In fact, moral outrage is never entirely disinterested, and disinterestedness may even predict the absence of outrage (Batson, 2011). Thus, moral outrage may not be a purely moral emotion.

Moral outrage, while not entirely selfless, does serve prosocial functions by upholding moral standards, fueling social change, and benefiting society. According to this perspective, advocated by Jiménez-Leal and Cortissoz-Mora (2024), the prosocial nature of moral outrage promotes, maintains, and protects moral norms (Agostini & Van Zomeren, 2021). Furthermore, the connection between moral outrage and self-interest does not negate that people often react strongly to injustices affecting distant communities with whom they have no personal ties. An emotional process can be self-interested yet still be moral, if it triggers behaviour that benefits others (Giner-Sorolla et al., 2012, 2023). Therefore, moral outrage is still generally regarded as a moral emotion.

The literature on moral outrage has expanded considerably, reflecting a modern world where social injustices are more visible and accessible (Molho et al., 2017). Social media amplifies outrage-inducing content, making it easier than ever to express moral outrage (Mihailov et al., 2023). Understanding how moral outrage shapes people's lives remains a key topic of psychological and philosophical interest (Jiménez-Leal & Cortissoz-Mora, 2021).

## Moral Outrage Is All the Rage

Experiencing moral outrage is not a modern phenomenon; historians have documented its occurrence for centuries (Nussbaum, 2016). Enduring the costs associated with expressing moral outrage works as a signal to show commitment to moral behaviour. It sends information to others in one's social network and even strangers (primarily online) that one is willing to punish transgression and is unlikely to commit the same transgression, overall reinforcing one's adherence to social norms (Henrich, 2016; Henrich & Henrich, 2007). It would be unlikely

for people to punish moral transgressors, if they were not committed to creating group cohesion and norm adherence (Mihailov et al., 2023). However, in the digital age, the sheer volume and accessibility of information about moral violations worldwide has heightened awareness of social injustice (Thompson, 2005). The rise of social media platforms and their exponential growth in users (Goswami, 2018) have further amplified the frequency of opportunities to experience moral outrage.

**Modern Journalism and Social Media.** The media has long been responsible for keeping the public informed about global events, especially in regions where individuals lack direct experience (Happer & Philo, 2013). However, modern journalism has changed how such information is reported and consumed (Cinelli et al., 2021). News coverage often ignores the structural causes of events, instead emphasising the moral agency of those involved. This shift creates a strong incentive to feel morally outraged and directs outrage toward identifiable moral transgressors, thus increasing the likelihood of provoking moral outrage (Gamson, 2014; Jenkins et al., 2013).

Social media accelerates this process. Originally designed for entertainment, online platforms have quickly become dominant sources of information and news (Cinelli et al., 2021). The drive for viral content (and revenue) has shifted the incentives for information-sharing, prioritising content likely to generate engagement over its truthfulness or societal benefit (Crockett, 2017). Exaggeration and the spread of false information to evoke anger are common practices. Media outlets have capitalised on this trend by producing content designed to provoke “outrage porn” (Kreider, 2015), with sociologists dubbing modern media, particularly political coverage, the “outrage industry” (Jiménez-Leal & Cortissoz-Mora, 2021). Some scholars argue that media has fundamentally altered the way moral outrage is experienced and expressed (Rose-Stockwell & Haidt, 2019).

Social media fosters a cycle of moral outrage. Firstly, users are frequently exposed to provocative content that triggers strong reactions (Crockett, 2017). Secondly, platforms are designed to maximise engagement through features such as sharing, liking, and following (Mihailov et al., 2023). Given that individuals are more likely to share content that evokes moral outrage, it leads to greater engagement, expanding its reach and encouraging further involvement. Thirdly, users are more likely to continue scrolling when they are angry, and social media platforms are strategically designed to keep users engaged by ensuring they encounter more outrage-inducing content (Williams & Newmawu, 2018). Finally, this reinforcement feeds the platform’s algorithms, keeping outrage-inducing posts highly visible and fostering an

environment where outrage becomes both pervasive and contagious (Brady et al., 2020; Zuboff, 2019), thus promoting the engagement and spread of outrageous content (Mihailov et al., 2023).

**The Citizen Reporter.** The spread of outrage-inducing content is not limited to mainstream media. The internet has enabled anyone with a device and internet connection to share information (Mihailov et al., 2023). Social media platforms like X (formerly Twitter) are designed to facilitate instant sharing of photos, real-time reports, and quick replies to others (Marwick & Boyd, 2011). It also allows people from different religious, ethnic, and linguistic backgrounds to share experiences and knowledge with the masses (Crockett, 2017). Social media, therefore, has become a key platform for expressing emotions and a prominent method of communication for reinforcing social and moral norms, increasing the expression of moral outrage (Brady et al., 2023).

Public, online expressions of moral outrage often take the form of call-outs (Ditum, 2014). People individually single out, film, publicise, or shame others who have displayed moral violations connected to broader social injustice, such as racism or homophobia (Bouvier, 2020). These call-outs, especially on platforms like X, generate hashtags that enable others to join the outrage, often turning isolated events into global movements. Even when individuals are not directly affected by a moral violation, moral outrage can still be triggered, with online call-outs allowing outrage to spread worldwide from a single event (Van Troost et al., 2013).

Although social media can raise awareness of social issues and hold wrongdoers accountable, it can also limit exposure to diverse opinions. Online users prefer content that aligns with their worldview, and algorithms are designed to reinforce this preference by creating echo chambers that amplify polarisation. This design promotes the spread of misinformation, inflates perceptions of intergroup hostility, and deepens ideological divides (Brady et al., 2023). It also distorts social understandings of morality and politics, which threatens the stability of a functional democracy (Lazer et al., 2018; Rini, 2019). A field survey conducted on X found that social media users overestimate the intensity of moral outrage in posts, perceiving more outrage than the authors actually reported (Brady et al., 2023).

Unsurprisingly, moral outrage has become a highly prevalent topic of both public conversation and scientific discourse. The prevalence and accessibility of triggering content, its extremity, and how it is delivered all contribute to the recent amplification of this emotion. However, these contextual phenomena do not fully explain experiences of moral outrage.

Although moral outrage is linked to the desire to restore justice, it remains a negative emotion, and, according to the traditional view of emotional experience, people are inclined to avoid affective negativity (Alicke & Sedikides, 2011a). However, people willingly experience moral outrage (Green et al., 2019), suggesting that this is partly due to the emotion's association with self-enhancement.

## 1.2 Moral Outrage and Moral Self-Enhancement

At first glance, moral outrage seems like an unpleasant emotion - charged with anger, frustration, and negativity. Given that people are motivated to seek pleasurable experiences and avoid negative ones (Alicke & Sedikides, 2009), it might seem puzzling that so many willingly expose themselves to injustice-evoking content or express moral outrage in public. Lazarus (1991) described emotions as the product of cognitive appraisals, the evaluations of whether an event is personally meaningful and relevant to one's goals, identity, and values. From this perspective, moral outrage can be understood as a signal that something significant and morally consequential has occurred. Although affectively negative, such emotions can prompt reflection, goal pursuit, and identity affirmation. People may willingly experience moral outrage, because it reinforces deeply held beliefs and bolsters their self-image, even at the cost of short-term discomfort. For instance, negative affect linked to social or political causes - such as anger, guilt, or frustration - can promote psychological need fulfilment by strengthening meaning, self-worth, and connectedness with others (Juhl et al., 2017). When people experience outrage in response to perceived injustice, they may also be reinforcing a sense of moral clarity or integrity. In this section, I explore how moral outrage, though affectively aversive, can serve the self through moral self-enhancement - a process that may explain why individuals not only tolerate moral outrage, but sometimes seek it out.

### Self-Enhancement in the Moral Domain

Self-enhancement is the motivated cognitive process of exaggerating one's virtues and minimising shortcomings to feel better about oneself (Sedikides, 2021; Gregg & Sedikides, 2024; Sedikides & Gregg, 2008). People strive to perceive themselves more favourably than their peers, often beyond what is reflected in objective measures such as standardised tests or informant reports (Alicke & Sedikides, 2009; Sedikides, 2020). Although these beliefs about the self are inflated and unsupported, they feel true to the individuals. For instance, they are willing to bet money on their superiority over their peers (Williams & Gilovich, 2008), while believing

they are less susceptible to self-enhancement folly than their peers (Pronin et al., 2002). According to the self-concept-enhancing tactician model, individuals typically self-enhance tactically rather than candidly (Sedikides & Strube, 1997). That is, they do not self-enhance indiscriminately; instead, they prioritise self-conceptions that are personally important or central to them (Markus, 1977; Sedikides, 1993).

Morality is a central self-conception (Conway, 2018; Goodwin et al., 2014). Individuals strongly desire to be regarded as moral beings (Haidt, 2003). They view traits such as honesty, faithfulness, mercy, and altruism as highly desirable and view traits such as mercilessness, dishonesty, unfaithfulness, and selfishness as highly undesirable (Melnikoffa & Bailey, 2018). Given the personal importance of morality and moral reputation, people strategically manipulate judgements about their character in a favourable direction to be characterised as moral by others and by oneself (Allison et al., 1989; Van Lange & Sedikides, 1998; Ybarra et al., 2012). One way to cultivate both external recognition and the self-image of a moral person is by expressing moral outrage (Sedikides et al., 2025). In fact, some researchers argue that expressing moral outrage is primarily a performative spectacle designed to reinforce one's moral self-image and elicit personal satisfaction (Bouvier, 2020; Ditum, 2014). This phenomenon, called virtue signalling, is defined as "contributing to a moral discourse that aims to convince others that one is 'morally respectable'" (Tosi & Warmke, 2016, p. 199). Moral signalling purports to alert an audience to injustice, but the virtue signaller is also concerned with themselves and is motivated by letting others know about their high moral ground. Stated otherwise, individuals claim to be experiencing moral outrage in response to an injustice partly because they desire to display how morally advanced they are (Levy, 2021). Virtue signalling has attracted research attention, and evidence suggests that moral outrage is closely linked to positive beliefs about one's morality and offers a path to moral self-enhancement.

**Empirical Evidence.** Green et al. (2019) illustrated the relation between moral outrage and moral self-enhancement. They examined whether participants who experience moral outrage (vs. not) are likelier to draw favourable moral inferences about themselves. In Study 1a, participants read a short story about social injustice (moral outrage condition) or grocery shopping (control condition). The social injustice story described a tsunami tragedy in an Indonesian village and the political corruption that led to a family missing out on critical aid. The neutral story described a student shopping for their dinner. All participants then rated how angry versus calm they felt and assessed themselves on 10 moral (e.g., compassionate, considerate, generous) and 10 agentic (e.g., ambitious, confident, dominant) traits. A

manipulation check confirmed that participants in the moral outrage condition felt angrier and less content than those in the control condition. More importantly, moral outrage participants rated themselves as (1) more moral than control participants, and (2) more moral than agentic compared to control participants. In summary, experiencing moral outrage elicited moral, but not agentic, self-enhancement.

Evidence also suggests that individuals tactically self-enhance by seeking to experience moral outrage to reinforce their moral self-image. Green et al. (2019) examined whether individuals willingly endure moral outrage - a negative emotional experience - as a means of self-enhancement. In Study 1b, participants read a story about social injustice (moral outrage condition) or grocery shopping (control condition). This time, the injustice story was about a hurricane and political corruption in the aftermath, and the neutral story was the same as in Study 1a. Next, participants completed a manipulation check. Subsequently, they indicated their interest in reading further injustice-relevant newspaper articles and happiness-relevant articles based on provided headlines. Finally, they rated themselves on moral and agentic traits. Participants in the moral outrage (vs. control) condition were more outraged and more likely to be interested in reading further injustice-relevant rather than happiness-relevant articles. Further, they rated themselves (1) higher on moral traits than agentic traits and (2) higher on moral traits than participants in the control condition. Moral outrage led to moral self-enhancement and motivated participants to endure further moral outrage - and its accompanying negative emotional state - to improve their self-image. The desire to read more injustice-evoking articles mediated the effect of moral outrage on moral self-enhancement. In all, individuals strategically leverage moral outrage for self-enhancement, viewing the associated negative emotion as a small cost to boost their moral self-image.

Researchers have also shown that moral outrage can restore people's self-image when they feel guilty about their moral failings. In several experiments, Rothschild and Keefer (2017) examined outrage in response to brief news excerpts of corporate labour exploitation and environmental destruction. In Study 1, participants reported the extent to which they engaged in behaviours believed to "directly or indirectly contribute to the perpetuation of sweatshops and forced child labour in the developing world" (p. 212). This framing emphasised participants' personal responsibility, thereby threatening their moral self-image. Next, participants indicated the degree to which they felt guilty and completed a moral outrage measure. Personal moral guilt predicted moral outrage at corporate harm-doing. In Study 2, Rothschild and Keefer instructed participants that either their ingroup or outgroup was culpable for the wrongdoing. The researchers also manipulated whether participants reported guilt before or after an

opportunity to express moral outrage. Ingroup (vs. outgroup) culpability increased guilt and outrage, but an opportunity to express moral outrage first (rather than second) reduced personal guilt. Therefore, moral outrage repairs one's moral self-image and lowers moral guilt.

In Study 3, participants primed with ingroup culpability who were allowed to express moral outrage (vs. those who did not) ranked their moral character more positively relative to "other people they know" (p. 220). In Study 4, participants rated their moral character more positively when they blamed international corporations for third-party harms and could express moral outrage (vs. not express). The results of these two studies indicated that moral outrage targeted at a wrongdoer provides an opportunity to self-enhance. In Study 5, participants who felt guilty about their group's wrongdoing experienced reduced moral outrage when reassured of their moral integrity. Overall, the five Rothschild and Keefer studies demonstrated that (a) moral outrage can be driven by guilt over personal or collective harm-doing, (b) expressing outrage reduces guilt and reinforces a positive moral self-image, and (c) outrage serves as a means of maintaining a positive moral self-image, as guilt-induced outrage weakens when participants have alternative ways to affirm their morality.

Additional research supports the notion that moral outrage is used for self-enhancement, particularly individuals with low justice sensitivity - those who express weaker emotional and behavioural reactions to third-party unfairness (Baumert et al., 2013) - are more likely to use moral outrage to boost their self-image. In Studies 3 and 4 of Rothschild and Keefer (2017), participants completed a justice sensitivity scale and read a fabricated news article about sweatshop labour practices and exploited workers. As hypothesised, justice sensitivity was positively associated with moral outrage and punishment of the wrongdoer. Furthermore, among participants with high justice sensitivity, moral outrage levels did not differ between those who could affirm their own moral self and those who could not. In other words, individuals highly sensitive to injustice experienced moral outrage regardless of whether they could express it. However, participants with low justice sensitivity displayed less moral outrage when given the opportunity to affirm their moral self-image.

**The Process.** Although a strong theoretical and empirical basis exists for the relation between moral outrage and moral self-enhancement, researchers have not sufficiently studied how this relation arises. Green et al. (2019) assumed that moral outrage leads to moral self-enhancement, given that moral outrage signals one's virtuous nature. That is, they thought that emotion serves as a marker of moral integrity, enabling individuals to bolster their moral reputation and improve their virtuous self-image. However, this reasoning neglects the

interpersonal nature of moral self-enhancement. For example, in the Green et al. studies, participants rated themselves on moral traits without accounting for evaluating the transgressor's moral character. Similarly, Juhl et al. (2017) proposed that the opportunity to take the moral high ground and uphold moral principles in response to others' immoral or unjust actions fosters moral self-enhancement and can even boost self-esteem. An alternative explanation is that moral outrage drives moral self-enhancement via downward social comparison, where individuals contrast themselves with the moral transgressor.

## The Role of Social Comparison

**Social Comparison.** When people receive information about someone else, they often interpret it in relation to themselves (Corcoran et al., 2011; Sedikides, 2021). Social comparisons are fundamental to human cognition (Festinger, 1954; Wood, 1996). The comparer searches for similarities or differences between the self and the target on particular dimensions. People regularly compare themselves to others in personality, attractiveness, income, or ability (Gerber et al., 2018). Through such social comparisons, one gains a sense of whether they are doing better or worse than others (Festinger, 1954). However, people engage in social comparison not only for accurate self-insight but also to enhance their self-image (Sedikides & Alicke, 2019). Two common strategies for tactical self-enhancement are the better-than-average effect and downward social comparison.

**Better-Than-Average Effect.** An enduring finding across multiple populations and contexts is that individuals judge themselves more favourably than the average peer on an expansive range of traits (Zell et al., 2020). People think they are more considerate, fair, loyal, kind, charitable, cooperative, and less lazy, gullible, or mean than the average peer (Alicke, 1985; Sedikides & Alicke, 2012). This phenomenon, termed the better-than-average effect, is pronounced in traits that people regard as personally important (Gebauer et al., 2013; Sedikides & Strube, 1997).

No trait shows this effect more strongly than morality (Newman et al., 2015; Strohminger et al., 2017). People believe they are more moral than others (Tappin & McKay, 2017) and more moral than prior generations (Mastroianni & Gilbert, 2023). The most significant disparity between self-judgements and peer judgements is observed in traits such as honesty and trustworthiness (Alicke et al., 2001; Sedikides et al., 2014) compared to non-moral domains such as wisdom (Zell & Alicke, 2011) and intelligence (Van Lange & Sedikides, 1998). This asymmetric judgement of self, versus others, on morality extends to behaviour predictions.

For example, people think they are more likely to give up their seat on a crowded bus for a pregnant woman, donate blood, and distribute collective funds equitably than the average person (Goethals, 1986; Goethals et al., 1991). Such beliefs remain consistent throughout the lifespan, and individuals are convinced that, although other desirable traits will come and go throughout their lives, their moral traits will remain constant (Ybarra et al., 2012; Zell & Alicke, 2011)

However, the better-than-average effect is stronger in comparisons with generic peers rather than a specific target (Alicke et al., 1995). It is doubtful that the better-than-average effect accounts for differences observed across conditions such as those in the experiments conducted by Green et al. (2019). If the better-than-average effect drove these effects, it would have also emerged in the control conditions where participants compared to morally neutral targets (i.e., the equivalent of the generic peer). Instead, downward social comparison provides a more compelling explanation.

**Downward Social Comparison.** Downward social comparison is a common strategy for self-enhancement (Wills, 1981).This process involves comparing oneself to others perceived as inferior or less fortunate to enhance self-esteem (Reis et al., 1993; Wood, 1989). People use downward social comparisons strategically to repair their self-image after a relevant aspect of the self is threatened (Wills, 1981), to foster a greater appreciation for their circumstances (Taylor & Lobel, 1989), to increase their well-being (Stewart et al., 2013), and to restore self-esteem (Wills, 1981). For example, women undergoing breast cancer treatment compare downwards against those with a worse prognosis (Taylor & Lobel, 1989), and students who score poorly on a test compare themselves against others who score even lower (Pyszczynski et al., 1985).

Downward social comparison is more prevalent and influential in the moral domain than in other social domains. In Fleischmann et al.'s (2021) Experiment 1, participants reported their daily social comparisons over five days across 18 options, indicating the domain (e.g., academic, financial, moral) and whether the comparison was downward or upward. Participants made downward social comparisons in the domain of morality more than any other. In Experiments 2a and 2b, interest in downward social comparison increased when participants were in a high-threat condition, recalling a time they felt guilty or ashamed. Downward social comparison helped to restore moral self-image. In Experiments 4a and 4b, this threat-based tendency for downward social comparison was more potent in morality than in other commonly studied domains, such as athletics and economics. Taken together,

downward social comparison in the moral domain is a common process, occurring more frequently than in other social domains, particularly when individuals are motivated to restore their sense of morality.

The characteristics of moral outrage also facilitate downward social comparison (Sedikides et al., 2025). As an other-condemning emotion, moral outrage focuses on the moral transgression and the transgressor's intent to harm. This focus is distinguishable from empathic anger, an other-suffering emotion that responds to the harm experienced by victims (Batson et al., 2007, 2009). Although moral outrage and empathic anger often co-occur, they are distinct reactions (Hechler & Kessler, 2018). This distinction is crucial when theorising about the process responsible for moral self-enhancement. By directing attention to the moral transgressor, moral outrage enables the observer to engage in downward social comparison, reinforcing a more favourable moral self-image. For example, an observer may think: "They have acted immorally; I have not. Therefore, I am a moral person."

This process of self-enhancement through comparison to a moral transgressor aligns with findings from Rothschild and Keefer (2017), who demonstrated that expressing moral outrage can lead to a more favourable perception of one's moral character. Although they did not explicitly test the role of downward social comparison, their results suggest that moral outrage can serve as a mechanism for self-enhancement. In their experiments, participants who expressed moral outrage at a perceived moral wrongdoer (e.g., corporate exploitation, environmental destruction) rated their moral character more positively, particularly when they targeted the wrongdoer's actions. In Study 3, participants who expressed moral outrage about ingroup wrongdoing rated their moral character more positively relative to "people they know" (vs. members of their ingroup). This suggests that moral outrage, by focusing attention on the transgressor, enables individuals to compare themselves favourably to the wrongdoer, thereby elevating their self-perception. Although Rothschild and Keefer did not directly investigate downward social comparison, their findings support the idea that moral outrage can enhance self-image by fostering comparisons with others perceived as morally inferior.

Another way downward social comparison operates in the moral domain is by allowing individuals to boost their moral self-image through comparisons with distant or irrelevant others. In doing so, they must first select an appropriate referent to judge themselves against (Fleischmann et al., 2021). A key principle of social comparison is that it hinges on both the relevance and proximity of the target (Corcoran et al., 2011; Festinger, 1954). Comparers prefer to select and are more influenced by comparisons with similar (vs. dissimilar) targets (Goethals

& Nelson, 1973; Mayseless & Kruglanski, 1987; Wheeler et al., 1982). Therefore, when given a choice, individuals prefer to compare themselves against friends (vs. strangers) and similar others on dimensions such as age, gender, ethnicity, ideology, or skill level (Brown et al., 1992; Suls et al., 2002; Yudkin et al., 2016). For example, a university student may feel better about their academic ability if they compare themselves against a fellow student who failed some of their exams but will not feel better or worse about their academic ability if they compare themselves against someone with severe learning disabilities or with a genius, as such referents are too distant to be relevant.

However, the digital world has expanded the scope of comparison, exposing individuals to others with vastly different backgrounds, perspectives, and experiences (Gilbert et al., 1995; Yudkin et al., 2016). In the moral domain, individuals use extreme, distant, and irrelevant moral targets to compare themselves against (Fleischmann et al., 2021), perhaps because they believe their moral norms are universal and expect others to act according to them (Shweder et al., 1987; Tetlock, 2003). Consequently, individuals apply moral standards universally and can compare themselves to moral targets, regardless of the targets' relevance or distance, even in the most extreme cases. Indeed, the extremity of moral comparison has no apparent impact; for example, someone who cheats on their spouse (a moderate comparison) servers as a downward comparison just as much as someone who abandons their chronically ill spouse for an affair with her best friend (an extreme comparison; Fleischmann et al., 2021, Study 5a). Overall, downward social comparison is more prevalent in the moral domain, with individuals comparing themselves to extreme moral targets more often than in other domains, such as athleticism (Fleischmann et al., 2021). Hence, moral self-enhancement likely stems from downward social comparison rather than simply a response to feeling virtuous due to moral outrage.

In the following two sections, I discuss the efficacious and behavioural outcomes of moral outrage and moral self-enhancement. After all, psychologists are concerned not only with what humans think but also with what they do. What is the point of moral outrage if it does not achieve social change?

## 1.3 Social Action

Social and economic inequalities are prevalent features across most societies (Kugel & Smith, 1986; Sindarius & Pratto, 1999). People respond to these disparities in various ways, ranging from denial and inaction, cognitive and emotional reactions, and sometimes deliberate

behaviours aimed at advancing the well-being of the disadvantaged group (Wright & Tropp, 2002). From the impassioned protests of the Peasant's Revolt in England in 1381, sparked by dissatisfaction with the government (Ormrod, 1990), to the French and American Revolutions in the late 18th century, driven by social inequality and economic hardship (Boggs, 1963; McPhee, 2001), to The Troubles conflict in Northern Ireland in 1968, rooted in political, religious, and national divisions (Woodwell, 2005), and the #MeToo movement of 2017, a response to sexual harassment, abuse, and assault by those in power (Jaffe, 2018), people have long engaged in social action as a means to challenge perceived injustices and restore equity.

These examples highlight a common feature of most social injustice: it is created and imposed by powerful institutions or individuals capable of causing widespread harm, or it is an issue deeply entrenched in societal structures upheld by these institutions (Jennings, 1991; Powers & Faden, 2019). This is why the victims of social injustice are large groups or communities of people. Social movements frequently emerge as a response to perceived abuses of power by dominant institutions or figures (Gaventa, 1982; Tilly, 2004). As a result, meaningful change often requires collective efforts large enough to challenge these power imbalances and restore justice (Brady & Crockett, 2019; Hamann et al., 2023).

Although often used interchangeably with collective action, social action more broadly refers to individual and group actions aimed at promoting social change and restoring justice collectively (Van Zomeren & Iyer, 2009). Unless referring to specific published work, I use the latter term to encompass a wider range of activities, such as lobbying, campaigning, online activism, protests, and marches (Ortiz et al., 2022; Rothschild & Keefer, 2017). These activities do not always require the organised coordination typically associated with collective action (da Costa et al., 2023).

## Social Action in Action

When most people think of social action, they typically envision collective behaviours like mass protests or riots (Greijdanus et al., 2020). A global protest tracker revealed an unprecedented surge in significant protests, with 69 countries experiencing new protests in the previous 12 months alone [April 2024-April 2025] and over 700 experiencing protests worldwide since 2017 (Carnegie Protest Tracker, 2025). The extensive data on protest participation rates, motivations, and outcomes is likely due to the long historical record of protests, making them easier to document and analyse (Tilly, 2004; Van Stekelenburg & Klandermans, 2013). Protests are also highly visible events, often receiving substantial media coverage (Brasted, 2005; Brown

& Harlow, 2019), which further aids data collection. Most literature on social and collective action relies on measures of intentions to engage in traditional forms of protest, such as signing petitions or attending demonstrations (Bäck et al., 2018; Landmann & Naumann, 2024; Li et al., 2019). However, the range of activities considered social action has expanded significantly. Even in the early 21st century, researchers observed that new social movements were blending traditional methods, like voting and lobbying, with alternative approaches, such as online networking and consumer boycotts (Norris, 2002). The digital era has further transformed social action, providing new avenues for participation and activism.

**Social Action in a Modern World.** The internet, particularly social media, provides an accessible platform for people to unite and engage in collective social action (Smith & Rainie, 2008; Tatarchevskiy, 2011). It offers a low-cost way to participate in online activism - a form of activism that leverages the internet and digital media to mobilise social change (Bonilla et al., 2015). The flexibility and reach of online platforms have made them essential tools for organising and promoting social action, often minimising the need for traditional, offline efforts.

Firstly, online platforms allow users to communicate, organise, and coordinate social action (Leach & Allen, 2017; Theocharis, 2015). Organising actions like physical protests once took months of planning. However, online platforms significantly reduce the logistical costs of organising, scale participation without requiring direct interaction between organisers and participants, and break through spatial and temporal constraints, thereby enabling more efficient coordination (Tufekci, 2017). Accordingly, organisations, charities, and political leaders increasingly rely on digital platforms to promote and plan social action (Brodie, 2013; Castells, 2012; Wilkins et al., 2019). Moreover, such action no longer requires organisation by formal leaders or institutions; it can be mobilised from the bottom up by individuals, even those with little political power (Bennett & Segerberg, 2012; Greijdanus et al., 2020).

For instance, in 2009, street protests in Moldova grew from 10,000 to 39,000 people in just days after a “Twitter revolution,” where information, photos, and videos about the protest spread rapidly online (Mungiu-Pippidi & Munteanu, 2009). Similarly, global news of the escalating Russian invasion of Ukraine in 2022 sparked viral expressions of solidarity and widespread calls for volunteers to house refugees (De Coninck, 2022; Zawadzka-Paluektau, 2022). Therefore, online platforms have become crucial for mobilising physical social action. However, the functions of online platforms, particularly social media, have also given rise to a new form of activism that remains within the digital realm: online activism.

Secondly, although activism rarely fully substitutes for offline social action (Greijdanus et al., 2020), digital protests, social media campaigns, and online petitions can serve as powerful tools for spreading awareness and generating social pressure without requiring offline participation. A notable example is the KONY 2012 campaign. On March 5, 2012, the organisation Invisible Children released a video titled KONY 2012 on YouTube and Vimeo. The video aimed to raise global awareness about Joseph Kony, a Ugandan war criminal responsible for numerous atrocities, and to prompt his arrest. The campaign's message was simple: watch the video and share it. Within a month, the video had garnered over 100 million views worldwide (Lee & Hseih, 2013).

