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**Moral outrage moderates the relationships between system perception, system justification,
and intergroup helping behavior: A multigroup approach**

By

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Claremont Graduate University

2023

APPROVAL OF THE DISSERTATION COMMITTEE

This dissertation has been duly read, reviewed, and critiqued by the Committee listed below, which hereby approves the manuscript of Michael E. Knapp as fulfilling the scope and quality requirements for meriting the degree of Doctor of Philosophy in Psychology.

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Abstract

Moral outrage moderates the relationships between system perception, system justification, and intergroup helping behavior: A multigroup approach

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Michael E. Knapp

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Helping behavior is proposed to be a universal experience where a wide range of behaviors are used to benefit another person or group (Aknin et al., 2013; Nadler, 2002). Often these behaviors are motivated by positive values or emotions (Dovidio et al., 2012). However, when social status is salient, the members of a group may shift their motivation to help others from recipient benefit to retaining power and status for themselves instead (Nadler & Chernyak-Hai, 2014). The intergroup helping as status relations (IHSR) model proposes that higher status group members are motivated to retain their groups' higher status through specific helping behaviors directed toward those of lower status when the hierarchy is threatened (Nadler, 2002; Nadler & Halabi, 2006). According to the model, higher status group members are likely to give dependency-oriented help which solves the problem without transferring skill, rendering the lower status group members dependent in the future. Conversely, autonomy-oriented helping behavior that helps the recipient learn how to solve the problem and decreases dependency is often avoided being given by higher status group members so they can retain their position of power. Previous research has demonstrated that the motivation for maintaining status occurs as a function of system justification beliefs, such that the status quo should be defended, and social change avoided (Jost, 2018). Prosocial emotions were proposed as a way to disrupt this

justification process (Thomas et al., 2009; Wakslak et al., 2007). Specifically, moral outrage, comprised of anger directed at systems, may attenuate the effects of system perceptions on system justification beliefs. As such experiencing moral outrage about socioeconomic inequality in the US should result in both decreases in dependency-oriented helping behavior and increases in autonomy-oriented helping behavior.

The present two-study dissertation put forth a model investigating the moderating effect of moral outrage on intergroup helping intentions and behavior directed toward lower status groups. In Study 1 ($N = 376$), participants from an online research platform who identified as “above average” in subjective social status either experienced a moral outrage manipulation or neutral control condition and rated their perceptions of system legitimacy and stability, system justification beliefs, and helping intentions and behaviors towards people of lower socioeconomic status. In the moral outrage condition, participants read a short vignette on the negative effects of the current socioeconomic conditions in the US, while the control condition was a general report on the fishing industry. Results from Study 1 indicated that the moral outrage manipulation did not affect perceptions of system legitimacy, system justification beliefs, or helping intentions and behaviors on a statistically significant level. Although these results did not achieve statistical significance, people in the moral outrage condition did report trends in the direction hypothesized for four of five outcomes. Additionally, a two-factor model of system legitimacy and stability was confirmed using factor analysis.

Next, Study 2 ($N = 634$) used a bolstered moral outrage manipulation under the same procedure and assessed a multigroup structural model of the relationships between the same variables. The main hypothesized model assessed if moral outrage moderated the relationships between perceptions of system legitimacy and system justification beliefs as well as the

relationships between system justification beliefs and helping intentions and behaviors. Analyses of data did not support this model. However, the analysis of an exploratory model which included perceptions of system stability as an additional main predictor of system justification beliefs found differences between the moral outrage and control condition. In essence, compared to those in the control condition, those in the moral outrage condition had a stronger negative relationship between stability and system justification beliefs, and in turn beliefs had a negative relationship with helping intentions. Moral outrage influenced higher status group members' perceptions of the stability of economic conditions in the US and justification beliefs, but not as intended. Moral outrage enhanced some aspects of the justification process through defending the system, rather than attenuating it. Moral outrage is an emotion which may have unintended effects when not carefully channeled and in the current research resulted in bolstering justification beliefs and lower helping intentions towards those of lower status (Rushton & Thompson, 2020). As it related to system justification theory and IHSR, moral outrage appears to reinforce some aspects of the motivational efforts of higher status group members to use helping situations to retain their higher status positions (Jost, 2018; Nadler, 2002). Although research has demonstrated moral outrage as one of many prosocial emotions, a more channeled approach at using outwardly-facing prosocial emotions is warranted in future research to understand how emotion may be beneficial as well as detrimental to social change interventions in higher status groups.

Dedication

This dissertation is dedicated to everyone who helped me be the person I am today. Although this is one physical manifestation of my life, it would not be remotely possible without the family, friends, and support I have had along the way.

To my partner, Sarah, I am eternally grateful for everything you have sacrificed – always. You kept this dream alive through the darkest and brightest of times. It takes a special person to support the pursuit of something so large. Thank you.

To my grandmother, Gloria, I wish you could have seen this day. You were, and will always be, a great source of inspiration for me. Thank you.

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CHAPTER I

Literature Review

Introduction

The success of a group of people in navigating the social world and all its demands, responsibilities, and challenges may depend upon help from others. Prosocial behavior is an avenue by which any behavior is used to benefit another person and in the context of intergroup relations, may benefit members of another group (Aknin et al., 2013; Nadler, 2002). Prosocial or helping behaviors are typically motivated by positive moral values, empathy, or interest in the well-being of others (Dovidio et al., 2012). However, when social status and social identity are salient, an additional motivation for helping includes providing help to the recipient while also retaining status positions (Nadler, 2002; Nadler & Halabi, 2006). Helpers will work to retain social status and the effects of help may be detrimental for the recipient in the future (Nadler, 2002; Nadler & Halabi, 2006).

Previous research has found that when social status is salient, the members of a group may have ill intentions when providing help to other groups (Nadler & Chernyak-Hai, 2014). Specifically, the help directed toward another group's members may render the recipient(s) in a state of dependency and may be harmful long-term. Alternatively, intergroup helping may assist group members in enhancing skills and autonomy, although this type of help is less common (Nadler, 2002; Nadler & Halabi, 2006). The antecedents and consequences of help which keeps the recipient in a state of dependency and lower status has been the focus of recent research (Nadler & Chernyak-Hai, 2014; Nadler & Halabi, 2006). System justification theory (SJT; Jost, 2018; Jost & Banaji, 1994; Jost & Hunyady, 2003; Jost & van der Toom, 2012) provides an explanation for understanding why higher status group members use helping situations as a way

to reinforce their position in the social hierarchy. The following research explores and extends system justification theory within the intergroup helping as status relations (IHSR) framework to investigate how moral outrage at socioeconomic inequality in the US may disrupt the system justification process and lead to increased autonomy-oriented, and decreased dependency-oriented, helping behavior directed at lower status group members (Jost, 2018; Nadler, 2002).

Considering the complexity of intergroup relations in stratified social hierarchies and the use of helping behavior to reinforce rather than restructure those hierarchies, the present research utilized a robust quantitative approach across two studies to investigate how the prosocial emotion of moral outrage may play a role in the decision-making process of higher status group members to help those of lower social status. Following a brief review of the system justification theory, intergroup helping as status relations, and moral outrage, two experimental studies are described that test if moral outrage alters the system justification-helping behavior process in two US-based samples of people who are above-average subjective socioeconomic status. Although in intergroup contexts the perspective and motivation from both the helper and recipient are in play, the present research focused on higher status group motivations, attitudes, and behavior and how to disrupt system justifying helping behavior toward lower status groups.

System Justification and Intergroup Helping

Previous research on intergroup relations has noted that the interaction between groups is facilitated by group members on behalf of their groups as a function of social identity (Nadler, 2002; Tajfel & Turner, 1986). According to social identity theory, people seek to positively identify themselves with similar others across many facets (e.g., appearance, interest, financial standing, etc.), while differentiating from others, which forms a group identity (Hogg, 2018; Tajfel & Turner, 1986). When group identity is salient, whether made explicit or through active

comparison to other people, group members act as representatives of their groups and their behaviors are assumed by others to reflect the values, intentions, and behaviors of their group (Hogg, 2018). In addition, according to self-categorization theory, events which are beneficial or threatening to the group are typically experienced as such by the individual members (Turner et al., 1987). Self-categorization operates at this level because someone perceives themselves as similar to and therefore cognitively grouped with similar others (social identity). If an event which is relevant to the group impacts the group as a whole then it should impact the individual who categorizes themselves as one of the group (Hogg, 2018).

When two groups' members are interacting in a given situation, and their group membership is salient, perceived status differences between the two groups may impact how these members behave toward each other and the emotions they experience (Mackie et al., 2000; Mackie et al., 2008). If there is a perceived threat such as competition for resources or differences in group-relevant values, group members may experience emotions such as anger and be motivated to take corrective action to reduce threat and subsequent anger (Mackie et al., 2008). When people identified with their ingroup on a social issue (e.g., allowance or punishment for drug use) and were asked about emotions related to the outgroup who did not share their values, people reported higher levels of anger and ingroup identification (Mackie et al., 2000). In addition to experiencing anger, people supported confronting, arguing, and opposing the outgroup when group differences were salient (Mackie et al., 2000). As such, social identity impacts how people view themselves and their group, how they experience emotions when differences between groups on valued dimensions are salient, and their motivations when interacting with other groups' members.

System Justification Theory

When it comes to the matter of maintenance of the hierarchy of social status, system justification theory (SJT) proposes, in brief, people across the social hierarchy are motivated to justify, or bolster, the existing social status differences and hierarchies even when the status quo is rife with inequality (see Jost, 2018; Jost et al., 2019; Jost & Banaji, 1994). The motivation behind justifying existing social hierarchies was proposed under conditions of system threat (e.g., questioning the legitimacy or stability), system dependence (e.g., reliance on the system for resources, security, etc.), system inescapability (e.g., inability to leave system such as lack of immigration opportunities, social mobility, etc.), and lower personal control (Kay & Friesen, 2011). When undergraduate students were induced to feel dependent upon their university, they were supportive of whatever funding policy (e.g., merit-based or equality-based) was presented as the status quo (Kay et al., 2009). The same effects of supporting the status quo, however it was presented, was found when people were made to feel dependent on their country and the focus was on national funding policies (Kay et al., 2009). When the system which people are in is salient, they will gravitate toward justifying its existence based on the status quo – essentially, if it's already there then it should remain there.

Justification efforts have been observed in both people of lower and higher status when a threat to the social hierarchy system is perceived (e.g., system change) because justifying the status quo serves a palliative function to reduce feelings of uncertainty or distress (Jost, 2018). Previous research has established that the motivation to justify the status quo is related to a need for order and certainty (Jost et al., 2003; Jost & Hunyady, 2003, 2005). For example, if the current social status hierarchy is threatened with change (e.g., redistribution of wealth), people are motivated to justify the current system to avoid the distress of acknowledging that they social

system is illegitimate, unstable, or unfair (Jost, 2018). As such, the motivation to behind interactions with outgroup members of differing social status depends upon each group's relative status, but typically manifests into maintaining the social hierarchy.

The evaluation of social status within a social system, and the system itself, as legitimate and stable precedes system justification. Social status is based upon the combination and amount of valued social and material resources a group has compared to other groups (Jost, 2018; Tajfel & Turner, 1986). Commonly valued resources include but are not limited to: financial wealth, access to education and job opportunities, prestige, and power. As certain groups begin to acquire more of these resources, their social status is perceived as greater than groups that have less. The continued stratification of social status results in sustained social comparison between groups on their relative differences in resources. If a group member perceives their group to have greater amounts of valued resources, this will result in a positive evaluation of their group and the members themselves (Tajfel & Turner, 1986). Subsequently, group members, on behalf of their group, will be motivated to maintain a positive evaluation in comparison to others by working to retain this higher social status (Tajfel & Turner, 1986). However, the opposite is also true, group members who evaluate their group as having relatively less than another group may evaluate their group in a negative manner and engage in social creativity to increase self-esteem and positive evaluation (Turner, et al., 1979).

Over time, the *status quo*, defined as an established and sustained hierarchical structure where some groups have more valued resources, and others have less will emerge. Although the hierarchy may be perceived as the norm, stratification of social status may lead to conflict and competition for social and material resources as access and control are scarce (Sherif, 1966). In addition to competition, if people perceive that their group, and as a result themselves, are unable

to escape their current position in the system or are dependent upon the system (e.g., financial, security, etc.) in its current state they will feel threatened (Kay & Friesen, 2011). These conflicts imply that the social hierarchy, or system, is not legitimate or fair which creates feelings of discomfort. SJT proposes that to dampen or avoid these feelings of discomfort, people will justify the current hierarchy through bolstering their attitudes or behaving in ways which reinforce the status quo (Jost, 2018; Jost & Banaji, 1994).

For example, previous research found that when presented with information regarding the gender pay gap in the Canada, people who were led to believe that this status quo was unchangeable due to restrictions in emigration (they could not exit the system), increased their support for rationale that the gap was due to natural gender differences (Laurin et al., 2010). Furthermore, participants in this condition reported weak endorsement for the system being unfair as the explanation for the gender pay gap. However, if the system was perceived as escapable, participants reported no differences in the explanation between gender pay differences being based on an unfair system or natural gender differences (Laurin et al., 2010). As the status quo is bolstered due to threat of system inescapability, support for social change is reduced and the system is defended although it is perceived as harmful or unfair (Jost & Hunyady, 2005; Kay & Friesen, 2011). Only under instances of system escapability, or that change was possible, were system justification-related attitudes not endorsed at greater levels.

However, it should be noted that this motivation to justify the system is not unique to any group along the spectrum of social status and has been reported by people in both higher and lower status groups (Jost, 2018). Although seemingly counterintuitive, a review by Jost and Hunyady (2005) indicated that for members of all status groups, system justification beliefs were related to favoring the higher status group, decreased support for social change, and increased

perceptions of legitimacy of the system. Justification behaviors (e.g., endorsement of conservative ideologies, defending existing system, etc.) resulted in lower self-esteem and well-being for lower status group members because the system was ultimately maintained (Jost & Hunyady, 2005). Therefore, although the context in which the system is salient (e.g., threat, change, inescapability) may differ, system justification serves to both (a) reduce feelings of psychological discomfort associated with a threat to the system and (b) bolster and maintain the system as it currently stands as a legitimate and stable entity (Jost, 2018).

Overall, under conditions where the system may be perceived as threatened or changing, whether by appearing less legitimate or stable, higher status group members are motivated to maintain their position in the hierarchy and prevent those who are of lower status from gaining in relative position (Jost, 2018). In addition to maintaining a system which benefits them, higher status group members also reported increased self-esteem and well-being, decreased support for social change, and increased ingroup favoritism (Jost & Hunyady, 2005). Conversely, lower status group members who endorse a system which does not benefit them reported low self-esteem, low well-being, and a lack of support for social change which would benefit them (Jost & Hunyady, 2005). As noted previously, system justification is carried out through both attitudinal and behavioral justification strategies. Behavioral justification strategies include endorsement of the status quo, support for system maintenance (e.g., policy support), as well as through helping behavior (Nadler, 2002; Nadler & Halabi, 2006).