Hashtags on social media platforms have also become a powerful symbolic form of social action. By using specific hashtags like #MeToo or #BringBackOurGirls, users can collectively raise awareness about social issues. These campaigns can remain entirely online, with participants engaging by sharing posts, videos, and personal opinions. Studies suggest that hashtag activism is crucial for raising awareness, fundraising, pressuring governments, and encouraging participation in larger movements or protests (Goswami, 2018). However, some scholars argue that online activism is less effective than offline action. Often labelled "slacktivism" or "soft collective action," these terms criticise online activism for requiring minimal effort and low costs, such as the lack of physical presence or financial investment (Lee & Hseih, 2013; Shi et al., 2015). The low cost is accompanied by a lack of direct, real-world consequences which can encourage disproportionate, harsher and more aggressive behaviour, including bullying, public shaming, and even threats or abusive language (Fritz, 2021). People can share a post or a hashtag and then log out and distance themselves from their device (Mihailov et al., 2023).

Critics contend that online activism can be unproductive and may even hinder more effective social action (Greijdanus et al., 2020), such as marching and demonstrating (Shi et al., 2015). However, participating in internet-enabled collective action (i.e., online activism), in cases where participants also hold participative efficacy beliefs, increases the willingness to engage in long-term, higher-threshold action (i.e., hard collective action; Wilkins et al., 2019).

Despite these criticisms, the accessibility of online platforms has increased participation rates in social action. Online activism has been credited with engaging today's global youth in volunteering, activism, and collective action, all of which are on the rise (Kiesa et al., 2007). Although debates about the effectiveness of online versus offline activism continue, understanding the psychological factors that drive people to participate in social action is

essential. Key factors such as moral outrage and efficacy beliefs play a significant role in motivating action.

## Moral Outrage

The antecedents of social action have been a focus of research across disciplines such as politics, sociology, and psychology, with a particular emphasis on the role of moral outrage (Van Zomeren & Iyer, 2009). The notion that moral outrage can serve as a motivator for engaging in costly helping behaviours, such as participation in social action, has been considered controversial by some scholars (Spring et al., 2018). Outrage at a violation of one's subjective moral standards is often perceived as a negative, aggressive response that motivates usually disproportionate and retributive behaviour toward the wrongdoer (Gummerum et al., 2016), resulting in a barrier to moral progress (Crockett, 2017). The negative view of moral outrage has led to other positive outcomes being overlooked. However, moral outrage is a powerful motivator for social action, acting both as the initial trigger for involvement and as a sustaining force that fuels ongoing efforts. As Jasper (2014, p. 5) notes, moral outrage is "the first signal that we feel there is something wrong in the world that must be fixed… [and] gives us the energy to try and fix it." Without this emotional response to perceived injustice, social action would struggle to gain momentum (Jasper, 1998). Indeed, it is hard to imagine any significant social movement without some form of anger (Van Stekelenburg & Klandermans, 2013).

The motivational power of outrage lies in its psychological characteristics. Emotions often drive behaviour, as people are motivated to act in response to how they feel (Izard, 2009). Although emotions alone may not guarantee action, they place individuals in a heightened motivational state, increasing their desire and tendency to engage in goal-directed behaviour (Baumeister et al., 2007). This is especially true for anger, an approach-motivated emotion that energises individuals to confront perceived wrongs (Tang et al., 2013). As Burkeman (2019) aptly stated, "Anger can be the start of something. But then you need the something… It doesn't need somewhere to go. It needs something to do" (p. 1). In contexts that elicit moral outrage, anger becomes particularly potent because there is a clear wrongdoer to condemn, a victim to defend, and a moral order to restore (Thomas et al., 2009a). Public displays of anger can also signal that people are prepared to act (Sabherwal et al., 2021). However, emotions do not always directly translate into behaviour, as other cognitive processes also influence decision-making (Lazarus, 1991), especially when the action involves significant risks or high costs, which is often the case with social action (Tufekci, 2017). Further, as the decision to engage in social action is deliberate and sustained, it can rarely be engaged in on demand (Borders &

Wiley, 2020). Therefore, there is processing time for mediating motivators to come into play. Over the years, several models have been developed to structure the motivating factors that influence engagement in social action.

## Models of Social Action

The Dual-Pathway Model (Van Zomeren et al., 2004, 2008, 2012) has been widely used in related research and is well-supported by empirical findings (Tausch et al., 2011; Van Zomeren et al., 2004, 2010). This model integrates elements from several influential theories: Relative Deprivation Theory (Smith et al., 2012; Walker & Smith, 2002), Resource Mobilisation Theory (McCarthy & Zald, 1977), and Social Identity Theory (Tajfel & Turner, 1979). It explains that people are motivated to engage in collective action through two distinct but complementary pathways: emotion-driven and efficacy-driven.

The emotion-driven pathway focuses on feelings such as moral outrage, which arise from perceived injustice and fuel the desire to act, as discussed earlier in this review. The efficacy-driven pathway, on the other hand, centres on an individual's belief that their group can achieve meaningful change, motivating action based on strategic thinking and confidence in success. Although these pathways can operate independently, they often interact, with emotions enhancing commitment and efficacy, thereby strengthening belief in the likelihood of achieving goals (Van Zomeren et al., 2008). Indeed, perceptions of human agency (i.e., efficacy beliefs) are vital in motivating people to engage in social action (Hamann et al., 2023).

The Social Identity Model of Collective Action (SIMCA; Van Zomeren et al., 2008), builds on the Dual-Pathway Model by incorporating social identity as a third key pathway. The SIMCA posits that individuals are more likely to engage in collective efforts when they identify strongly with a group that perceives itself as the victim of injustice or disadvantage. This shared identity fosters a sense of belonging and collective responsibility. As in earlier models, the SIMCA emphasises the role of perceived injustice and feelings of anger in fuelling motivation for change, while perceived efficacy influences participation. Individuals are more inclined to act when they believe their efforts can lead to social or political change. These three elements - social identity, perceived injustice, and efficacy - interact to shape collective action, with strong social identification amplifying feelings of injustice and enhancing belief in the group's ability to achieve its goals.

Although the SIMCA is now more extensively used in related research than the Dual-Pathway Model, social identity may not always be a dominant motivator for social action. As

discussed earlier, people can and do engage in social action on behalf of third-party victims with whom they have no direct relationship, and thus have minimal connection or identification with. For instance, emotionally charged media coverage can increase empathy and moral concern, prompting viewers to engage in charitable donations or activism for distant or unfamiliar groups (Oliver et al., 2012). This phenomenon has been demonstrated in recent years, with emotionally engaging stories, images, and viral content playing a powerful role in inspiring social and collective action for distant causes, such as the Syrian refugee crisis of 2015 (Cohen, 2015) and the #BlackLivesMatter movement that peaked in 2020 (Mondon & Winter, 2021). Individuals can be motivated to engage in activist behaviours even in the absence of a shared group identity. The implication is that strong group identification may not always be necessary. Nonetheless, most models argue that engagement in social action involves strong emotional reactions to perceived injustice and efficacy beliefs regarding the ability to effect change (Becker & Tausch, 2017). Having already discussed the role of moral outrage, the next section of this review will focus on the role of efficacy beliefs in motivating social action.

## 1.4 Efficacy and Moral Self-Enhancement

Modern society faces urgent challenges like climate change, social injustice, and biodiversity loss (IPCC, 2019, 2021). However, social action does not emerge spontaneously. For individuals to be motivated to act, they must first believe that achieving social justice or creating a better world is possible. This belief, known as efficacy, is a critical factor in driving social action (Thomas et al., 2009b; Van Zomeren et al., 2008).

### Self and Group Efficacy

Efficacy beliefs are a core aspect of personal agency, shaping individuals' confidence in their ability to achieve desired outcomes (Bandura, 1997). Such beliefs also influence the way people think, feel, behave and motivate themselves (Bandura, 1995). As such, self-efficacy is a key determinant of goal-oriented behaviour (Bandura, 1982). The stronger one's self-efficacy, the more likely they are to act to achieve their goals (Bandura, 1997, 2000). For instance, self-efficacy predicts academic success, sports achievements, and even quitting smoking (Bandura, 1977, 1997; Witte & Allen, 2000). Additionally, high self-efficacy promotes persistence in the face of adversity, resilience after setbacks, and increased effort and investment (Bandura, 2013; Schwarzer & Luszczynska, 2008). Furthermore, individuals with

high self-efficacy exhibit prosocial behaviours, such as cooperativeness, helpfulness, and sharing, with a vested interest in others' well-being (Bandura, 2001). Therefore, for problems that are primarily individual, self-efficacy beliefs are strong predictors of action (Bandura, 1995, 1997).

However, when the goal is collective, such as achieving social change, group efficacy becomes more influential (Hamann et al., 2024; Hardin, 2015). Group efficacy is defined as "the belief that the ingroup can achieve social change through unified action" (Cohen-Chen & Van Zomeren, 2018, p.1). This belief is a key predictor of participation in social action (Corcoran et al., 2011; Hornsey et al., 2006; Mummendey et al., 1999). Without a sense of group efficacy, moral outrage may remain an internal emotional response rather than translating into collective action. Indeed, group efficacy is an essential motivator for supporting, intending to participate in, and engaging in collective action (Corcoran et al., 2011; Hornsey et al., 2006; Van Zomeren et al., 2008).

For example, Shi et al. (2015, Experiment 3) demonstrated that people were more willing to engage in soft than hard social actions, and, more importantly, that group efficacy influenced behaviour only in the context of hard collective action (i.e., actions that require more effort, risk, or investment). Participants with high group efficacy were more willing to engage in hard collective action than those with low group efficacy. Conversely, group efficacy did not affect participants' intentions regarding soft collective action, which involves lower costs and less risk. Further, a meta-analysis found a positive, medium-sized relation (mean effect size $r = 0.34$) between group efficacy and collective action across diverse contexts, issues, and samples (Van Zomeren et al., 2008). This relation is especially strong in cases of perceived social injustice, where both the problem and the solution are viewed at the group level rather than the individual level (Van Zomeren et al., 2009).

Nevertheless, individuals with strong group efficacy beliefs may be more likely to free-ride, reducing their participation in collective action. If individuals believe that their group can achieve a specific goal through collective action, they may feel their participation has little impact (Olsen, 1968). For example, a single signature on a petition is unlikely to significantly affect the outcome. However, research shows that group efficacy beliefs do increase participation in collective action. Some explanations for this apparent contradiction have turned to non-efficacy predictors, such as group identity (Drury & Reicher, 2009). Still, given the relevance of efficacy beliefs in decision-making, individuals are unlikely to disregard these beliefs when deciding whether to engage in collective action (Mazzoni et al., 2012). The concept

of participative efficacy has been proposed as the key link to explain this contradiction (Van Zomeren et al., 2012).

## Participative Efficacy

The concept of participative efficacy, introduced by Azzi and Dandekar (1998), differs from both self-efficacy and group efficacy. Participative efficacy refers to the belief that one's actions will make a meaningful contribution to group efforts aimed at achieving collective goals (Van Zomeren et al., 2012). This belief encompasses two key components: confidence in the effectiveness of collective action and the conviction that one's contributions will make a difference. Van Zomeren et al. (2012) used participative efficacy to explain why individuals do not engage in free-riding behaviours when pursuing collective goals. As collective actions often dilute an individual's impact (Koletsou & Mancy, 2011), feeling personally valuable in the group's efforts is essential for motivating participation.

Van Zomeren et al. (2012) conducted three studies to test whether participative efficacy uniquely predicts collective action. In Study 1, students read about a government proposal to turn student allowances into loans and raise tuition fees. They were then asked to assess their efficacy (e.g., "I believe that I can stop the financial cuts to higher education"; p. 634), group efficacy (e.g., "I believe that students, together, can stop the financial cuts to higher education"; p. 633), and participative efficacy (e.g., "I believe that I, as an individual, can provide an important contribution so that students, together, can stop the financial cuts to higher education"; p. 633). The researchers also measured students' collective action intentions. A confirmatory factor analysis confirmed a good fit for the distinct types of efficacy beliefs. Both group efficacy and participative efficacy, but not individual efficacy, uniquely predicted intentions to engage in collective action.

In Study 2, Van Zomeren et al. (2012) recruited Israeli citizens taking part in a protest against unreasonably high and unregulated real estate prices. They measured participative efficacy, group efficacy, and individual efficacy beliefs, followed by willingness to engage in nonviolent (e.g., signing a petition) and violent (e.g., destroying buildings) forms of social action. Participative efficacy, but not group nor individual efficacy, predicted both nonviolent and violent tendencies for collective action. Participative efficacy also uniquely predicted participants' motivation, even when they felt their contribution might have a small impact (e.g., "I am motivated to make a difference, even if it turns out to be small"; p. 629). Study 3 replicated the findings of Study 1 with a different population. Across all three studies, the

authors demonstrated that participative efficacy uniquely represents an individual's belief that their contribution can meaningfully impact collective efforts, even if the outcome is minimal.

Participative efficacy serves as a conceptual bridge between self-efficacy and group-efficacy, capturing the belief that one's individual efforts meaningfully contribute to the success of a collective goal. The literature has demonstrated that (a) moral outrage predicts both moral self-enhancement and social action, and (b) participative efficacy predicts social action. These findings align with influential models of social action, such as SIMCA, which position both emotional arousal and efficacy beliefs as key motivators for engaging in social action (Van Zomeren et al., 2008). However, little attention has been paid to *why* individuals might believe their personal contributions matter or are valuable in the first place. In the next section, I explore this knowledge gap and the potential role of moral self-enhancement.

## The Missing Link? Moral Self-Enhancement and Participative Efficacy

Rather than conceptualising moral outrage and participative efficacy as separate and parallel antecedents to social action, it is possible that these constructs are psychologically interrelated. Emerging theory and evidence indicate that moral self-enhancement may serve as the mechanism that links moral outrage to a belief in one's own value as a moral contributor to social action - shaping both self-image and self-beliefs. In this view, moral self-enhancement acts as a cognitive bridge between moral outrage and moral agency. That is, moral self-enhancement translates an emotional response into a belief that one is both justified and capable of contributing to collective change. Although this connection has yet to be directly tested, it may have been overlooked due to how these constructs are traditionally framed. Moral self-enhancement is typically regarded as a self-focused, individual level process grounded in moral psychology (Gregg & Sedikides, 2024; Sedikides & Gregg, 2008). In contrast, participative efficacy is typically studied within social or political psychology as a group-based belief about one's impact on collective efforts (Van Zomeren et al., 2008). I examine in this section the possibility that moral self-enhancement is the psychological missing link between moral outrage and participative efficacy.

**A Valuable Contributor.** People are more likely to feel efficacious when they believe they possess the traits, skills, or resources necessary to contribute meaningfully (Bandura, 1997). In the moral domain, the perception of oneself as especially principled or virtuous may foster the belief that one is uniquely capable of acting in morally substantial ways. This idea is supported by research on moral identity, which refers to ‘‘the degree to which being

a moral person is important to an individual's identity'' (Hardy & Carlo, 2011, p. 212). Individuals with a strong moral identity are more likely to feel morally competent (Blasi, 1984), more likely to act in ways that align with their values (Aquino & Reed, 2002), and more likely to respond to injustice with moral conviction (Mullen & Monin, 2016). For example, moral identity predicts moral efficacy (i.e., the belief that one can act according to moral principles) but does not predict general self-efficacy (Rullo et al., 2021, Study 2). Thus, a positive moral self-image can uniquely support efficacy beliefs related to moral action. This conclusion aligns with identity-based motivation theory (Oyserman, 2009), which posits that people are most likely to act when doing so feels both identity-congruent and achievable. Moral self-enhancement aligns with both conditions by affirming, "this is who I am" and "this is something I can do."

**Self-Consistency Pressure**. Beyond influencing perceptions of capability, moral self-enhancement may also motivate action through a desire for cognitive consistency between one's self-image and behaviour. According to Blasi (1983, 1984), individuals who see themselves as moral think that they have a personal responsibility to behave in ways that affirm this identity. Such a behaviour reflects a broader cognitive drive toward consistency - people are motivated to maintain coherence among their thoughts, values, and actions, especially in domains central to the self. When behaviour conflicts with a valued moral self-image, it can produce psychological discomfort, known as cognitive dissonance (Festinger, 1957). This discomfort is particularly acute when the discrepancy threatens the integrity of one's moral self-image (Beaman et al., 1983; Burger, 1999; Gawronski & Strack, 2012; Thibodeau & Aronson, 1992).

In this context, moral self-enhancement may heighten the salience of one's moral self-image, increasing the likelihood that inconsistencies between self-image and inaction will be experienced as dissonant. To restore cognitive consistency, individuals may feel compelled to engage in behaviours that align with their moral self-view, including participating in collective efforts to address injustice. This pressure explains why moral self-enhancement may contribute to participative efficacy: individuals not only believe they can make a difference, but also think they must act in order to maintain coherence between who they are and what they do. Furthermore, the self-enhancement literature indicates that, once a positive moral self-image is established, individuals are motivated to protect and reinforce it through consistent behaviour and beliefs (Alicke & Sedikides, 2009; Sachdeva et al., 2009). Thus, moral self-enhancement plays a dual role - enhancing both perceived capacity and perceived obligation to contribute meaningfully to collective moral goals.

**Social Contexts and Group Dynamics.** Social action rarely occurs in isolation. Rather, it unfolds within group contexts, where individuals evaluate both their own contributions and those of others. Moral self-enhancement may shape how people perceive their value within these group efforts. By bolstering their moral self-image, individuals may come to see themselves as particularly capable or essential to achieving collective goals. This perception can inflate participative efficacy by fostering the belief that one's involvement is not just helpful, but uniquely essential to the group's success. This sense of being especially morally capable may foster perceived indispensability, the belief that the group's success depends on the involvement of people like oneself. In this way, moral self-enhancement shapes how participative efficacy is experienced, shifting it from a general belief about group potential to a self-referenced belief: "*I* can make a difference because *I* am morally fit to do so."

However, these beliefs may also influence how individuals view others in the group. Specifically, the perception of being morally superior can lead to social distancing or reduced trust in others' motivations or competence. For example, individuals perceived as morally superior often elicit resentment or rejection from peers (Monin et al., 2008), and strong moral convictions can foster intolerance toward those perceived as less morally committed (Klein & Pohl, 2021). From a social-cognitive perspective, such dynamics may promote biased comparisons that bolster one's sense of efficacy while simultaneously undermining group cohesion. Although participative efficacy is typically framed as a group-based belief, moral self-enhancement may individualise that belief - shaping it around perceptions of personal indispensability and moral standing within the group. Hence, whereas moral self-enhancement may elevate participative efficacy, it may also introduce relational challenges within collective contexts. The belief that "people like me are essential for change" may strengthen motivation to act but also risk eroding solidarity - a key ingredient for sustained collective action (van Zomeren et al., 2008). Understanding these dual effects is crucial for developing a more nuanced model of how moral cognition functions within group-based mobilisation.

## 1.5 Summary

Moral outrage has become a popular area of research, fuelled by an increased prevalence of this emotion in people's everyday lives and the real-world effects it has on social action and social change. Amplified by the nature of social media, people are witnessing more moral violations and, therefore, are expressing more moral outrage and engaging in more social

action, both online and offline. Engaging in social action requires more than just perceiving injustice. Three key psychological factors contribute to this process: moral outrage, moral self-enhancement, and participative efficacy.

First, perceiving injustice or unfairness that harms a third-party victim triggers moral outrage (Haidt, 2003). As a form of anger, moral outrage serves as a powerful emotional catalyst for action to rectify the injustice (Carver & Harmon-Jones, 2009; Tagar et al., 2011). Second, the frequency and willingness to experience this typically negative emotion positively affects moral self-image. Specifically, moral outrage elicits moral self-enhancement (Green et al., 2019; Rothschild & Keefer, 2017). However, researchers have not sufficiently studied how this relation arises. One untested explanation is that moral outrage elicits moral self-enhancement via downward social comparison. With witnessing moral violations comes perceiving moral transgressors. As per social comparison theory, individuals tactically compare to those inferior in a particular trait to feel better about themselves. Third, feeling morally superior (moral self-enhancement) reinforces a sense of moral responsibility. This perception aligns with research on self-enhancement preservation and self-consistency theory, which suggests that individuals who view themselves as moral experience an internal pressure to act per their self-image and likely feel like they possess the skills to be a valuable contributor to social action. Finally, individuals must believe that their participation will make a difference for them to act. Social movements and collective action often require large-scale cooperation, making participative efficacy a crucial predictor of engagement (Van Zomeren et al., 2012). If people perceive their contribution as insignificant or ineffective, they are less likely to invest time and effort in activism, protests, or advocacy. Conversely, those who believe that their actions, when combined with others, can bring about meaningful change are more likely to engage.

Together, these factors create the psychological conditions necessary for social action. Therefore, in this thesis, I propose a theoretical model that suggests experiencing moral outrage leads to moral self-enhancement, which, in turn, leads to the belief their contribution to social action will make a difference. This belief subsequently increases the likelihood of social action engagement. In Chapter 2, I introduce and explain the hypothesised theoretical model. Then, in Chapters 3 to 5, I experimentally examine each path of the model before testing the entire model in Chapter 6: the effect of moral outrage on social action serially through moral self-enhancement and participative efficacy. I discuss the findings in Chapter 7.

# Chapter 2: Introducing the Theoretical Model

This chapter introduces the theoretical model that I will empirically test across Chapters 3 to 6. Through a review of the literature, I identified several gaps that necessitate the development of a new theoretical framework and novel measures to test some constructs. Specifically, although prior research has established that moral outrage can lead to moral self-enhancement, the underlying mechanism driving this relation remains unclear. I propose that downward social comparison plays a mechanistic role. Furthermore, although participative efficacy predicts collective action intentions, prior social action measures are limited in scope. I suggest that participative efficacy can predict a broader range of social actions, such as online activism. Lastly, although research has linked moral outrage, moral self-enhancement, participative efficacy, and social action in various permutations, these constructs have not been integrated into a unified theoretical framework. A unified theoretical framework can provide the field with a comprehensive yet falsifiable model that can guide research on social action in the future. I address these gaps by proposing and empirically testing a model that traces a path from moral outrage to social action sequentially via moral self-enhancement and participative efficacy, using measures to test for downward social comparison and a broader range of social action activities.

## Theoretical Background and Model Development

### The Role of Downward Social Comparison

Previous research has assumed that moral outrage begets moral self-enhancement, given that moral outrage signals one's virtuous nature (Green et al., 2019; Rothschild & Keefer, 2017). However, these studies largely neglected the interpersonal nature of moral self-enhancement. For example, in both studies by Green et al. (2019), participants rated *themselves* on several moral traits after reading either a vignette about a social injustice or a neutral topic. Similarly, Juhl et al. (2017) suggest that it is the opportunity to take the moral high ground and assert moral principles in response to others acting immorally or unjustly that leads to an increase in moral self-enhancement. In neither case did the authors ask participants to evaluate the moral character of the moral transgressor. This omission is important, because humans, like other primate species, have inequity averse social preferences. For example, Brown capuchin monkeys (*Cebus apella*) exhibit negative reactions to unequal reward distribution, refusing to participate when a peer receives a better reward for the same or no

effort (Brosnan & de Waal, 2003). Similar effects have been obtained in other primate species (Azzi et al., 2012; Báez-Mendoza et al., 2015) and humans (Tricomi et al., 2010; Tsoi & McAuliffe, 2020). In the inequity aversion studies above, payouts (i.e., rewards) for the self are viewed less positively only when compared to the payouts of others.

I propose that these ideas can be extended to self-enhancement. Viewing oneself positively is inherently rewarding (Chavez et al., 2017). Individuals engage in moral self-enhancement by judging themselves more favourably than moral transgressors. This occurs through a social comparison process, wherein one's own morality is bolstered by viewing transgressors in a negative light. In this view, moral self-enhancement arises from comparison rather than a mere concern for justice. Rothschild and Keefer (2017) reported that participants who expressed moral outrage (vs. those who did not) at a moral transgressor ranked their own moral character higher (relative to people they knew). Therefore, expressing moral outrage at a perceived moral transgressor increased the self-image of one's moral character in a manner indicative of a downward social comparison. Despite this supporting evidence, the personal moral character measure used poses a problem: asking participants to rate themselves against people they know rather than the moral transgressors. Therefore, the data may manifest the better-than-average effect rather than downward social comparison. I will develop and use a moral self-enhancement measure that overcomes this interpretive ambiguity. It will specifically test for downward social comparison as the underlying process.

### Expanding Social Action Measures

Participative efficacy refers to an individual's belief in their ability to meaningfully contribute to collective efforts (Van Zomeren et al., 2008). Prior research has demonstrated a positive association between participative efficacy and social action intentions. However, social action measures have often focused on a limited range of collective behaviours such as attending protests or signing petitions. Van Zomeren et al. (2013) measured the effect of participative efficacy on collective action across three studies using a four-item and a seven-item scale that included behaviours such as signing petitions and attending demonstrations. However, the authors did not disclose the remaining behavioural items. Thus, the breadth (or lack thereof) of social action behaviours assessed is unclear.

As discussed in Chapter 1, social action has evolved into a broader and more dynamic set of activities, particularly with the rise of online activism. To reflect this shift, I will use measures of social action that incorporate a wider range of possible actions that individuals

might take to address social issues, such as online activism (e.g., sharing content on social media), advocacy (e.g., writing to political representatives), and economic resistance (e.g., boycotting organisations), aiming to broadening the conceptualisation of social action.

### Relating Moral Self-Enhancement to Participative Efficacy: A Missing Link?

The SIMCA (Van Zomeren et al., 2008) proposes that emotion and efficacy function as two independent psychological pathways driving collective action. On one side, moral outrage represents a high-arousal, approach-oriented emotion that predicts protest behaviour and social movement participation. On the other side, efficacy beliefs - particularly participative efficacy, or the belief that one's personal contribution can meaningfully support a group's goal - are essential for motivating individuals to engage in costly or effortful social action (Bandura, 1997). However, rather than viewing these processes as parallel but separate, emerging perspectives suggest they may be psychologically connected. In particular, moral self-enhancement may serve as the mechanism that links moral outrage to a belief in one's capacity for moral action. Experiencing outrage in response to a moral violation can bolster one's moral self-image, especially through downward comparisons with transgressors (Yzerbyt et al., 2018; Wojciszke, 2005). In turn, this heightened moral self-image may foster a sense of personal value and responsibility in collective efforts. That is, moral self-enhancement may act as a cognitive-affective bridge between moral outrage and participative efficacy.

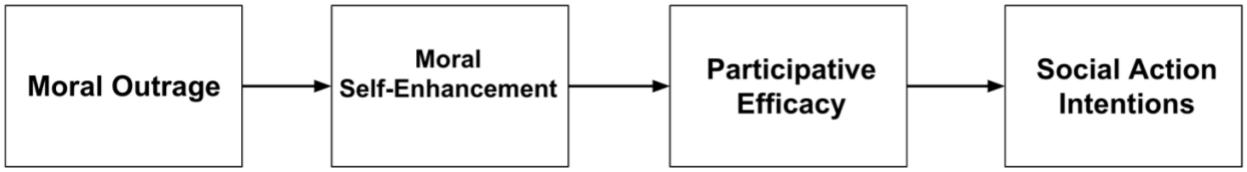
The transition from emotional response to action rarely occurs instantaneously. In most real-world cases, a temporal gap follows the experience of moral outrage, allowing for reflective processing. During this time, individuals may engage in self-enhancement, bolstering their self-image by comparing their moral standing relative to the perceived wrongdoer. This internal reappraisal of the self can shape efficacy beliefs, not just in terms of capability, but also of obligation. Feeling morally superior may cultivate a belief that one is uniquely qualified and perhaps even duty-bound to contribute to redressing the wrong. Although moral outrage, moral self-enhancement, and participative efficacy have each been independently linked to social action, no research to date has directly examined whether moral self-enhancement predicts participative efficacy. This is a crucial gap. Given that moral self-enhancement is often framed as a self-focused psychological process (Gregg & Sedikides, 2024; Sedikides & Gregg, 2008), and participative efficacy as a group-focused belief (Van Zomeren et al., 2008), their potential interdependence may have gone unnoticed due to disciplinary silos. However, as highlighted in Chapter 1, perceiving oneself as morally superior to those who violate collective norms may elevate not just one's moral self-image, but also one's belief in their capacity to contribute

meaningfully to collective efforts**.** This theoretically important yet previously untested link serves as a core focus of the thesis.

## Theoretical Model

Building on the preceding analysis, I designed a theoretical model consisting of a serial mediation pathway that integrates all four constructs: moral outrage, moral self-enhancement, participative efficacy, and social action intentions. By embedding moral self-enhancement as a mediating step, this model offers a novel theoretical refinement to existing frameworks by suggesting that emotional and efficacy antecedents of social action are linked via a cognitive mechanism. This perspective not only adds nuance to our understanding of moral behavioural motivation but also accounts for the psychological transformations that can occur in the time between experiencing moral emotions and engaging in collective behaviour. I present the theoretical model in Figure 1.

**Figure 1.** The Theoretical Model




### Overview of Proposed Studies

I conducted six studies to systematically test this theoretical model, each addressing a specific pathway within the model. In all, I examined how moral outrage influences moral self-enhancement, participative efficacy, and social action intentions. I tested whether moral outrage increases self-enhancement through downward social comparison (Chapter 3), whether self-enhancement boosts participative efficacy (Chapter 4), and whether efficacy predicts social action (Chapter 5). Finally, I tested the full model, hypothesising that moral outrage strengthens social action engagement through positive moral self-image and efficacy beliefs about participation (Chapter 6).

**Chapter 3: Moral Outrage and Moral Self-Enhancement.** In two studies, I assessed the link between moral outrage and moral self-enhancement to determine whether this relation occurs via downward social comparison. In Study 1a, I randomly assigned U.S. participants

who voted for Joe Biden in the 2020 election to think about either a neutral event (*control condition*) or the Storming of the United States Capitol Building in January 2021 (*moral outrage condition*). Then I assessed moral self-enhancement through self-reported moral comparisons between participants and the perceived moral transgressors (or neutral targets) in the event they read about. In Study 1b, I sought to replicate Study 1a with a moral outrage condition that was less context-specific. In Study 1b, I randomly assigned participants to think about an issue of their choosing that evokes moral outrage (vs. control) and then instructed them to complete the same moral self-enhancement measure as in Study 1a. I hypothesised that, in both studies, moral outrage (vs. control) would increase moral self-enhancement.

**Chapter 4: Moral Self-Enhancement and Participative Efficacy.** In Study 2, I assessed whether moral self-enhancement elicits participative efficacy. To manipulate moral self-enhancement, I randomly assigned participants to recall either a time in their life in which they behaved in a particularly moral way (*moral self-enhancement condition*) or a time in which they behaved with a low level of moral character (*moral self-diminishment condition*). Then I assessed participative efficacy beliefs. I hypothesised that those in the moral self-enhancement condition would report higher participative efficacy beliefs.

**Chapter 5: Participative Efficacy and Social Action Intentions.** In Chapter 5, I assessed whether participative efficacy leads to social action intentions (Study 3). Participants read vignettes depicting various social issues and a broad range of actions someone can take to rectify the problem (e.g., sign a petition or attend a council meeting; Appendix D). Half of the vignettes implied that individual participation would be impactful in manipulating participative efficacy, and the other half implied that participation would be futile. After each vignette, participants reported how likely they are to engage in the social actions described in the vignette. I hypothesised that participants would be more willing to engage in social action when it was implied that their participation would be valuable (*participative efficacy condition*) versus futile (*participative futility condition*) to group actions.

**Chapter 6: Testing the Full Theoretical Model.** In two final studies (Studies 4a and 4b), I tested the full sequential mediation model. Participants ranked several social issues by importance. Participants in the moral outrage condition wrote about their most important issue, whereas control participants wrote about their least important issue. All participants then completed successive measures of moral self-enhancement, participative efficacy, and social action intentions. In Study 4a and Study 4b, I hypothesised that moral outrage would increase social action intentions serially via moral self-enhancement and participative efficacy.

## Conclusion

This chapter has outlined a novel theoretical model integrating moral outrage, moral self-enhancement, participative efficacy, and social action intentions. The subsequent empirical studies will systematically investigate this model, addressing key theoretical gaps and offering new insights into the effect of moral self-image and self-beliefs regarding efficacy on the relation between moral outrage and social action.

# Chapter 3. The Moral Pedestal: Moral Outrage and Moral Self-Enhancement

In this chapter, I focus on the relation between the first two variables in the sequence of the theoretical model: moral outrage and moral self-enhancement. Moral outrage is a form of anger elicited in response to a perceived injustice or moral violation harming a large group or community (Hoffman, 2000). On the one hand, moral outage can promote prosociality as it is commonly associated with the goal to restore justice by either compensating the victim or punishing the transgressor (Carlsmith et al., 2002; Haidt, 2003). On the other hand, moral outrage serves a self-centric function as it promotes positive image of one's moral character (i.e., moral self-enhancement). This self-centric function is so strong that people will endure further moral outrage for the opportunity to engage in moral self-enhancement (Green et al., 2019).

Although the hypothesised relation between these variables is not novel, as discussed in Chapter 2, research has underexplored the social motives underlying the relation between moral outrage and moral self-enhancement. In Studies 1a and 1b, I designed and used a measure that explicitly gauges moral self-enhancement via downward social comparison. Participants rate *themselves* on several moral traits *compared* to the targets in the vignette (i.e., morally deficient targets in the moral outrage condition vs. morally neutral targets in the control condition).

## Study 1a: The Storming of the United States Capitol Building

In January 2021, Donald Trump supporters attacked the United States Capitol Building in Washington, D.C., in an attempt to overturn the 2020 presidential election results. For several years, the event made global news and was the subject of negative online discourse (Jakubik et al., 2023). A search on Google Scholar for "January 6 Capitol Riot" in 2025 yields over 10,000 results, indicating significant academic interest. Also, major news organisations have published numerous articles, analyses, and opinion pieces on the topic. Therefore, I recruited U.S. citizens who had voted for Joe Biden in the 2020 election, expecting they would likely experience moral outrage in recalling the event. I carried out this study in June 2022, approximately 18 months after the storming of the United States Capitol Building.

## Hypothesis

Participants in the experimental (i.e., moral outrage) condition read and wrote about individuals in the storming of the United States Capitol Building, whereas participants in the control condition read and wrote about individuals attending a hot air balloon festival. I hypothesised that experimental condition participants would rate their moral character more favourably than control participants. That is, I hypothesised that participants in the moral outrage (vs. control) condition would report higher moral self-enhancement.

## Method

**Participants.** To determine the sample size, I conducted a power analysis in G*Power 3.1 (Faul et al., 2007). I aimed for 80% power, assuming a two-sided test and an alpha level of .05. Drawing on the findings of Green et al. (2019), who reported similar effects of righteous anger on moral self-enhancement across two studies (Study 1a: Cohen's $d$ = .42, Study 1b: Cohen's $d$ = .44), I assumed a moderate effect size (Cohen's $d$ = .40) for my estimate. Based on these parameters, a sample of 200 participants was deemed necessary.

Participants were 203 U.S. adults (141 women, 53 men, six identified as another gender, and three did not disclose). Participants were 19 to 79 years old ($M_{age}$ = 32.88, $SD_{age}$ = 11.95) and predominantly White (67% White, 10.8% Asian/Pacific Islander, 6.9% Black, 13.7% from other ethnic backgrounds including Latino/Latina, Hispanic and 'Other', and 1.5% did not respond).

I recruited all participants via Prolific (https://www.prolific.co), a crowdsourcing platform. Peer et al. (2017) evaluated Prolific and found that it generates data of comparable quality to that of behavioural laboratories in terms of effect sizes and reliability. Prolific workers are also more naïve to experimental research, more demographically diverse than university subject pools (e.g., age, ethnicity, geographic location) and can be pre-screened under several categories (e.g., religious affiliation, political affiliation, employment status). Using Prolific screening tools, participants were pre-screened to have voted for Joe Biden in the 2020 election and to have self-identified as politically liberal. However, I presented the experiment as an examination of attitudes and psychological states by writing about an event, and participants were not made aware of the pre-screening. They completed the survey via a link on their personal computer, tablet, or phone and were remunerated with £2.25.

**Materials and Procedure.** I randomly assigned participants either to a moral outrage condition ($n$ = 104) or a control condition ($n$ = 99). I asked all participants to read a short vignette

of an event and to write about their thoughts and feelings for 5 minutes regarding the people who attended it (Appendix A). I designed two vignettes to be similar in length, and both described real-life events that many people attended in the U.S. In addition to reading the vignette, all participants wrote for 5 minutes about the event and those who attended it. The purpose of the writing task was to heighten engagement with the manipulation.

***Moral Outrage Condition.*** In the moral outrage condition, participants read a short vignette about the Storming of the United States Capitol Building in 2021, Washington, D.C. I selected the storming of the Capitol Building because the event's perceived attack on democracy, its lawlessness and violence, and its association with the political polarisation of Republicans. These factors likely evoke moral outrage among individuals who voted for Joe Biden (i.e., the political opposition: Democrats). Importantly, participants would likely judge this event and those who attended as morally deficient. Specifically, participants read:

> On January 6, 2021, a mob of Donald Trump supporters attacked the United States Capitol. They sought to overturn the 2020 presidential election results by disrupting the joint congressional session to count electoral votes that would formalise President-elect Joe Biden's victory. Rioters assaulted law enforcement officers and vandalised the building for several hours. Five people died; many people were injured, including 138 police officers.

***Control Condition.*** In the control condition, participants read a short vignette about an actual hot air balloon festival held in Colorado (U.S.). I designed the vignette not to elicit strong feelings about the people who attended the event or their moral character, and for participants to deem the attendees as morally neutral. To reduce the possibility of participants negatively judging the event attendees, I changed the hot air balloon festival date from November to September 2019, further before the COVID-19 pandemic. I selected this time to prevent judgements of the attendees related to isolation, lockdown, and social distancing rules. However, it was close to January 2021 to minimise historical context as a confounding variable. Specifically, participants read:

> On September 1, 2019, a large crowd of people convened in Memorial Park in Colorado Springs for the Colorado Springs Labor Day Lift Off, a hot air balloon festival. In addition to admiring the hot air balloons as they filled the sky, people played lawn games and had picnics with friends and family. The attendees also enjoyed skydiving demonstrations, carnival rides, and fireworks.

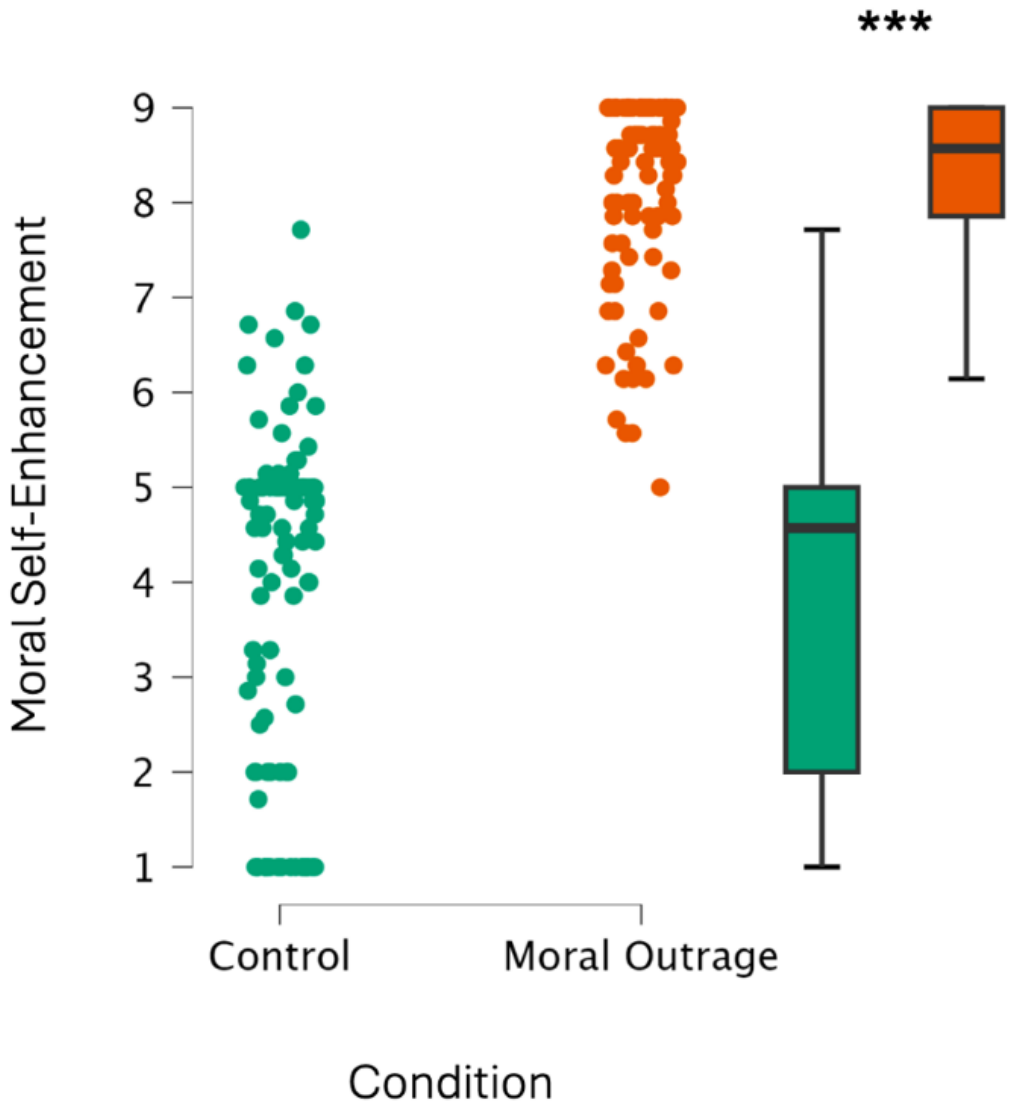
***Moral Self-Enhancement.*** After the writing task, I assessed moral self-enhancement using seven moral traits. I selected four traits (responsible citizen, considerate, respectful, and moral) from Green et al.'s (2019) list of moral traits. (The remaining six traits [e.g., generous] of Green et al. were too specific and irrelevant to the purposes of this study). I selected the remaining three traits from an article that highlighted the link between moral character on the one hand and liking, warmth, and trustworthiness on the other (Fiske et al., 2007). I asked participants to rate the extent to which they felt they possessed each trait (1 = *extremely disagree*, 9 = *extremely agree*) compared to those who attended the event. For example, participants in the moral outrage condition reported their agreement with statements such as "I am more considerate than the people who stormed the Capitol", whereas participants in the control condition reported their agreement with statements such as "I am more considerate than the people who attended the balloon festival." These items formed a reliable index (Cronbach's α = .99). Participants also responded to a demographic questionnaire and a mood repair task to minimise unwarranted discomfort. Debriefing concluded the study[1].

## Results

**Main Analysis.** To test my hypothesis that moral outrage would increase moral self-enhancement, I conducted a one-way (condition: moral outrage vs. control) Analysis of Variance (ANOVA) on moral self-enhancement. The results showed that participants in the moral outrage condition $M = 8.20$, $SD = .99$) reported higher moral self-enhancement than those in the control condition ($M = 3.84$, $SD = 1.81$), $F(1, 201) = 460.47$, $p < .001$, $\eta^2_p = .70$ (Figure 2).

[1] Participants rated themselves on four competence-related traits (i.e., smarter, make better decisions, more knowledgeable, better reasoning skills) compared to those attending the event. Participants also completed measures of Negative Affect (Watson & Clark, 1999), Self-Esteem (Hepper et al., 2012), Satisfaction with Life (Diener et al., 1985), Virtue and Self-Worth (Crocker et al., 2003) and several follow up questions. These measures were exploratory, and I did not analyse the data.

**Figure 2.** *Raincloud Plot of Moral Self-Enhancement Scores Across Conditions in Study 1a.*




*Note*: Error bars represent 95% confidence intervals. *** $p < .001$.

## Discussion

I assessed the effect of moral outrage on moral self-enhancement. Participants who compared themselves to individuals storming the U.S. Capitol Building rated their moral character much higher than participants who compared themselves to attendees of a hot air balloon festival. I used a novel measure that tested for the role of downward social comparison in the relation between moral outrage and moral self-enhancement. A meta-analysis of the better-than-average effect (Zell et al., 2020) indicated that people perceive themselves as slightly better than the average person, with an effect size of $d = 0.78$, 95% CI [0.71, 0.84]. In contrast, Study 1a produced an effect size nearly four times larger ($d = 3.01$, CI [2.61, 3.41]),

indicating that the findings cannot be solely attributed to the better-than-average effect. The observed result is likely driven by the fact that, rather than comparing themselves to an average person, participants evaluated themselves against morally deficient targets. This pattern is consistent with prior findings and my hypothesis.

Study 1a had a key limitation: the moral outrage manipulation was context-specific to the storming of the U.S. Capitol Building. This event might elicit higher levels of moral outrage than events in people's daily lives due to the event's high-profile nature and the deliberate recruitment of participants who voted for Joe Biden. Therefore, the results may lack ecological validity. I addressed this issue in Study 1b.

## Study 1b: Passionate About a Chosen Social Issue

In Study 1b, I sought to replicate the Study 1a findings using a more general manipulation to ensure that the observed effect was not context-specific. I instructed participants in the moral outrage condition to write about any social injustice for which they felt passionate and angry, including the moral transgressors they deemed responsible. These instructions allowed them to freely select any moral violation that elicited moral outrage. In contrast, I designed the control to evoke a neutral emotional response by asking participants to write about an acquaintance.

### Hypothesis

I hypothesised that participants in the experimental (i.e., moral outrage) condition would report higher moral self-enhancement than those in the control condition

### Method

**Participants.** In Study 1a, I observed a large effect size (Cohen's $d$ = 3.01). To replicate and extend these findings, I aimed to recruit a sample size similar to Study 1a ($N$ = 200). Still, I decided to oversample to account for a potential interaction between culture (UK vs. U.S.) and moral outrage. Given the large effect size observed in Study 1a, I estimated that recruiting at least 320 participants would provide sufficient statistical power to detect a meaningful difference, with 90% power, using G*Power (Faul et al., 2007) to detect at least a 50% attenuation of the effect between groups (Giner-Sorolla et al., 2024).

I tested 363 participants but removed 17 for being under 18. This left 346 (280 women, 55 men, three identified as another gender, and eight did not disclose), ranging in age from 18 to 74 years ($M_{age}$ = 21.41, $SD_{age}$ = 6.73). Of them, 197 were University of Southampton undergraduates (UK) who were recruited via SONA (https://sotonpsych.sona-systems) and took part for course credit. Further, 149 were Hanover College undergraduates (U.S.) who took part voluntarily via Psychological Research on the Net (https://psych.hanover.edu). The UK sample comprised 14 ethnic backgrounds (64.5% White British, 12.2% other White backgrounds, 5.6% Indian, and 17.7% from other ethnic backgrounds, including Caribbean, African, other Black British, other Asian British, Chinese, and Hispanic). The U.S. sample represented seven ethnic backgrounds (49.7% White, 14.1% Latino/Latina, 11.4% Black, 9.4% Hispanic, 11.4% from other ethnic backgrounds, including Asian/Pacific Islander and Native American, and 4% did not respond). Participants completed the survey via a link on their digital device of choice. Although some did not complete the full study, all of them completed the writing task and key dependent variable measure.

**Materials and Procedure.** I randomly assigned participants to a moral outrage ($n$ = 156) or control ($n$ = 190) condition.

***Moral Outrage Condition.*** Participants in the moral outrage condition spent a few minutes writing about a social injustice that angered them the most. Next, they described their thoughts and feelings about the person(s) they felt responsible for causing the injustice. The purpose of this task was to encourage participants to have a particular moral transgressor in mind completing the subsequent moral self-enhancement measure. Participants chose to write about topics such as women's rights, LGBTQ+ rights, racism, reproductive rights, and the cost-of-living crisis.

***Control Condition.*** In the control condition, participants spent a few minutes writing about a recent social event they had attended, focusing on an acquaintance for whom they had neutral feelings (i.e., someone they neither particularly liked nor disliked, and who was not a family member or friend). I selected this as the control condition to ensure that participants would have a morally neutral target in mind completing the subsequent moral self-enhancement measure.

***Moral Self-Enhancement.*** I used six moral traits from Study 1a (likeable, considerate, interpersonally warm, trustworthy, respectful, and moral). I replaced the trait 'a responsible citizen' of Study 1a with 'a better person' to align with the more general manipulation.

Participants rated the extent to which they felt they possessed each trait compared to those they wrote about in the study. University of Southampton undergraduates responded to the items on a 7-point scale (1 = *strongly disagree*, 7 = *strongly agree*), whereas Hanover College undergraduates responded on a 9-point scale (1 = *extremely disagree*, 9 = *extremely agree*). I transformed the 9-point scale scores into their equivalent 7-point scale scores in SPSS. I rounded them to the nearest whole number to keep consistency (Cronbach's α = .96). Higher scores represented higher moral self-enhancement.

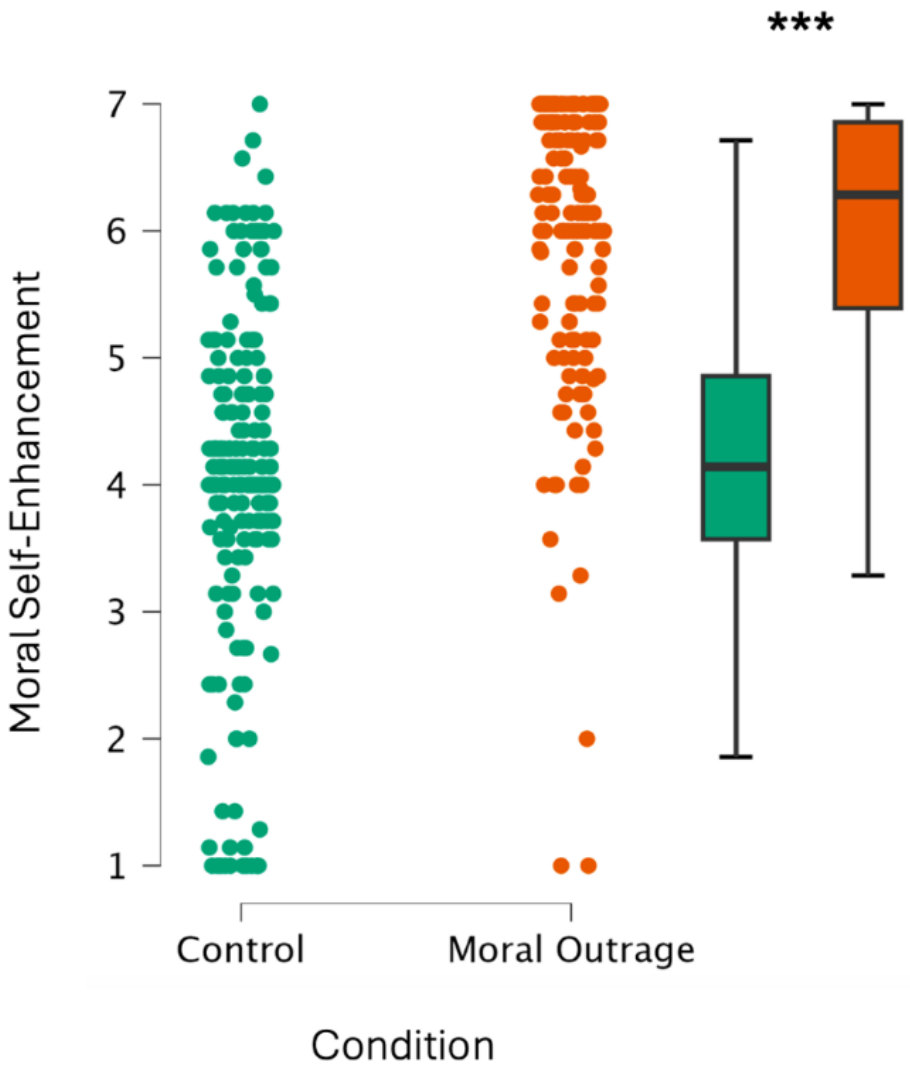
Participants then responded to a demographics questionnaire. Also, to minimise unwarranted discomfort, they completed a mood repair task involving rating animal pictures. The debriefing concluded the experimental session. See Appendix B for the stimulus materials[2].

## Results

**Preliminary Analysis.** First, to rule out location differences, I conducted a one-way ANOVA (location: University of Southampton, UK vs. Hanover College, U.S.) on the dependent variable: moral self-enhancement. The effect of location on moral self-enhancement was not significant, $F(1,346) = .84$, $p = .361$, $\eta^2_p = .00$. Therefore, UK and U.S. participants responded equivalently.

[2] Participants also filled out a few exploratory measures: Negative Affect (PANAS-X; Watson & Clark, 1999), Self-Esteem (Hepper et al., 2012), Satisfaction with Life Scale (Diener et al., 1985), Virtue and Self-Worth (Crocker et al., 2003), Justice Sensitivity (Schmitt et al., 2010), and several follow-up questions (Appendix B). I did not analyse the relevant data.

**Figure 3.** *Raincloud Plot of Moral Self-Enhancement Across Conditions in Study 1b.*




*Note*: Error bars represent 95% confidence intervals. *** $p < .001$.

**Main Analysis.** To test the hypothesis that moral outrage would increase moral self-enhancement, I conducted a one-way ANOVA (condition: moral outrage vs. control) on moral self-enhancement. Participants in the moral outrage condition ($M = 5.96$, $SD = 1.14$) reported significantly higher moral self-enhancement than those in the control condition ($M = 4.06$, $SD = 1.34$), $F(1,346) = 198.02$, $p = <.001$, $\eta^2_p = .365$ (Figure 3).

## Discussion

In Study 1b, I purported to replicate the findings of Study 1a with a manipulation that was not context-specific. I assessed the effect of moral outrage on moral self-enhancement using the same measure as in Study 1a, with one scale item (moral trait) changed to better align

with the manipulation. Moral outrage influenced moral self-enhancement. Participants who compared themselves to perceived moral transgressors responsible for social injustice rated their own moral character more positively than those who compared themselves to someone to whom they had neutral feelings. The results were consistent with the hypothesis, replicating the Study 1a findings. Further, participants in the moral outrage condition chose to write about an extensive range of social injustices, addressing the limitation of context-specificity in Study 1a.

The effect size more than twice as large ($d$ = 1.52, CI [1.28, 1.76]) as that reported in a better-than-average effect meta-analysis ($dz$ = 0.78, 95% CI [0.71, 0.84]), further suggesting that the findings cannot be solely attributed to the better-than-average effect. Instead, this heightened effect is likely driven by participants comparing themselves to morally deficient targets rather than to an average person.

## Summary and Discussion

In Studies 1a and 1b, moral outrage increased moral self-enhancement in both context-specific (Storming of the Capitol Building; Study 1a) and non-specific ( chosen social injustice; Study 1b) contexts. These results support the hypotheses and replicate previous findings of a predictive relation between moral outrage and moral self-enhancement. Furthermore, the results pointed to downward social comparison as the process responsible for this relation. When people perceive a moral transgressor responsible for an injustice, they engage in downward social comparison with the target and judge their own moral character more positively in comparison, experiencing moral self-enhancement.

The larger effect size observed in Study 1a may reflect the more consistent and extreme emotional reaction anticipated from the pre-screened participants. On the contrary, participants in Study 1b were not pre-screened and likely exhibited a range of individual differences - such as political interest (Prior, 2010) and justice sensitivity (Schmitt et al., 2010) - which may have introduced variability and acted as confounding variables affecting the expression of moral outrage in response to social injustice.

# Chapter 4. Assessing The Relation Between Moral Self-Enhancement and Participative Efficacy

This chapter focuses on a possible relation between the second and third components of the proposed model: moral self-enhancement and participative efficacy. Although moral self-enhancement has traditionally been conceptualised as an individual-level motivational process that boosts one's moral self-image (Gregg & Sedikides, 2024; Sedikides & Gregg, 2008), participative efficacy refers to the belief that one's personal contributions can meaningfully undergird collective action (Van Zomeren et al., 2008). These constructs are theoretically distinct, yet both refer to beliefs about the self in moral contexts. Despite theoretical accounts suggesting that individuals who perceive themselves as morally exemplary may also feel particularly capable of contributing to moral causes, this relation has not been empirically examined. The literature indicates that people are motivated to maintain a favourable self-image (Alicke & Sedikides, 2011b; Sedikides & Strube, 1997) and to behave in ways aligned with their moral identity (Blasi, 1983; Sedikides et al., 2025), implying that moral self-enhancement may strengthen participative efficacy beliefs.

## Study 2: A Valuable Moral Contributor

Although both constructs (moral self-enhancement and participative efficacy) are proposed to function as serial mediators in the full model, this study aims to provide initial evidence for a potential causal pathway between the two. To do this, in preregistered Study 2 (https://aspredicted.org/see_one.php), I experimentally manipulated moral self-enhancement and measured subsequent participative efficacy beliefs to assess whether bolstering one's moral self-image increases perceived value and capability within a collective cause.

### Hypothesis

I hypothesised that participants in the moral self-enhancement condition (vs. the moral self-diminishment condition) would report stronger participative efficacy beliefs. Specifically, those who recall a time when they behaved in a particularly moral manner will be more likely to believe that their personal contributions would positively influence group goals.

## Method

**Participants.** I based effect size estimates on findings from Rullo et al. (2022), who examined the effect of moral identity on moral self-efficacy. They found varying effect sizes across three studies ($d$ = .28 to 2.02). Here, I employed a conceptually aligned manipulation to induce moral self-enhancement and assessed its impact using a theoretically related measure of efficacy beliefs. I cautiously aimed for a moderate effect size ($d$ = .50). With this effect size and 90% power, 172 participants were needed in a between-subjects design (G*Power 3; Faul et al., 2007). I aimed for a minimum of 200 participants to hedge against attrition.

I recruited participants via Prolific (https://www.prolific.co). Participants were 256 adults residing in the UK (156 women, 94 men, three identified as another gender, and two did not disclose), ranging in age from 18 to 78 years ($M_{age}$ = 40.96, $SD_{age}$ = 12.80) and predominantly White British (75%), other White backgrounds (8%), White and Asian (3.1%), African (3.1%) and the remaining 10.8% representing 14 different ethnic backgrounds including Indian, White Irish, Chinese, Pakistani, and other Black and White backgrounds. I advertised the study as an examination of attitudes toward various issues. Participants completed the survey via a link on their digital device for approximately 10 minutes and were compensated with £1.33.