Intergroup Helping as Status Relations

Generally, helping behavior is considered a universally experienced phenomenon where help is intended to benefit another person or group through need fulfillment, problem solving, etc., as well as provide ancillary benefits such as self-esteem enhancement for the giver (Aknin

et al., 2013; Clary et al., 1998). In an intergroup context, help is provided between members of different groups or the group themselves. When relative differences in social status are salient, the motivation and consequences of helping others does not always address the underlying need for help of the recipient. The intergroup helping as status relations model (IHSR; Nadler, 2002; Nadler & Halabi, 2006) suggests that during intergroup helping situations where help is given from higher status groups to lower status groups, two types of helping behavior (dependency- or autonomy-oriented) may occur depending on if the current social hierarchy is perceived as legitimate and stable. Legitimacy was proposed as the agreement and acceptance of the status hierarchy as existing for legitimate reasons (Jost & Major, 2001; Tajfel & Turner, 1986). Stability was conceptualized as the perception of the status hierarchy and the higher status group's position as existing for the foreseeable future (Cunningham & Platow, 2007; Tajfel & Turner, 1986). When the current conditions of a system are perceived legitimate and stable (or illegitimate-unstable) by higher status group members, they will provide temporary, dependency-oriented help to lower status group members intended to resolve the need for help without transferring any skills to the recipient and rendering them dependent on the helper in the future (Nadler, 2002).

The alternative, autonomy-oriented helping behavior, provides instruction or support for the recipient to solve their need for help themselves now and in the future (Nadler, 2002). Therefore, autonomy-oriented helping behavior is meant to provide a step toward social change by relieving some disadvantage from the lower status group. The IHSR model indicated that autonomy-oriented helping behavior is avoided by higher status group members as it could induce system change (Nadler, 2002). System change, such as a lower status group and its members increasing their relative status (e.g., political power, etc.), is prevented because it

would threaten the higher status group's position (Nadler, 2002; Nadler & Halabi, 2006). Ultimately, in intergroup helping situation situations, higher status group members are working on behalf of their group to retain power and status. The assumption of *noblesse oblige*, that those in power have a social responsibility to help those who have less, is deployed strategically by providing help but also preserving the status hierarchy by preventing social change (Nadler & Halabi, 2006; Piff et al. 2010). Essentially, higher status group members are providing help today, but ensuring the lower status group is dependent on the higher status group for help in the future.

For example, in the IHSR model, presumably when higher status groups donate to charitable organizations, the intended benefit of giving a donation may not actually be providing the assistance necessary to address the distribution of resources and social status structure, but rather placating a current need and reinforcing the current status hierarchy (Nadler, 2002). The model proposes that higher status groups, regardless of their perception of legitimacy and stability of status relations, are typically more likely to give dependency-oriented help in order to preserve their position in the hierarchy (Nadler, 2002). For lower status group members, if the social hierarchy is perceived as stable and legitimate, then they are proposed to seek and accept dependency-oriented help from higher status group members (Nadler, 2002). Conversely, if the social hierarchy is perceived as unstable and illegitimate, lower status group members are proposed to either not seek help from the higher status group or seek autonomy-oriented help (Nadler, 2002). In an experiment of helping-seeking behavior for lower status groups, participants who were led to believe the difference between their school and another higher achieving school's achievement level was stable or unstable. When stable, lower status group members sought dependency-oriented help through receiving answers to unsolved math

problems (Nadler & Halabi, 2006). When the system was perceived unstable, lower status group members avoided seeking help all together (Nadler & Halabi, 2006).

As the relative accumulation of resources by groups, whether material or social, becomes stratified, differences which arise from the social status hierarchy will affect how help is given from higher status group members to lower status group members. IHSR proposes that helping behavior from higher status to lower status group members is motivated by maintenance of power, rather than egalitarian social values or empathy (Nadler, 2002). When presented with the profile of a lower status help recipient, the majority of participants (78%) preferred to give dependency-oriented help over autonomy-oriented (22%) help (Nadler & Chernyak-Hai, 2014). Help recipients were perceived as existing in a stable social status situation in which the help they needed was likely to necessary in the future, therefore dependency-oriented help was given. When assessing emotional reactions to and perceptions of the lower status help recipients, participants reported greater feelings pity, responsibility to help, and that recipients would need help in the future (Nadler & Chernyak-Hai, 2014).

In both system justification and intergroup helping, the perceptions of the system as stable and legitimate are antecedents to the motivation of higher status group members to maintain the system (Jost et al., 2005; Nadler, 2002). In intergroup helping, dependency-oriented helping behavior serves the function of maintaining the current status hierarchy and justifying the system (Nadler, 2002). As previous research has highlighted, higher status group members elect to give dependency-oriented helping behavior in all conditions in order to maintain the system (Nadler, 2002; Nadler & Chernyak-Hai, 2014). However, the extent to which either legitimacy or stability, or both, have relationships with system justification efforts is mixed empirically (Jost et al., 2005). Across several studies involving a diverse set of participants from

different countries, legitimacy and stability each had some support as predictors, but in some cases the high intercorrelation between them impacted interpretability. Originally proposed in the IHSR model as theoretically-related antecedents to system-maintaining behaviors, how each perception of the system is related to system justification beliefs and behaviors is important to consider. Among an English sample, there were positive relationships between perceptions of status differences, system justification, and perceptions of system legitimacy and stability (Jost et al., 2005). In this study, the relationship between system justification beliefs and behaviors with stability was greater ($b = .62$) than the relationship with legitimacy ($b = .10$; Jost et al., 2005). As such, stability, the perception that a system is likely to continue in the future, is stronger when system justification motives are active.

In additional empirical work, the level of threat experienced by the participants was manipulated to be low or high prior to assessing these relationships (Jost et al., 2005). Participants were randomly assigned to either read a vignette that the current conditions in Israel were stable and the citizens were generally happy, and desired to stay (low threat) or current conditions were likely to change, citizens were upset, and they were willing to leave the country (high threat). Participants in the low threat condition reported strong positive relationships between system justification beliefs and behaviors with both system legitimacy and stability (Jost et al., 2005). However, in the high threat condition, system justification beliefs and behaviors had a weak, positive relationship with legitimacy, and a negative weak relationship with stability (Jost et al., 2005). The nature of the relationship between system justification and perceptions of system legitimacy and stability may depend on system threat. Consideration should be given for the theoretical model of intergroup helping that includes legitimacy and stability predicting the type of helping behavior directed at lower status groups, such that they may not always operate

in the same manner when impacted by the system is called into view (Jost et al., 2005; Nadler, 2002).

Emotion was proposed as one avenue that may impact perceptions of system legitimacy and stability which precede system justification beliefs and behaviors, such as intergroup helping (Thomas et al., 2009; Wakslak et al., 2007). For example, when considering what may disrupt a seemingly endless cycle of power and status perseverance by higher status group members, emotion induction for compassion was demonstrated to have an impact on higher status people's giving behavior (Piff, et al. 2010). When controlling for religiosity, age, and ethnicity, people who reported higher socioeconomic status (SES; e.g., income) reported donating a smaller proportion of their resources to people in need compared to those of lower SES (Piff et al., 2010). When higher status individuals were induced to feel compassion towards those in poverty using a video manipulation of childhood poverty, they had significant increases in donations (Piff et al., 2010). Although not tested within the framework of autonomy or dependency-oriented help, increasing compassion for those in need increased prosocial behavior by higher status group members. However, previous research demonstrated that prosocial emotions such as empathy and moral outrage increase the likelihood of higher status group member's helping, but the type of helping behavior which is motivated depends on if the emotion is inwardly or outwardly facing (Wakslak et al., 2007).

The Role of Prosocial Emotions in Disrupting System Justification

Prosocial emotions (e.g., empathy, etc.) have been proposed to increase the likelihood of help being given when social status is salient and system justification beliefs are taken into account (Krauth-Gruber & Bonnot, 2020; Thomas et al., 2009; Wakslak et al., 2007). As mentioned previously, when social identity is salient (e.g., priming high income status), emotions

are suggested to be felt on behalf of the group and lead to group-based action (Mackie et al., 2008). In a review of prosocial emotions, Thomas and colleagues (2009) noted that the emotions of guilt, empathy, sympathy, self-focused anger, and moral outrage lead to prosocial behavior by higher status group members. However, not every emotion leads to prosocial behavior which addresses inequity systems. For example, guilt was proposed as a self-focused emotion where higher status group members acknowledge the current social system is illegitimate and their group is responsible (Thomas et al., 2009). Prosocial behavior is motivated to reduce the negative feelings associated with guilt through symbolic action such as an apology (Thomas et al., 2009). When the higher status group engages in prosocial behavior, these acts will acknowledge responsibility but reducing negative affect quickly is the main focus (Thomas et al., 2009).

As it relates to system justification and IHSR, the prosocial behavior reduces the tension brought from acknowledging inequality through dependency-oriented helping behavior which is prosocial but does not lead to social change. When participants were manipulated to view their advantage over immigrants when participating in recreational sports as illegitimate, they reported higher levels of guilt compared to those who were told to view this advantage as legitimate (Harth et al., 2008). In both the legitimate and illegitimate conditions, guilt was not significantly associated with endorsement of redistributive efforts to increase equal opportunities (Harth et al., 2008). Therefore, although acknowledging illegitimate social systems may lead to guilt, guilt does not lead to social change behavior.

When prosocial behavior is used to maintain the system and temporarily remove tension associated with acknowledging an inequitable system, this often results in a paternalistic view of lower status groups by higher status group members (Jackman, 1994; Radke et al., 2020; Thomas

& McGarty, 2009). Higher status groups perceive lower status recipients as needing to be cared for and dependent upon help which reinforces the status quo and makes dependency-oriented help more likely in the future. Noted by Jackman (1994) as the “velvet glove” treatment, higher status group members use dependency-oriented help to demonstrate “care” for lower status group members under the notion they require it. However, as help is given, it reinforces the paternalistic belief that lower status groups and their members need the help and higher status group members will provide help but remain in a relative state of advantage (Radke et al., 2020).

Conversely, a different emotion, moral outrage, was proposed to support social change through helping behavior (Thomas et al., 2009). Moral outrage is described as an other-focused emotion where outrage is spurred by perceptions that an illegitimate system, as opposed to the higher status group, is responsible for inequality (Krauth-Gruber & Bonnot, 2020; Thomas et al., 2009). As such, moral outrage was proposed to create solidarity between higher and lower status groups because both recognize the system is at fault, rather than a particular group (Thomas et al., 2009). If the system has been determined to be immoral and unjust, therefore illegitimate, higher status individuals should engage in autonomy-supportive behavior to mobilize less advantaged groups towards more equitable conditions (Thomas et al., 2009; Wakslak et al., 2007). Therefore, connecting perceptions of the status quo with moral outrage seems to lessen the effects of system justification by calling into question the legitimacy of the system on a moral level.

Systemic issues are unavoidably emotional due to the ongoing disadvantageous positions lower status groups endure. When pointing out the system is immoral, people (regardless of group) should perceive the system as illegitimate, responsible, and requiring change (Thomas et al., 2009). Moral outrage has been associated with support for political and social action

(Wakslak et al., 2007). However, this emotion must be used carefully. When social status (e.g., income) was reported, status was associated with endorsing system justifying ideologies (e.g., opposition to equality), which in turn was associated with reduced moral outrage and guilt (Wakslak et al., 2007). As such, system justification led to lower support for redistribution efforts (e.g., education, jobs, etc.). The temporal order of experiencing moral outrage is an important factor in reducing the likelihood high status group members using system justification behaviors in both their palliative and status maintaining function. If higher status group members are induced to feel moral outrage by calling out an immoral system this should result in reduced perceptions of legitimacy and stability as a result of viewing the system is to blame. Given that moral outrage is related to social change efforts, the palliative function of system justification should be avoided and result in greater helping intentions and behavior which supports social change for lower status group members. Fostering moral outrage as a way to improve lower status groups position in the status hierarchy through affecting system perceptions and increasing autonomy-oriented help requires further investigation.

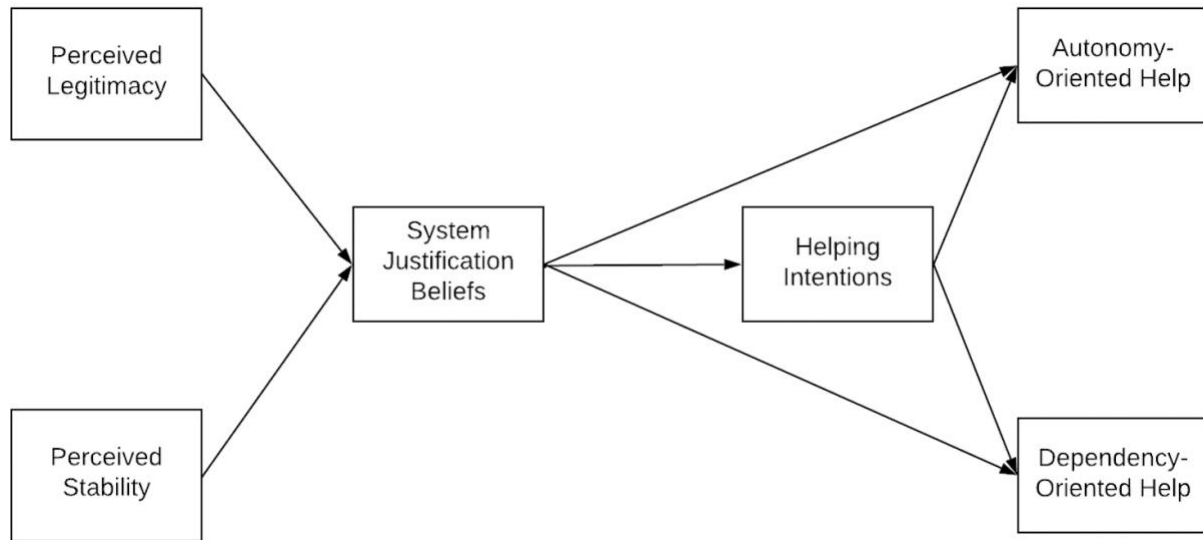
The present research proposed that if participants experience moral outrage prior to reporting on perceptions of the social system and system justification beliefs, there will be weaker relationships between perceptions and system justification beliefs, and therefore greater autonomy-oriented helping behavior. Overall, the present research investigated the effects of moral outrage on intergroup helping intentions and behavior. Specifically, moral outrage was proposed to simultaneously attenuate the relationship between perceptions of the social system and system justification, attenuate the relationship between justification and dependency-oriented helping, and bolster autonomy-oriented helping behavior toward low status group members.

The Present Research

When experiencing moral outrage (e.g., frustration or anger at the system), by calling into question the morality of the legitimacy of the system, perceptions of the legitimacy and stability of the system should be weakened and system justification motives should be dampened (Figure 1). Moral outrage should lead to greater intentions to help lower status group members in order to disrupt the system which is responsible for the inequitable conditions (Figure 1). Specifically, there may be an opportunity to both decrease the likelihood of dependency-oriented helping behavior and foster autonomy-oriented helping behavior from higher status group members towards lower status group members (Figure 1). If, by default, system threat and uncertainty provide an opportunity to bolster status quo, then inducing moral outrage regarding the legitimacy and stability of the system may be more likely to disrupt system justification and increase system change. Specifically, following this proposition, if higher status group members are feeling moral outrage toward the current conditions of the social system, they will be more apt to provide autonomy-oriented helping to lower status group members when provided with the opportunity. The present research proposes the connections between these concepts in the following theoretical model.