**Materials and Procedure.** I was not aware of any studies that specifically manipulated moral self-enhancement. I relied on a manipulation introduced by O'Mara et al. (2012) and modified by Guenther et al. (2024, Study 4). In the latter study, participants in the self-enhancement (vs. control) condition recalled and wrote about a situation in which they had shown a much higher (vs. lower) level of care, understanding, or kindness. As a manipulation check, Guenther et al. instructed participants to "rate the amount of each trait you believe you had when recalling this situation" (p. 1187). Results showed that recalling memories of past desirable behaviours elicited self-enhancement. Hence, I used the Guenther et al. modified version. I randomly assigned participants either to a moral self-enhancement condition ($n$ = 125) or a moral self-diminishment condition ($n$ = 131).

***Conditions and Manipulation Check.*** Participants in the experimental (i.e., moral self-enhancement) condition recalled a time when they behaved in a way that showed a *high level* of care, respect, or kindness and spent the next five minutes describing the situation. Participants in the control (i.e., moral self-diminishment) condition recalled a time when they behaved in a way that showed *low* care, respect, or kindness and spent the next five minutes describing the situation. Then, all participants reported the extent to which they currently felt caring,

respectful, and kind-hearted (1 = *not at all*, 7 = *very much*; Cronbach's $\alpha$ = .96), as a manipulation check.

***Participative Efficacy.*** I measured participative efficacy beliefs with Van Zomeren et al.'s (2013) four-item participative efficacy scale. I adapted the items so that the relevant group was like-minded others, and the relevant goal was social action (i.e., "I believe that I, as an individual, can contribute greatly so that along with like-minded individuals, we can hold those responsible for social issues, accountable"). Participants rated their agreement with the four items (1 = *strongly disagree,* 7 = *strongly agree*; Cronbach's $\alpha$ = .94). Lastly, participants responded to a demographic questionnaire, mood repair, probing, and the debriefing. I provide stimulus materials in Appendix C.

## Results

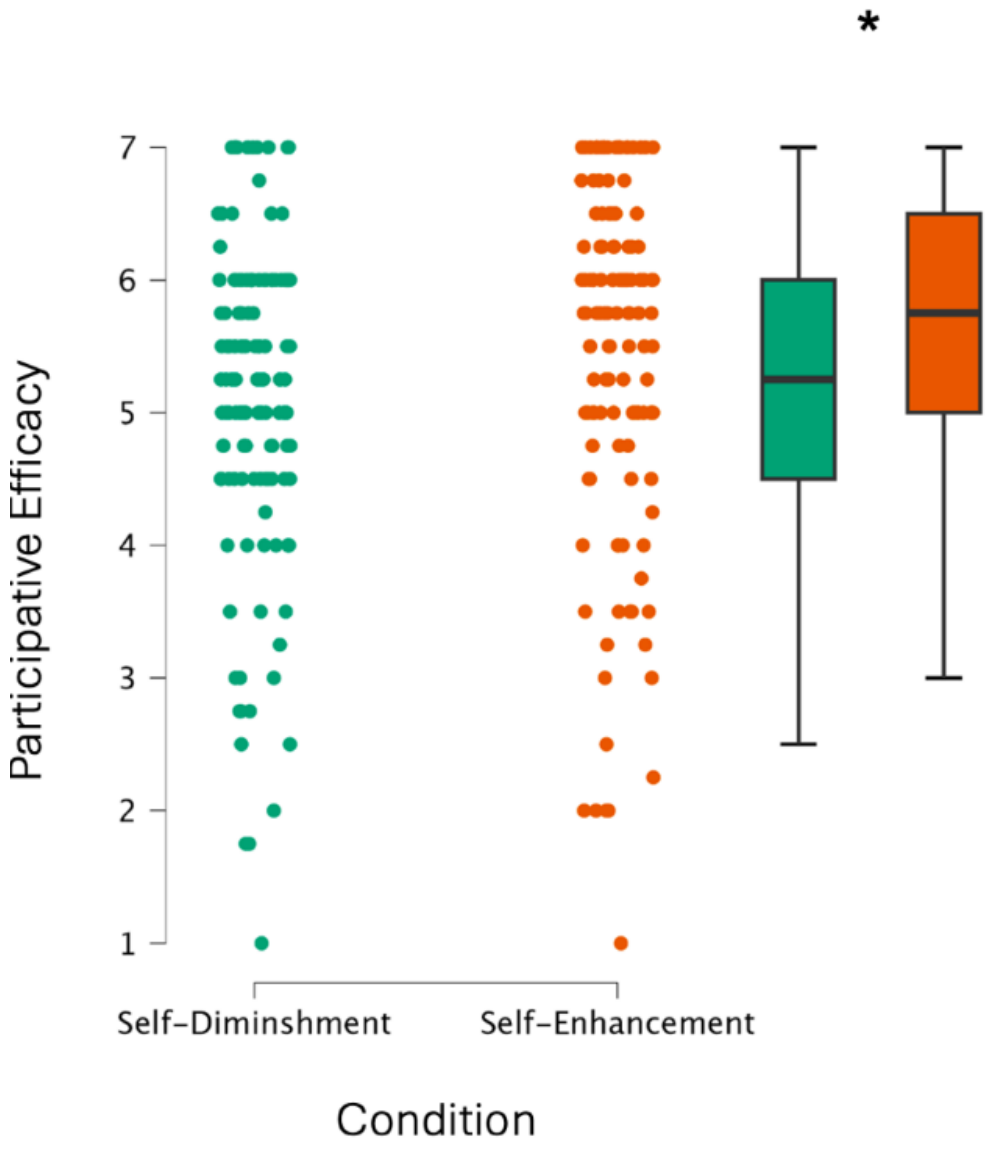
**Manipulation Check.** Levene's test for equality of variances was significant, $F(1, 254) = 21.50$, $p = <.001$, indicating that the assumption of equal variances was violated. I proceeded with a Welch's independent samples t-test. Participants in the moral self-enhancement condition ($M = 5.73$, $SD = 1.21$) felt more moral than those in the moral self-diminishment condition ($M = 4.78$, $SD = 1.74$), $t(232.23) = 5.07$, $p < .001$, $d = 1.50$.

Moreover, the results of one sample t-tests comparing each conditional mean to the scale midpoint (4) suggested that participants in the moral self-diminishment condition were significantly higher than the midpoint, $t = 5.14$, $p < .001$, $d = 0.45$. However, the increase compared to the scale midpoint was nearly three times larger in the self-enhancement condition, $t(124) = 16.00$, $p < .001$, $d = 1.43$. In summary, the manipulation was effective and driven more so by an increase in moral self-image among participants in the moral self-enhancement condition.

**Main Analysis.** To test the hypothesis that moral self-enhancement strengthens participative efficacy beliefs, I conducted a one-way ANOVA (condition: moral self-enhancement vs. moral self-diminishment) on participative efficacy. Participants in the moral self-enhancement condition ($M = 5.44$, $SD = 1.35$) reported stronger participative efficacy than those in the moral self-diminishment condition ($M = 5.10$, $SD = 1.22$), $F(1, 255) = 4.37$, $p = .04$, $\eta^2_p = .02$ (Figure 4). Participants who experienced moral self-enhancement were more likely to believe that their contribution to social action would be valuable.

Participative efficacy was significantly above the midpoint (4) in both conditions: moral self-diminishment $t = 10.39$, $p < .001$; moral self-enhancement: $t = 11.95$, $p < .001$. Further, the effect size was greater in the self-enhancement condition ($d = 1.07$) compared to the self-diminishment condition ($d = 0.91$). These results indicate that the effect was driven by an amplification in the self-enhancement condition as opposed to a diminishment in the self-diminishment condition.

**Figure 4.** *Raincloud Plot of Participative Efficacy Across Conditions in Study 2.*




*Note*: Error bars represent 95% confidence intervals. *$p < .05$.

**Discussion**

As hypothesised, experiencing moral self-enhancement (via recalling past moral behaviour), compared to experiencing moral self-diminishment (via recalling moral shortcomings), increased participative efficacy beliefs. Individuals who experience a sense of moral superiority are likelier to believe that their contributions to group social action would be valuable. This constitutes a novel addition to the literature.

The effect size was relatively small ($d$ = .26), suggesting that the relation between moral self-enhancement and participative efficacy may not be particularly pronounced. A reason may be that the two variables were manipulated and measured outside of the broader context of moral outrage. That is, participants were not confronted with a tangible social issue. The absence of a concrete real-world social issue may have limited their ability to respond to the participative efficacy items in a way that genuinely reflected their engagement with social action participation. I address this limitation in Studies 4a and 4b.

# Chapter 5. Assessing the Relation Between Participative Efficacy and Social Action Intentions

In this chapter, I assessed the relation between participative efficacy and social action intentions, the final variables in the sequential model. Although self-efficacy beliefs are a well-established predictor of goal-oriented behaviour (Bandura, 1982), social action is a behaviour that specifically requires collective effort to be effective (Hardin, 2015). A specific efficacy belief, participative efficacy, is crucial in motivating collective behaviours such as social action. Participative efficacy, the belief that one's contribution will make a difference to group goals (Van Zomeren et al., 2013), is important in situations where an individual's actions may have only a small influence on outcomes (Koletsou & Mancy, 2011). Although participative efficacy has been shown to strengthen collective action intentions (Van Zomeren et al., 2013), no published studies have directly manipulated participative efficacy within the context of social action or examined its influence on broader social action intentions - especially those that reflect the evolving landscape of activism in the digital age, such as online engagement and virtual mobilisation. I aimed to do so in Study 3.

## Study 3: "I Can Make a Difference!": A Vignette Study

In preregistered Study 3 (https://aspredicted.org/see_one.php), I presented participants with 20 vignettes about various social issues. For half of participants, I emphasised the importance of individual contribution to collective social action (participative efficacy condition). For the other half, I portrayed individual contributions as ineffective in achieving collective success (participative futility). I then assessed social action intentions.

### Hypothesis

I hypothesised that participants would report stronger social action intentions in the participative efficacy, compared to the participative futility, condition. In other words, believing that their individual behaviours would contribute to achieving the group goal of addressing a social issue through social action, would increase their willingness to engage in such behaviours.

## Method

**Participants.** From a pilot study ($n$ = 22), I obtained significantly stronger social action intentions in the participative efficacy ($M$ = 5.82, $SD$ = 0.71) than participative futility condition ($M$ = 4.46, $SD$ = 1.31), $t(21) = 5.51$, $p < .001$, ($d$ = 1.18). With this effect size and 90% power, 30 participants were needed in a within-subjects design. I aimed to test at least 40 participants, partly hedging against data loss and/or poor-quality data.

Participants were 42 adults (23 women, 18 men, one identified as another gender) recruited via Prolific (https://www.prolific.co). All of them resided in the UK, were UK citizens, and ranged in age from 18 to 62 years ($M_{age}$ = 40.43, $SD_{age}$ = 10.80). Participants were predominantly White British (76.2%). The remaining were African (7.8%), while 16% comprised seven other ethnic backgrounds (White Irish, Pakistani, White and Asian, Other Black, White and mixed backgrounds). All participants completed the survey on their digital device for approximately 8 minutes and were compensated with £1.00.

**Materials and Procedure.** I generated 20 vignettes that described various social issues. A key consideration in their design was minimising the probability of manipulating group efficacy (the belief that the group can or cannot achieve specific goals). For example, I avoided broad social issues, such as climate change, as participants may hold pre-existing opinions and beliefs about whether meaningful action is possible: some may think addressing climate change lies more in the hands of large corporations than individuals, making any social action seem futile. To overcome this potential problem, I focused on local and community-level social and policy concerns, framing these issues in terms of clear, actionable responses (e.g., attending meetings, organising campaigns, signing petitions), in which participants could realistically engage. By framing the issues in terms of specific, actionable steps rather than abstract or overwhelming challenges, I aimed to narrow participants' attention on their sense of agency rather than broader doubts about the feasibility of the group. Furthermore, I excluded featuring specific persons-in-need from the vignettes, such as those experiencing homelessness, where responsibility for addressing the issue could be debated (e.g., whether the burden lies with the person vs. external interventions).

I first drafted an original vignette regarding University Fees "Imagine you are a university student. The university is considering a proposal to dramatically increase student fees. You, as a student, can engage in protests, write emails to university officials, and put up posters around the campus." I then generated the next 19 vignettes with assistance from ChatGPT, an AI

language model (OpenAI, 2025). I instructed it to “Create 19 additional vignettes based on the first one, each addressing a different local or community-level social issue. Focus on specific, actionable responses (e.g., attending meetings, organising campaigns) that participants could realistically take. Avoid broad, abstract issues like climate change, where pre-existing beliefs about group efficacy might influence responses. Exclude issues involving individuals in need, such as homelessness, to prevent debates over responsibility. Each vignette should be of similar length and structure, with clear descriptions of the issue and available actions”. I edited the generated vignettes to ensure a varied spread of actionable responses, reduce repetition, and match the actionable responses to each social issue.

I then asked ChatGPT to evenly split the 20 vignettes into two groups of 10 (Group 1 and Group 2), ensuring a balanced representation of issues across welfare, environmental, public services, and cultural debates while maintaining a mix of local and community-level concerns across the two groups.

***Scenario-Framing.*** Each vignette ended with one of two possible sentences designed to manipulate participative efficacy beliefs. The final sentence in half of the vignettes emphasised participative efficacy (Scenario-Framing A):

> "Imagine you are a patient advocate in a community where a hospital is considering cutting essential services, such as emergency care. As an advocate, you can attend public forums, share information on social media and organise a peaceful demonstration outside the hospital. The cause needs as much support as possible for a chance to make a difference. Your actions are likely to have a big impact."

In the other half, the final sentence emphasised participative futility (Scenario-Framing B):

> "Imagine you are a volunteer at an animal shelter. A local business plans to open a factory farm nearby, raising concerns about animal cruelty and environmental harm. As a volunteer, you can write to your local MP, organise an awareness campaign, and share educational materials in your community. The cause has already received enough support to make a difference. Your actions are unlikely to have any impact whatsoever."

***Experiment Versions.*** I used a within-subjects design. I randomly assigned participants to one of two versions of the experiment. In Version 1, Group 1 vignettes ended with Scenario-Framing A (participative efficacy), whereas Group 2 vignettes ended with Scenario-Framing B (participative futility). In Version 2, the framing was reversed, with Group 1 vignettes ending with

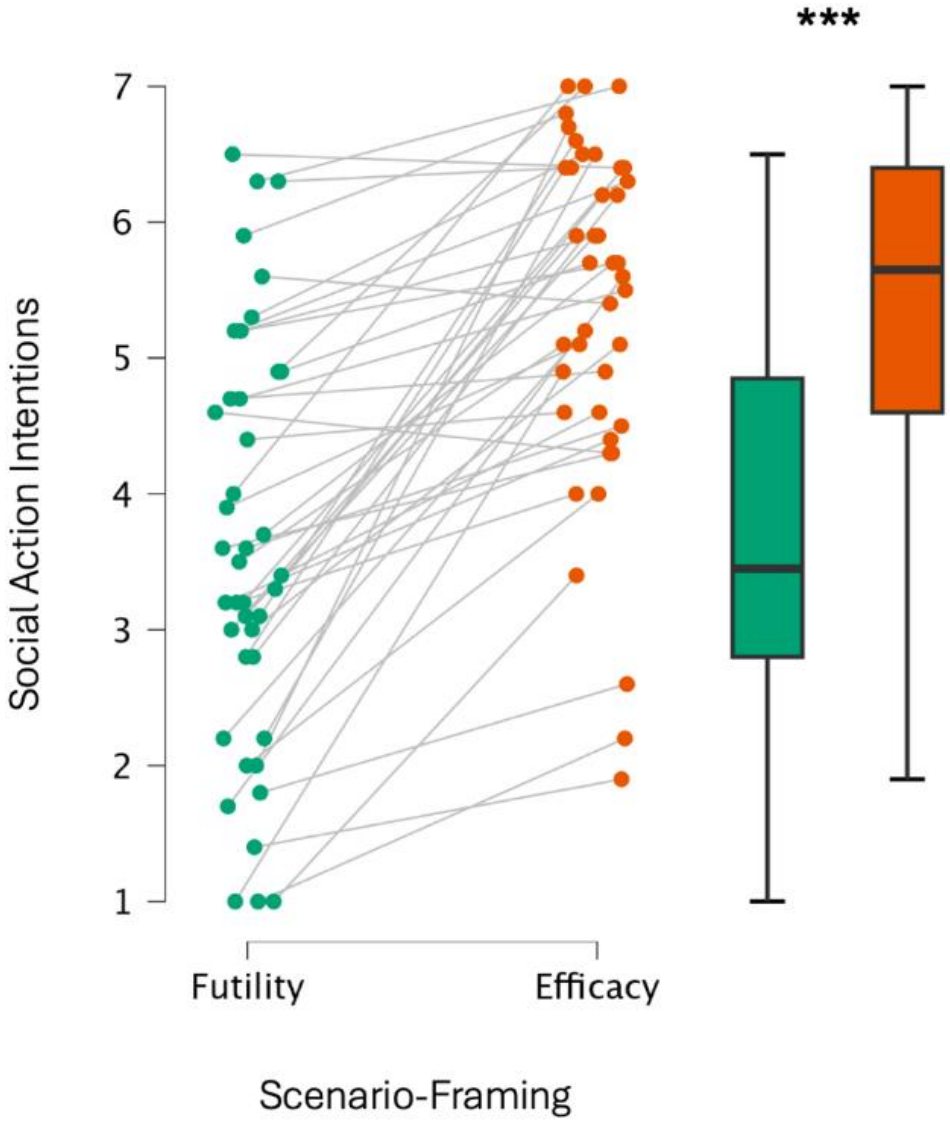
Scenario-Framing B and Group 2 vignettes ending with Scenario-Framing A. Regardless of condition, the study presented all 20 vignettes in a random order to each participant.

***Social Action Intentions.*** Participants reported their likelihood of engaging in the actions described in each hypothetical vignette (1 = *not at all likely*, 7 = *very likely*). Lastly, they completed a demographics questionnaire and read the debrief. I provide the stimulus materials in Appendix D.

## Results

**Main Analysis.** I conducted a 2 (scenario-framing: efficacy vs. futility) x 2 (experiment version 1 vs. version 2) mixed model ANOVA to examine the effects of participative efficacy and version of the experiment on social action intentions. As hypothesised, there was a main effect of scenario-framing on social action intention scores, $F(1, 40) = 65.63$, $p = <.001$, $\eta^2_p = .62$. Social action intention scores were significantly higher in response to vignettes framed with participative efficacy ($M = 5.35$, $SD = 1.28$) versus vignettes framed with participative futility ($M = 3.63$, $SD = 1.52$). There was no significant main effect of the experiment version (Version 1 vs Version 2) on social action intention scores, $F(1, 40) = 2.52$, $p = .120$, $\eta^2_p = .06$. The scenario-framing x experiment version interaction was non-significant, $F(1, 40) = 0.39$, $p = .845$. Thus, the main effect of participative efficacy (vs. futility) on social action intentions did was not influenced by which vignettes were tied to efficacy (vs. futility).

**Figure 5.** *Raincloud Plot of Social Action Intentions by Scenario-Framing with 95% Confidence Intervals in Study 3.*




*Note*: Error bars represent 95% confidence intervals. *** $p < .001$.

## Discussion

In Study 3, participative efficacy strengthened social action intentions, supporting the hypothesis. When participants were presented with a scenario in which their involvement in social action was portrayed as impactful, they were more likely to express intentions to engage in such action. Conversely, when participants were exposed to a scenario suggesting that their involvement would be futile, they were less likely to report intentions to take social action. The effect size of this relation was moderate and aligned with the effect size from the pilot study. These results expand upon previous findings by Van Zomeren et al. (2013). The results indicate

that participative efficacy can be manipulated in an experimental setting and that this efficacy belief strengthens a broader range of social action intentions. These include modern methods of social action such as joining online forums and sharing social media posts.

# Chapter 6. Testing the Full Model

In this final empirical chapter, I tested the full sequence of the theoretical model. Across four previously reported studies, I examined the three independent relations within the model and demonstrated that (1) moral outrage elicits moral self-enhancement, (2) moral self-enhancement strengthens participative efficacy, and (3) participative efficacy galvanises social action intentions. However, the theoretical model posits that moral self-enhancement and participative efficacy are sequential mediators in the relations between moral outrage and social action intentions. Thus, it is essential to test the full model.

In Studies 4a and 4b, participants ranked a list of nine pressing social issues in the UK. Then, they wrote about the issue they ranked as most important (moral outrage condition) or least important (control condition). Following this, they completed measures of moral self-enhancement, participative efficacy, and social action intentions.

## Study 4a: Tackling Social Issues in the UK

### Hypothesis

In Study 4a, I sought to test the full theoretical model. That is, I hypothesised that participants in the moral outrage condition (vs. control condition) would report stronger social action intentions serially through moral self-enhancement and participative efficacy.

### Method

**Participants.** I aimed to ensure adequate statistical power to detect the proposed serial mediation in the theorised model, should it exist. I thus conducted a Monte Carlo Power Analysis for Indirect Effects (Schoemann et al., 2017) to determine the required sample size. I used the correlations and standard deviations from Study 1a (X -> M1: $r$ = .640, $SD$ = 1.57), Study 2 (M1 -> M2: $r$ = .130, $SD$ = 1.29), and Study 3 (M2 -> Y: $r$ = .528, $SD$ = 1.64). I derived the three remaining correlations from related research. Borders and Wiley (2020) correlated group anger with group efficacy (X -> M2: averaged $r$ = .370), and correlated group anger with collective action intentions (X -> Y: averaged $r$ = .430). Tropp and Brown (2004) correlated self-enhancement with collective action interest across two studies (M1 -> Y: averaged $r$ = .385). Based on 1,000 replications with 20,000 Monte Carlo Draws per replication, a random seed of 1234, and a 95% confidence level, 460 participants were required to detect a serial indirect effect with 90% power. I aimed to recruit at least 500 participants to guard against exclusions.

I tested 503 participants (363 women, 134 men, five identified as another gender, one did not disclose), ranging in age from 18 to 77 years ($M_{age}$ = 33.20, $SD_{age}$ = 13.94). Of them, 353 were Prolific workers, paid each £2.40, and 150 were University of Southampton undergraduates, compensated with course credit. All participants resided in the UK. The sample was predominantly White British (75%), whilst the remaining comprised 5.2% other White background, 3.4% Indian, 2.8% African, and 13.6% representing 14 ethnic other backgrounds, including White Irish, Chinese, Pakistani, and other Black and White backgrounds. Participants completed the survey on their digital device via a link for approximately 12 minutes.

**Materials and Procedure.** I selected six social issues from an online list of current and important social issues in the UK (Soken-Huberty, 2024): The Cost-of-Living Crisis, Homelessness, Children Experiencing Poverty, Climate Change, Mental Health, and The Healthcare System. I accompanied each social issue with a brief description that I minimally adapted to align with one another in length. I selected three additional social issues likely to be perceived as less important: Traffic Congestion (Local Government Association, 2017), Public Transportation Punctuality (Stone King, 2024), and Access to High-speed Internet (Royal Geographical Society, 2024). I used information from these websites to write a short description of each, matching the format and length of the other six.

**Conditions.** All participants ranked the nine social issues from 1 (*most important to me*) to 9 (*least important to me*). Then, I randomly assigned and counterbalanced them either to the moral outrage condition ($n$ = 256) or the control condition ($n$ = 247). Participants in the moral outrage condition wrote about the social issue they ranked as most important to them, whereas those in the control condition wrote about the social issue they ranked as least important to them. All participants spent a few minutes describing the social issue and the people responsible for causing it (i.e., moral transgressors).

***Moral Self-Enhancement.*** Next, I assessed moral self-enhancement with eight moral traits. I used six traits (respectful, moral, compassionate, considerate, kind-hearted, caring) from the Green et al.'s (2019, Study 1 and 2) list of moral traits. I added the remaining the trait “empathetic” from Seara-Cardoso et al. (2012) and the trait “trustworthy” from Hardin (1996); both traits were strongly associated with morality in the relevant studies. Participants indicated the extent to which they felt they possessed each trait in comparison to those responsible for the social issue they wrote about. A sample item is: "Having completed the prior task, I now feel more trustworthy than the people responsible for the social issue I wrote about" (1 = *strongly disagree*, 7 = *strongly agree*; Cronbach's $\alpha$ = .96). Higher scores reflected greater moral self-enhancement.

***Participative Efficacy.*** Subsequently, I measured participative efficacy with the same 4-item scale as in Study 2, adapted from Van Zomeren et al. (2013). A sample item is: "I believe that I, as an individual, can contribute greatly so that those affected by the social issue above, can hold those responsible for the social issue, accountable" (1 = *strongly disagree*, 7 = *strongly agree*; Cronbach's $\alpha$ = .97). In both conditions, participants responded to the items pertinent to the social issue they had written about earlier.

***Social Action Intentions.*** Next, I measured social action intentions with nine items borrowed and adapted from previous research. I took five action items from Choma et al.'s (2024) collective action intention index, and four indices relevant to internet-enabled social actions (Bäck et al., 2018; Earl & Kimport, 2011). (Most of the chosen items have also been used by Turner et al. [2024], validating a social activism scale). Participants rated the likelihood of engaging in each social action for the social issue they had written about. A sample item is: "Right now, I feel that I would donate money to a relevant charity or organisation" (1 = *not at all likely, 4 = somewhat likely*, 7 = *very likely*; Cronbach's $\alpha$ = .92).

***Behavioural Item and Remaining Tasks.*** As an exploratory measure of behaviour, participants ticked a box if they were interested in being sent more information after the study on what they could do to fight the social issue they wrote about. Lastly, participants responded to a demographic questionnaire, a mood repair task, and the debriefing[3]. I provide the stimulus materials in Appendix D.

## Results

**Descriptive Statistics.** Table 1 presents the study's key descriptive statistics for each measured variable. Analyses revealed that mean scores for moral self-enhancement, participative efficacy, and social action intentions were higher in the moral outrage condition than in the control condition which laid the foundation for testing of a causal chain.

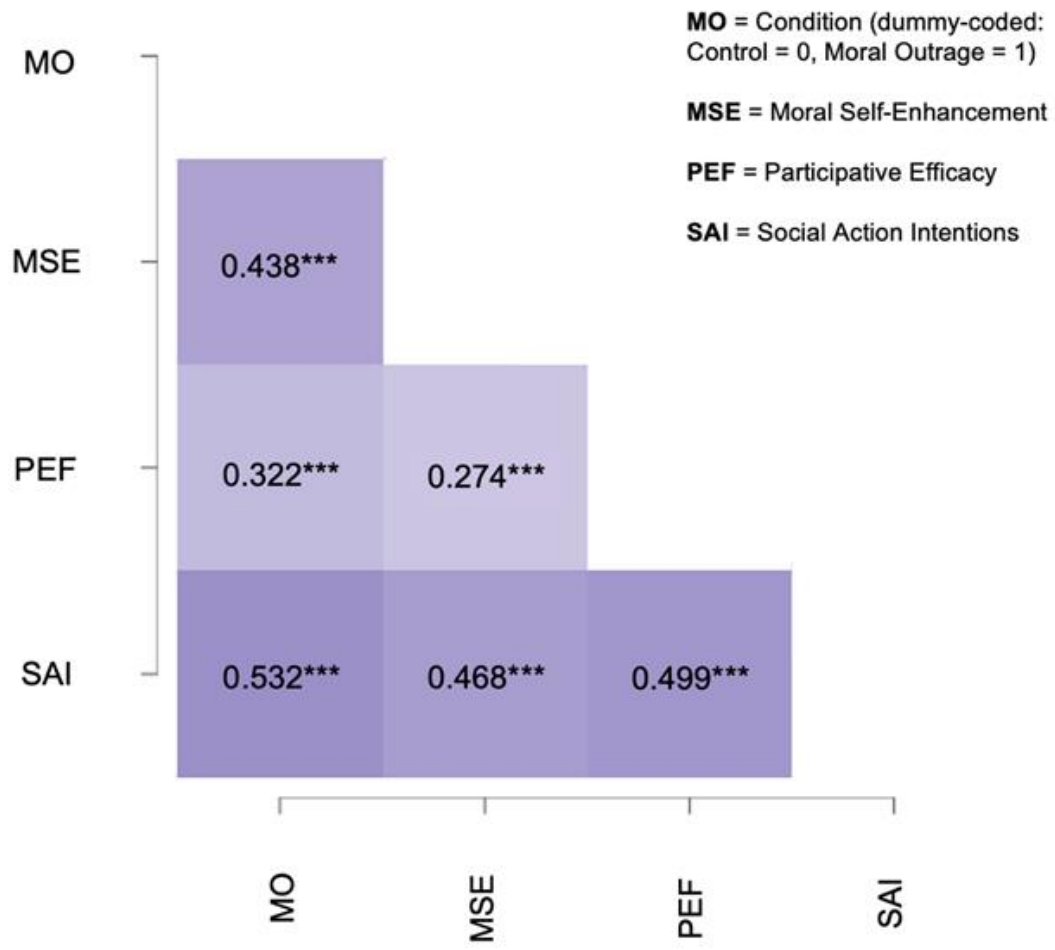
[3] Participants also responded to one follow-up question. I did not analyse the responses.

**Table 1.** *Descriptive Statistics for Moral Self-Enhancement, Participative Efficacy, and Social Action Intentions in Study 4a*

| | Moral Self-Enhancement | | Participative Efficacy | | Social Action Intentions | |
|---|---|---|---|---|---|---|
| | Control | Moral Outrage | Control | Moral Outrage | Control | Moral Outrage |
| Mean | 4.216 | 5.403 | 3.182 | 4.202 | 2.993 | 4.678 |
| Std. Deviation | 1.234 | 1.209 | 1.659 | 1.332 | 1.447 | 1.232 |

**Correlation Analysis.** Correlation analysis evinced significant positive associations between condition (dummy coded: 0 = control, 1 = moral outrage), moral self-enhancement, participative efficacy, and social action intentions (Figure 6). Additionally, moral self-enhancement was positively associated with participative efficacy, and both mediators were positively associated with social action intentions. These associations align with the hypothesised serial mediation model, suggesting that moral outrage may influence moral self-enhancement, which could then predict participative efficacy and, ultimately, social action intentions. The positive correlation between the two mediators is consistent with the proposed sequential pathway and provides preliminary evidence for the associations necessary to establish potential indirect effects in the forthcoming mediation analysis.

**Figure 6.** *Correlations between Condition, Moral Self-Enhancement, Participative Efficacy and Social Action Intentions in Study 4a (N = 503)*




*Note:* *** $p < .001$.

**Main Analysis.** To test whether moral self-enhancement and participative efficacy serially mediated the link between moral outrage and social action intentions, I implemented the Process Macro (Model 6; Hayes, 2013) with 95% bias-corrected confidence intervals based on 5000 bootstrap samples According to Hayes (2018), Model 6 can be implemented in the case of a serial mediation model, that is, (1) a model in which the independent variable has both direct and indirect effects on the dependent variable, and (2) there are two or more mediators, with one directionally influencing the other. Thus, Process Model 6 allows a researcher to control the indirect effect of individual mediators while controlling other variables. To aid explanation, I present in Figure 7 the named paths of the mediation model as per Hayes (2018).

**Figure 7.** *Conceptual Serial Mediation Model with Named Variables and Paths (PROCESS Model 6; Hayes 2018)*

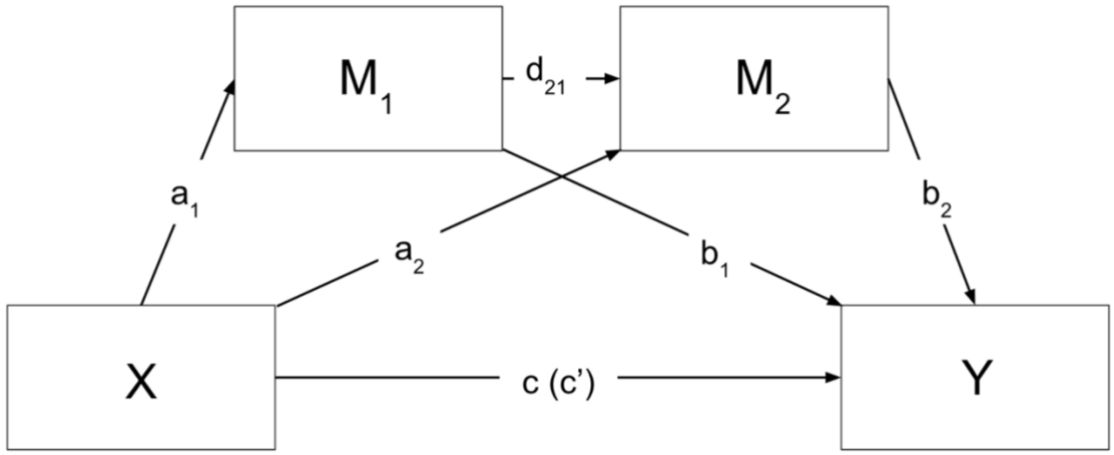
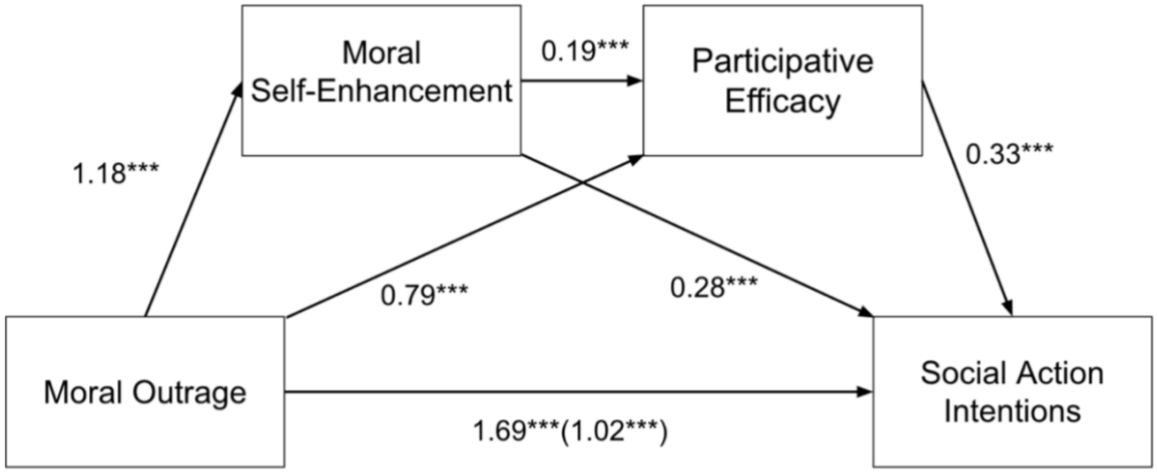



**Figure 8.** *Serial Mediation Model Showing the Effects of Moral Outrage, Moral Self-Enhancement and Participative Efficacy on Social Action Intentions in Study 4a (N = 503)*




*Note:* "Moral Outrage" (dummy coded: control condition = 0, moral outrage condition = 1), *** $p$ < .001.

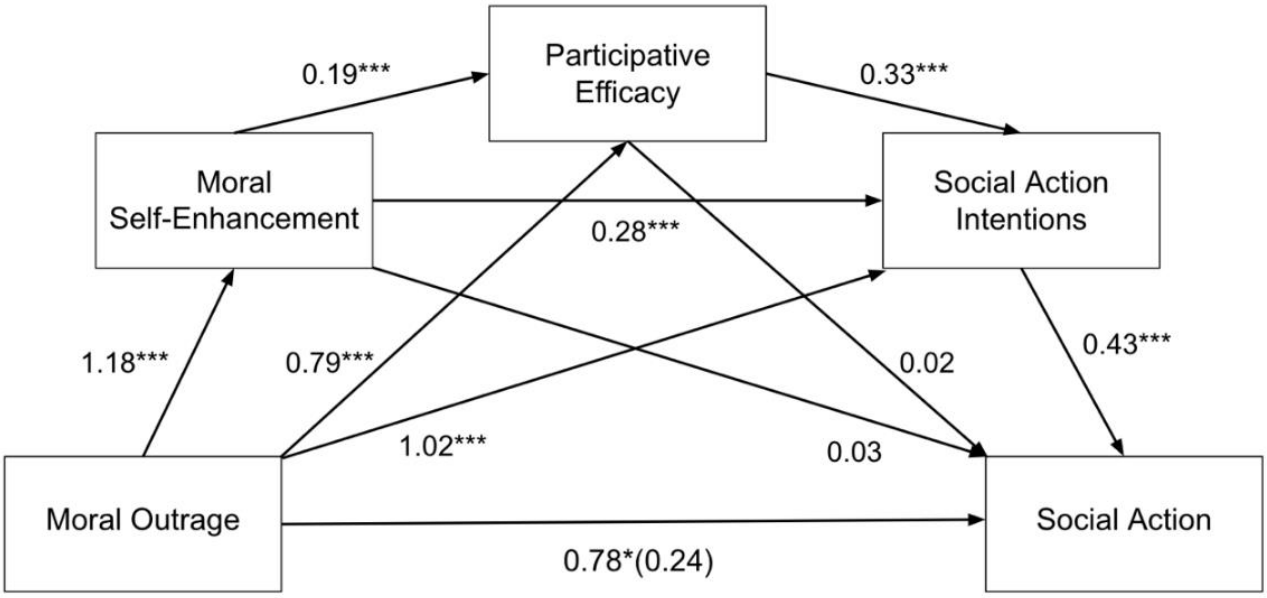
The total effect of moral outrage on social action intentions was significant (path c, $B$ = 1.69, Boot $SE$ = 0.12, $p$ <.001), indicating that moral outrage had a strong overall influence on intentions to engage in social action. The effect of moral outrage on moral self-enhancement (path $a_1$) was significant, the effect of moral self-enhancement on participative efficacy (path $d_{21}$) was significant, and the effect of participative efficacy on social actions (path $b_2$) was significant. Finally, there was a significant serial indirect effect (path $a_1d_{21}b_2$) of moral outrage on

social action intentions serially through moral self-enhancement and participative efficacy (*B* = 0.08, Boot *SE* = 0.03, 95% CI [0.027, 0.128]), confirming that the serial mediation path accounted for a significant portion of the association between moral outrage and social action intentions. The indirect effect of moral outrage on social action intentions via moral self-enhancement (path $a_1b_1$) was significant, *B* = 0.33, Boot *SE* = 0.07, 95% CI [0.207, 0.465]. The indirect effect of moral outrage on social action intentions via participative efficacy (path $a_2b_2$) was also significant, *B* = 0.26, Boot *SE* = 0.06, 95% CI [0.152, 0.387][4].

**Extended Behavioural Model.** For exploratory purposes, to find out if the model would extend beyond social action intentions to actual behaviour, I asked participants to tick a box if they wanted to receive more information about how they could fight the social issue they wrote about. The behavioural item was dummy-coded (0 = none, 1 = social action). I conducted a Chi-Square test of independence to examine the relation between moral outrage and the social action behavioural item. The results indicated that the association was statistically significant, $\chi^2(1) = 25.09$, $p = <.001$. That is, those in the moral outrage condition were likelier to engage in a form of social action. Next, I added this variable to the end of the serial mediation, analysing social action intentions as a third mediator instead (Figure 8). The serial indirect path ($a_1d_{21,}d_{32}b_3$) remained significant *B* = 0.33, Boot *SE* = 0.01, 95% CI [0.013, 0.067].

[4] To rule out the possibility of reverse causation, I tested an alternative serial mediation model in which social action intentions predicted moral outrage through participative efficacy and moral self-enhancement ($b_2d_1a_1$). The serial indirect effect was not significant, *B* = 0.01, *SE* = 0.01, 95% CI [-0.01, 0.04]. I then tested the mediators in reverse order in a serial mediation model ($X,M_{2,}M_{1,}Y$). The indirect effect remained significant, *B* = 0.04, *SE* = 0.01, 95% CI [0.01, 0.07], but was weaker than in the theorised model order, supporting the original mediation sequence.

**Figure 9.** *Serial Mediation Model Showing the Effects of Moral Outrage, Moral Self-Enhancement and Participative Efficacy, Social Action Intentions and Social Action in Study 4a (N = 503)*




*Note:* "Moral Outrage" (dummy coded: control condition = 0, moral outrage condition = 1), "Social Action" (dummy coded: none = 0, social action = 1), *** $p < .001$. * $p < .05$.

However, the direct effect of moral outrage on social action (path c') was no longer significant. This implies that the relation between moral outrage and actual social action is fully mediated by the sequential pathway involving all three mediators. These findings highlight that moral outrage's influence on behaviour is best explained through a chain of psychological processes, rather than a direct effect alone, supporting the proposed theoretical model. Furthermore, the influence of moral self-enhancement and participative efficacy on social action was not significant. Neither moral self-image nor efficacy beliefs independently predicted social action, underscoring the critical role of the serial mediation pathway (specifically, the mediating effect of social action intentions) in predicting the behavioural outcomes of moral outrage.

## Discussion

In Study 4a, I examined the full theorised model, that is, whether moral self-enhancement and participative efficacy mediate the relation between moral outrage and social action intentions. Consistent with prior findings, moral outrage was positively associated with moral self-enhancement, suggesting that individuals who experience moral outrage perceive themselves as more morally virtuous. In turn, moral self-enhancement was associated with increased participative efficacy, indicating that feeling morally superior is linked to stronger beliefs in one's ability to contribute to social change. Finally, participative efficacy was

associated with social action intentions, supporting the idea that, when individuals believe they can make a difference, they are more likely to express intentions to act. The serial mediation analysis confirmed that moral outrage influenced social action intentions through moral self-enhancement and participative efficacy. However, alternative models revealed that the indirect effects through each mediator individually were stronger than the sequential mediation pathway. This finding suggests that, whereas both mediators contribute to explaining the relation between moral outrage and social action intentions, they may operate independently to some extent. This finding diverges from the theoretical model, which posits that moral self-enhancement must be reinforced before individuals develop participative efficacy beliefs.

Although the parallel mediation model produced stronger indirect effects, the serial mediation model remains theoretically justified and aligns with the psychological sequencing proposed in prior literature. Although the indirect effect of the serial mediation was weak (B = 0.08), it remained statistically significant, supporting the hypothesised mediation pathway. Furthermore, an alternative serial mediation model with reversed mediators produced a weaker effect, reinforcing the validity of the proposed mediation order. Given these mixed findings, I conducted Study 4b to test the robustness of the serial mediation effect. Finally, exploratory analyses provided evidence that moral outrage influenced actual behaviour. Participants in the moral outrage condition were more likely to request additional information on how to act against the social issue they had written about. This behavioural outcome suggests that social action intentions may translate into real-world engagement, highlighting the broader implications of these findings for mobilising social action.

## Study 4b: Fighting UK Social Issues

In preregistered (https://aspredicted.org/see_one.php) Study 4b, I aimed to replicate the findings of Study 4a. I conducted this study in July 2024, just before the UK general election, a time when social issues in the UK were particularly salient.

### Hypothesis

I hypothesised that participants in the moral outrage condition (vs. control condition) would report stronger intentions to engage in social action, mediated serially through moral self-enhancement and participative efficacy.

## Method

**Participants.** I conducted a Monte Carlo Power Analysis for Indirect Effects (Schoemann et al., 2017) to determine the required sample size. In this power analysis, I used the correlations between variables and standard deviations from the serial mediation in Study 4a, specifying 1,000 replications with 20,000 Monte Carlo Draws per replication, a random seed of 1234, and a 95% confidence level. Based on these parameters, 438 participants were required to detect my hypothesised indirect effect with 90% power. I aimed to recruit at least 450 participants to guard against exclusions.

I tested 453 Prolific workers (286 women, 162 men, two identified as another gender, and three did not disclose), ranging in age from 18 to 80 ($M_{age}$ = 40.02, $SD_{age}$ = 12.77). I reimbursed each with £1.50. All participants resided in the UK and were of British nationality. The sample comprised 17 ethnic backgrounds (90.1% White British, 1.8% Indian, 1.5% Pakistani, and 6.7% represented 14 other ethnic backgrounds, including other White backgrounds, White and Black Caribbean, African, Chinese and other Asian backgrounds). Participants completed the survey via a link on their digital device of choice for approximately 10 minutes.

**Materials and Procedure.** I used the same nine social issues from Study 4a. Participants read the brief description of each social issue and then ranked the social issues from both important to them (*1*) to least important to them (9). I randomly assigned participants either the moral outrage ($n$ = 230) or control ($n$ = 222) condition.

***Conditions.*** In the moral outrage condition, participants wrote about the social issue they had ranked most important to them. In the control condition, they wrote about the social issue they had ranked least important to them. Participants in both conditions spent several minutes describing the social issue and the people they felt were responsible for causing it.

***Moral Self-Enhancement.*** I assessed moral self-enhancement with the same eight moral traits and scale items (presented in a separate random order for each participant) as in Study 4a. A sample item is: "I now feel more compassionate than the people responsible for the social issue I wrote about" (1 = *strongly disagree*, 7 = *strongly agree*; Cronbach's $\alpha$ = .97*)*. Higher scores reflect greater moral self-enhancement.

***Participative Efficacy.*** I next assessed participative efficacy with Van Zomeren et al.'s (2013) scale adapted for the manipulation as per Studies 2 and 4a. I displayed the four statements in a separate random order for each participant. A sample item is: "I believe that I, as an individual, can contribute greatly so that those affected by the social issue above can hold

those responsible for the social issue accountable" (1 = *strongly disagree*, 7 = *strongly agree*; Cronbach's $\alpha$ = .98). Higher scores reflect greater participative efficacy beliefs.

***Social Action Intentions.*** Finally, I assessed social action intentions with the same nine items as in Study 4a. Again, I presented the items in a separate random order for each participant. A sample item is: "Right now, I feel that I would attend an event (e.g., protest, rally, fundraiser)" (1 = *not at all likely,* 4 = *somewhat likely*, 7 = *very likely*; Cronbach's α = .93). Higher scores reflect stronger intentions to engage in social action. As in Study 4a, I included exploratorily, a behavioural item asking participants to tick a box if they were interested in being sent more information on what they can do to fight the social issue they wrote about. Lastly, participants responded to a demographic questionnaire a short mood repair task and read the debriefing. I list the stimulus materials in Appendix E.

## Results

**Descriptive Statistics.** Table 2 presents the key study variables' means and standard deviations. As in Study 4a, mean scores were higher in the moral outrage condition (vs. control) for moral self-enhancement, participative efficacy and social action intentions, in alignment with the hypothesised causal chain.

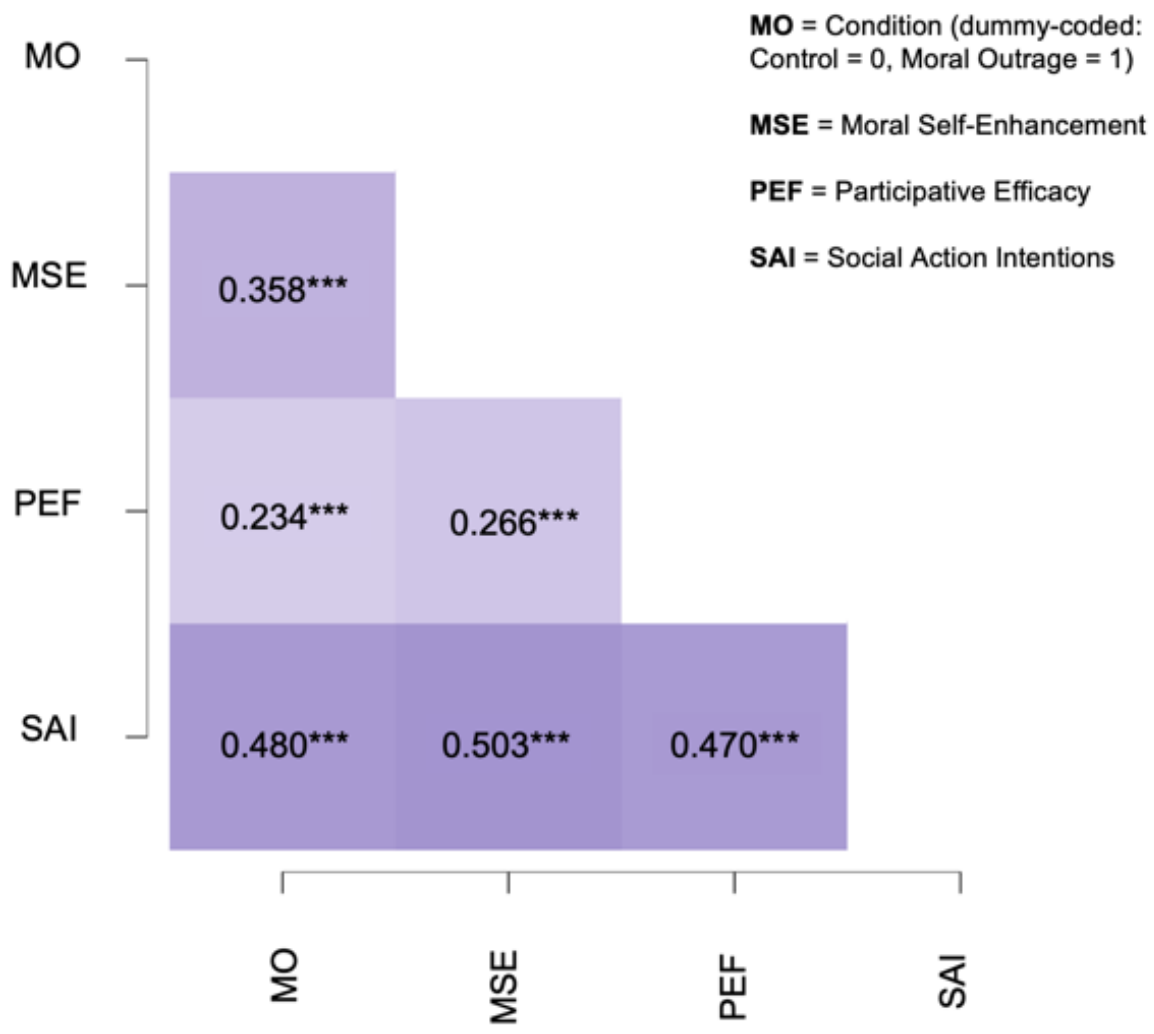
**Table 2.** *Descriptive Statistics for Moral Self-Enhancement, Participative Efficacy, and Social Action Intentions in Study 4b*

| | Moral Self-Enhancement | | Participative Efficacy | | Social Action Intentions | |
|---|---|---|---|---|---|---|
| | Control | Moral Outrage | Control | Moral Outrage | Control | Moral Outrage |
| Mean | 4.321 | 5.379 | 3.099 | 3.893 | 2.715 | 4.257 |
| Std. Deviation | 1.292 | 1.466 | 1.617 | 1.688 | 1.391 | 1.428 |

**Correlation Analysis.** Correlation analysis showed significant positive associations among moral outrage (dummy coded: 0 = control condition, 1 = moral outrage condition), moral self-enhancement, participative efficacy, and social action intentions (Figure 8). Moral outrage was positively associated with moral self-enhancement, moral self-enhancement was positively associated with participative efficacy, and participative efficacy was positively linked with intentions to engage in social action. These results provide initial support for the proposed theoretical serial links.

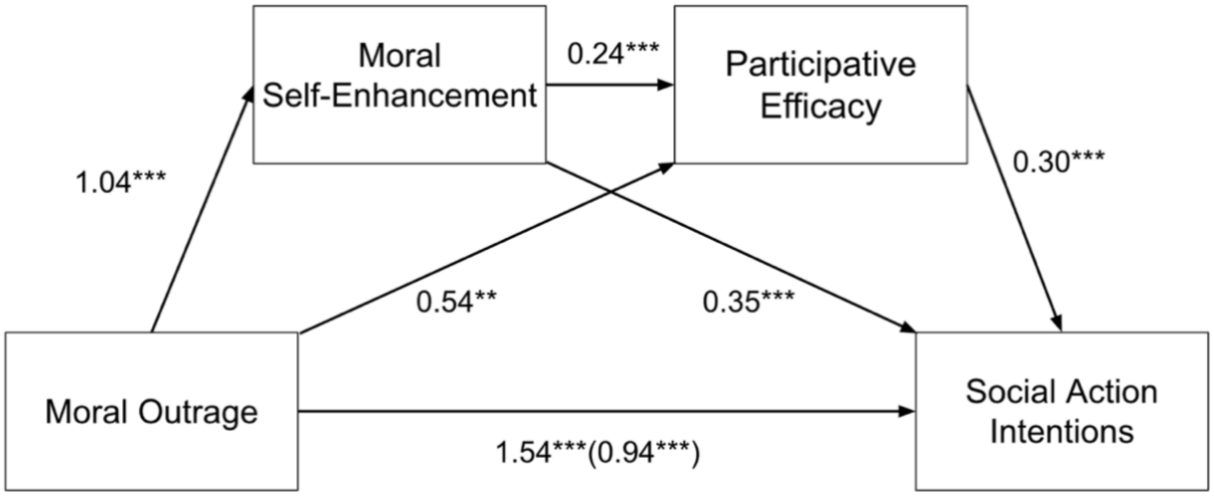
**Main Analysis.** To test whether the effect of moral outrage on social action intentions was serially mediated by moral self-enhancement and participative efficacy, I used Process Model 6 (Hayes, 2013) with 95% bias-corrected confidence intervals based on the default 5000 bootstrap samples. I display the results in Figure 9.

**Figure 10.** *Correlations between Condition, Moral Self-Enhancement, Participative Efficacy and Social Action Intentions in Study 4b (N = 453)*




*Note:* *** $p < .001$.

**Figure 11.** *Serial Mediation Model Showing the Effects of Moral Outrage, Moral Self-enhancement and Participative Efficacy on Social Action Intentions in Study 4b (N = 453)*




*Note:* "Moral Outrage" (dummy coded control = 0, moral outrage = 1), *** $p < .001$. ** $p < .01$.

The total effect of moral outrage on social action intentions was significant (path c, $B = 1.54$, Boot $SE = 0.13$, $p < .001$) indicating that moral outrage had a strong overall effect on social action intentions. The effect of moral outrage on moral self-enhancement (path $a_1$), the effect of moral self-enhancement on participative efficacy (path $d_{21}$), and the effect of participative efficacy on social action intentions (path $b_2$) were all significant. Finally, as per my hypothesis, there was a significant serial mediating effect of moral outrage on social action intentions through moral self-enhancement and participative efficacy (path $a_1d_{21}b_2$, $B = 0.08$, Boot $SE = 0.02$, 95% CI [0.038, 0.131]), suggesting that moral self-enhancement and participative efficacy serially mediate moral outrage and social action intentions. The indirect effect of moral outrage on social action intentions via moral self-enhancement (path $a_1b_1$) was also significant, $B = 0.36$, Boot $SE = 0.07$, 95% CI [0.247, 0.512], as was the indirect effect of moral outrage on social action intentions via participative efficacy (path $a_2b_2$), $B = 0.16$, Boot $SE = 0.06$, 95% CI [0.067, 0.288][5].

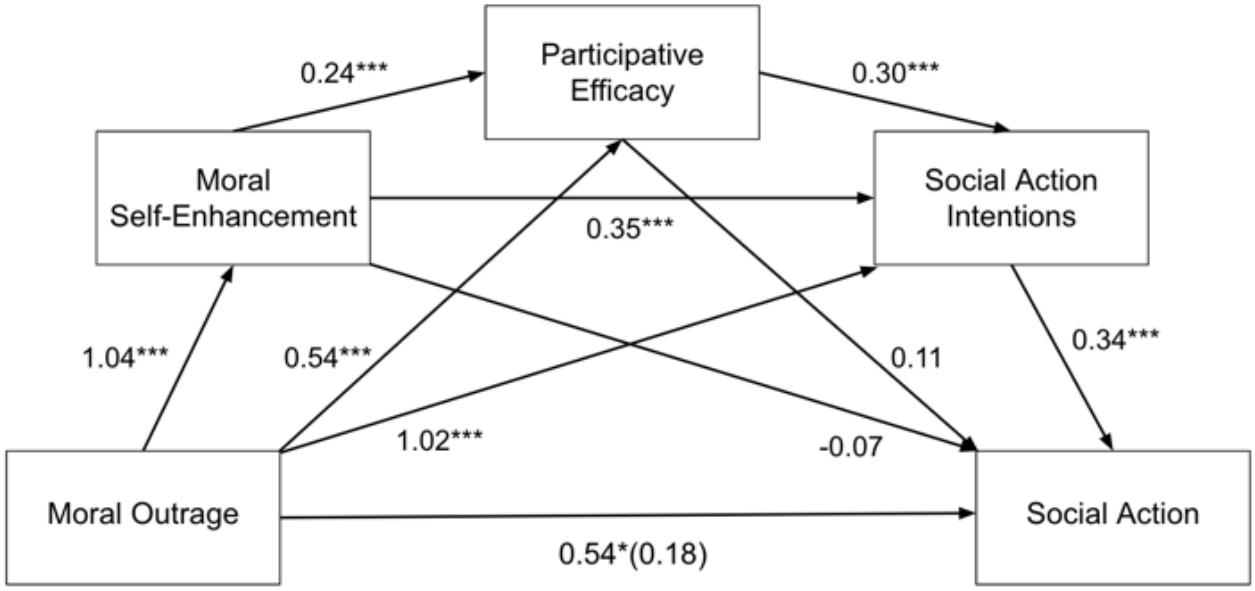
**Extended Behavioural Model.** As in Study 4a, I extended the serial mediation model to include the item that asked participants to tick the box if they would like to receive more information about how they can fight the social issue they wrote about. The behavioural item

[5] To rule out the possibility of reverse causality, I tested the alternative serial mediation model ($b_2d_{21}a_1$; the effect of social action intentions on moral outrage through participative efficacy and moral self-enhancement). The serial mediation was not significant, $B = 0.00$, $SE = 0.00$, 95% CI [-0.01, 0.01]. I also tested the mediators in reverse order ($X, M_2, M_1, Y$) and the indirect effect remained significant, $B = 0.04$, $SE = 0.02$, 95% CI [0.02, 0.09], but was weaker than the hypothesised mediation sequence. These results support the original, theorised mediation sequence.

was dummy-coded (0 = none, 1 = social action). Firstly, a Chi-Square test of independence was significant, $\chi^2(1) = 11.40$, $p = <.001$. Individuals who wrote about an important social issue were more likely to ask for more information to be sent to them after the study. When using this item as a dichotomous outcome variable of the original serial mediation (and moving social action intention as a third mediator), the serial mediation path ($a_1d_{21,}d_{32}b_3$) was still significant $B = 0.03$, Boot $SE = 0.01$, 95% CI [0.010, 0.055], (Figure 12).