Figure 1

Theoretical Relationships Between System Perceptions and Justification and Helping Intentions and Behaviors



Overall, the present research investigated how moral outrage impacts these outcomes through two studies. In Study 1, the effect of moral outrage was compared against a control condition on perceptions of system legitimacy, system justification, helping intentions, and helping behavior directed toward lower status group members. Study 2 extended this by investigating the moderating effect of moral outrage on the relationships between of system perception and justification as it leads to helping intentions and helping behavior.

Study 1

The first study investigated the effects of moral outrage manipulation on perceptions of system legitimacy and stability, system justification beliefs, helping intentions, and helping behaviors using an online sample of adults. In order to focus on help given from higher status group members to lower status group members, inclusion into the study required participants responding they were at least average or better in social status (e.g., financially, educationally,

etc.). Participants were randomized in either a moral outrage or control vignette condition before completing measures on system perceptions and the other outcomes. Additionally, the first study established several measures (e.g., legitimacy and stability) for the purposes of both studies. Moral outrage has been an effective intervention in reducing perceptions of system legitimacy and bolstering the relationship between higher status and lower status group members through unifying blame for unequitable conditions on the system, and was proposed to increase autonomy-oriented helping behavior directed as lower status group members.

Study 2

Study 2 extended the findings of Study 1 by assessing the moderating effect of moral outrage, compared to a control condition, on the relationships between perceptions of system legitimacy and stability, system justification beliefs, and helping intentions and behaviors. Hypotheses included that moral outrage would decrease the relationship between perceptions of system legitimacy and system justification beliefs. In the control condition, the status quo should be observed, such that there should be a strong relationship between perceptions of the system and system justification beliefs. Additionally, moral outrage would bolster the relationship between system justification beliefs and helping intentions, such that moral outrage should weaken system justification beliefs and increase helping intentions of higher status group members toward lower status group members.

Similar to the first study, Study 2 was conducted using an online sample of adults who perceived themselves as at or above average in social status and were randomized in a moral outrage or control condition. Participants completed several measures following the manipulation. A multigroup modeling approach allowed the assessment of the moderating effect of moral outrage on relationships on a model-wide level, as opposed to a more traditional

interaction approach which limits the number of paths affected, and a deeper assessment of the hypothesized connection between system perception, justification, and helping behavior.

Additionally, the role of the perceptions of system stability was assessed in addition to system legitimacy using an exploratory model as an additional predictor of system justification beliefs.

Given that stability is a core component of IHSR, but not covered as deeply in empirical literature, the hypotheses for its effects were investigated.

Chapter II

Study 1

Hypotheses

Study 1 attempted to induce moral outrage and to test specific hypotheses about the role of moral outrage in help provided by higher status group members to lower status group members. The following hypotheses are put forth regarding moral outrage. Specifically, in line with previous research, feelings of moral outrage will result in lower (H1a) perceptions of socioeconomic system legitimacy and (H1b) system justification beliefs compared to a control condition (Thomas et al., 2009; Wakslak et al., 2007). Furthermore, if moral outrage reduces perceptions of system legitimacy and stability therefore directing higher status group members toward system change, feelings of moral outrage will be related to greater (H2a) helping intentions, (H2b) autonomy-oriented helping behavior, and lower (H2c) dependency-oriented helping behavior compared to a control condition (Nadler, 2002).

Methods

Participants and Design

Participants were recruited from Prolific (www.prolific.co), an online research platform, under the premise of completing a brief, approximately 10-minute survey about their social attitudes and behaviors (see Procedure for more details on recruitment). Participants were compensated \$1.64 (\$9.82/hr) for completion; the median time to completion was 7 minutes and 12 seconds. The final sample, following data cleaning, included 376 participants with an average age of 37.50 years ($SD = 14.29$) who were primarily female-identifying ($N = 197, 52.4\%$) and White – Caucasian ($N = 273, 72.6\%$). See full demographic information for Study 1 below (Table 1).

Table 1

Descriptive Statistics for Participant Demographics in Study 1

Variable	Level	Representation
Age		37.50 (14.29) 18 – 85
Gender Identity	Female	197 (52.4%)
	Male	98 (26.1%)
	Genderqueer/Nonconforming	2 (0.5%)
	Transgender	5 (1.3%)
	Missing	74 (19.7%)
Ethnicity	Black/African American	21 (5.6%)
	Caribbean	1 (0.3%)
	East Asian	13 (3.4%)
	Latino/Hispanic	29 (7.7%)
	Middle Eastern	2 (0.5%)
	Mixed Race/Ethnicity	16 (4.3%)
	Native American or Alaskan Native	1 (0.3%)
	South Asian	7 (1.9%)
	Southeast Asian	6 (1.6%)
	White/Sephardic Jew	4 (1.1%)
	White/Caucasian	273 (72.6%)
	Missing	3 (0.8%)
Income	Less than \$10,000	21 (5.6%)
	\$10,000 - \$15,999	13 (3.5%)
	\$16,000 - \$19,999	6 (1.6%)
	\$20,000 - \$29,999	16 (4.3%)
	\$30,000 - \$39,999	31 (8.2%)
	\$40,000 - \$49,999	24 (6.4%)
	\$50,000 - \$59,999	31 (8.2%)
	\$60,000 - \$69,999	33 (8.8%)
	\$70,000 - \$79,999	25 (6.6%)
	\$80,000 - \$89,999	30 (8.0%)
	\$90,000 - \$99,999	31 (8.2%)
	\$100,000 - \$149,999	58 (15.4%)
	More than \$150,000	30 (8.0%)
	Missing	27 (7.2%)
SES	5	122 (32.4%)
	6	122 (32.4%)
	7	96 (25.5%)
	8	30 (8.0%)

9	5 (1.3%)
Missing	1 (0.3%)

Note. SES is the McArthur Subjective Socioeconomic Status scale.

Participants met inclusion criteria if they were at least 18 years of age or older, currently resided in the U.S., could complete the study in English, and rated themselves at least a 5 or greater on the McArthur Subjective SES scale (Adler et al., 2000; see Appendix A). The McArthur Subjective SES scale asks participants to rate themselves on a 10-point ladder, with those near the top having the best conditions (e.g., education, income, etc.) and those near the bottom having lesser conditions (Adler et al., 2000). The final sample exceeded the a priori sample size of $N = 354$ based on a G*Power analyses for an independent samples t-test with a moderate effect size, $d = 0.40$, power = .90, and alpha = .007 (Faul et al., 2009). An additional 10% of the total ($N = 354$) was added to compensate for all data lost during the data cleaning process, $n = 35$, for the final total recruitment target of 389 participants.

Measures

Participants generally completed multi-item measures with Likert-based response scales which were aggregated, when appropriate, into means for analyses. Measures in their complete form may be found in Appendices.

Subjective SES. Participants rated the subjective SES using the one-item MacArthur Scale of Subjective Social Status (Adler et al., 2000). Participants were instructed to view an image of a 10-rung ladder and select the position they believe they have in society considering those at the bottom have the least education, money, etc., and those at the top have the most. Given that this a single-item measure, internal consistency (Cronbach's alpha) cannot be used to indicate reliability. However, previous research has established strong test-retest reliability, $r = .62$, $p < .01$ (Operario et al., 2004).

Demographics. The demographic questions included five items assessing age, gender identity, race/ethnicity, income, and employment status. All demographics were collected via Prolific as a part of participant sign-up. Gender identity included options: male, female, genderqueer/nonconforming, and trans male/trans man, trans female/trans woman. Race/ethnicity allowed participants to choose all that applied including: Black/African American, Caribbean, East Asian, Latino/Hispanic, White/Caucasian, etc. Income included 13 options in \$15,000 increments starting at “Less than \$10,000”, “\$10,000 to \$15,999”, to the last option of “More than \$150,000” from which participants selected their total household income per year after taxes. Employment status included six options “Full-time,” “Part-time,” “Not paid in work (e.g., homemaker, retired, or disabled)”, “Unemployed (and job seeking)”, and Other.

Perceived legitimacy. Perceived legitimacy was measured using four items on a 7-point scale (1 = *Strongly disagree*, 7 = *Strongly agree*). Items were developed for the purpose of the study, based on previous research regarding aspects of legitimacy (e.g., Bettencourt et al., 2001; Jost & Major, 2001; Tajfel & Turner, 1986; see Appendix B). The four items were (1) “The socioeconomic system in this country is fair”, (2) “Socioeconomic status is a just way to understand social status”, (3) “People generally agree that socioeconomic status is a legitimate indicator of social status”, and (4) “Differences in socioeconomic exist for a reason.” Items were averaged to create a mean composite. The internal consistency was acceptable, *Cronbach’s alpha* = .705 [.650, .749].

Perceived stability. Perceived stability was measured using five items on a 7-point scale (1 = *Strongly disagree*, 7 = *Strongly agree*). Similar to legitimacy, stability items were developed for the purpose of the study based upon previous research (e.g., Bettencourt et al., 2001; Chernyak-Hai et al., 2014; Tajfel & Turner, 1986; see Appendix B). The five items were (1)

“Socioeconomic status is likely to change in the future”, (2) “Socioeconomic status is a fixed characteristic (unlikely to change)”, (3) “Socioeconomic status has been a part of how social status is judged for a long time”, (4) “The differences in socioeconomic status in society will be the same in the future”, and (5) “There are realistic ways that socioeconomic status can be changed.” Items were averaged to create a mean composite. The internal consistency was acceptable, *Cronbach’s alpha* = .653 [.589, .702].

System justification scale. The system justification scale (Kay & Jost, 2003) was an 8-item measure assessing the extent to which participants agree with statements regarding the conditions of the current social system in the U.S (See Appendix C). Items were measured on a 5-point scale (1 = *Strongly disagree*, 5 = *Strongly agree*), and a composite mean score was used for analyses. An example item includes, “In general, you find society to be fair” and “Most politics serve the greater good.” Previous research has confirmed the reliability ($\alpha = .87$) and validity of the scale (Kay & Jost, 2013). The internal consistency was acceptable, *Cronbach’s alpha* = .890 [.867, .907].

Moral outrage. A 4-item measure of moral outrage (see Appendix D) from the Deontic Justice Scale was used as a manipulation check. The overall scale contained three subscales, including moral obligation (8 items), moral accountability (6 items), and moral outrage (4 items) which can be used as a composite measure (Beugré, 2012). The current study used only the moral outrage scale, but the overall measure had acceptable reliability in previous research ($\alpha = .85 - .89$; overall scale $\alpha = .91$) and validity (Beugré, 2012). An example moral outrage was “I feel saddened by injustices done to others.” The internal consistency was acceptable, *Cronbach’s alpha* = .886 [.856, .909].

Helping intentions. Helping intentions was measured using three items assessing interest, willingness, and likelihood to provide help to those who are of lower socioeconomic status (see Appendix E). The Interest item asked participants, “How interested are you in helping people of lower socioeconomic status?” on a 7-point Likert scale (1 = *Very uninterested*, 7 = *Very interested*). Second, a Willingness item had participants rate how willing they would be to help, “How willing would you be to help people of lower socioeconomic status?” on a 7-point Likert scale (1 = *Very unwilling*, 7 = *Very willing*). Finally, the Likelihood item asked participants about the likelihood they would help to provide help, “How likely would you be to provide help to those of lower socioeconomic status?” on a 7-point Likert scale (1 = *Very unlikely*, 7 = *Very likely*). Helping intentions was calculated by a mean score of the three responses, with higher mean scores suggesting more intention to provide help. The internal consistency was acceptable, *Cronbach’s alpha* = .992 [.907, .935].

Helping behavior. Two helping behavior scales were developed for the purposes of the study, based upon scenarios detailing autonomy- and dependency-oriented organizations by Maki and colleagues (2017). The measures were adapted to frame help in terms of how much the participant would endorse providing specific helping behaviors to those of a lower socioeconomic status (see Appendix F). Dependency-oriented behavior had three items whereas and autonomy-oriented behavior had four items which participants answered on a 5-point scale (1 = *Not at all*, 5 = *Very much so*). Participants were instructed to, “For the next few items, consider ways in which you can help those in need. Below are a sample of ways help can be provided. Please indicate using the scale provided how much you would endorse each helping behavior as a part of your way to help people of lower socioeconomic status.” An example dependency-oriented item was, “Donate resources, such as food, on a regular basis to recipients.”

Whereas an example autonomy-oriented item was, “Volunteer to help facilitate biweekly education classes at a community center.” Separate mean composite scores were created for the purposes of analyses (e.g., greater scores mean greater endorsement of dependency-oriented helping behavior). The internal consistency was acceptable for both measures; dependency-oriented helping behavior *Cronbach’s alpha* = .658 [.589, .714] and autonomy-oriented helping behavior *Cronbach’s alpha* = .898 [.874, .915].

Vignette check. Participants were provided with the opportunity to provide feedback regarding the vignettes via two questions. The two items assessed if the manipulation vignettes were clear and understandable. The clear item asked, “When thinking of your experience reading the short except early in the study, was the text clear in its wording?” The understandable item asked, “When thinking of your experience reading the short except early in the study, was the text understandable?” Participants used a 5-point Likert scale (1 = *Strongly disagree*, 5 = *Strongly agree*) in responding to both items.

Procedure

The study, which included self-report questionnaires as well as an experimental manipulation, was conducted online. Participants were recruited through Prolific (see Appendix G) and followed a published study link to complete the study on Qualtrics, a survey management website. Participants were presented with purpose of the study was “... to investigate and increase understanding of differences in how people perceive, react, and behave in different situations, as well as some beliefs, attitudes, and behaviors.” A built-in prescreening question asked about subjective SES. In addition, demographic items were asked during this time but not used to screen participants. The other five demographic items (e.g., age, gender, etc.) were collected at the same time as the prescreening item but were not used as inclusion criterion for

the study. Those who selected the fifth rung or greater on SES, indicating they perceived themselves as at least middle class to upper class were directed to a Qualtrics survey where they read the study description, including the purpose of the study, estimated time of completion, compensation for participation, risks and benefits, as well as contact information of the researcher should they have questions. In essence, participants were told the study would include answering some questionnaires about how people respond to different situations and would take approximately 10 minutes of their time. Participants were informed that they may not directly benefit from participation, but they will be compensated (see Participants and Design) for participation. Prior to participation, participants read through the informed consent and electronically signed and acknowledged that they met the inclusion requirements and agreed to participate.

First, participants were randomly assigned to one of two vignettes regarding moral outrage. In the Moral Outrage condition, participants read through a section of the highlights on the Healthy People 2020 report on the impact of poverty on Americans, as defined by socioeconomic status (Poverty, n.d.):

The prevalence of poverty in the United States is an important public health issue. In 2015, approximately 43 million Americans lived in poverty. Although the U.S. Census Bureau uses “a set of dollar value thresholds that vary by family size and composition to determine who is in poverty,” poverty may be defined in a number of different ways, particularly by socioeconomic status (SES).