However, the direct effect of moral outrage on social action (path c') was no longer significant. This suggests that the relation between moral outrage and actual social action is fully mediated by the sequential pathway involving all three mediators. Further, the direct effects of moral self-enhancement on social action and participative efficacy on social action were not significant, testifying to the importance of the serial mediation pathway to predict behavioural outcomes of moral outrage, and thus the importance of moral self-image and self-beliefs.

**Figure 12.** *Serial Mediation Model Showing the Effects of Moral Outrage, Moral Self-Enhancement and Participative Efficacy, Social Action Intentions and Social Action in Study 4b (N = 453)*




*Note:* "Moral Outrage" (dummy coded: control condition = 0, moral outrage condition = 1), "Social Action" (dummy coded: none = 0, social action = 1), *** $p < .001$. * $p < .05$.

**Discussion**

In Study 4b I sought to replicate the findings of Study 4a and ensure that the order of any measure items did not affect results. I used the same manipulation and measures as in Study 4a, but I presented the items in random order separately for each participant. The results

showed a significant mediating role of moral self-enhancement and participative efficacy in the relation between moral outrage and social action intentions. Participants who felt moral outrage by writing about a social issue that was most important to them also experienced moral self-enhancement, which increased participative efficacy beliefs, strengthening their intentions to engage in social action aimed to address the social issue.

## Summary and Discussion

In two studies, participants ranked nine social issues affecting the UK from most to least important to them. Participants in the moral outrage condition wrote about the most important social issue to them, whereas those in the control group wrote about the least important to them. The results demonstrated that moral outrage was positively associated with moral self-enhancement. Furthermore, both studies showed that individuals engage in downward social comparison in response to moral transgressions, resulting in moral self-enhancement. In turn, moral self-enhancement increased participative efficacy, supporting the idea that feeling particularly moral can enhance one's belief in their ability to provide a valuable contribution to social action. Finally, participative efficacy predicted social action intentions, reinforcing prior research indicating that individuals who believe in their ability to effect change are more likely to express a willingness to act. However, the findings extended beyond existing literature in that the range of social actions was broad and included online activism (e.g., sharing content on social media), advocacy (e.g., writing to political representatives), and economic resistance (e.g., boycotting organisations).

The serial mediation analysis in both studies showed that moral outrage influences social action intentions sequentially through moral self-enhancement and participative efficacy. This provides additional support for the robustness of the model. Furthermore, both studies illustrated that moral outrage influenced not just self-reported social action intentions but also behaviour. That is, participants in the moral outrage condition were more likely to request additional information on how to engage in social action regarding the social issue they wrote about after the study. This finding constitutes preliminary evidence that the psychological mechanisms identified in the model may extend beyond mere intention and have implications for real-world activism and engagement.

# Chapter 7. General Discussion

In this PhD thesis, I investigated how moral outrage influences social action intentions through moral self-enhancement and participative efficacy. Moral outrage has long been recognised as a powerful emotional response that can motivate social action. However, recent empirical advances have also highlighted its self-serving aspects, such as its capacity to elicit moral self-enhancement. In parallel, the social action literature has emphasised the importance of participative efficacy, defined as the belief that one's input can contribute meaningfully to group efforts, as a critical antecedent of engagement. Although combinations of these four constructs have been examined together in related areas of research, they have not been integrated into a unifying theoretical framework. I bridged this gap by developing a more comprehensive understanding of the psychological pathways from moral outrage to social action. I extended prior work theoretically by proposing a novel serial mediation model. I also extend it methodologically by introducing new measures of moral self-enhancement via downward social comparison, broadening how social action intentions are assessed and being the first to experimentally manipulate participative efficacy.

## Summary of Study Methods and Findings

### Studies 1a & 1b: Examining the Mechanism of Moral Outrage and Moral Self-Enhancement

Prior work has established a positive relation between moral outrage and moral self-enhancement (Green et al., 2019; Rothschild & Keefer, 2017). However, these studies often neglected the social comparison processes underlying this effect, focusing primarily on how individuals rate their morality following exposure to injustice rather than how they evaluate the morality of transgressors. I proposed instead that moral self-enhancement is driven by downward social comparison: individuals bolster their moral self-image by comparing themselves to those who commit moral violations. To evaluate this proposal, I developed a novel measure of moral self-enhancement that explicitly incorporates comparison to moral wrongdoers and tested it in two initial investigations (Study 1a and 1b).

In Study 1a, politically liberal participants read and wrote about either the Storming of the U.S. Capitol Building in January 2021 (moral outrage condition) or a hot air balloon festival (control condition). Then, all participants rated themselves on several moral traits in comparison to the people who attended the event. Participants in the moral outrage condition (vs. control) reported greater moral self-enhancement. Study 1b replicated this effect in a broader context: participants in the moral outrage condition wrote about any passionately held

social issue and its associated wrongdoers, whereas controls described a recent social event and an acquaintance who attended. Again, moral outrage increased moral self-enhancement. Together, the studies document the causal role of moral outrage on moral self-enhancement, and indicated that this role is underpinned by downward social comparison.

### Study 2: Exploring The Effect of Moral Self-Enhancement on Participative Efficacy

Building on the idea that moral self-enhancement serves as a psychological bridge between moral outrage and participative efficacy, I next tested a novel theoretical link between moral self-enhancement and participative efficacy. I hypothesised that feeling morally superior would foster beliefs that one's contribution to social action would be valuable to the group (participative efficacy). In Study 2, participants in the moral self-enhancement condition recalled a time in which they had behaved in a particularly moral manner (caring, respectful, kind), and participants in the moral self-diminishment condition recalled a time in which they had not behaved in a particularly moral manner. Then, all participants completed a participative efficacy scale. Those in the moral self-enhancement (vs. control) condition reported stronger participative efficacy beliefs. Importantly, the statistical difference between conditions was not due to the moral self-diminishment condition leading to a below-average level of participative efficacy beliefs. This study provided the first empirical evidence that experiencing moral self-enhancement can strengthen the belief that one's actions matter. It marks a key step forward in understanding how internal self-perceptions translate into collective engagement.

### Study 3: Establishing The Effect of Participative Efficacy on Social Action Intentions

Grounded in the idea that beliefs about one's capacity to contribute meaningfully can turn moral conviction into action, I next tested the link between the third and final variables in my model: participative efficacy and social action intentions. Only one published study has directly examined this relation (Van Zomeren et al., 2013). Moreover, most literature on social action intentions relies on narrow and often outdated behavioural measures, typically centred around traditional forms of activism such as protesting or signing petitions (Bäck et al., 2018; Li et al., 2019; Landmann & Naumann, 2024). To close this gap, I introduced in Study 3 a broader and more contemporary range of social actions, including both traditional civic behaviours (e.g., contacting a local MP) and modern forms of online activism (e.g., sharing content on social media) of which participants had to rate their likelihood of engaging in. This practice expanded operationalisation aimed to reflect the evolving landscape of social action and improve ecological validity.

Crucially, Study 3 was the first to experimentally manipulate participative efficacy. Using a scenario-based design, participants read 20 vignettes describing various social issues and a diverse and contemporary set of social actions in which they could engage. Each vignette ended with either a participative efficacy framing, emphasising the value of individual contributions to collective efforts, or a participative futility framing that conveyed the opposite. Participants subsequently rated how likely they would be to engage in the described social actions. Participants were more likely to engage in social action in response to vignettes framed with participative efficacy in comparison to vignettes framed with participative futility. The results provided the first causal evidence that participative efficacy can increase social action intentions, offering insight into how a sense of personal impact can activate engagement in today's diverse social landscape.

**Studies 4a and 4b: Testing the Full Serial Mediation Model**

Having established support for each link in the proposed pathway from moral outrage to social action, I turned to the key aim of the thesis: Does moral outrage set in motion a psychological chain reaction that leads to greater engagement in collective action? In Studies 4a and 4b, I tested the full serial mediation model, integrating moral self-enhancement and participative efficacy as sequential mediators. Participants first ranked nine pressing social issues in the UK. Those in the moral outrage condition reflected on the issue they found most important and the wrongdoers responsible, whereas those in the control condition wrote about the least important issue. Subsequently, all participants rated their own moral traits relative to the wrongdoers (as in Studies 1a and 1b), reported their participative efficacy specific to the issue (as in Study 2), and indicated their likelihood of engaging in a range of social actions, including both traditional, offline, and online forms of activism.

The results of both studies supported the hypothesised serial mediation. Moral outrage increased moral self-enhancement, which in turn was linked to more participative efficacy, ultimately predicting stronger social action intentions. In short, those who experienced moral outrage (vs. a control) saw themselves as more moral than the wrongdoers, felt more capable of making a difference, and were more willing to act. These findings demonstrate that moral outrage is not merely a reactive or symbolic emotion but can initiate a cascade of psychological processes that culminate in readiness to engage with social change. In addition, these findings offer preliminary validation for the extended framework proposed earlier - highlighting how internal shifts in self-image and self-beliefs convert emotional responses into sustained, meaningful action.

## Strengths and Implications

In this section, I outline strengths of this research and considers its theoretical contributions, robustness, and practical implications. In doing so, I situate the findings within the broader literature and highlight how they contribute to ongoing debates around self-enhancement, efficacy, and social action.

### Theoretical Contributions

**Connecting Previously Isolated Constructs.** As per the main aim of this thesis, I extended existing models of social action by proposing and empirically testing a new serial mediation model with a pathway from moral outrage to social action intentions, through moral self-enhancement and participative efficacy. Although prior work has established that moral outrage can lead to both moral self-enhancement (Green et al., 2019) and social action (Van Zomeren et al., 2008), Studies 4a and 4b provided evidence that these constructs are not simply parallel outcomes. Rather, the 'selfish' and 'selfless' consequences are sequentially connected: the self-serving psychological effects of moral outrage can actively facilitate social action engagement by augmenting beliefs in one's participative efficacy. This recasts moral self-enhancement as a psychologically meaningful and prosocial mechanism - a bridge between moral emotion and social action.

The literature has indicated that related constructs such as moral identity (i.e., the degree to which being moral is central to one's self-concept increase moral self-efficacy (i.e., the belief in one's ability to act according to moral standards; Rullo et al., 2021), and that people with high moral identity are more likely to engage in prosocial behaviours (Patrick et al., 2018). However, moral identity reflects a stable dispositional trait (Aquino & Reed, 2002), whereas moral self-enhancement is a situationally activated motivational process (Gregg & Sedikides, 2024; Sedikides & Gregg, 2008). The current findings suggest that, unlike moral identity, moral self-enhancement emerges in response to moral outrage and functions as a psychological mechanism that provides an emotion-driven route to social action.

**Moral Outrage as a Moral Emotion.** There remains considerable debate in the literature over whether moral outrage qualifies as a genuinely moral emotion. One strand of this debate centres on the issue of self-disinterestedness - whether moral outrage must arise solely from concern for others, rather than from personal harm or experience of injustice (which I address in more detail later in this chapter). Another strand of the debate questions whether moral outrage can be considered moral if it yields benefits to the self, such as a superior view of one's morality.

Some researchers suggest that people often experience outrage less out of genuine concern of transgression and more to feel morally superior or to signal their values to others - virtue signalling (Bouvier, 2020; Ditum, 2014). Virtue signalling purports to alert an audience to an injustice, but the virtue signaller is also concerned with themselves and is motivated by letting others know about their high moral ground (Levy, 2021). It is often accompanied by indicating that one belongs on the right side, attempting to outdo other signallers by harsher moral condemnation, and demonstrating out-of-proportion anger (Tosi & Warmke, 2016). Therefore, signallers can experience a sense of moral superiority. However, even if outrage is not always genuine, some authors (Giner-Sorolla et al., 2012, 2023) argue that emotions can be both self-interested and moral, provided they motivate actions that benefit others, or as long as its consequences extend beyond the self (Jiménez-Leal & Cortissoz-Mora, 2024). Indeed, moral outrage has been shown to promote, maintain, and protect moral norms, thereby contributing to societal well-being (Agostini & Van Zomeren, 2021), and without moral outrage, social action would struggle to ever gain support and momentum (Jasper, 1998).

My research uniquely contributes to this ongoing debate by identifying a novel link between moral self-enhancement and participative efficacy. Specifically, my findings suggest that the seemingly self-serving experience of a moral self-enhancement boost (i.e., moral superiority) may function as a motivational resource, enabling individuals to perceive themselves as capable agents of moral action. Therefore, the self-focused, seemingly selfish, outcome of moral outrage actually enables its prosocial impact, not just occurs alongside it. If individuals did not experience a sense of moral superiority in response to injustice and moral transgressors, then they might not perceive themselves as valuable contributors to social action, thereby undermining motivation to engage. Rather than disqualifying outrage from moral status, its self-serving dimension emerges here as a functional mechanism that mobilises prosocial behaviour.

**The Role of Downward Social Comparison.** The findings from Studies 1a, 1b, 4a, and 4b offer robust evidence that downward social comparison plays a role in the relation between moral outrage and moral self-enhancement. This expands scholarly understanding of moral self-enhancement from being a purely internal process to one that is inherently relational and comparative. Specifically, individuals' moral self-image is shaped not only by internal moral standards but also by contrasting against perceived transgressors. This insight reframes moral judgement: condemning others may not only defend norms but additionally bolster one's own virtuous self-image.

That downward social comparison mediates the relation between moral self-enhancement and participative efficacy offers a new lens on why media narratives often centre

on wrongdoers (Gamson, 2014). Traditionally, this focus has been seen as a tactic to provoke outrage and signal moral violation. However, the current findings raise the possibility that such framing may also serve an additional psychological function: it allows audiences, and perhaps even the media reporters themselves, to experience a sense of moral superiority. By spotlighting the moral failings of others, media coverage facilitates implicit downward comparisons, enabling consumers to feel comparatively virtuous. This might explain why stories often emphasise blame and moral transgression over empathy-inducing portrayals of victims (Gamson, 2014). While speculative, this possibility suggests a self-reinforcing loop: media elicits outrage to drive engagement, providing targets for moral comparison, which enhances the viewer's moral self-image, thereby increasing continued interest in similar content.

These insights have implications for the messaging strategies used in campaigns and activism. Campaigns that highlight moral transgressors (e.g., corrupt leaders, polluting corporations) may not only provoke outrage but also provoke moral self-enhancement and thus bolster efficacy beliefs. Conversely, campaigns that focus solely on victims may evoke empathy without necessarily motivating action. Framing that encourages self-enhancing comparisons (e.g., "you can do better than those responsible") may prove more effective in mobilising engagement.

**Expanding Social Action Measures.** A key contribution of the thesis is the development of a more comprehensive and contemporary approach to measuring social action intentions. In Study 3, participants rated their likelihood of engaging in a variety of actions embedded within issue-based vignettes. Although effective for contextual immersion, these measures have limited adaptability for future use. To address this weakness, Studies 4a and 4b introduced a new scale that combines items from established measures of traditional activism, such as protesting and petition-signing, with items reflecting newer forms of engagement, including online activism and digital advocacy. This scale provides a more ecologically valid and flexible tool for assessing how people engage with social causes in the current era. By broadening what counts as social action, it captures a wider range of behaviours, from quick digital support to sustained collective participation. It reflects the changing nature of civic engagement in a digital world and offers researchers a practical and inclusive way to study modern activism.

## Robustness

**Multiple Studies and Samples.** I employed a rigorous six-study design that allowed for both replication and conceptual triangulation. Studies 1a to 3 tested individual pathways of the proposed model, whereas Study 1b replicated Study 1a in a more generalised context. Studies 4a and 4b then tested and replicated the full serial mediation model. The consistency of effects

across different designs and samples bolsters the model's internal validity and reliability (Brewer & Crano, 2014). The research also drew on diverse samples from both the UK and the U.S., including students and members of the public, spanning a range of ages, ethnicities, and backgrounds. This diversity elevates external validity and supports generalisability within Western contexts. Still, the sample remains largely WEIRD (Western, Educated, Industrialised, Rich, Democratic), and future work should examine the model across more varied cultural and socio-economic contexts (Henrich et al., 2010). I revisit this issue in the Limitations section.

**Correlational Versus Causal Inference.** The full model tested in Studies 4a and 4b is based on regression and mediation analyses and thus reflects associations. My earlier studies (Studies 1a–3), though, employed experimental manipulations to isolate the effects of key variables. This experimental approach allowed for more confident causal interpretations of the specific pathways, such as the effect of moral outrage on moral self-enhancement, and the impact of self-enhancement on participative efficacy. The corresponding findings provide strong empirical scaffolding for the serial mediation model subsequently tested in a cross-sectional framework. Although serial mediation inherently involves correlational data, the convergence of findings across both experimental and correlational methods strengthens the internal validity and theoretical coherence of the proposed model (Spencer et al., 2005).

**Testing Reverse Relations.** Although this research focused on a pathway from moral outrage to social action intentions, it is important to consider possible reverse or reciprocal effects. Prior work suggests that engaging in social action may bolster one's moral self-image, and feeling efficacious within collective efforts may enhance moral self-worth (Aquino & Reed, 2002; Monin & Miller, 2001; Van Zomeren et al., 2010). A strong moral self-image might also intensify outrage to preserve consistency with one's moral self-concept (Skitka et al., 2008). However, alternative and reverse models tested here did not yield significant effects. The results support the proposed direction of influence and highlight the unique role of moral outrage in initiating a sequence that enhances moral self-perception, building participative efficacy, and motivating social action.

## Real-World Implications

**Activism and Policymaking.** Understanding the psychological mechanisms that channel moral outrage into social action offers valuable insights for campaigners, communicators, and policymakers aiming to increase civic engagement. The findings of this thesis underscore that the self-enhancement motive - typically regarded as solipsistic and morally ambiguous - is not inherently at odds with prosocial or collective goals. Rather, moral self-enhancement may serve a functional purpose by increasing individuals' perceived

participative efficacy, a key determinant of collective action (Van Zomeren et al., 2008). This possibility challenges the dichotomy between "selfish" and "selfless" motives in activism, and instead suggests a sequential alignment whereby individuals' need to bolster their moral worth may act as a motivational bridge toward action.

Activism strategies that incorporate opportunities for moral bolstering - such as framing participation as being "on the right side of history," "doing the right thing," or aligning with morally superior values - may strengthen individuals' sense of agency. In contexts where individuals feel overwhelmed, disempowered, or sceptical about their impact, these strategies may be relevant. Messaging that highlights injustice while simultaneously positioning individuals as capable, morally competent, and valuable contributors can promote mobilisation and engagement (Bandura, 2000; Thomas et al., 2009a).

Furthermore, the findings suggest that communication strategies which focus on clear perpetrators of injustice, rather than solely highlighting victim narratives, enhance engagement by triggering the downward social comparisons that facilitate moral self-enhancement. Although media emphasis on moral transgressors is often criticised for sensationalism or a negativity bias (Soroka, 2006), this framing may serve a motivational function by reinforcing the audience's moral self-concept, making them more likely to act. This possibility offers a novel explanation for why media coverage frequently foregrounds wrongdoing: it may not only evoke outrage but also bolster moral self-image of both viewers and even journalists themselves.

In summary, this research contributes to a more nuanced understanding of the psychological levers underlying collective mobilisation. By identifying moral self-enhancement as a key motivational process that augments perceived efficacy, the findings support more psychologically-informed approaches to activism, capable of fostering meaningful and sustained social engagement - even in the face of systemic challenges or collective disillusionment.

**Response to Existential Threats.** This thesis contributes to the growing interdisciplinary effort to understand how people respond psychologically to existential threats. Such threats endanger not only individual survival but also collective identity, societal functioning, and the long-term continuity of humanity. Building on the Multidimensional Existential Threat model (Hirschberger et al., 2016), I propose that moral outrage can serve as a psychologically meaningful entry point into existential threat appraisal. This emotional response, when channeled through moral self-enhancement and participative efficacy, enables individuals to see themselves as both morally justified and capable of contributing to collective solutions. My model aligns with the Social Identity Model of Pro-Environmental Action (Fritsche et al., 2018), which emphasises how group identification and collective efficacy shape threat

appraisals and motivate coordinated behaviour. Similarly, Stollberg and Jonas (2021) show that existential threats do not inevitably lead to paralysis. When people experience collective emotions like anger and believe that their group can make a difference, these threats can motivate constructive social action. These psychological insights are critical in the current moment, as humanity faces global and irreversible threats - including climate change and the rise of artificial intelligence - that exceed the capacity of individuals to manage alone.

## Limitations and Future Directions

In this section, I outline the key limitations of the present research and identify promising avenues for future investigation. In doing so, I reflect on the methodological limitations, role of individual differences, and other potential covariates, while proposing ways in which subsequent research can build on these findings.

### Methodology

**Moral Outrage vs. Other Anger.** One methodological concern is whether the current experimental manipulations successfully elicited moral outrage as opposed to other forms of anger, such as moral anger directed at personal experience or empathic anger on behalf of third-party victims, given that I did not include manipulation checks.

***Moral Anger.*** Firstly, moral anger is defined as the anger that arises from personal experiences of harm, such as betrayal or interpersonal injustice (Jiménez-Leal & Cortissoz-Mora, 2024; Lomas, 2019). Yet moral outrage describes the anger that arises from violations of collective moral norms and affects broader groups of people or communities beyond the self (e.g., social injustice; Jiménez-Leal & Cortissoz-Mora, 2024). Therefore, a theoretical criterion for distinguishing moral outrage from moral anger is self-disinterestedness; that is, moral outrage is thought to be elicited by perceived injustice towards and harm of others, not the self.

However, the requirement of complete self-disinterestedness in moral outrage remains contested. Hechler and Kessler (2018), based on a series of studies, argue that moral outrage is primarily elicited by the perceived immorality of an act and its potential for harm, rather than by the actual suffering of victims, which instead evokes empathic anger. This argument suggests that moral outrage can arise independently of direct consequences, and thus, whether one is personally affected or simply a member of the broader group may be irrelevant to its elicitation. Hence, in this thesis I adopt the view that personal harm does not necessarily exclude an emotional response from being classified as moral outrage. Instead, what defines moral outrage is the scope and target of the anger - specifically, whether the emotion is primarily directed at systemic or societal-level injustices affecting a broader group or community. For

example, I argue that a UK citizen who is directly affected by government underfunding of the National Health Service still experiences moral outrage rather than moral anger. The presence of personal relevance in such cases does not undermine the outward, group-oriented nature of the emotional response: anger felt on behalf of a wider community, including strangers.

In line with this position, I did not assess participants' personal involvement or the degree of disinterestedness in the manipulations of Studies 1a, 1b, 3, 4a, and 4b. Admittedly, it is unlikely that participants were entirely self-disinterested in these scenarios. For instance, in Study 1a ("Storming of the Capitol"), participants identified as liberal voters who supported Joe Biden, and in Study 1b, participants selected a social issue they felt passionate about, both of which suggest potential personal relevance. Nonetheless, I maintain that the design of my studies was consistent with the definition of moral outrage. The moral transgressions / social issues and injustices presented were not directed at participants as individuals (e.g., "imagine you have been cheated on by your spouse"), but rather at broader societal or moral norms (e.g., "imagine a company has proposed building a factory that could pollute the area"). Given that the scenarios involved violations affecting larger communities rather than individuals alone, any anger elicited is best understood as moral outrage. Accordingly, my decision not to measure personal involvement or disinterestedness reflects a theoretical stance: that moral outrage can coexist with personal impact. Regardless, I acknowledge this as a methodological limitation and suggest future research directions later in this chapter.

***Empathic Anger.*** Secondly, empathic anger can be defined as the anger people feel toward a transgressor on behalf of a suffering victim (Hoffman, 1989). It is possible that the manipulations used in studies 1a, 1b, 3, 4a, and 4b, elicited empathic anger, particularly given that they involved descriptions of social injustice and implied the existence of victims. However, I would argue that, firstly, the materials in my studies were specifically designed to focus attention on the broader event of moral transgression or the actions of the transgressors, rather than on the suffering or emotional experience of the victims. This distinction is important, as in contrast to empathic anger, moral anger or outrage is more likely to arise from a perceived moral violation and the behaviour of the wrongdoer (Batson et al., 2007, 2009). Although a degree of empathic concern may be difficult to rule out entirely (Hechler & Kessler, 2018), the intention was to emphasise the moral transgression and transgressor as the primary triggers of participants' emotional responses.

Furthermore, even if empathic anger was elicited, this emotion is unlikely to be the primary emotional driver of the effects observed in my experiments. Empathy, although considered a moral emotion, is cognitively effortful and emotionally taxing, and people often avoid it due to these costs. Moreover, empathy does not always instigate the motivational push

toward action; rather, it can be experienced as aversive and paralysing (Cameron et al., 2019; Hechler & Kessler, 2018). In contrast, moral anger and outrage has been shown to activate the approach system, mobilising individuals toward action (Harmon-Jones & Harmon-Jones, 2010; Harmon-Jones et al., 2009). My research indicates that the emotion elicited by the manipulations did not lead to distress or withdrawal, but to morally self-enhancing appraisals and increased participative efficacy as well as social action intentions. My findings are consistent with the broader literature on anger as a positive activating force that enhances readiness to act. Thus, although empathic anger cannot be entirely ruled out, the outcomes of the response to the manipulations align more closely with the characteristics of moral outrage.

***Future Research.*** Follow-up work could benefit from aiming to disentangle moral outrage from related emotional constructs by developing and validating more precise measures that can distinguish among moral anger, empathic anger, and moral outrage, and could test for the role of self-disinterestedness in moral outrage specifically. Standard emotion scales, such as the PANAS-X (Watson & Clark, 1999), are insufficient for this purpose because although the emotion label "anger" may be endorsed in all cases, it is the source and target of the emotion that determine whether it reflects a moral reaction. Instead, a more promising approach would be to explicitly measure the degree of personal involvement and disinterestedness in participants' responses to moral transgressions. This could include items assessing whether individuals felt personally harmed or whether their emotional reaction was primarily on behalf of others.

I chose not to include such emotion manipulation checks in the present studies because doing so might have made the purpose of the research too transparent: asking participants about their emotion, especially anger, might change their reaction. Specifically, asking participants directly about moral emotions and then immediately assessing their moral self-evaluations risks signalling the study's hypothesis, which could introduce demand characteristics and compromise the validity of the results (Orne, 1962). I prioritised preserving the subtlety of the experimental design, though this came at the cost of confirming the specificity of the emotional responses.

Moreover, self-reporting anger can alter the emotional experience itself. For example, participants asked to report their emotions during an anger-inducing task showed elevated cardiovascular stress responses compared to participants completing neutral questionnaires (Kassam & Mendes, 2013). Notably, this effect was observed only in the anger condition, suggesting that self-reporting may intensify anger through mechanisms such as rumination. In the context of moral psychology, such rumination could artificially amplify moral self-focus and moral self-enhancement, confounding the interpretation of self-related outcomes. At the same

time, because rumination is often associated with negative self-attention and psychological distress, it may also undermine rather than inflate positive self-beliefs. These complexities highlight the methodological trade-offs between emotional specificity and experimental subtlety, which future research should seek to resolve through careful experimental design.

One alternative would be to manipulate personal relevance directly within moral transgression scenarios. For example, researchers could pre-screen participants for their levels of identification with specific social issues, and then randomly assign them to scenarios that are either personally relevant or self-disinterested. This practice would allow for controlled comparisons of disinterested versus self-relevant emotional responses. Additionally, future studies could incorporate distinct measures of empathic concern, moral outrage, and personal moral anger to examine how these emotions co-occur or diverge, and which are most predictive of moral motivation such as protest, advocacy, or helping behaviour.

**Conceptualisation of Moral Self-Enhancement.** Another challenge of my research is how to define and measure moral self-enhancement. Moral self-enhancement can be understood as either a motive (the desire to affirm one's moral worth) or a perception (the resulting appraisal that one is morally superior; Sedikides & Gregg, 2008; Sedikides et al., 2025). These two conceptions are not mutually exclusive, but they have different implications for measurement and interpretation. Distinguishing between them is critical, particularly because manipulations that target moral self-perception (e.g., recalling virtue or vice, like in Study 2) may inadvertently influence the motivation to self-enhance, and vice versa. This raises the question: are the downstream effects observed in my studies (e.g., increased participative efficacy and social action) due to changes in how moral people feel, or in how much they want to feel moral?

I endorsed the perception-based interpretation: moral self-enhancement is conceptualised and operationalised as an outcome, namely, an increase in perceived moral superiority following moral outrage and downward social comparison. This interpretation aligns with the structure of my theoretical model, in which elicited moral outrage, in turn, leads to enhanced moral self-beliefs via downward social comparison. However, I acknowledge that this conceptual definition leaves my approach open to criticism. For example, in Study 2, where participants recalled past moral versus immoral behaviour, any observed changes in participative efficacy beliefs could plausibly be attributed to either self-perception ("I feel more moral") or motivation ("I now want to affirm my morality"). This ambiguity cannot be resolved without directly and separately measuring both constructs.

Despite this limitation, findings from my full-model studies (Studies 4a and 4b) offer partial support for the perception-based view. In these studies, the sequencing of effects was

consistent with the proposed model: moral outrage preceded increases in comparative moral self-beliefs, suggesting that individuals come to see themselves more morally after reacting to a moral transgression. Moreover, if moral self-enhancement was primarily driven by a motive to affirm one's moral self-perception, I would expect participants in the control conditions (who were also asked to reflect on a social issue, albeit least important to them) to engage in downward comparison with those responsible for the issue. Yet they did not show elevated self-evaluations comparable to participants in the experimental conditions. This pattern suggests that the observed moral self-enhancement effects were not simply a byproduct of a general desire to self-enhance, but were elicited by exposure to moral transgressors and therefore can be conceived as an outcome.

***Future Research.*** Future investigations could clarify this distinction by experimentally manipulating motivational states (such as inducing a desire for moral self-enhancement) and examining whether this influences engagement in moral outrage. Longitudinal or temporally separated designs could also help determine whether moral outrage serves as a cause or consequence of moral self-enhancement. Additionally, researchers could attempt to measure motivates and perceptions (e.g., "To what extent do you feel a need to see yourself as a good moral person right now?") and the perception of having done so (e.g., "How moral do you feel right now?"). Measuring these separately would clarify whether downstream effects, such as increased efficacy beliefs or social action, are driven by changes in how moral people feel or by their underlying motivation to affirm their moral self-beliefs.

**Operationalisation of Moral Self-Enhancement.** The moral self-enhancement measure I designed and used across multiple studies has a few methodological limitations. To begin, I am unable to concretely confirm that downward social comparison plays a role. In Studies 1a, 1b, 4a and 4b, moral self-enhancement was captured by a differential (Self – Other) score: "I am more [moral trait] than [target]". In the context of the social comparison literature, I propose that it is plausible that exposure to moral violations, transgressors, and the experience of moral outrage, leads to both a derogation of the transgressors and an increase in moral self-beliefs, which exaggerates the differential. Given that moral transgressors are typically viewed as less moral than norm-conforming individuals, part of the observed effect likely stems from negative evaluations of others (downward social comparison).

However, it is important to address the fact that my effects could have come from an increase in self-evaluation, a decrease in evaluation of others, or both. A sceptic could, therefore, attribute the observed differentials to altered other-judgements alone, and argue that no genuine moral self-enhancement has occurred. This issue points to a deeper conceptual tension: is downward comparison a mechanism that causes moral self-enhancement or merely

a manifestation of it? The alternative interpretation is also viable: individuals motivated to affirm their moral self-image may engage in downward comparison as a strategy to achieve that goal. As such, the current operationalisation risks treating downward comparison as evidence of moral self-enhancement rather than testing whether it causes changes in self-perception.

***Future Research.*** Future work can address such scepticism by collecting separate self- and other-ratings, allowing researchers to determine whether the differential effect reflects an increase in self-evaluation, a decrease in evaluation of others, or both. Examining the correlation between differential scores and each component separately (e.g., self-ratings and other-ratings) would also allow researchers to assess which element contributes more strongly to the effect.

Another approach would be to temporally separate the induction of downward comparison from the measurement of self-evaluation. For instance, at one stage participants could be exposed to moral transgressors or moral non-transgressors, and only later be asked to rate themselves, others generally, or the transgressor/non-transgressor. This strategy would allow researchers to examine whether initial exposure shifts subsequent moral self-beliefs independently. Another method could involve manipulating participants' motivation to self-enhance first – such as by asking them to recall times they behaved immorally or morally – and then observing their preference for engaging with content about moral transgressors. If participants who feel morally diminished subsequently choose to read about immoral others, this finding would provide evidence for motivated, defensive moral self-enhancement. Collectively, such approaches would move beyond correlational evidence and provide stronger tests of whether downward moral comparison is an outcome of self-enhancement motivation or its cause.

***Moral Traits.*** There is a lack of consistency in the literature regarding how moral character - and by extension, moral self-enhancement - is measured. I selected trait items that had been used in prior studies or were conceptually linked to moral self-beliefs in the literature. However, I was unable to adopt any existing full-scale moral traits measure, as many available scales included items that were not always contextually appropriate for the specific manipulations or populations involved. Although I aimed to maintain consistency in the selection of items across experiments and obtained high Cronbach's alphas indicating good internal reliability, this highlights a broader issue in the field.

Such as lack of standardisation limits the ability to compare findings across studies, replicate effects, and establish construct validity. It also leaves open the possibility that what is being measured under the umbrella of ‘moral self-enhancement’ varies substantially from one study to another, depending on the particular traits selected. Future research would benefit

from the development of a validated, standardised measure of moral traits. Such a scale could include a core set of universally agreed-upon moral traits (e.g., honesty, fairness, compassion) that are not overly context-dependent, allowing for consistent application across different studies. Ideally, it would be validated across diverse populations and situations and supplemented with optional modules for context-specific traits when needed.

***Future Research.*** In addition to improving the measurement of moral traits, follow-up studies should also include non-moral trait dimensions (such as competence, intelligence, or agentic traits) as controls. Doing so allows for a more rigorous test of the specificity of moral self-enhancement. For instance, if participants report elevated self-ratings on moral traits but not on unrelated traits following a moral outrage manipulation, this will strengthen the claim that the observed effect is morally specific rather than reflecting general self-enhancement. Conversely, if effects spill over into non-moral domains, this might suggest that what appears to be moral self-enhancement is better understood as a broader evaluative shift in self-perception. Including such controls would provide important boundary conditions and clarify the psychological scope of the effect.

**Self-Report Bias.** A key limitation of the thesis is its reliance on self-report measures, given that all six studies were conducted online. Self-report surveys are a widely used and efficient data collection method, but they are susceptible to social desirability bias (Hart et al., 2015), recall bias (Althubaiti, 2016), and self-perception bias (Grijalva & Zhang, 2016). Despite assurances of anonymity and confidentiality to participants, the possibility remains that individuals tailor their responses to align with what they perceive to be socially acceptable or what they believe the researchers expect. Consequently, it is often difficult to ascertain whether the responses truly reflect participants' attitudes and beliefs or whether they are influenced by a desire to present themselves in a favourable light, especially in a moral context (Aquino & Reed, 2002).

Yet, Corneille and Gawronski (2024) challenge the view that self-reports are inherently flawed. They argued that many criticisms of self-report methods, such as vulnerability to social desirability and experimental demand, apply equally to implicit measures. They also suggest that self-reports outperform implicit measures in terms of reliability, stability, and predictive validity. Although it remains critical to interpret self-report data carefully, these findings suggest that self-reports, when thoughtfully designed and deployed, are valid and preferable tools for measuring internal states, including those related to the moral self and social action.

**Moral Hypocrisy and Public Self-Presentation.** All studies in this thesis were conducted in private, online settings, helping to reduce demand characteristics and social pressure. This practice, however, may have weakened the effects of public self-presentation motives. The

moral hypocrisy literature suggests that individuals behave more morally in public to maintain a positive reputation (Batson et al., 1999). The concept of moral hypocrisy addresses the discrepancy between how people behave in public versus private settings due to different motivations behind moral behaviour. People often act morally in public not only to benefit others but also to maintain a positive self-image and manage impressions. In public, individuals often adhere to moral norms to gain social approval, avoid sanctions, and augment their reputation; by contrast, in private contexts, moral behaviour may be more relaxed or less rigorously manifested.

In this thesis, even though participants were assured of anonymity, they may have still perceived a level of monitoring, potentially altering their responses. Nevertheless, future studies should experimentally manipulate public versus private response conditions to assess whether moral behaviour or intentions differ across contexts, and whether moral self-enhancement in private still fosters meaningful engagement or reflects a subtler form of moral hypocrisy.

**Longitudinal Studies.** Another limitation concerns the cross-sectional nature of the data. The studies capture participants' emotional and motivational responses in the immediate aftermath of moral outrage, yet offer limited insight into the durability of these effects over time. Emotions such as anger are often intense but fleeting (Kuppens et al., 2007), and it is unclear whether the ensuing moral self-enhancement and participative efficacy are sustained long enough to promote lasting engagement. Moreover, moral motivation may require reinforcement through continued exposure or social feedback to translate into sustained action. Although the experimental designs in Studies 1a-3 establish causal pathways, longitudinal studies are essential for examining the temporal dynamics of these psychological processes. Future studies could test whether moral outrage can produce lasting shifts in self-image and efficacy beliefs that support ongoing prosocial engagement versus whether these effects diminish over time in the absence of moral reinforcement, social validation, or concrete opportunities to act. The answer to this question is essential for determining whether moral outrage functions as a brief emotional impulse or a sustained motivational force for social change.

**Intentions Versus Behaviour.** Another limitation concerns the gap between intentions and behaviour (Sheeran & Webb, 2016). Studies 3, 4a, and 4b measured intentions to engage in social action. However, intentions alone do not reliably predict real-world behaviour, particularly in morally or socially charged domains. Numerous factors - such as social norms, perceived barriers, and resource constraints - can inhibit the translation of intention into action (Ajzen, 1991; Gollwitzer & Sheeran, 2006). As such, although the findings offer insight into the

psychological mechanisms underlying social action tendencies, caution is warranted when extrapolating these results to predict real-world behaviour.

In Studies 4a and 4b, I provided participants the opportunity to request further information about how to support the cause. I did so exploratorily and to strengthen ecological validity. This measure offers preliminary behavioural evidence, but it remains a limited proxy for genuine action, given its binary format and low personal cost. Furthermore, it could be argued that this item measure further intention, rather than behaviour. Future research should move beyond self-reported intentions by incorporating more ecologically valid and consequential behavioural outcomes, such as signing up for campaigns, making donations, participating in protests, or engaging in sustained digital activism. Tracking these behaviours over time, ideally through longitudinal and field-based methods, would provide a stronger test of whether the psychological mechanisms identified in the current theoretical model reliably predict meaningful social engagement in real-world contexts.

**Laboratory Context Versus Real-World Behaviour.** To maintain consistency and theoretical clarity, I adapted for the materials stimuli and manipulations from established studies in the moral outrage literature. This practice aided internal validity but may have limited ecological validity. Real-world moral outrage is often triggered by media exposure, interpersonal discourse, or experience - contexts not fully captured in a controlled laboratory or online survey environment. It remains uncertain whether participants would respond in the same way when encountering real-life injustices as they did with constructed vignettes. Follow-up investigations could address this issue by incorporating real-world stimuli, such as actual news footage or media coverage of contemporary moral issues. Such stimuli may evoke stronger and more authentic emotional reactions, potentially strengthening the elicitation of moral self-enhancement and the proposed pathway to participative efficacy.

However, using real-world materials presents several practical and methodological challenges. For instance, participants may vary in prior exposure, political beliefs, or emotional sensitivity, leading to heterogeneous responses that are more difficult to control. Despite these complexities, moving toward more ecologically grounded designs is essential for testing whether the psychological mechanisms identified in controlled settings generalise to the messy, emotionally charged contexts in which moral outrage typically arises. Greater ecological realism would help clarify not only whether the model holds beyond the laboratory, but also how it unfolds amid the diverse and dynamic conditions of real-world moral conflict.

**Covariates and Individual Differences.**

One limitation of the present research is that it did not account for individual differences that may shape responses to moral transgressions and influence the degree of moral self-enhancement. Traits such as communal narcissism, justice sensitivity, moral identity, and moral foundations have been shown to predict the intensity and expression of moral emotions, including outrage, and may moderate the extent to which people engage in downward social comparison or the extent to which they have a behavioural motivation. Including such individual differences as covariates or moderators would not only help to control for baseline variability across participants, but would also clarify whether the observed effects are robust across individual predispositions or primarily driven by certain psychological profiles. As Underwood (1975) suggested, testing whether individual traits moderate experimental effects offer a valuable way to examine the processes underlying them. Below, I outline several traits that future research could examine as covariates or moderators.

***Communal Narcissism.*** One potential covariate/moderator of my model is narcissism, particularly in its communal form. Communal narcissism involves the belief that one is exceptionally moral, helpful, and prosocial, often in a self-aggrandising or performative way (Gebauer et al., 2012). Individuals high in narcissism may already maintain inflated moral self-views, making them less sensitive to the boosting effects of downward moral comparison. Alternatively, they may be especially likely to seize on opportunities to affirm their moral superiority in response to others' transgressions, thereby amplifying the self-enhancement pathway. Moreover, narcissistic individuals express moral outrage in ways that are more self-serving or status-seeking than justice-driven (Czarna et al., 2021), suggesting that the moral outrage observed in this model may sometimes reflect reputational motives rather than genuine prosocial concern. This could weaken or alter the downstream link between outrage and participative efficacy. Future research would benefit from including measures of communal narcissism to examine whether it moderates key processes in the model, such as the relationship between outrage and self-enhancement or between self-enhancement and efficacy beliefs. Doing so would help clarify whether the effects observed are driven by moral conviction or by a desire to bolster the self-image.

***Justice Sensitivity.*** One promising avenue for future research involves testing justice sensitivity as a moderator of the effects observed in this model. Justice sensitivity refers to the tendency to notice and be emotionally affected by injustice (Schmitt et al., 2010). Individuals low in this trait downplay injustice, experience weaker emotional responses, and are less motivated to act (Gollwitzer et al., 2009). In contrast, those high in justice sensitivity are especially attuned to others' suffering and may react with heightened moral outrage when confronted with injustice. This amplified response may, in turn, increase the likelihood of moral self-enhancement, as individuals bolster their moral self-image in contrast to perceived

wrongdoers. Critically, justice sensitivity moderates whether moral outrage reflects a self-focused morality bolster or a genuine drive to restore justice (Baumert & Schmitt, 2016; Rothschild & Keefer, 2018). This finding has direct implications for the current model: individuals lower in justice sensitivity may be less likely to engage in downward comparison or moral self-enhancement, thereby weakening the proposed pathway.

***Moral Identity*.** Similarly, moral identity has been linked to prosocial action (Lefebvre & Krettenauer, 2019; Mullen & Monin, 2016). Individuals high in moral identity are more likely to translate moral self-enhancement into action, particularly when the moral self is made salient. Thus, follow-up work could assess whether moral identity strengthens the link between self-enhancement and participative efficacy. If this link is genuine, it should be more pronounced in those for whom moral identity is strong.

***Moral Foundations*.** Another promising direction is to examine whether moral foundations moderate the pathway from moral outrage to social action. According to Moral Foundations Theory (Graham et al., 2013), people vary in the importance they place on different moral domains, such as care, fairness, and authority. These differences may influence not only what provokes moral outrage, but also how that outrage is processed and translated into self-enhancement, efficacy, and action. As an example, a person who strongly endorses care and fairness foundations may experience moral outrage in response to harm and injustice, leading to a sense of moral self-enhancement and a belief in their capacity to contribute to rectifying the situation. In contrast, people who prioritise loyalty or authority may interpret the same issue through a different lens. As a result, they may suppress outrage or directing it toward those who challenge group norms or institutions. Hence, moral foundations could moderate the link between outrage and moral self-enhancement by influencing how people appraise moral transgressions and whether they see themselves as morally superior to the wrongdoer. Moreover, foundational differences could shape participative efficacy. For instance, those high in fairness sensitivity may be more likely to believe their contribution can right a wrong, whereas those who prioritise purity or authority might disengage if action is seen as disruptive or improper.

## Boundary Conditions and Contextual Considerations

**Group Efficacy.** Although participative efficacy reflects one's belief that their personal contribution matters, this belief is contingent on perceptions of group efficacy - the belief that the group as a whole can effect change. Van Zomeren et al. (2008, p. 515) noted that "participative efficacy… implicitly presumes that the group is capable of achieving its goal." Therefore, if group efficacy is perceived as low, participative efficacy may be undermined,

disrupting the proposed pathway and potentially explaining why moral outrage does not always result in social action.

This would help to account for contexts like climate change cynicism, where people may feel morally motivated but still disengage because they believe social action is futile. Although exposure to global crises can provoke strong emotional reactions such as anger or moral outrage, these responses do not always translate into a sense of personal or collective agency. In some cases, individuals may feel morally superior or express blame toward corporations or governments, but simultaneously adopt a defeatist outlook, believing that the general public lacks the power to drive meaningful change. Such a disconnect can undermine social action intentions, as people may feel that efforts like individual lifestyle changes or community advocacy are ultimately futile in the face of entrenched systemic forces.

**Cultural differences.** Cultural context also plays a role in shaping responses to moral outrage and subsequent social action. Various factors, including individualism versus collectivism and political systems, can influence how likely individuals are to take part in social movements or collective action (Hofstede, 2001). In individualistic cultures (e.g., the UK, Northern Europe, Canada, the U.S.), values of personal freedom and independence may encourage individuals to act in line with their personal beliefs. Social action in these cultures often focuses on individual rights, justice, and personal freedoms (Kagitcibasi, 1997). In contrast, collectivist cultures (e.g., many Asian, African, and Latin American societies) may emphasise group harmony and conformity, making confrontation or protest less common (Triandis, 1995; Chiu et al., 2010).

Furthermore, in democratic societies (e.g., Western Europe, North America), citizens generally have freedom to engage in social action, protest, and activism (Tilly, 2004). The institutional framework in these countries often supports and protects individuals' rights to protest and engage in civil disobedience, potentially aiding higher levels of social action. In contrast, authoritarian or totalitarian regimes (e.g., certain Middle Eastern, African, and Asian countries) may suppress social action due to restrictive laws, fear of repression, and limited avenues for free expression (Davenport, 2007). In these cultures, people may be less likely to engage in social action, although resistance movements can still arise, often underground or in a more covert manner. This issue is important to consider in discussions of social justice, as systemic injustices are often perpetuated by powerful institutions. Questioning authority or fighting against social norms may be seen as disrespectful or inappropriate (Hofstede, 2001).

Therefore, the hypothesised model might not replicate in collectivist cultures or countries with authoritarian regimes. It would not matter how morally outraged people are, or how bolstered their moral self-image is, or even how valuable they think their contributions

would be to social action, because the risks involved in engaging in social action would be too high. Future studies should explore how political context, and cultural values moderate the effects of moral outrage on behaviour.

**When Moral Outrage Is Misplaced.** Finally, a critical assumption I have made is that participants view the social issues presented (or selected depending on the study) as clear moral injustices, with identifiable wrongdoers. However, moral judgments are often subjective and influenced by political orientation and individual values. For instance, what one participant sees as environmental negligence, another may view as necessary economic development. This variability may have influenced participants' levels of outrage or their willingness to morally elevate themselves in contrast to the perceived perpetrators. Although the design aimed to harness participants' natural emotional responses by allowing the flexibility to choose their social injustice to write about (Study 1b) or to choose their most important from a list of 9 social issues (Studies 4a and 4b), it also introduces variability in the extent to which participants experienced moral outrage or viewed wrongdoers as blameworthy. Follow-up investigations should examine the implications of misplaced moral outrage, including scenarios where individuals experience outrage based on inaccurate or ideologically biased information. Additionally, examining how consensus about moral wrongdoing (or lack thereof) influences the psychological pathways tested in this model would offer a richer understanding of the nuances in moral action.

## Conclusion

The research reported in this thesis offers a step forward in understanding how people transform moral outrage into meaningful social action. Across six studies, the evidence indicated that moral self-enhancement and participative efficacy work together to bridge the gap between emotional reaction and behavioural intentions. Rather than dismissing outrage as impulsive or performative, this work demonstrates its power to reshape self-image and ignite a sense of agency. By clarifying not only whether people act, but how and why they do, the findings push the field beyond fragmented insights toward a unified, testable framework. They also provide a concrete roadmap for those seeking to channel moral emotions into lasting social impact.

# Appendix A. Study 1a: The Storming of the United States Capitol Building

**Instructions**

PLEASE READ ALL INSTRUCTIONS CAREFULLY

It is important that you complete the study without taking any breaks and that you complete the study while you are free from distractions (e.g., other people, videos, music).

In this study, we are interested in understanding the relationship between various attitudes and psychological states. You will first read a brief description about an event and then you will write about your thoughts and feelings regarding the people who attended it. Next, you will complete some psychological questionnaires, some of which will ask you questions about the event and the people who attended.

Additionally, it is important to tell you that there are no right or wrong answers, or good or bad answers, to any questions that you'll be asked. What this means for you is that throughout the study you can feel free to respond to all of the questions as honestly and accurately as you can.

**Conditions**

*Experimental:*

On January 6, 2021, a mob of Donald Trump supporters attacked the United States Capitol. They sought to overturn the 2020 presidential election results by disrupting the joint congressional session to count electoral votes that would formalize President-elect Joe Biden's victory. Rioters assaulted law enforcement officers and vandalized the building for several hours. Five people died; many people were injured, including 138 police officers.

In the space below, we want you to write for 5 minutes about your thoughts and feelings about this event. Please also write about your thoughts and feelings about the people who attacked the Capitol building. In order for us to get an accurate picture of your attitudes toward the attack and the people who committed it, please immerse yourself completely in your thoughts and feelings about these people as you are writing. Write freely and don't worry about grammar/spelling.

*Control:*

On September 1, 2019, a large crowd of people convened in Memorial Park in Colorado Springs for the Colorado Springs Labor Day Lift Off, a hot air balloon festival. In addition to admiring the hot air balloons as they filled the sky, people played lawn games and had picnics with friends and family. The attendees also enjoyed skydiving demonstrations, carnival rides, and fireworks.

Now, in the space below, we want you to write for five minutes about your thoughts and feelings about this event. Please also write about your thoughts and feelings of the people who attended. In order for us to get an accurate picture of your attitudes toward this event and the people involved, please immerse yourself completely in your thoughts and feelings about these people as you are writing. Write freely and don't worry about grammar/spelling.

Now that you have written about this event, you will complete a number of questionnaires, some of which will ask you about your attitudes towards aspects of this event and the people who attended.

**Moral Self-Enhancement**

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|---|---|---|---|---|---|---|---|---|
| Extremely Disagree | Strongly Disagree | Moderately Disagree | Slightly Disagree | Neither Agree nor Disagree | Slightly Agree | Moderately Agree | Strongly Agree | Extremely Agree |

*Experimental:*

A few moments ago, you wrote about the Trump supporters who stormed the Capitol on January 6, 2021. For this task, you will be comparing yourself to the people who stormed the Capitol. For each statement, indicate the extent to which you agree.

1. I am a more responsible citizen than the people who stormed the Capitol.
2. I am more likeable than the people who stormed the Capitol.
3. I am more considerate than the people who stormed the Capitol.
4. I am more interpersonally warm than the people who stormed the Capitol.
5. I am more trustworthy than the people who stormed the Capitol.

6. I am more respectful than the people who stormed the Capitol.
7. I am more moral than the people who stormed the Capitol.

*Control:*

A few moments ago, you wrote about those who attended the Colorado Springs Labor Day Lift-Off event on September 1, 2019. For this task, you will be comparing yourself to the people who attended the balloon festival. For each statement, indicate the extent to which you agree.

1. I am a more responsible citizen than the people who attended the balloon festival.
2. I am more likeable than the people who attended the balloon festival.
3. I am more considerate than the people who attended the balloon festival.
4. I am more interpersonally warm than the people who attended the balloon festival.
5. I am more trustworthy than the people who attended the balloon festival.
6. I am more respectful than the people who attended the balloon festival.
7. I am more moral than the people who attended the balloon festival.

**Demographics**

1. How would you describe your ethnic background? (Black / White / Asian/Pacific Islander / Latino/Latina / Hispanic / Native American / Other)
2. Please indicate your sex: (Male / Female / Other)
3. Please indicate your age: _____ years
4. What is the primary language you speak? _____

**Probing and mood repair**

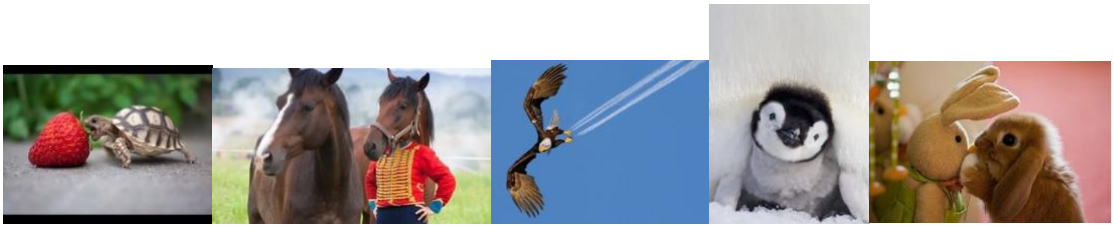
1. Have you attended the Colorado Springs Labor Day Lift-Off balloon festival in the past? (Yes/No)
2. Do you live, or have you ever lived, in Colorado Springs? (Yes/No)

3. Did you experience any distractions while completing this study? A distraction could involve not being alone, listening to music, or having the television on while you were completing the study. (Yes/No)

*(If answered Yes)*

4. Please state the distraction you experienced as specifically as you can. _____
5. In your own words, what was the purpose of this study? _____
6. Please list two positive qualities about yourself. _____
7. Please rate how much you like the following pictures using the scale provided.

| 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|
| Not Very Much | | | | Very Much |



**Debriefing**

1. Please enter your Prolific ID in the space below. _____

[DEBRIEFING]

***END OF EXPERIMENT***

# Appendix B. Study 1b: Passionate About a Chosen Social Issue

**Instructions**

PLEASE READ ALL INSTRUCTIONS CAREFULLY

It is important that you complete the study without taking any breaks and that you complete the study while you are free from distractions (e.g., other people, videos, music).

In this study, we are interested in understanding the relationship among various thoughts, feelings, and psychological states. You will first complete a writing task. Next, you will complete some psychological questionnaires, some of which will ask you questions about things that you wrote about in the writing task.

Additionally, it is important to tell you that there are no right or wrong answers, or good or bad answers, to any questions that you'll be asked. What this means for you is that throughout the study you can feel free to respond to all of the questions as honestly and accurately as you can.

**Conditions**

On the next few pages, you will complete a writing task. Your responses will help us understand your thoughts and feelings. For this task, don't worry about grammar and spelling, just write freely.

*Experimental:*

Please bring to mind a social injustice (e.g., discrimination against a certain group, corruption) that you feel passionate about and truly angers you. Additionally, bring to mind the specific person or persons responsible for causing this social injustice (i.e., wrongdoers).

In the space below, describe this social injustice and state who the wrongdoer or wrongdoers are. Do not write about your thoughts and feelings towards the wrongdoer(s) yet, as you will do this on the next page. _____

In the space below, please describe in detail your thoughts and feelings about the wrongdoer(s). Please immerse yourself completely in your thoughts and feelings as you write. _____

*Control:*

Please bring to mind one to three persons you know that meet ALL of the following criteria: (1) You have neutral feelings towards them (i.e., you do not particularly like or dislike them). (2) They are NOT a family member. (3) They are NOT a friend. In the space below, choose at least one of these persons and give a description of how you know them or how you have met them. Do not write about your thoughts and feeling towards this person or these persons yet, as you will do this on the next page. DO NOT STATE ANYONE'S NAME. _____

In the space below, please describe in detail your thoughts and feelings about this person or these persons. Please immerse yourself completely in your thoughts and feelings as you write. _____

**Moral Self-Enhancement**

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|---|---|---|---|---|---|---|---|---|
| Extremely Disagree | Strongly Disagree | Moderately Disagree | Slightly Disagree | Neither Agree or Disagree | Slightly Agree | Moderately Agree | Strongly Agree | Extremely Agree |

**OR**

| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|
| Strongly Disagree | Moderately Disagree | Slightly Disagree | Neither Agree or Disagree | Slightly Agree | Moderately Agree | Strongly Agree |

*Experimental:*

A few moments ago, you wrote about a person or persons responsible for causing a social injustice. For this task, you will compare yourself to this person or these persons. Please indicate the extent to which you disagree or agree with each statement.

*Control:*

A few moments ago, you wrote about a person or persons. For this task, you will compare yourself to this person or these persons. Please indicate the extent to which you disagree or agree with each statement.

**The writing task made me feel that I am**

...a better person than the person/persons I wrote about.

...more likeable than the person/persons I wrote about.

...more considerate than the person/persons I wrote about.

...more interpersonally warm than the person/persons I write about.

...more trustworthy than the person/persons I wrote about.

...more respectful than the person/persons I wrote about.