Socioeconomic status can be determined by a family's income level, education level, and occupational status. In spite of the differences in definition between poverty and socioeconomic status, researchers agree that there is a clear and established relationship

between poverty, socioeconomic status, and health outcomes—including increased risk for disease and premature death.

Many factors can contribute to inequitable access to resources and opportunities, which may result in poverty. Marital status, education, social class, social status, income level, and geographic location (e.g., urban vs. rural) can influence a household's risk of living in poverty. For example, in 2012, 17.7% of people in rural areas were living in poverty, compared to 14.5% of people in urban areas. Racial and ethnic minorities are more likely than non-minority groups to experience poverty at some point in their lives. In addition, children from families that receive welfare assistance are 3 times more likely to use welfare benefits when they become adults than children from families who do not receive welfare. Studies also report that migrant status is a risk factor for poverty.

Residents of impoverished neighborhoods or communities are at increased risk for mental illness, chronic disease, higher mortality, and lower life expectancy. Some population groups living in poverty may have more adverse health outcomes than others. For example, the risk for chronic conditions such as heart disease, diabetes, and obesity is higher among those with the lowest income and education levels. In addition, older adults who are poor experience higher rates of disability and mortality. Finally, people with disabilities are more vulnerable to the effects of poverty than other groups.

Racial and ethnic minorities living in poverty (defined by socioeconomic status) may also have more adverse health outcomes. For example, a study of health outcomes among those living in poverty found that African American men are more likely to die from prostate cancer than any other racial group. The same study found that African American

women are more likely to suffer from breast and cervical cancer than any other racial group.

Similarly, racial and income-based disparities are found among children. One study found more than half of the children living in poverty had cavities, compared to one third of those living above the poverty level. The study also found that, of families living in poverty, Mexican American children had the highest prevalence of cavities. This high rate of cavities may be due, in part, to parents' lack of awareness of recommendations for early preventive oral health care. Cost may be another important factor as almost two-thirds of the parents in 1 study did not obtain dental care for their children due to cost.

In the control condition, participants received a section of the Fisheries of the United States, 2018 Factsheet, which is an annual report generated by National Oceanic and Atmospheric Administration through the U.S. Department of Commerce (National Marine Fisheries Service, 2020). The control condition scenario was selected given that it follows a similar, government-based annual report format as the Healthy People report (Poverty, n.d.) and concerns the current status of issues related to the economy but in a more neutral perspective:

ABOUT THE REPORT

Each year NOAA Fisheries compiles key fisheries statistics from the previous year into an annual snapshot documenting fishing's importance to the nation. The 2018 report provides landings totals for both domestic recreational and commercial fisheries by species and allows us to track important indicators such as annual seafood consumption and the productivity of top fishing ports. These statistics provide valuable insights, but to fully understand the overall condition of our fisheries, they must be looked at in

combination with other biological, social, and economic factors of ecosystem and ocean health.

SUSTAINABLE FISHERIES, JOBS, AND THE ECONOMY

Both commercial and recreational fisheries play an enormous role in the U.S. economy. In 2018, U.S. commercial fishermen landed 9.4 billion pounds of seafood valued at \$5.6 billion. Recreational anglers made 194 million marine recreational fishing trips with a catch of 956 million fish and landings of 347 million fish (359 million pounds). Fish processors, icehouses, restaurants, grocery stores, bait and tackle shops, fuel stations, and many other businesses benefit from healthy commercial and recreational fishing.

HEALTHY STOCKS MEAN HEALTHY ECONOMIES

Maintaining high commercial fish landings and values and high participation levels in recreational fisheries is good news for fishermen, fishing communities, and for the Americans who want sustainable, healthy U.S. seafood and rewarding outdoor recreational experiences. We are seeing that responsible management has resulted in continued, steady high landings and values of U.S. fisheries over the last five years. This is the payoff from the collective progress that our agency, the eight regional fishery management councils, and our stakeholders have made, working together to ensure the sustainability and economic stability of our nation's fisheries. Additional information on the economic impacts of commercial and recreational fishing can be found in the companion publication Fisheries Economics of the United States (FEUS).

The use of a control vignette which was loosely related to how current conditions affect the economy and society was based upon research by Wilkins and colleagues (2014) who used a similar vignette designation (intervention focused on social mobility, control focused on a team

that had performed well). Following, participants responded to the legitimacy and stability items and the measure of system justification beliefs. Additionally, participants completed the deontic justice measure for moral outrage, as well as the helping intentions and behavior measure. After responding to the helping measures, participants completed the two items assessing manipulation clarity and understanding. Last, participants were thanked for their participation and debriefed on the nature of the study. Specifically, participants were debriefed that the study was designed to investigate the link between perceptions of the socioeconomic system and people's attitudes and behaviors towards others.

Results

Data Cleaning

Although 389 participants were recruited, a final sample of 376 was used for analysis. The data was determined to be missing completely at random based on a non-significant Little's MCAR test, $\chi^2(1297) = 1303.04, p = .448$. Across all data, 29 out of 389 participants had at least one missing response. One item in the Stability measure had the highest rate of missingness at 1.4%, and all other items had less than 1% missing. Single mean imputation was used to replace missing values. The prescreening item for subjective SES was then assessed to ensure all participants were appropriately prescreened (McArthur Subjects SES response at 5 or above), and 5 participants were removed for not reporting a 5 or above for that item resulting in a sample size of $N = 386$. Univariate outliers were removed for main composite variables (e.g., Legitimacy, Stability, etc.) based upon having a mean score greater than 3 SDs from the sample mean (Kline, 2016), which removed 10 participants and resulted in the final sample size of $N = 376$. Data collection was set to randomize who was in each condition to be equal. The final sample was approximately equal randomized between conditions with 186 (49.5%) in the control

condition and 190 (50.5%) in the moral outrage condition. Lastly, participants in both conditions found the vignettes, on average, clear (Control M = 4.25, SD = 0.88; Moral Outrage M = 4.63, SD = 0.64) and understandable (Control M = 4.12, SD = 0.89; Moral Outrage M = 4.71, SD = 0.57). There were significant differences with those in the moral outrage condition finding their vignette significantly clearer ($t(337.66) = -4.81, p < .001, d = -0.497$) and more understandable ($t(312.97) = -7.50, p < .001, d = -0.775$) than those in the control condition. However, given the 5-point scale, both conditions were above 4 out of 5 which is the near the ceiling of the response options and should be considered acceptable for understanding their respective vignettes.

Scale Assessment

Measured variables including legitimacy, stability, helping intentions, and autonomy and dependency-oriented helping behaviors were assessed for their structural validity using confirmatory factor analysis (CFA). Specifically, under the IHSR model, a two-factor model was assessed that had legitimacy and stability items loading onto their respective latent factors and included a correlation between the two latent variables (Nadler, 2002). Similarly, the two helping behavior measures were also assessed using a two-factor model. The helping intentions measure was assessed using a single factor model. Model fit indices were assessed based on guidelines for Chi-square and associated p -value $> .05$, CFI $> .90$, RMSEA $< .08$, and SRMR $< .08$, as specified by Kline (2016). Given the nature of survey data and the use of Likert scales, the assumption of multivariate normality under Maximum Likelihood in CFA is often failed, therefore multivariate normality was addressed during model fit using DWLS estimation (Bandalos, 2014; Shi & Maydeu-Olivares, 2020). In the case of Helping Intentions which only had three items, DWLS estimation returned model fit results which were not interpretable (e.g., CFI = 1.00), therefore standardized factor loadings were used to assess fit. In addition, their

reliability as indicated by internal consistency was assessed using Cronbach's alpha including 95% confidence intervals (Table 2).

Legitimacy and stability. A two-factor of legitimacy and stability was conducted to test both the validity of their measurement, but also confirm their theoretically-proposed complementary relationship in the IHSR model (Nadler, 20220. The two-factor model for legitimacy and stability had adequate but not ideal fit, $\chi^2(26) = 152.26, p < .001, CFI = .810, TLI = .736, RMSEA = .114 [.097, .132], SRMR = .104$. There was a significant, unstandardized covariance between legitimacy and stability, $r = .186, p < .001$. According to model fit indices put forth by Kline (2016), an ideal model has a p -value $> .05, CFI$ and $TLI > .90, RMSEA < .08$, and $SRMR < .08$. Considering these guidelines, the original model does not fit the data well. One issue which may have impacted model fit includes that two items on the stability measure had standardized factor loadings less than .300 which is less than desirable for a scale (Kline, 2016).

A secondary model was assessed removing these two items on the stability measure which yielded a model that was marginally better statistically, $\chi^2(13) = 94.11, p < .001, CFI = .850, TLI = .758, RMSEA = .129 [.105, .154], SRMR = .102$. Similarly, there was a significant, unstandardized covariance between legitimacy and stability, $r = .222, p < .001$. When comparing the two models, model fit indices indicated there was a significant reduction in Chi-square value, $SRMR$ remained similar, but CFI and $RMSEA$ increased, $\Delta\chi^2(13) = 58.15, p < .001$. Taken holistically, the removal of the two items did not seem warranted as some model fit indices increased, decreased, or were unchanged. The analyses proceeded with the originally constructed measure of stability.

Table 2

Validity and Reliability Statistics for Study 1 Measures

Measure	α [95% CI]	χ^2	CFI	SRMR	RMSEA
Legitimacy	.705 [.650, .749]	152.26***	.810	.104	.114
Stability	.653 [.589, .702]				
Helping Intentions	.992 [.907, .935]	0.00***	1.000	.000	.000
Autonomy Help Behavior	.898 [.874, .915]	14.18	.999	.040	.016
Dependency Help Behavior	.658 [.589, .714]				
Moral Outrage	.886 [.856, .909]	-	-	-	-
SJB	.890 [.867, .907]	-	-	-	-

Note. Legitimacy and Stability, as well as Autonomy and Dependency Help Behavior, were each run in two-factor models, so model fit results are only reported once. System Justification Beliefs (SJB) and Moral Outrage had been previously validated, so only internal consistency is reported for this measure.

Helping intentions. In some instances, a three-item factor using DWLS estimation may return model fit indices which are not interpretable using traditional guidelines. In these cases, standardized factor loadings are used to assess the fit of the items on the latent factor. For this measure, standardized factor loadings ranged from .857 - .943. Coupled with an internal consistency $\alpha = .992$ [.907, .935], it was determined that this measure was both structurally valid and reliable for the purposes of the study.

Helping behavior. The model fit for the two-factor helping behavior (dependency- and autonomy-oriented helping behavior) model was good, $\chi^2(13) = 14.18$, $p = .362$, $CFI = .999$, $TLI = .999$, $RMSEA = .016$ [.000, .055], $SRMR = .040$. The standardized factor loadings for dependency-oriented help ranged from .466 - .717 and ranged from .725 - .883 for autonomy-oriented helping behavior. There was a significant, unstandardized covariance of $r = .364$, $p < .001$ between the two factors indicating a positive relationship. Although dependency-oriented helping behavior had less than ideal internal consistency (Table 2), based on the structural validity being acceptable they were deemed usable for analysis.

Manipulation Check

The manipulation check was assessed to determine if the moral outrage condition had significantly greater reported levels of moral outrage than the control condition. An independent-samples t-test was conducted. The assumption of homogeneity of variance was not violated, $F(1, 374) = 0.46, p = .496$. There was not a significant difference between conditions, $t(374) = 1.32, p = .188, d = 0.136 [-0.067, 0.339]$. The moral outrage condition had slightly lower reported moral outrage ($M = 4.48, SD = 0.59$) than the control condition ($M = 4.56, SD = 0.58$). Although the manipulation was not successful in generating differences in reported moral outrage, analyses were conducted comparing the two conditions consistent with the experimental design of this study. However, condition effects may be unlikely to be obtained given the lack of difference in rated moral outrage between conditions.

Test of Hypotheses

A series of independent-samples t-tests were conducted to assess for mean-level differences between conditions, such that those in the moral outrage condition were hypothesized to report lower on legitimacy (H1a), stability, and system justification beliefs (H1b). Furthermore, those in the moral outrage condition were hypothesized to report greater helping intentions (H2a), and autonomy-oriented helping behavior (H2b), but lower dependency-oriented helping behavior (H2c). Including the moral outrage manipulation check, the total analyses include seven comparisons between groups, so p -values are assessed with an adjusted alpha threshold from .05 to .007 to correct for Type 1 error inflation due to multiple comparisons. According to the Bonferroni correction, a conservative approach, alpha (.05) is divided by the number of comparisons, in this instance seven were made, thus lowering alpha to $\alpha = .007$. The adjusted significance level should prevent Type 1 error when making inferences about the

effect of the conditions (Benjamini & Hochberg, 1995). The assumption of homogeneity of variance was met for all comparisons using Levene’s test (Table 3).

Table 3

Levene’s Test for Homogeneity of Variance of Study 1 Outcomes

Measures	<i>F</i>	<i>p</i>
Legitimacy	1.16	.281
Stability	0.05	.826
Helping Intentions	0.46	.496
Dependency Help Behavior	0.04	.848
Autonomy Help Behavior	0.32	.859
System Justification Beliefs	1.95	.163

Note. *df* for all tests was (1,374).

Based on descriptive statistics (*M*, *SD*), those in the moral outrage condition reported lower perceptions of system legitimacy, system justification beliefs, and dependency-oriented helping behavior compared to those in the control condition which was directionally in line with hypotheses (Table 4). Furthermore, those in the moral outrage condition reported greater autonomy-oriented helping behavior, which was also in line with hypotheses (Table 4). However, those in the moral outrage condition also reported greater levels of stability. When compared using independent-samples *t*-test, there were no statistically significant differences on any measure between conditions based on the adjusted alpha level, so all hypotheses were not supported through inferential statistics (Table 4).

Table 4

Descriptive and Independent-Samples t-Test Statistics for Study 1 Hypotheses

Measure	Control		Moral Outrage		<i>t</i>	<i>d</i> [95% CI]
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>		
Legitimacy	3.57	1.21	3.43	1.15	1.20	0.123 [-0.079, 0.326]
Stability	3.84	0.92	4.06	0.93	-2.29	-0.237 [-0.440, -0.033]
Helping Intentions	4.92	1.06	4.88	1.14	0.37	0.038 [-0.163, 0.241]
Autonomy Help Behavior	3.22	1.10	3.25	1.09	-0.24	-0.025 [-0.227, 0.178]
Dep. Help Behavior	3.33	0.93	3.30	0.90	0.28	0.029 [-0.173, 0.231]

SJB 2.43 0.87 2.29 0.73 1.64 0.169 [-0.033, 0.372]

Note. A negative *t* and *d* indicated that the mean for the control condition was less than the mean

for the moral outrage condition. Control N = 186 and Moral Outrage N = 190. Dep. Help

Behavior = Dependency Help Behavior.

For stability, there was a statistically significant difference using the traditional .05 threshold; those in the moral outrage condition (M = 4.06, SD = 0.93) had greater ratings of system stability than those in the control condition (M = 3.84, SD = 0.92). However, it was not below the .007 adjusted threshold so caution should be used when interpreting this result. Additionally, although not statistically significant, those in the moral outrage condition reported lower means (Table 4) for helping intentions compared to the control group which was the opposite of what was hypothesized (H2a).