...more moral than the person/persons I wrote about.

**Demographics** - University of Southampton Students

1. How would you describe your ethnic background?

| **a) Black or Black British** | **d) Mixed** |
|---|---|
| Caribbean | White & Black Caribbean |
| African | White & Black African |
| Any other Black background within (a) | White & Asian |
| **b) White** | White & Hispanic |
| British | Any other mixed background |
| Irish | **e) Other ethnic groups** |
| American | Chinese |
| Any other White background | Japanese |
| **c) Asian or Asian British** | Hispanic |
| Indian | Any other ethnic group |
| Pakistani | Do not state |

Bangladeshi

Any other Asian background within (c)

2. Please indicate your sex: (Male / Female / Other)
3. Please indicate your age: _____ years
4. What is the primary language you speak? _____

**Demographics** - Students from the U.S. (Hanover College)

1. How would you describe your ethnic background? (Black / White / Asian/Pacific Islander / Latino/Latina / Hispanic / Native American / Other)
2. Please indicate your sex: (Male / Female / Other)
3. Please indicate your age: _____ years
4. What is the primary language you speak? _____

**Probing and mood repair**

1. Did you experience any distractions while completing this study? A distraction could involve not being alone, listening to music, or having the television on while you were completing the study. (Yes/No)

*(If answered Yes)*

2. Please state the distraction you experienced as specifically as you can.____
3. In your own words, what was the purpose of this study? _____

4. What type of device did you use to complete this study (e.g., laptop, tablet)?___
5. Please list two positive qualities about yourself. _____
6. Please rate how much you like the following picture using the scale provided.

| 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|
| Not Very Much | | | | Very Much |

[DEBRIEFING]

***END OF EXPERIMENT***

# Appendix C. Study 2: A Valuable Moral Contributor

**Introduction**

PLEASE READ ALL INSTRUCTIONS CAREFULLY

It is important that you complete the study while you are free from distractions (e.g., other people, videos, music) and without taking any breaks.

We are interested in your attitudes toward various issues. We will ask you to reflect on some recent behaviours and then respond to a few questionnaires.

Please keep in mind that there are no right or wrong answers, or good or bad answers, to any questions here. What this means for you is that throughout the study you can feel free to respond to all of the questions as honestly as you can.

**Conditions**

*Moral Self-Enhancement* [3-minute timer on page]

Please recall at time in your life when you behaved in a way that showed a particularly *high* (or higher than normal) level of care, respect, or kindness.

Please spend the next five minutes describing the details about this situation that made you more caring, respectful, or kind. What was it like to be in this situation? What thoughts and feelings did you experience?

Please note that it may a few moments for the “next page” button to appear at the bottom of this page.

*Moral Self-Diminishment* [3-minute timer on page]

Please recall at time in your life when you behaved in a way that showed a particularly *low* (or lower than normal) level of care, respect, or kindness.

Please spend the next five minutes describing the details about this situation that made you less caring, respectful, or kind. What was it like to be in this situation? What thoughts and feelings did you experience?

Please note that it may a few moments for the “next page” button to appear at the bottom of this page.

**Manipulation Check**

| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|
| Not at All | | | | | | Very Much |

*Right at this moment, I feel …*

1. Caring
2. Respectful
3. Kind-hearted

**Participative Efficacy**

Please tell us how you feel right now about the following statements:

| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|
| Strongly Disagree | Moderately Disagree | Slightly Disagree | Neither Agree or Disagree | Slightly Agree | Moderately Agree | Strongly Agree |

1. I believe that I, as an individual, can contribute greatly so that along with like-minded individuals, we can hold those responsible for social issues, accountable.
2. I believe that I, as an individual, can provide an important contribution so that, along with other like-minded individuals, together, we can fight social issues.

3. I believe that I, as an individual, can provide a significant contribution so that, through joint actions, like-minded individuals can make significant progress on social issues.
4. I believe that I, as an individual, can contribute meaningfully so that like-minded individuals can achieve the common goal of fighting social issues.

**Demographics**

1. How would you describe your ethnic background?

a) Black or Black British
Caribbean
African
Any other Black background within (a)
b) White
British
Irish
American
Any other White background
c) Asian or Asian British
Indian
Pakistani
Bangladeshi
Any other Asian background within (c)
d) Mixed
White & Black Caribbean
White & Black African
White & Asian
White & Hispanic
Any other mixed background
e) Other ethnic groups
Chinese
Japanese
Hispanic
Any other ethnic group
Do not state

2. What is your gender? (Male / Female / Other / Prefer not to say)
3. Please indicate your age: _____ years
4. What is the primary language you speak? ____

**Probing and Mood Repair**

1. It is vital to our study that we only include responses from people that devoted their full attention to this study. Otherwise, much effort (the researchers' and the time of other

participants) could go in vain. You will receive payment for this study no matter how you answer this question. In your honest opinion, should we use your data in our analyses in this study? (Yes / No)

2. What are your general thoughts about this study?_____
3. If you had to guess, what do you think the study is about?_____
4. At what point did you realise this?_____
5. Please list two positive qualities about yourself:_____

[DEBRIEFING]

***END OF EXPERIMENT***

# Appendix D. Study 3: "I Can Make a Difference!": A Vignette Study

**Introduction**

PLEASE READ ALL INSTRUCTIONS CAREFULLY

It is important that you complete the study while you are free from distractions (e.g., other people, videos, music) and without taking any breaks.

We are interested in your views and action intentions regarding various social issues. You will be presented with hypothetical scenarios about these issues, including descriptions of possible actions that could be taken to address them. We would like you to consider each scenario carefully and tell us how likely you would be to engage in the described actions.

Please keep in mind that there are no right or wrong answers, or good or bad answers, to any questions here. What this means for you is that throughout the study you can feel free to respond to all of the questions as honestly as you can.

**Experiment**

You will now be presented with 20 hypothetical scenarios based on social issues. We are interested in how you respond to these social issues. Please report **honestly** and **accurately.**

*Group 1 Vignettes*

1. **Housing Crisis**

   "Imagine you are a tenant living in a large city. The local government is proposing a policy allowing landlords to drastically increase rent without regulation. You, as a tenant, you can attend community meetings, attend city council hearings, and distribute flyers to raise awareness about the issue."

2. **Environmental Protection**

   "Imagine you are a member of a community living near a pristine forest. A company has

proposed building a factory that could pollute the area. As a resident, you can participate in an organised protest, sign a petition, and write letters to your local government officials to voice your concerns."

3. **Workplace Conditions**

   "Imagine you are an employee at a large company. The company is considering a policy that would significantly reduce employee benefits. As an employee, you can speak to coworkers to organise a joint response, write to company leadership, and organise an internal petition."

4. **Healthcare Access**

   "Imagine you are a patient advocate in a community where a hospital is considering cutting essential services, such as emergency care. As an advocate, you can attend public forums, share information on social media and organise a peaceful demonstration outside the hospital."

5. **Educational Equity**

   "Imagine you are a parent of a child attending a state primary school. The school district is proposing budget cuts that would eliminate funding for art and music programmes. As a parent, you can join school board meetings, join a community action group, and sign a parent-led petition."

6. **Animal Welfare**

   "Imagine you are a volunteer at an animal shelter. A local business plans to open a factory farm nearby, raising concerns about animal cruelty and environmental harm. As a volunteer, you can write to your local MP, organise an awareness campaign, and share educational materials in your community."

7. **Internet Access**

   "Imagine you are a resident in a rural area where a major telecommunications company has decided to increase the cost of internet access while reducing service quality. As a resident, you can gather testimonials from neighbours, write a collective letter to the company, and lobby local government officials for intervention."

8. **Community Park**

   "Imagine you live in a neighbourhood with a popular park that is scheduled to be replaced by a commercial shopping complex. As a community member, you can organise park clean-up days to show its value, attend town hall meetings, and start a social media campaign to save the park."

9. **Youth Programs**

   "Imagine you are a young adult in a community where funding for after-school programs is being slashed. These programs provide safe spaces for kids to learn and socialize. As a concerned resident, you can reach out to school administrators, rally parents and local leaders, and create an online fundraiser to support these initiatives.

10. **Water Supply Crisis**

    "Imagine you live in a small town where the primary water source is being overused by a nearby corporation. This overuse threatens the town's water supply. As a resident, you can attend town hall meetings, sign an online petition, and lobby local officials to take action."

*Group 2 Vignettes:*

11. **Public Transportation**

    "Imagine you are a daily commuter in a city where the government is proposing to cut funding for public transportation, leading to reduced services. As a commuter, you can sign a public petition, participate in a community discussion forum, and attend a local government meeting to express your concerns."

12. **School Curriculum Debate**

    "Imagine you are a parent in a school district that is proposing to remove science and technology programs due to budget cuts. As a concerned parent, you can speak at school board meetings, collaborate with other parents, and reach out to local businesses for potential sponsorships to save the programs."

13. **Local Wildlife Protection**

    "Imagine you live near a wetland that is home to endangered species. A company has

proposed building a highway through the area, which could destroy the habitat. As a local resident, you can join an environmental organisation, write a letter to your local council, and participate in peaceful protests to protect the wetlands."

14. **Community Safety**

    "Imagine you live in a neighbourhood where streetlights are frequently broken, leading to safety concerns at night. Despite repeated complaints, the issue remains unresolved. As a community member, you can collect signatures for a petition, attend a neighbourhood safety meeting, and reach out to the media to highlight the issue."

15. **Cultural Preservation**

    "Imagine you are part of a community that values its historical landmarks, and one of the oldest buildings is scheduled for demolition to make way for new development. As a community advocate, you can share information about the development online, start a preservation campaign, and appeal to local heritage organisations for support."

16. **Library Closure**

    "Imagine you are a frequent visitor to your local library, which is at risk of being closed due to funding shortages. As a community member, you can donate some of your own books, promote others to donate books, and start a petition to keep the library open."

17. **Food Security**

    "Imagine you volunteer at a community food pantry that is struggling to meet demand because of a proposed reduction in government food aid. As a volunteer, you donate to your local food bank, attend fundraising events, and contact local media to report on the issue."

18. **Healthcare Policy**

    "Imagine you are a patient in a healthcare system where a new policy is being proposed to increase the cost of life-saving medications. As a patient, you can participate in advocacy groups, write to your elected representatives, and share your story in the media to raise awareness about the issue."

19. **Climate Change Action**

    "Imagine you are a resident of a coastal town where rising sea levels are threatening the

community. The local government is considering cutting funding for climate adaptation projects. As a resident, you can attend public planning meetings, join a grassroots awareness campaign, and write to your local MP."

20. **Workplace Equality**

"Imagine you work for a company that has announced plans to eliminate diversity and inclusion initiatives due to budget cuts. As an employee, you can speak with HR, form an employee-led advocacy group, and write an open letter to leadership explaining the importance of these programs."

**Scenario-Framing**

*Participative Efficacy:*

**[repeated after each social issue]:** The cause needs as much support as possible for a chance to make a difference. Your actions are likely to have a big impact. How likely are you to engage in the actions described above?

*Participative Futility:*

**[repeated after each social issue]:** The cause already has enough support and will succeed regardless of your participation. Your actions are unlikely to have any impact whatsoever. How likely are you to engage in the actions described above?

| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|
| Not at all likely | | | Somewhat likely | | | Very likely |

**Demographics**

1. How would you describe your ethnic background?

a) Black or Black British

Caribbean

African

Any other Black background within (a)

b) White

British

Irish

American

Any other White background

c) Asian or Asian British

Indian

Pakistani

Bangladeshi

Any other Asian background within (c)

d) Mixed

White & Black Caribbean

White & Black African

White & Asian

White & Hispanic

Any other mixed background

e) Other ethnic groups

Chinese

Japanese

Hispanic

Any other ethnic group

Do not state

1. What is your gender? (Male / Female / Other / Prefer not to say)
2. Please indicate your age: _____
3. What is the primary language you speak? _____

[DEBRIEFING]

***END OF EXPERIMENT***

# Appendix E. Study 4a: Tackling Social Issues in the UK

**Introduction**

READ ALL INSTRUCTIONS CAREFULLY

It is important that you complete the study while you are free from distractions (e.g., other people, videos, music) and without taking any breaks.

We are interested in understanding the relationship between your thoughts and feelings on a variety of topics. You will first be asked to rank a selection of social issues on their importance to you. Then, you will describe one of the social issues. After that, you will write about your thoughts and feelings regarding the people who caused the social issue. Finally, you will respond to a few questionnaires.

Please keep in mind that there are no right or wrong answers, or good or bad answers, to any questions that you'll be asked. What this means for you is that throughout the study you can feel free to respond to all of the questions as honestly and accurately as you can.

**Manipulation**

Below is a list of 9 social issues facing the UK at the moment. Please read the short description of each social issue and then rank how important they are to you, where 1 = *the most important to you* and 9 = *the least important to you*.

*Social Issues*

1. **Cost of Living Crisis:** The UK has been in a cost-of-living crisis since 2021. There are a few causes, such as the national rise in inflation, COVID-19, and Brexit. The high price of everyday goods, like groceries, electricity, and clothing, has the most impact on low-income families and also impacts the future of young people. According to a survey of 18-24-year-olds, ⅔ had lowered their career expectations, saying they could only focus on short-term survival.
2. **Homelessness:** This year, the number of households in temporary accommodation reached its highest level since 1998. To address this issue, experts say the government

needs to build more homes urgently. Whilst they put the ideal number at around 380,000 homes, only 192,000 homes were built in 2022. The causes of homelessness, like high rents and a lack of affordable housing, also need to be addressed.

3. **Children Experiencing Poverty:** 4.3 million children in the UK currently live in poverty. According to data, the income of households earning the least is set to fall yet again. The cost-of-living crisis and a lack of government funding are the biggest contributors to this issue. Black and minority ethnic children will be affected the most. 46% of this group live in poverty compared to 26% of white British children.
4. **Public Transportation Punctuality:** Punctuality issues in public transportation have surged in the UK, leading to widespread inconvenience for commuters. Causes include outdated infrastructure and inadequate investment. These delays impact individuals' daily routines and work commitments, prompting a call for increased investment from the government to enhance the reliability and punctuality of public transport services.
5. **Climate Change:** The UK is one of the world's top 20 greenhouse gas emitters. Whilst the public are supporting stronger regulations and emission reductions, the country is not on track to meet its goals. It still depends heavily on electricity generated from gas. In 2022, the country recorded its hottest temperatures on record and there are concerns that the government are not doing enough and are even planning to "backtrack" on the UK's climate goals.
6. **Traffic Congestion:** A growing concern in the UK, traffic congestion disrupts daily commuting due to increased vehicle numbers and inadequate infrastructure. Beyond individual inconvenience, it poses environmental and economic challenges. Calls for improved urban planning, public transportation, and alternative modes of travel are escalating to address this persistent issue.
7. **Mental Health:** Up to 10 million people (including 1.5 million children) need additional mental health support as a direct result of the covid-19 pandemic. The organisation 'Mind' revealed that more people are in mental health crisis than ever recorded and helpline calls have soared. However, mental health receives 5.8% of the total UK health

research spend despite representing 23% of service demand and due to other government funding cuts, people are waiting months or even years for their first appointment.

8. **Access to High-Speed Internet:** Limited access to high-speed internet is a growing concern in the UK. This issue, prevalent in certain areas, hinders individuals' connectivity and access to online resources. Calls for expanded infrastructure and initiatives to bridge the digital divide are increasing to ensure equitable access to high-speed internet for all.
9. **The Healthcare System:** Wait times for treatments and emergency care by the publicly-funded National Health Service (NHS) are getting out of control. Falling wages, staff shortages, and lack of public funding are just three of the major issues. 50% of people waiting for treatment including cardiac surgery and cancer treatment, have waited up to 18 weeks and 400,000 people have waited for over a year. In early 2023, tens of thousands of NHS staff staged the largest walkout in NHS history.

**[RANKING EXERCISE]**

Most Important Social Issue to Me = 1

Least Important Social Issue to Me = 9

**Conditions**

*Experimental*

Why did you rank [**insert social issue rank #1]** as the most important social issue to you? Please spend several minutes describing the social issue, and also write about your thoughts and feelings toward the people who you believe are responsible for it. Write freely and don’t worry about grammar or spelling.

*Control*

Why did you rank **[insert social issue rank #9]** as the least important social issue to you? Please spend several minutes describing this social issue, and also write about your

thoughts and feelings toward the people who you believe are responsible for it. Write freely and don't worry about grammar or spelling.

**Moral Self-Enhancement**

A few moments ago, you wrote about a social issue currently facing the UK and about the people you feel are responsible for causing it. Now, please compare yourself to these people.

| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|
| Strongly Disagree | Moderately Disagree | Slightly Disagree | Neither Agree or Disagree | Slightly Agree | Moderately Agree | Strongly Agree |

**Having completed the prior task I now feel**

... more empathetic than the people responsible for the social issue I wrote about.

... more respectful than the people responsible for the social issue I wrote about.

... more moral than the people responsible for the social issue I wrote about.

... more compassionate than the people responsible for the social issue I wrote about.

... more considerate than the people responsible for the social issue I wrote about.

... more trustworthy than the people responsible for the social issue I wrote about.

... more caring than the people responsible for the social issue I wrote about.

... more kind-hearted than the people responsible for the social issue I wrote about.

**Participative Efficacy**

Earlier you rated and wrote about [insert social cause #1 or 9], a current issue facing the UK.

| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|
| Strongly Disagree | Moderately Disagree | Slightly Disagree | Neither Agree or Disagree | Slightly Agree | Moderately Agree | Strongly Agree |

**Having completed the prior task…**

1. I believe that I, as an individual, can contribute greatly so that those effected by the social issue above can hold those responsible for the social issue above, accountable.
2. I believe that I, as an individual, can provide an important contribution so that, along with other likeminded individuals, together, we can fight the social issue above.
3. I believe that I, as an individual, can provide a significant contribution so that, through joint actions, likeminded individuals can make significant progress on the social issue above.
4. I believe that I, as an individual, can contribute meaningfully so that likeminded individuals can achieve their common goal of fighting the social issue above.

**Social Action Intentions**

1. What types of behaviours do you feel you would engage in to attempt to rectify **[insert social issue #1 or 9]?** Keeping that social issue in mind, please report below how likely you are to engage in the following activities:

| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|
| Not at all likely | | | Somewhat likely | | | Very likely |

*Right now, I feel that I would…*

1. Sign a petition.
2. Share a petition on social media.
3. Donate money to a relevant charity or organisation.
4. Donate your time to a relevant charity or organisation.
5. Write to or email your local Member of Parliament.
6. Share your opinion on social media.
7. Attend an event (e.g., protest, rally, fundraiser).
8. Share your opinion with your close friends and/or family.
9. Boycott companies/organisations that contribute to this social injustice.

**Social Action (Behaviour)**

If you wish to receive more information about how you can help fight [**insert social issue #1or9**], please tick the box below and we will email you some resources after you have completed the study:

**Demographics**

1. How would you describe your ethnic background?

| **a) Black or Black British** | **d) Mixed** |
|---|---|
| Caribbean | White & Black Caribbean |
| African | White & Black African |
| Any other Black background within (a) | White & Asian |
| **b) White** | White & Hispanic |

British
Irish
American
Any other White background

**c) Asian or Asian British**

Indian
Pakistani
Bangladeshi
Any other Asian background within (c)
Any other mixed background

**e) Other ethnic groups**

Chinese
Japanese
Hispanic
Any other ethnic group
Do not state

2. What is your gender? _____
3. Please indicate your age: _____ years
4. What is the primary language you speak? _____
5. Here is a 7-point scale on which the political views that people might hold are arranged from extremely liberal (left) to extremely conservative (right). Where would you place yourself on this scale?

| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|
| Extremely Liberal | | | | | | Extremely Conservative |

**Probing and mood repair**

1. Did you experience any distractions while completing this study? A distraction could involve not being alone, listening to music, or having the television on while you were completing the study (Yes / No)

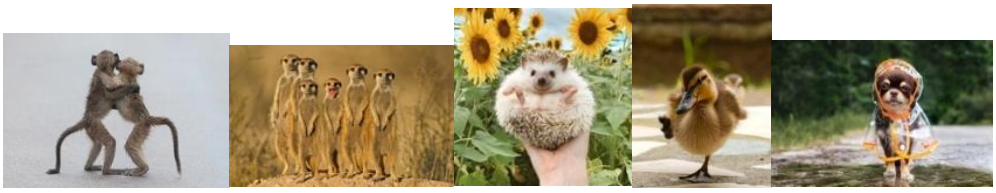
*(If answered Yes)*

2. Please state the distraction you experienced as specifically as you can.____
3. If you had to guess, what do you think the study is about? _____
4. At what point did you realize this? _____

5. Please list two positive qualities about yourself. ___ ___

6. Please rate how much you like the following pictures using the scale provided.

| 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|
| Not Very Much | | | | Very Much |



[DEBRIEFING]

***END OF EXPERIMENT***

# Appendix F. Study 4b: Fighting UK Social Issues

**Introduction**

READ ALL INSTRUCTIONS CAREFULLY

It is important that you complete the study while you are free from distractions (e.g., other people, videos, music) and without taking any breaks.

We are interested in understanding the relationship between your thoughts and feelings on a variety of topics. You will first be asked to rank a selection of social issues on their importance to you. Then, you will describe one of the social issues. After that, you will write about your thoughts and feelings regarding the people who caused the social issue. Finally, you will respond to a few questionnaires.

Please keep in mind that there are no right or wrong answers, or good or bad answers, to any questions that you'll be asked. What this means for you is that throughout the study you can feel free to respond to all of the questions as honestly and accurately as you can.

**Manipulation**

Below is a list of 9 social issues facing the UK at the moment. Please read the short description of each social issue and then rank how important they are to you, where 1 = *the most important to you* and 9 = *the least important to you*.

*Social Issues*

1. **Cost of Living Crisis:** The UK has been in a cost-of-living crisis since 2021. There are a few causes, such as the national rise in inflation, COVID-19, and Brexit. The high price of everyday goods, like groceries, electricity, and clothing, has the most impact on low-income families and also impacts the future of young people. According to a survey of 18-24-year-olds, ⅔ had lowered their career expectations, saying they could only focus on short-term survival.
2. **Homelessness:** This year, the number of households in temporary accommodation reached its highest level since 1998. To address this issue, experts say the government needs to build more homes urgently. Whilst they put the ideal number at around 380,000

homes, only 192,000 homes were built in 2022. The causes of homelessness, like high rents and a lack of affordable housing, also need to be addressed.

3. **Children Experiencing Poverty:** 4.3 million children in the UK currently live in poverty. According to data, the income of households earning the least is set to fall yet again. The cost-of-living crisis and a lack of government funding are the biggest contributors to this issue. Black and minority ethnic children will be affected the most. 46% of this group live in poverty compared to 26% of white British children.
4. **Public Transportation Punctuality:** Punctuality issues in public transportation have surged in the UK, leading to widespread inconvenience for commuters. Causes include outdated infrastructure and inadequate investment. These delays impact individuals' daily routines and work commitments, prompting a call for increased investment from the government to enhance the reliability and punctuality of public transport services.
5. **Climate Change:** The UK is one of the world's top 20 greenhouse gas emitters. Whilst the public are supporting stronger regulations and emission reductions, the country is not on track to meet its goals. It still depends heavily on electricity generated from gas. In 2022, the country recorded its hottest temperatures on record and there are concerns that the government are not doing enough and are even planning to "backtrack" on the UK's climate goals.
6. **Traffic Congestion:** A growing concern in the UK, traffic congestion disrupts daily commuting due to increased vehicle numbers and inadequate infrastructure. Beyond individual inconvenience, it poses environmental and economic challenges. Calls for improved urban planning, public transportation, and alternative modes of travel are escalating to address this persistent issue.
7. **Mental Health:** Up to 10 million people (including 1.5 million children) need additional mental health support as a direct result of the covid-19 pandemic. The organisation 'Mind' revealed that more people are in mental health crisis than ever recorded and helpline calls have soared. However, mental health receives 5.8% of the total UK health research spend despite representing 23% of service demand and due to other

government funding cuts, people are waiting months or even years for their first appointment.

8. **Access to High-Speed Internet:** Limited access to high-speed internet is a growing concern in the UK. This issue, prevalent in certain areas, hinders individuals' connectivity and access to online resources. Calls for expanded infrastructure and initiatives to bridge the digital divide are increasing to ensure equitable access to high-speed internet for all.
9. **The Healthcare System:** Wait times for treatments and emergency care by the publicly-funded National Health Service (NHS) are getting out of control. Falling wages, staff shortages, and lack of public funding are just three of the major issues. 50% of people waiting for treatment including cardiac surgery and cancer treatment, have waited up to 18 weeks and 400,000 people have waited for over a year. In early 2023, tens of thousands of NHS staff staged the largest walkout in NHS history.

**[RANKING EXERCISE]**

Most Important Social Issue to Me = 1

Least Important Social Issue to Me = 9

**Conditions**

*Experimental*

Why did you rank [**insert social issue rank #1]** as the most important social issue to you? Please spend several minutes describing the social issue, and also write about your thoughts and feelings toward the people who you believe are responsible for it. Write freely and don’t worry about grammar or spelling.

*Control*

Why did you rank **[insert social issue rank #9]** as the least important social issue to you? Please spend several minutes describing this social issue, and also write about your thoughts and feelings toward the people who you believe are responsible for it. Write freely and don’t worry about grammar or spelling.

**Moral Self-Enhancement**

A few moments ago, you wrote about a social issue currently facing the UK and about the people you feel are responsible for causing it. Now, please compare yourself to these people.

| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|
| Strongly Disagree | Moderately Disagree | Slightly Disagree | Neither Agree or Disagree | Slightly Agree | Moderately Agree | Strongly Agree |

**Having completed the prior task I now feel ...**

... more empathetic than the people responsible for the social issue I wrote about.

... more respectful than the people responsible for the social issue I wrote about.

... more moral than the people responsible for the social issue I wrote about.

... more compassionate than the people responsible for the social issue I wrote about.

... more considerate than the people responsible for the social issue I wrote about.

... more trustworthy than the people responsible for the social issue I wrote about.

... more caring than the people responsible for the social issue I wrote about.

... more kind-hearted than the people responsible for the social issue I wrote about.

**Participative Efficacy**

Earlier you rated and wrote about [insert social cause #1 or 9], a current issue facing the UK.

| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|
| Strongly Disagree | Moderately Disagree | Slightly Disagree | Neither Agree or Disagree | Slightly Agree | Moderately Agree | Strongly Agree |

**Having completed the prior task…**

1. I believe that I, as an individual, can contribute greatly so that those effected by the social issue above can hold those responsible for the social issue above, accountable.
2. I believe that I, as an individual, can provide an important contribution so that, along with other likeminded individuals, together, we can fight the social issue above.
3. I believe that I, as an individual, can provide a significant contribution so that, through joint actions, likeminded individuals can make significant progress on the social issue above.
4. I believe that I, as an individual, can contribute meaningfully so that likeminded individuals can achieve their common goal of fighting the social issue above.

**Social Action Intentions**

1. What types of behaviours do you feel you would engage in to attempt to rectify **[insert social issue #1 or 9]?** Keeping that social issue in mind, please report below how likely you are to engage in the following activities:

| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|
| Not at all likely | | | Somewhat likely | | | Very likely |

*Right now, I feel that I would…*

1. Sign a petition.
2. Share a petition on social media.
3. Donate money to a relevant charity or organisation.
4. Donate your time to a relevant charity or organisation.
5. Write to or email your local Member of Parliament.
6. Share your opinion on social media.
7. Attend an event (e.g., protest, rally, fundraiser).
8. Share your opinion with your close friends and/or family.
9. Boycott companies/organisations that contribute to this social injustice.

**Social Action (Behaviour)**

If you wish to receive more information about how you can help fight [**insert social issue #1or9**], please tick the box below and we will email you some resources after you have completed the study.

**Demographics**

1. How would you describe your ethnic background?

**a) Black or Black British**
Caribbean
African
Any other Black background within (a)
**b) White**
**d) Mixed**
White & Black
Caribbean
White & Black African
White & Asian

British
Irish
American
Any other White background

**c) Asian or Asian British**

Indian
Pakistani
Bangladeshi
Any other Asian background within (c)

White & Hispanic
Any other mixed background

**e) Other ethnic groups**

Chinese
Japanese
Hispanic
Any other ethnic group
Do not state

2. What is your gender? _____

3. Please indicate your age: _____ years

4. What is the primary language you speak? _____

5. How would you describe your political orientation? _____

6. Here is a 7-point scale on which the political views that people might hold are arranged from extremely liberal (left) to extremely conservative (right). Where would you place yourself on this scale?

| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|
| Extremely Liberal | | | | | | Extremely Conservative |

**Probing and mood repair**

1. Did you experience any distractions while completing this study? A distraction could involve not being alone, listening to music, or having the television on while you were completing the study. (Yes / No)

*(If answered Yes)*

2. Please state the distraction you experienced as specifically as you can. ____

3. If you had to guess, what do you think the study is about? _____

4. At what point did you realise this? _____

5. Please list two positive qualities about yourself. _____

[DEBRIEFING]

***END OF EXPERIMENT***

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