Correlational Analyses

Given the lack of statistical significance in the experimental manipulation, overall correlations were assessed to provide preliminary analysis of the hypothesized model (Figure 1) proposed in both studies (Table 5).

Table 5

Correlation Matrix of Main Study Variables in Study 1

	1	2	3	4	5	6	7
Legitimacy	-						
Stability	.065	-					
Moral Outrage	-.212***	-.047	-				
Help Intent	-.296***	-.013	.500***	-			
Aut. Help	-.148**	.027	.244***	.491***	-		
Dep. Help	-.136**	.013	.378***	.561***	.629***	-	
SJB	.513***	-.078	-.216***	-.381***	-.218***	-.217***	-

Note. Aut. Help = autonomy-oriented helping behavior and Dep. Help = dependency-oriented helping behavior. *** $p < .001$, ** $p < .01$.

Although perceptions of system legitimacy and stability were theorized as intercorrelated in the IHSR model, there was not a significant relationship in Study 1, $r = .065$, $p = .217$ (Nadler, 2002). However, in line with SJT (Jost, 2018), perceptions of legitimacy had a strong, positive relationship with SJB, $r = .513$, $p < .001$. Participants who perceived the current socioeconomic system as legitimate also reported greater system justification beliefs that the status quo should be maintained. SJB was negatively related to intentions to provide help to those of lower socioeconomic status ($r = -.381$, $p < .001$), autonomy-oriented help ($r = -.218$, $p < .001$), and dependency-oriented help ($r = -.217$, $p < .001$). These findings suggest that higher status group members who believe the status quo should be maintained reported lower intention to provide help to those of lower status and lower endorsement of either type of helping behavior, in defense of the current system.

Internal Analyses

A series of additional post-hoc exploratory analyses were conducted to investigate a more refined inclusion criteria, the manipulation effect, as well as assessing differences in outcomes between high and low system justifiers. These post-hoc analyses were performed following the test of hypotheses in order to explore, in the case of system justification beliefs, additional dispositional factors which may impact perceptions of the system (e.g., legitimacy) and helping intentions and behavior. Given previous research (Jost et al., 2005; Jost, 2018) has investigated the impact of high versus low trait system justification, these post-hoc exploratory analyses are supported by theory and empirical work.

Subjective SES. In terms of the inclusion criteria, the study originally was inclusive of participants who rated themselves as a 5 or greater on the McArthur Subjective SES scale which would then include people who viewed themselves as “average” as well as “above average” in relation to others. However, the study was intending to look at those who would be considered members of higher status groups socioeconomically. Therefore, a subset of participants who rated themselves as a 6 or greater ($N = 247$) was used for the hypothesized analyses. The series of independent-samples t -tests looking at main study outcomes yield no statistically significant effects, similar to the original analyses. Furthermore, there was a wide dispersion of income reported (Table 1). Among those who reported a 6 or greater on the subjective SES scale, those who had an income above the scale middle (\$60,000 or greater; $N = 147$) were further re-assessed in a similar manner and yielded no significant results on the t -tests.

Comparison of high and low system justifiers. Although the experimental manipulation did not successfully result in significant differences between conditions, the level of trait system justification was used to assess potential differences between those of high (above median split; $N = 128$) and low (below median split; $N = 119$) on study outcomes. Previous research has indicated a positive relationship between system legitimacy and system justification motives and behavior (Jost, 2018). As such, if people are high in system justification beliefs, they should endorse or bolster attitudes and behaviors which seek to maintain the system compared to those low in system justification. Therefore, although post-hoc, it was expected that high system justifiers would report greater legitimacy, SJB, and lower intentions to help other and endorse helping behavior (Jost, 2018).

Within those who rated themselves as a 6 or greater on the subjective SES scale, there were significant differences between high and low system justifiers on mean-level perceptions of

legitimacy, moral outrage, helping intentions, and both helping behaviors, but not perceptions of system stability. Participants who were high system justifiers reported greater perceptions of legitimacy ($M = 3.99$, $SD = 1.04$) than those who were low system justifiers ($M = 3.05$, $SD = 1.03$; $p < .001$, $d = 0.871$). Additionally, those who were low system justifiers reported greater moral outrage ($M = 4.68$, $SD = 1.13$, $p < .001$, $d = -0.559$), helping intentions ($M = 5.29$, $SD = 1.00$, $p < .001$, $d = -0.668$), autonomy-oriented ($M = 3.46$, $SD = 1.03$, $p = .004$, $d = -0.365$), and dependency-oriented helping behavior ($M = 3.47$, $SD = 0.94$, $p = .015$, $d = -0.311$) than those who were high system justifiers (moral outrage $M = 4.35$, $SD = 0.66$; helping intentions $M = 4.58$, $SD = 1.11$; autonomy-oriented helping behavior $M = 3.01$, $SD = 1.11$; dependency-oriented helping behavior $M = 3.18$, $SD = 0.89$). However, there were no significant differences between high ($M = 3.88$, $SD = 0.89$) and low ($M = 3.99$, $SD = 0.94$) system justifiers on perceptions of system stability, $p = .382$, $d = -0.111$.

Additionally, 2 (justification: high, low) x 2 (condition: moral outrage, control) factorial ANOVAs were run to compare if the effect of the experimental condition on study outcomes varied by high and low system justification status. Similar to the main effects explored above, there was no significant differences between experimental conditions on any study outcomes, however, the main effects were found for high and low system justification as reported above. There were no significant interactions; the level of reported outcomes did not vary between conditions by system justification status.

Nature of helping behaviors for high and low justifiers. Concerning the types of helping behavior, previous research has indicated that they serve both different purposes with regard to system maintenance and are perceived differently by lower status group members (Nadler, 2002; Nadler & Chernyak-Hai, 2014). High system justifiers who seek to maintain the system may

perceive any helping behavior intended to help those of lower status as system threatening, and may not differentiate between the two types. Conversely, those lower in system justification who are less motivated to justify the status quo, may perceive that some behaviors (autonomy-oriented) are more likely to induce social change than others (dependency-oriented). However, research has not investigated if these are perceived as different by higher status group members, or by high or low system justifiers within that group.

The two-factor model CFA for helping behaviors was assessed for both high and low system justifiers. The two-factor model fit the data well in both the high and low system justifier groups; high system justifiers, $\chi^2(13) = 10.15, p = .682, CFI = 1.00, TLI = 1.00, RMSEA = .000$ [.000, .070], $SRMR = .057$. There was a significant, unstandardized covariance between legitimacy and stability, $r = .319, p < .001$. The standardized factor loadings for the autonomy-oriented factor ranged from .724 - .891 and for the dependency-oriented factor ranged from .364 - .754. Similar model fit results were found for the low system justifiers, $\chi^2(13) = 8.43, p = .814, CFI = 1.00, TLI = 1.00, RMSEA = .000$ [.000, .057], $SRMR = .055$. There was a significant, unstandardized covariance between legitimacy and stability, $r = .258, p < .001$. The standardized factor loadings for the autonomy-oriented factor ranged from .594 - .867 and for the dependency-oriented factor ranged from .423 - .829.

Discussion

Overall, the experimental manipulation that had participants in the moral outrage condition read a vignette detailing inequitable and harmful socioeconomic conditions for those in poverty in the U.S. did not have the hypothesized effect. Participants in both conditions reported means on the moral outrage measure which were close to the ceiling of the response scale (around 4.5 out of 5). Although the measure itself may not adequately capture the variability in

response to manipulation, the hypothesized effects on key study outcomes (e.g., legitimacy, system justification beliefs, etc.) were not found using the independent-samples *t*-tests. When assessing the descriptive statistics for the various outcomes, four out of five hypotheses had the hypothesized direction of the effect, although not statistically significant.

Previous research on moral outrage as a prosocial emotion (Thomas et al., 2009; Wakslak et al., 2007) has supported the relationship between the emotion and support for social change. In the present study, although non-significant, those who experienced the moral outrage manipulation did have descriptively lower dependency-oriented helping behavior, while also reporting greater autonomy-oriented helping behavior. Given nonsignificant findings, there is not empirical support for previous work, but descriptive statistics indicate that future work should investigate how and when moral outrage is related to greater autonomy-oriented behaviors and lower levels of dependency-oriented helping behavior (Nadler, 2002; Thomas et al., 2009; Wakslak et al., 2007). Furthermore, as in relates to the connection between system justification beliefs and the IHSR, those in the moral outrage condition reported lower perceptions of system legitimacy and system justification beliefs. The present research proposed that helping behavior directed from higher status group members toward lower status group members operates within IHSR through system justification beliefs. The mean-level perceptions of the socioeconomic system, which should precede justification efforts, were descriptively different; the mean of legitimacy was lower for those in the moral outrage condition (Wakslak et al., 2007). Furthermore, system justification beliefs were also lower compared to the control condition. These findings may lead to further research on the effect of moral outrage as a prosocial emotion which may reduce system justification beliefs and dependency-oriented helping behavior as well as increase autonomy-oriented helping behavior (Jost, 2018; Nadler, 2002).

Several internal analyses were conducted to investigate the presence of effects for the manipulation as well as alternative effects which were not a priori hypothesized. A median split was used to subsequently compare study outcomes for those who reported being high system justifiers and low system justifiers. Those who were high system justifiers reported greater perceptions of system legitimacy, whereas those who were low system justifiers reported greater moral outrage, helping intentions and both helping behaviors. Findings lend support to previous research that system justification is positively related to perceiving the system as legitimate and therefore engaging in system justification behaviors through lower intentions to help and endorsement of help (Jost et al., 2005; Jost, 2018; Nadler, 2002). When assessing if these effects varied by experimental manipulation, there were no significant results suggesting that the moral outrage manipulation did not influence high or low system justifiers on any study outcomes.

As previously mentioned, in Study 1, there were almost ceiling mean-level responses on the moral outrage measure and some directionally-supported descriptive statistics with small effect sizes between groups on the measures. In order to more fully assess the moderating effect of moral outrage, two steps should be taken including bolstering the experimental manipulation of moral outrage and expanding the response scale for the moral outrage measure to better capture variability within and between the two conditions. In a more robust moral outrage manipulation, it should be possible to better assess if moral outrage has the hypothesized effect on system perceptions, system justification, and intergroup helping, both at the mean-level as well as influencing the predicted relationships between variables.

Chapter III

Study 2

The aim of Study 2 was both to strengthen the manipulation of moral outrage as well as assess the proposed moderating effect of moral outrage on the relationships between perceptions of the legitimacy of the socioeconomic system, system justification beliefs, and helping intentions and behaviors. Separately, Study 2 assessed the addition of perceptions of system stability, with perceptions of system legitimacy, in the same theoretical model predicting system justification beliefs. Regarding the moral outrage manipulation, Study 2 increased its intensity by having participants write about the focus of their vignette (e.g., personal or anecdotal experiences with poverty for moral outrage condition) after reading through the vignette. Additionally, Study 2 expanded the Likert scale response anchors for the moral outrage measure to be 7-point instead of 5-point to capture more variability in perceptions of moral outrage as responses in both conditions were near the ceiling (5) in Study 1. Furthermore, some items were reworded to frame moral outrage responses in a more intense way thus inducing increased variability in responses between conditions (see Measures). Regarding the hypothesized model, Study 2 extended the investigation of the mean-level differences to assess the relational nature of the system perceptions and beliefs with helping intentions and behaviors when participants were induced to feel moral outrage compared to a control condition through a multigroup analytic approach.

Hypotheses

In an extension of Study 1, Study 2 tested several hypotheses in relation to the structural model presented in Figure 2. The hypothesized model was estimated using a multigroup approach so that the hypothesized relationships were assessed within each group as well as test

for invariance to determine if there are differences in the strength and direction of relationships between the groups.

Similar to Study 1, an overall hypothesis was proposed that those in the moral outrage condition would have lower (H1a) perceptions of socioeconomic system legitimacy and (H1b) system justification beliefs compared to a control condition (Thomas et al., 2009; Wakslak et al., 2007). Furthermore, moral outrage would be related to greater (H1c) helping intentions, (H1d) autonomy-oriented helping behavior, and lower (H1e) dependency-oriented helping behavior compared to a control condition (Nadler, 2002).

Additionally, with regard to the model testing, the following hypotheses were proposed for the control condition:

2. *Legitimacy will have a significant positive relationship with system justification beliefs.*
3. *System justification beliefs will have a significant relationship with helping intentions.*
4. *System justification beliefs will have a significant, positive relationship with dependency-oriented helping behavior (a), such that greater system justification is related to greater intention to provide dependency-oriented help. Additionally, system justification will have no relationship with autonomy-oriented help (b).*
5. *Helping intentions will have a significant positive relationship with both (a) dependency-oriented helping behavior and (b) autonomy-oriented helping behavior.*

In the moral outrage condition, the main differences between the hypothesized relationships in each condition are for hypotheses H2, H3, H4a, and H4b. The hypothesized pathways for the moral outrage condition are as follows:

2. *Legitimacy will have a positive relationship with system justification beliefs.*

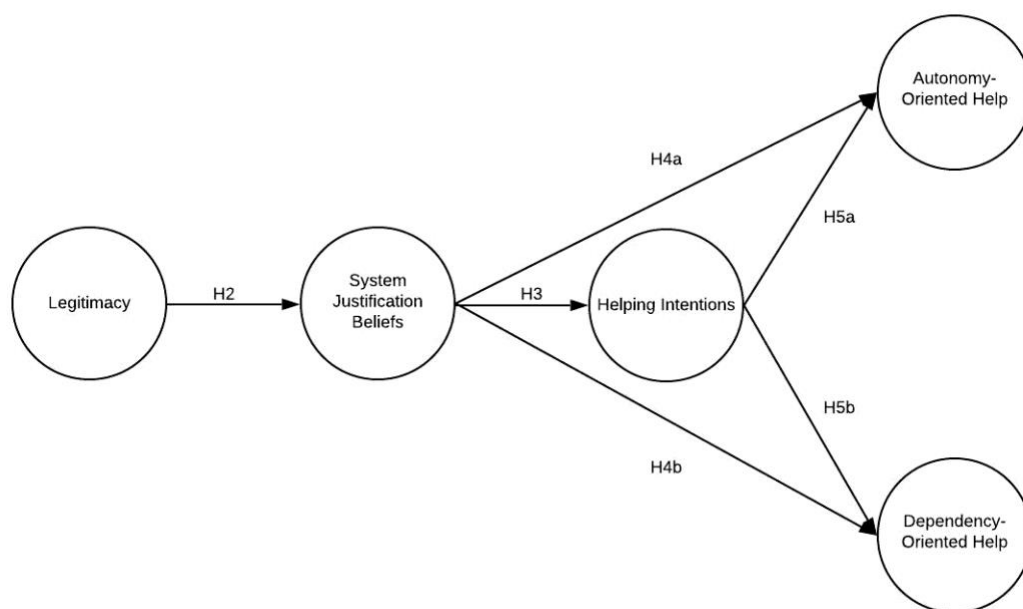
3. *System justification beliefs will have a significant negative relationship with helping intentions.*
4. *System justification beliefs will have no relationship with dependency-oriented helping intentions (a). However, system justification beliefs will have significant negative relationship with autonomy-oriented helping intentions (b), such that lower levels of system justification beliefs will be related to greater autonomy-oriented helping intentions.*
5. *Helping intentions will have a significant positive relationship with both (a) dependency-oriented helping behavior and (b) autonomy-oriented helping behavior.*

The key differences that were tested between conditions included the relationship between legitimacy and system justification beliefs as well as between system justification beliefs and dependency-oriented helping behavior. A significant positive relationship between legitimacy and system justification beliefs was expected in the control condition, whereas a positive relationship was expected in the moral outrage condition, but this was hypothesized to be weaker as a result of moral outrage (H2). Additionally, a significant relationship between system justification beliefs and helping intentions, without a direction, was proposed for the control condition. However, in the moral outrage condition, a significant negative relationship was proposed (H3). For those in the moral outrage condition, no relationship between system justification and dependency-oriented was proposed, however a significant positive relationship between these variables was proposed for those in the control condition (H4a). Lastly, no relationship was proposed in the control condition between system justification belief and autonomy-oriented behavior, but a significant negative relationship was proposed for the moral outrage condition, such that lower system justification beliefs would be related to greater

autonomy-oriented helping behavior (H4b). No differences between the conditions for the relationships between helping intentions and helping behaviors were proposed (H5a and H5b, respectively).

Figure 2

Conceptual Model of Relationships Between Perceptions of System, System Justification Beliefs, and Helping Intentions and Behaviors



Methods

Participants and Design

Participants were recruited from Prolific (www.prolific.co) under the premise of completing a brief, approximately 10-minute survey about their social attitudes and behaviors (see Procedure for more details on recruitment). They were compensated \$1.50 (\$9.00/hr) and the median time to completion was 8 minutes and 11 seconds. The final sample (Table 5), following data cleaning, included 634 participants with an average age of 40.79 ($SD = 14.55$) who were primarily male-identifying ($N = 338, 53.3\%$) and White – Caucasian ($N = 475,$

74.9%). The final sample had approximately equal group sizes with 314 (49.5%) in the control condition and 320 (50.5%) in the moral outrage condition. See full demographic information for Study 2 below (Table 6).

Table 6

Descriptive Statistics for Participant Demographics in Study 2

Variable	Level	Representation
Age		40.79 (14.55) 18 – 81
Gender Identity	Female	284 (44.8%)
	Male	338 (53.3%)
	Genderqueer/Nonconforming	7 (1.1%)
	Transgender	5 (0.8%)
Ethnicity	African	2 (0.3%)
	Black/African American	34 (5.4%)
	Caribbean	1 (0.1%)
	East Asian	24 (3.8%)
	Latino/Hispanic	33 (5.2%)
	Mixed	32 (5.0%)
	Native American or Alaskan	2 (0.3%)
	Native	
	South Asian	10 (1.6%)
	Southeast Asian	10 (1.6%)
	White/Sephardic Jew	8 (1.3%)
	White Mexican	2 (0.3%)
	White/Caucasian	475 (74.9%)
	Missing	1 (0.2%)
Income	Less than \$10,000	22 (3.5%)
	\$10,000 - \$15,999	20 (3.2%)
	\$16,000 - \$19,999	11 (1.7%)
	\$20,000 - \$29,999	33 (5.2%)
	\$30,000 - \$39,999	46 (7.3%)
	\$40,000 - \$49,999	54 (8.5%)
	\$50,000 - \$59,999	58 (9.1%)
	\$60,000 - \$69,999	54 (8.5%)
	\$70,000 - \$79,999	65 (10.3%)
	\$80,000 - \$89,999	41 (6.5%)
	\$90,000 - \$99,999	44 (6.9%)
	\$100,000 - \$149,999	115 (18.1%)

	More than \$150,000	71 (11.2%)
SES	5	237 (37.4%)
	6	175 (27.6%)
	7	141 (22.2%)
	8	58 (9.1%)
	9	14 (2.2%)
	10	9 (1.5%)

Note. SES is the McArthur Subjective Socioeconomic Status scale.

Participants met inclusion criteria if they were at least 18 years of age or older, currently resided in the U.S., could complete the study in English, and rated themselves at least a 5 or greater on the McArthur Subjective SES scale (Adler et al., 2000). A total of 700 participants were recruited, based upon SEM sample size recommendation established in previous simulation studies (Anderson & Gerbing, 1984; Bandalos, 2014; Hu & Bentler, 1999; Wolf et al., 2013). The range in sample size was between 200 to 500 participants required to assess a well-powered model across a variety of model specification variants and effects (e.g., multivariate non-normality, inclusion of continuous and binary variables, and estimation such as Maximum Likelihood [ML], DWLS, etc.). The participants were randomly assigned to one of two conditions.

Measures

The measures that were collected in Study 2 were the same as Study 1 except for changes made to the moral outrage items. Measures included legitimacy, stability, system justification beliefs, helping intentions, dependency- and autonomy-oriented helping behaviors. Reliabilities, which were similar to those reported in Study 1 (Table 6). Descriptives statistics (Table 6) were similar to that of Study 1 in terms of variability (M , SD) and distribution (skew, kurtosis) for most variables. However, moral outrage had an overall distribution near the ceiling of the response scale of 7, $M = 5.66$, $SD = 1.04$, $skew = -0.69$, $kurtosis = 0.25$ (Table 6).

Moral outrage. For the moral outrage measure, changes included using stronger language for items (see Appendix H). For example in Study 1 an item read “I feel sad when I see others being unfairly treated”, whereas in Study 2 it read “I feel most upset when I see others being unfairly treated.” Additionally, two items were added to more fully capture moral outrage: “Even the slightest injustice toward others makes me upset” and “It is unacceptable when other people experience injustice.” Lastly, the response scale anchors were extended from a 5-point to 7-point scale to capture more variability (see Appendix H). The moral outrage measure had adequate reliability, *Cronbach’s alpha* = .928 [.917, .938].

Procedure

The procedure for Study 2 mirrored the materials, measures, and procedure for Study 1 which included collecting data via Prolific.co, an online data collection and management site, from a sample of average or above-average subjective SES adults in the US. Prospective participants were told that the purpose of the study was “... to investigate and increase understanding of differences in how people perceive, react, and behave in different situations, as well as some beliefs, attitudes, and behaviors.” Similar to Study 1, following consent, participants were randomly-assigned to one of two vignette conditions (moral outrage or control vignettes from Study 1). However, in Study 2, participants were asked to take a few minutes to write about any personal or known experiences with their randomly assigned condition (e.g., poverty or fishing) after reading their vignette. Following, participants completed the revised moral outrage measure, and all subsequent measures were the same as Study 1 (e.g., legitimacy). At the end of the survey, participants were thanked for their participation and received the same debriefing message as Study 1.

Results

Data Cleaning

Although 700 participants were recruited, a final sample of 634 was used for analysis. First, the inclusion criterion was assessed to ensure all participants were appropriately prescreened (McArthur Subjects SES response at 5 or above). All participants were above the set threshold for passing the prescreener which kept the sample size at $N = 700$. The data was then assessed for patterns of missingness and was determined to be missing completely at random based on a non-significant Little's MCAR test, $\chi^2(2160) = 1839.03, p = .999$. One item in the Stability measure had the highest rate of missingness at 0.8%, and all other items had less missingness than that; therefore, single mean imputation was used to replace missing values. Univariate outliers were removed for main composite variables (e.g., legitimacy) based upon having a mean score greater than 3 SDs from the sample mean (Kline, 2016), which removed 27 participants and resulted in a new sample size, $N = 673$. Finally, multivariate outliers were removed using Cook's distance based on main study variables and removed 39 participants and concluded primary data cleaning before analysis with a final sample, $N = 634$.

Following data cleaning, internal consistency of study measures was assessed using Cronbach's alpha (Table 7). The majority of measures had satisfactory internal consistency. Although an alpha above .600 is preferred in most cases (George & Mallery, 2003), only the Stability measure was marginally below this threshold but was deemed accepted for the purposes of the analyses. Additionally, descriptive statistics are reported for the overall composites across conditions (Table 7). All measures had distributions which were unimodal and relatively normal given skew and kurtosis were between -1 and 1 for all variables. Moral outrage had a mean, when considering the standard deviation, which was higher on the distribution and close to the

ceiling ($M = 5.66$, $SD 1.04$) for the 7-point scale. The pattern of descriptive statistics, across conditions, was similar to that of Study 1 which highlights consistency in response across samples.

Table 7

Internal Consistency and Overall Descriptive Statistics for Study 2 Measures

Measure	α [95% CI]	M	SD	$Skew$	$Kurtosis$
Legitimacy	.665 [.614, .711]	3.55	1.13	0.05	0.04
Stability	.573 [.512, .626]	4.29	0.70	-0.57	2.66
Helping Intentions	.937 [.927, .945]	4.79	1.20	-0.54	-0.32
Autonomy Help Behavior	.905 [.887, .921]	3.10	1.12	-0.19	-0.66
Dependency Help Behavior	.721 [.678, .756]	3.33	0.97	-0.17	-0.39
Moral Outrage	.928 [.917, .938]	5.66	1.04	-0.69	0.25
SJB	.891 [.917, .938]	3.72	0.98	0.65	0.35

Note. Both helping behavior measures are on a 5-point scale (1-5). All other scales are on a 7-point scale (1-7).

Analysis of Mean Differences of Outcomes Between Conditions

In addition to assessing the hypothesized model of relationships, mean-level differences between conditions were assessed using independent-samples t -tests (Table 8). Similar to Study 1, there were seven independent tests conducted which may inflate Type I error. As such, a Bonferroni-adjusted alpha of .007 was used to determine statistical significance, rather than the traditional .05 cutoff. There were no statistically significant differences between conditions on the outcomes using the adjusted significance threshold. However, for autonomy-oriented helping behavior, there was statistically significant differences between conditions using the traditional threshold (.05), such that those in the moral outrage condition ($M = 3.22$, $SD = 1.13$) reported greater means for autonomy-oriented helping behavior compared to those in the control condition, $M = 2.96$, $SD = 1.11$ (Table 8). Although caution should be used in interpreting the results, the pattern of findings is consistent with hypotheses that moral outrage should reported

greater autonomy-oriented helping behavior toward those of lower status (H1d). Additionally, those in the moral outrage condition had descriptively greater means on helping intentions (H1c) and moral outrage, which is consistent with hypotheses (Table 8). However, those in the moral outrage condition reported greater mean levels of legitimacy (H1a), stability, system justification beliefs (H1c), and dependency-oriented helping (H1e) behavior which is not consistent with hypotheses (Table 8).

Table 8

Descriptive Statistics by Condition and Independent-Samples t-Test Results for Study 2 Measures

Measure	Moral Outrage		Control		<i>t</i>	<i>d</i> [95% CI]
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>		
Legitimacy	3.57	1.14	3.53	1.12	-0.66	-0.05 [-0.21, 0.10]
Stability	4.32	0.67	4.29	0.73	-0.41	-0.03 [-0.19, -.12]
Helping Intentions	4.88	1.19	4.72	1.18	-1.48	-0.12 [-0.27, 0.04]
Auto. Help Behavior	3.22	1.13	2.96	1.11	-2.49	-0.20 [-0.35, -0.04]
Dep. Help Behavior	3.39	1.00	3.26	0.98	-1.50	-0.12 [-0.28, 0.04]
Moral Outrage	5.72	1.05	5.62	1.02	-0.92	-0.07 [-0.23, 0.08]
SJB	3.72	0.98	3.71	0.97	-0.18	-0.01 [-0.17, 0.14]

Note. *df* = 633 for all tests. Helping Behavior are on a 5-point scale (1-5). All other scales are on a 7-point scale (1-7).

Test of Models and Paths

Prior to assessing correlations and the multigroup analysis, the assumption of multivariate normality for the multigroup path analysis was assessed using the Henze-Zirkler test. The test was significant, $T = 1.34$, $p < .001$ indicating that the main study variables did not follow a multivariate normal distribution. For the purposes of the multigroup analysis diagonally-weighted least squared (DWLS), a robust estimation technique, was used as it did not have the assumption of multivariate normality and provided less biased estimates of model parameters.

Correlations. Correlational analyses were run to assess bivariate relationships and examine patterns of the relationships as they relate to the study hypotheses. Although specific

hypotheses cannot be supported directly via correlations since they were made in relation to the multigroup model, correlations may give insights into the types of relationships (e.g., strength and direction) without accounting for the variance between other relationships (Table 9). In the control condition, the bivariate correlations lent initial support for the majority of hypotheses. Perceptions of socioeconomic system legitimacy had a significant, positive relationship with system justification beliefs, $r = .567$, $p < .001$, which was in line with hypotheses (Control H2). Furthermore, system justification beliefs had a significant, negative relationship with helping intentions, $r = -.192$, $p < .001$ (Control H3). For the hypotheses for the relationship between system justification and helping behaviors, there was not significant relationship between system justification and autonomy-oriented helping behavior (Control H4a; $r = -.074$, $p = .191$) in support of Control H4b, however for dependency-oriented helping behavior (Control H4b; $r = .001$, $p = .981$, this hypothesis was not supported. The relationship between system justification beliefs and dependency-oriented helping behavior was in the opposite direction of hypotheses. Lastly, helping intentions had significant, positive relationships with both autonomy-oriented (Control5a; $r = .583$, $p < .001$) and dependency-oriented helping behavior (Control 5b; $r = .614$, $p < .001$) which supported hypotheses.

Table 9

Bivariate Correlations for Main Study Variables by Condition

Variable	1	2	3	4	5	6
1. Legitimacy	-	.271***	.596***	-.256***	-.165**	-.169**
2. Stability	.304***	-	.065	.171**	.133*	.142*
3. SJB	.567***	.256***	-	-.245***	-.174**	-.122*
4. Helping Intentions	-.192***	.120*	-.100+	-	.592***	.596***
5. Auto. Help Behavior	-.188***	.025	-.074	.583***	-	.774***

6. Dep. Help Behavior	-.151**	.096+	.001	.614***	.800***	-
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Note. The lower left of the diagonal represents the correlations between variables in the control condition, whereas right of the diagonal is for the moral outrage condition. + $p < .10$, * $p < .05$, ** $p < .01$, *** $p < .001$. SJB refers to system justification beliefs.

In the moral outrage condition, the bivariate correlations lent initial support for some of the hypotheses. Perceptions of socioeconomic system legitimacy had a significant, positive relationship with system justification beliefs, $r = .596, p < .001$, which was in line with hypotheses (Moral Outrage H2). A weaker positive relationship which was expected, but not supported. An analysis on the group differences in this relationship was explored in the multigroup analysis to determine if the relationships are invariant between groups and if they change in the presence of other relationships. Similar to the control condition, system justification beliefs had a significant, negative relationship with helping intentions, $r = -.245, p < .001$, consistent with hypotheses (Moral Outrage H3). Furthermore, there were significant negative relationships between system justification and autonomy-oriented helping behavior (Moral Outrage H4a; $r = -.174, p = .002$) and dependency-oriented helping behavior (Moral Outrage H4b; $r = -.122, p = .028$). The hypothesis regarding the relationship between system justification beliefs and autonomy-oriented helping behavior was supported such that lower system justification was related to greater autonomy-oriented helping behavior which would serve to alter the current social system when participants were focused on a morally responsible, but inequitable system (Nadler, 2002).

However, the relationship between system justification beliefs and dependency-oriented helping behavior was not supported and in the opposite direction of hypotheses. Under the combination of the IHSR model and system justification theory, system justification should have a positive relationship with dependency-oriented helping as a way to maintain the system (Jost,

2018; Nadler, 2002). However, for participants in the moral outrage condition, system justification was related to both lower levels of autonomy- and dependency-oriented helping behavior and descriptively stronger than in the control condition. The differences between conditions on these relationships was explored in the multigroup analysis. Lastly, helping intentions had significant, positive relationships with both autonomy-oriented (Moral Outrage 5a; $r = .589, p < .001$) and dependency-oriented helping behavior (Moral Outrage 5b; $r = .592, p < .001$) which supported hypotheses.

Multigroup analysis for impact of moral outrage. A multigroup model was assessed where the structural model (Figure 2) was fit for both the moral outrage and control conditions simultaneously. A multigroup approach was used to assess whether the relationships specified in the model varied based on the condition participants experience. As such, this approach emphasized the idea of an interaction, such that the relationships between variables depends on condition assignment, however it was applied to an entire model of relationships instead of a single outcome. As such, the moderating effect of moral outrage will be assessed on multiple pathways at the same time and allow for the assessment of where and how moral outrage impacts relationships. The general approach to estimate whether the relationship pathways differ based on groups required at least two models (Kline, 2016). In the first model (Model 1), each group's intercepts and regression pathways were estimated freely and allowed to vary between groups. In the second model (Model 2), all intercepts and regression pathways were constrained to be the equal between each group. Subsequently, a model comparison assessed for significant differences in fit between the models to determine next steps. For example, if the result was non-significant then a multigroup approach was not supported and the global fit of relationships (collapsed across groups) was assessed. However, if the model comparison was statistically

significant, then some pathways vary based upon group and others do not and the constraining of specific pathways to test hypotheses was warranted.

The general approach to assessing which pathways vary by group and which were constrained (do not vary by group) took a theoretical approach. Pathways were constrained based upon the hypotheses and tested against the base model (Model 1) using model comparison. Of note, the pathways of interest to be tested between groups using constraints included assessing the pathways between legitimacy to system justification beliefs, and system justification beliefs and helping intentions, as well as between helping intentions both autonomy- and dependency-oriented helping intentions (see Figure 2 for visual model).

A final, supported model was determined by model comparison with the intended final model to not be statistically significant compared to Model 1 as well as the final model having adequate model fit. Guidelines for determining adequate model fit was based upon model fit indices that included Chi-square and associated p -value $> .05$, CFI $> .90$, RMSEA $< .08$, and SRMR $< .08$ (Kline, 2016). Lastly, following the establishment of differences between groups on the overall proposed model and specified pathways, analyses investigated the regression pathways within each condition to assess the hypothesized relationships via regression coefficients, standard error, and p -values. These analyses aimed to support the hypothesized relationships between the variables under conditions of moral outrage, as well as status quo (control).

Model 1, the freely estimated model, fit the data well, $\chi^2(14) = 25.11$, $p = .034$, CFI = .987, TLI = .973, RMSEA = .050 [.014, .081], SRMR = .041. Model 2, which constrained all intercepts and regression pathways to be equal, also fit the data well, $\chi^2(25) = 43.41$, $p = .013$, CFI = .979, TLI = .975, RMSEA = .048 [.022, .072], SRMR = .054. A model comparison was

not statistically significant, $\Delta\chi^2(11) = 18.30, p = .075$, suggesting that multigroup analysis was not appropriate, and a single global model was assessed (Model 1). As it relates to the central hypotheses of Study 2, the non-significant model comparison suggests that hypothesized global moderating effects of moral outrage was not supported; there were no differences between conditions on the relationships between perceptions of the system, system justification beliefs, and helping intentions and behaviors.

As such, the overall correlations between main study variables, across conditions, were assessed to investigate the relationships system perceptions, justification beliefs, moral outrage, and helping intentions and behaviors (Table 10) prior to assessing the global model fit.

Table 10

Correlation Matrix for Main Study Variables in Study 2

	1	2	3	4	5	6	7
Legitimacy	-						
Stability	.288***	-					
Moral Outrage	-.224***	.159***	-				
Help Intent	-.223***	.146***	.583***	-			
Aut. Help	-.173**	.080*	.358***	.590***	-		
Dep. Help	-.158**	.120**	.336***	.606***	.787***	-	
SJB	.580***	.162***	-.207***	-.174***	-.124**	-.062	-

Note. Aut. Help = autonomy-oriented helping behavior, Dep. Help = dependency-oriented

helping behavior. *** $p < .001$, ** $p < .01$, * $p < .05$.

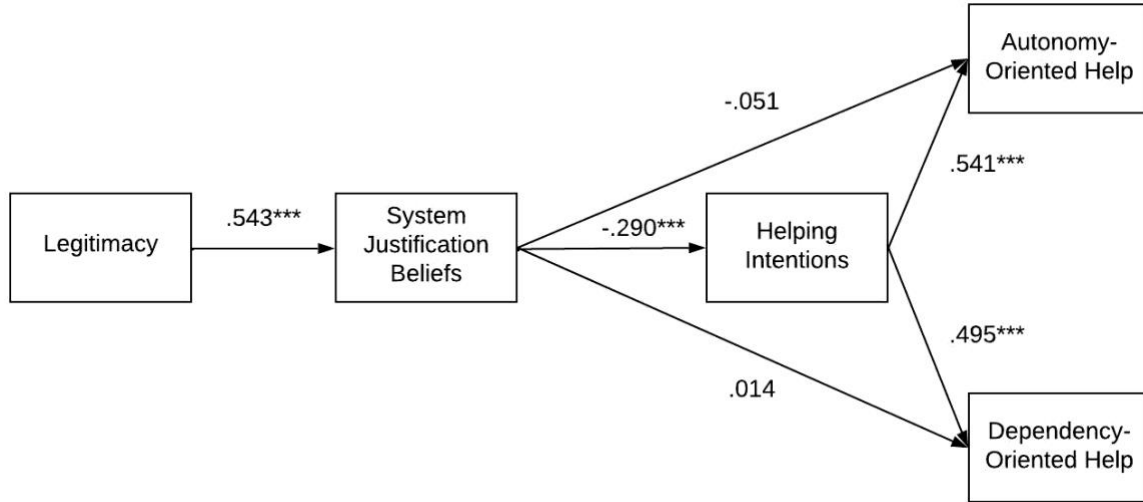
Perceived legitimacy had a strong, positive relationship with system justification beliefs, $r = .580, p < .001$. This is in line with system justification theory such that perceived legitimacy among higher status group members should be related to system justification beliefs, thus maintaining the status quo. Furthermore, SJB had a negative relationship with helping intentions,

such that those who had greater beliefs that the system should be maintained reported lower intentions to help those of low socioeconomic status, $r = -.174, p < .001$. SJB was also negative related to autonomy-oriented helping behavior ($r = -.124, p = .002$), but unrelated to dependency-oriented helping behavior, $r = -.062, p = .120$.

The global model (Model 1) fit the data well, $\chi^2(7) = 20.00, p = .006, CFI = .985, TLI = .968, RMSEA = .054 [.027, .083], SRMR = .043$ (Figure 3). Legitimacy had a significant, positive relationship with system justification beliefs, $B = .543, SE = .051, p < .001, R^2 = .415$. In turn, system justification beliefs significantly predicted help intentions ($B = -.290, SE = .049, p < .001, R^2 = .053$), but not autonomy-oriented ($B = -.051, SE = .056, p = .365$) or dependency-oriented helping behaviors ($B = .014, SE = .051, p = .784$). Although there were significant bivariate correlations between system justification beliefs and both helping behaviors, they may be mediated by helping intentions and therefore non-significant in this model. Finally, helping intentions had a significant, positive relationship with both autonomy-oriented ($B = .541, SE = .053, p < .001, R^2 = .347$) and dependency-oriented helping behavior ($B = .495, SE = .048, p < .001, R^2 = .367$). Lastly, autonomy- and dependency-oriented helping behaviors were significantly correlated, $r = .673, p < .001$.

Figure 3

Global Model Fit with Unstandardized Regression Pathways



Note. *** $p < .001$. Dashed arrows indicate a non-significant regression pathway.

As it relates to the hypotheses, the overall moderating effect of moral outrage was not supported. Presumably, since there were no differences between conditions, the global model fit (Figure 3) was operating under the control condition where moral outrage did not impact the relationships. As such, the hypothesized relationships were assessed in relation to the hypotheses for the control condition. There was a positive relationship between legitimacy and system justification beliefs was supported (Control H2). Perceptions of the current socioeconomic system as legitimate was associated with endorsing system justification beliefs. Furthermore, a directional hypothesis was not made for system justification beliefs and helping intentions, as IHSR should suggest that although participants may want to justify the system, they may do so through helping behavior therefore only a significant relationship was hypothesized (Nadler, 2002). This hypothesis was supported, and system justification beliefs had a significant negative relationship with helping intentions, such that greater beliefs in justification was associated with

lower intentions to provide help to lower status group members (Control H3). Furthermore, system justification did not have a significant relationship with autonomy-oriented helping behavior which was consistent with hypotheses (Control 4b). Although non-significant, system justification beliefs had a positive relationship with dependency-oriented helping behavior, which is consistent directionally with the patterns in relationships hypothesized, but did not support the significance hypothesized (Control H4a). Lastly, the relationship between helping intentions and both helping behaviors was significant and strongly positive, in line with the final hypotheses (Control 5a and 5b, respectively).

Exploratory analysis of system stability as a predictor of system justification beliefs. In addition to the models assessing the relationship of perceptions of system legitimacy with system justification beliefs, the inclusion of perceptions of system stability predicting system justification beliefs was assessed. Although the concept of stability is a core component of IHSR, this relationship has received limited empirical support by which strong hypotheses could be made. The exploratory analyses were conducted to assess if the inclusion of stability as a predictor, which was theoretically proposed in IHSR (Nadler, 2002; Nadler & Halabi, 2006), added significantly to the model. Nadler (2002) proposed that although legitimacy and stability were related and core perceptions of the system and social hierarchy which precede helping behavior, they are theoretically distinct. As such, previous research by Jost and colleagues (2005) found that under no threat, there was a significant, positive relationship between legitimacy and stability with system justification beliefs. However, under threat, legitimacy still had a positive relationship with system justification beliefs, but stability had a significant, negative relationship (Jost et al., 2005).

The exploratory model gave the opportunity to assess the theoretical relevance and contribution of system stability to the relationship between system perceptions and system justification in intergroup helping. Specifically, the exploratory model contained both legitimacy and stability as predictors of system justification beliefs. Similar to the focal model tests, a two-step multigroup analysis was conducted with a subsequent model comparison to assess if stability added a significant amount of variance explained to the main hypothesized model (Figure 2) in addition to legitimacy and provided insight to potential differences between conditions. As a note, if there was not a significant difference in between the models then a single, global model was assessed.

The first multigroup (freely estimated) model with the additional pathway from stability to system justification beliefs, as well as a covariance between legitimacy and stability, fit the data well, $\chi^2(22) = 55.77, p < .001, CFI = .963, TLI = .933, RMSEA = .070 [.047, .093], SRMR = .056$. The second model which constrained all intercepts and regression pathways to be equal, also fit the data well, $\chi^2(34) = 78.69, p < .001, CFI = .951, TLI = .942, RMSEA = .064 [.046, .083], SRMR = .066$. A model comparison was statistically significant, $\Delta\chi^2(12) = 22.93, p = .028$, suggesting that multigroup analysis was appropriate and subsequent models were assessed using constraints on theoretically proposed intercepts or pathways (Model 1).

Given that multigroup analysis was warranted in this case, an iterative process of constraining and freeing pathways to determine an optimal model was used. Although many combinations of this process are possible given its exploratory nature, only certain theoretically relevant paths were assessed (see Table 10). The primary pathways that were explored between conditions included (Model a) legitimacy predicting system justification beliefs, (Model b) stability predicting system justification beliefs, (Model c) system justification beliefs predicting

helping intentions, and helping intentions predicting (Model d) dependency-oriented helping behavior and (Model e) autonomy-oriented helping behavior (Table 11). Subsequently, additional models were explored based on the results of these initial constraint tests.

In order to assess whether a constraint should have been imposed, or removed so the relationships can be estimated freely for each group, a constraint was placed on a singular path and model comparison to the free model was made. If the model comparison was significant, the path remained freely estimated for each group. Alternatively, if the model comparison was non-significant, the constraints remained since this regression pathway did not differ between groups. Overall, Model c which constrained the pathway between system justification beliefs and helping intentions to be equal between conditions was the only significant model comparison indicating that this pathway differed between the control and moral outrage condition. The model (Model b) which had stability predicting system justification beliefs pathway approached, but did not achieve, the traditional threshold of statistical significance (Table 11).

Table 11

Chi-square Change for Constrained Models Based by Specified Constraints

Model	Constraint	$\Delta\chi^2$	<i>p</i>
a	Legitimacy → SJB	0.56	.453
b	Stability → SJB	3.54	.060+
c	System Justification Beliefs → Helping Intentions	4.83	.028*
d	Helping Intentions → Dependency-Oriented Help Behavior	0.04	.835
e	Helping Intentions → Autonomy-Oriented Help Behavior	0.00	.972

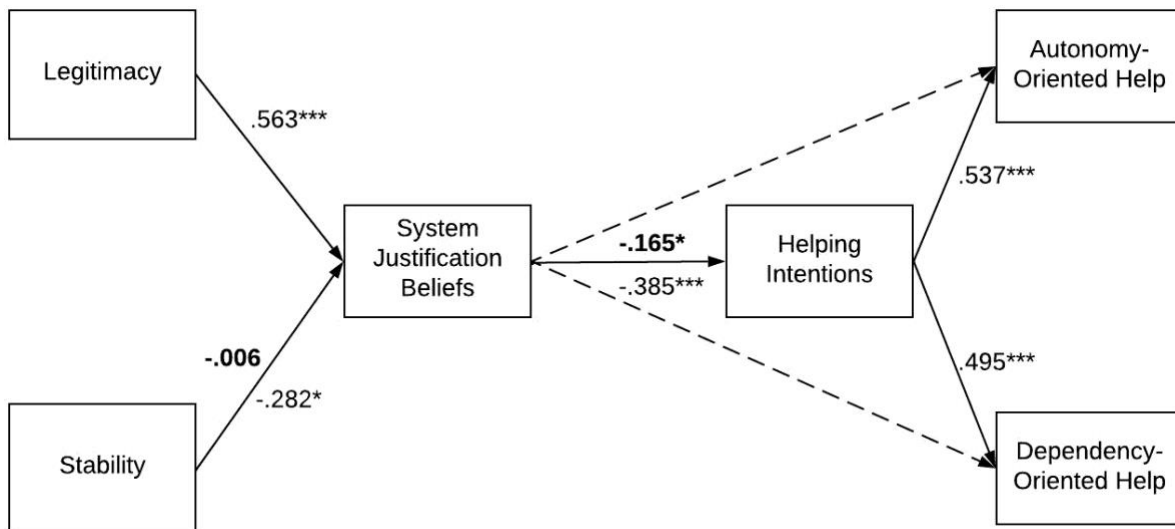
Note. SJB is system justification beliefs. * *p* < .05, + *p* < .10

Following the process of constraining individual paths, Model a, Model d, and Model e indicated strong support for the constraint of those paths to be equal in a final model (Table 11). Although Model b did not achieve statistical significance, two final models will be tested to determine the optimal statistical model. First, an overall model was assessed that constrained all

pathways (Model a, b, d, and e) except the relationship between system justification beliefs and helping intentions was conducted. The model fit the data well, $\chi^2(26) = 59.53, p < .001, CFI = .963, TLI = .943, RMSEA = .064 [.043, .085], SRMR = .058$. Additionally, an overall model which also constrained all pathways except the relationship between system justification beliefs and helping intention and the pathway between stability and system justification beliefs (Model b) fit the data well, $\chi^2(25) = 56.38, CFI = .966, TLI = .945, RMSEA = .063 [.041, .085], SRMR = .056$. A model comparison between the two overall models was conducted to determine whether two pathways should be allowed to freely vary. The model comparison approached the traditional threshold for statistical significance, $\Delta\chi^2(1) = 3.15, p = .076$. Although not statistically significant, the model which allowed the stability to system justification beliefs and system justification beliefs to helping intentions to vary freely fit marginally better based on model fit statistics.

Figure 4

Final Exploratory Model with Unstandardized Regression Pathways



Note. For the paths with two values, the bolded values (above the paths) are unstandardized regression coefficients for the control condition and the non-bolded (below paths) are for the moral outrage condition. *** $p < .001$, * $p < .05$.

In this final exploratory model (Figure 4), stability had a significant, negative relationship with system justification beliefs in the moral outrage condition ($B = -.282$, $SE = .119$, $p = .018$), but no significant relationship in the control condition ($B = -.006$, $SE = .120$, $p = .958$). For those in the moral outrage condition, lower levels of perceived stability were related to greater reported levels of system justification beliefs. As it relates back to the original hypotheses, the relationship between stability and system justification beliefs was the opposite as what was hypothesized for legitimacy (Moral Outrage H2). However, it was in line with some research that found a negative relationship between system justification behaviors (e.g., status stereotyping) and stability (Jost et al., 2005). Considering there was a significant, positive correlation between legitimacy and stability ($r = .254$, $p < .001$), perceptions of the legitimacy and stability of the socioeconomic system in the U.S. had opposite relationships with system justification beliefs for those in the moral outrage condition. Legitimacy, constrained between conditions, had a strong positive relationship such that perceiving a more legitimate system was related to greater justification of the system and lower perceptions of stability was related to greater justification, $B = .563$, $SE = .059$, $p < .001$.

Additionally, for those in the moral outrage condition there was a stronger, negative relationship between system justification beliefs and helping intentions ($B = -.385$, $SE = .070$, $p < .001$) compared to the control condition ($B = -.165$, $SE = .067$, $p = .014$). As such, greater system justification beliefs were related to lower intentions to provide help to those of a lower socioeconomic status for those in the moral outrage condition. Taken with the pathways between

system perceptions and justification, those in the moral outrage condition reporting lower levels of stability and greater system justification beliefs also had lower intentions to help those of lower social status compared to those in the control condition. As such, although the analysis was exploratory, these patterns are consistent with previous research investigating the effects of system threat, but opposite of the research on the use of moral outrage to induce social change (Jost et al., 2018; Nadler, 2002; Thomas et al., 2009; Wakslak et al., 2007). If the hierarchy is perceived as unstable, higher status group members are likely to endorse system justification beliefs and maintain the system. In the present research, this was extended to include helping intentions and behavior which maintains the system (Nadler, 2002). Although system justification beliefs had a negative relationship with intentions to help, intentions were strongly related to dependency-oriented helping behavior. Specifically, the pathways from helping intentions to both helping behaviors were constrained to be equal between groups. There was a strong, positive relationship between helping intentions and dependency-oriented ($B = .495, SE = .048, p < .001$) and autonomy-oriented helping behavior ($B = .537, SE = .053, p < .001$) in both conditions.

Internal Analyses

Similar to Study 1, additional internal analyses were conducted to explore the effect of the moral outrage manipulation among a subset of higher social status participants (6 or greater on the McArthur subjective SES scale), the effect of system justifiers status (high vs. low median split), and the factor structure differences of helping behaviors among between high and low system justifiers.

Subjective SES. A subset of participants who rated themselves as a 6 or greater on the McArthur subjective SES scale was used to reassess the experimental manipulation ($N = 398$).

There were no statistically significant differences between experimental manipulation conditions on outcomes of legitimacy, stability, moral outrage, system justification beliefs, helping intentions, or either helping behavior. Furthermore, there was a wide dispersion of income reported (Table 6). Among those who reported a 6 or greater on the subjective SES scale, those who had an income above the scale middle (\$60,000 or greater; $N = 274$) were further re-assessed in a similar manner and yielded no significant results on the t -tests.

Comparison of high and low system justifiers. Although the experimental manipulation did not successfully result in significant differences between conditions, the level of trait system justification was used to assess potential differences between those of high (above median split; $N = 218$) and low (below median split; $N = 180$) on study outcomes. Within those who rated themselves as a 6 or greater on the subjective SES scale, there were significant differences between high and low system justifiers on mean-level perceptions of legitimacy, moral outrage, helping intentions, and both helping behaviors, but not perceptions of system stability. Participants who were high system justifiers reported greater perceptions of legitimacy ($M = 4.00$, $SD = 0.99$) than those who were low system justifiers ($M = 2.97$, $SD = 0.91$; $p < .001$, $d = -1.080$). Additionally, those who were low system justifiers reported greater moral outrage ($M = 5.85$, $SD = 0.96$, $p < .001$, $d = -0.475$), helping intentions ($M = 5.01$, $SD = 1.12$, $p < .001$, $d = -0.375$), autonomy-oriented ($M = 3.29$, $SD = 1.08$, $p = .001$, $d = -0.323$), and dependency-oriented helping behavior ($M = 3.42$, $SD = 0.95$, $p = .024$, $d = -0.229$) than those who were high system justifiers (moral outrage $M = 5.36$, $SD = 1.08$; helping intentions $M = 4.57$, $SD = 1.21$; autonomy-oriented helping behavior $M = 2.94$, $SD = 1.07$; dependency-oriented helping behavior $M = 3.21$, $SD = 0.90$). However, there were no significant differences between high ($M = 4.01$,

$SD = 0.80$) and low ($M = 4.06$, $SD = 1.02$) system justifiers on perceptions of system stability, $p = .681$, $d = -0.042$.

Similar to the findings in Study 1, 2 (justification: high, low) x 2 (condition: moral outrage, control) factorial ANOVAs were run to compare if the effect of the experimental condition on study outcomes varied by high and low system justification status. There were no significant differences between experimental conditions on any study outcomes, however, the main effects were found for high and low system justification as reported above. There were no significant interactions; the level of reported outcomes did not vary between conditions by system justification status.

Nature of helping behaviors for high and low justifiers. Additionally, the two-factor model CFA for helping behaviors was assessed for both high and low system justifiers. The two-factor model fit the data well in both the high and low system justifier groups; high system justifiers, $\chi^2(13) = 6.93$, $p = .906$, $CFI = 1.00$, $TLI = 1.00$, $RMSEA = .000$ [.000, .028], $SRMR = .036$. There was a significant, unstandardized covariance between legitimacy and stability, $r = .479$, $p < .001$. The standardized factor loadings for the autonomy-oriented factor ranged from .812 - .919 and for the dependency-oriented factor ranged from .486 - .826. Similar model fit results were found for the low system justifiers, $\chi^2(13) = 17.72$, $p = .169$, $CFI = .995$, $TLI = .991$, $RMSEA = .045$ [.000, .092], $SRMR = .065$. There was a significant, unstandardized covariance between legitimacy and stability, $r = .450$, $p < .001$. The standardized factor loadings for the autonomy-oriented factor ranged from .744 - .852 and for the dependency-oriented factor ranged from .444 - .709.

Correlational and multi-group differences between system justifiers. System justification status (high or low) was used to look at potential differences in correlations between

main study variables (Table 12). For those in the high justification group, they had a strong positive correlation between perceptions of legitimacy and stability ($r = .456, p < .001$), whereas non-significant in the low justification group. Additionally, there was a strong positive relationship between perceptions of legitimacy and system justification beliefs in the high justification group ($r = .545, p < .001$), but weakly positive among low justifiers ($r = .161, p = .031$). Among high justifiers, perceptions of system legitimacy had weak, negative associations to helping intentions and both helping behaviors (non-significant for dependency-oriented helping behavior). However, these relationships were stronger amongst low justifiers such that lower perceptions of system legitimacy was related to greater helping intentions and both helping behaviors (Table 12). Similar positive relationships were found between helping intentions and behaviors among both groups (Table 12).

Table 12

Bivariate Correlations for Main Study Variables by System Justification Status

Variable	1	2	3	4	5	6
1. Legitimacy	-	.456***	.545***	-.188**	-.167*	-.086
2. Stability	.075	-	.343***	.108	-.046	.051
3. SJB	.161*	.015	-	-.064	-.101	.002
4. Helping Intentions	-.323***	.201**	-.131+	-	.602***	.658***
5. Auto. Help Behavior	-.240**	.233**	-.014	.582***	-	.773***
6. Dep. Help Behavior	-.266**	.264***	.021	.583***	.757***	-

Note. The lower left of the diagonal represents the correlations between variables in the low justification group, whereas right of the diagonal is for the high justification group. + $p < .10$, * $p < .05$, ** $p < .01$, *** $p < .001$. SJB refers to system justification beliefs.

The multi-group approach which was used above was conducted for differences in the structural relationships between high and low justifiers. A freely estimated model and fully

constrained model were tested and compared. The freely estimated model fit the data well ($\chi^2(22) = 54.04, p < .001, CFI = .939, TLI = .889, RMSEA = .086 [.057, .115], SRMR = .102$) and fit the data significantly better than the constrained model, $\Delta\chi^2(7) = 45.513, p < .001$. Constraints were placed on the relationships between variables in a stepwise approach, but no models with constraints on individual pathways fit the data significantly better than the freely estimated model. In the freely estimated model, the only significant pathways within each group were between helping intentions and both helping behaviors. For high system justifiers, perceptions of system legitimacy predicted SJB ($B = .413, SE = .098, p < .001$), but this was not found for low justifiers ($B = .066, SE = .038, p = .053$) although there were descriptively strong differences in the correlation table (Table 12).

Qualitative response to experimental manipulation. Following the randomized display of the experimental manipulation vignette, participants were asked to write about any personal or known experiences with their assigned vignette. To explore the potential effects of the manipulation, responses were coded within the moral outrage condition as either having features of moral outrage including negative emotion and the system (government, administration, etc.) as the cause. In the moral outrage condition, 16 out of 320 participants had this “true” effect. The “true” effect group did not report significantly different levels of moral outrage than the overall moral outrage group, $t(319) = t = 0.50, p = .617$. However, 307 out of the 320 participants reported negative emotions (e.g., anger, frustration, upset) in their responses, but it was unclear the target of the emotion so the extent of moral outrage could not be assessed.

Discussion

Moral outrage has been suggested in previous research to be a prosocial emotion which may bolster solidarity of higher status people with lower status groups due to its focus being

directed at the system, as opposed to the higher status group, as responsible for inequality (Thomas et al., 2009; Wakslak et al., 2007). However, this was not supported in Study 2 at the mean level as there were not significant differences between the moral outrage and control conditions on outcomes (e.g., legitimacy). As noted previously, when assessing if there were differences between conditions on moral outrage, means were consistently reported at the higher end of the response scale in both studies and could be considered a ceiling effect. The measurement of moral outrage was limited in Study 2 although changes were made to both expanded the response scale by two points (5-point vs. 7-point scale) and increasing the intensity of the items (e.g., sad vs. most upset). Future research should attempt to expanded how moral outrage is assessed such as self-report measures being extended to larger spectrums (e.g., 100-point scale) to capture variability within and between conditions.

When assessing the differences between conditions using model testing, there were no statistically significant differences between conditions on the hypothesized model although it was close to the traditional threshold ($p = .075$). As such, the effects of moral outrage in Study 2 may have been smaller than hypothesized and thus were not captured. The main model, which was assess globally, supported the theoretical propositions of previous research that perceptions of system legitimacy were positively related to system justification (Jost et al., 2018). Furthermore, system justification was related to lower intentions to provide help to those of lower status. Taken together, this is line with the proposed connection between system justification and the IHSR model, such that people of higher social status perceive the current socioeconomic system as legitimate and attempt to justify the system through lower intentions to provide help (Jost, 2018; Nadler, 2002). However, helping intentions were positively related to both dependency- and autonomy-oriented helping behavior. Higher status group members may

not to intend to provide help as a way to maintain the system, but when asked, they were reported similar levels of each helping behavior. The similar relationships between helping intentions and each helping behavior is not in line with the IHSR model which proposed that dependency-oriented helping behavior should be given in the majority of situations by higher status group members (Nadler, 2002). However, in the original IHSR model, helping intentions were not proposed as a factor in addition to behavior, therefore the lower levels of intentions may represent higher status group members desire to avoid providing help to lower status group members and maintain the system (Nadler, 2002; Nadler & Samer, 2006).

In the exploratory model, results indicated that the relationships between perceptions of system stability and system justification as well as between system justification and helping intentions differed between conditions. There was a negative relationship between stability and system justification beliefs for participants in the moral outrage condition, such that those who perceived less stability reported greater system justification beliefs. In turn, there was a negative relationship between system justification beliefs and helping intentions, where greater system justification beliefs was associated with lower helping intentions toward lower status group members. However, there were not significant differences between conditions on the relationships between helping intentions and helping behaviors. Taken together, moral outrage may be unintentionally harmful because perceiving the current socioeconomic system as less stable, similar to a system threat, was associated with greater justification beliefs and subsequently lower intentions to provide help. Therefore, moral outrage as a prosocial emotion aimed at disrupting system justification efforts was not fully supported in this study. There were no measures which accounted for perceptions of the moral outrage manipulation as threatening, so this alternative explanation was not able to be assessed. However, internal analyses which

explored differences between system justification status (high or low) found that high justifiers reported significant lower moral outrage, helping intentions, and behaviors – however this did not depend on their assignment to an experimental condition. Helping behaviors were similar captured by the factors for both high and low justifiers suggesting that they may view them similarly. Qualitative responses were assessed and findings indicate that although the majority of responses were negative, they may not have been directed at a system (who was the blame for inequality). As mentioned, perceptions of the manipulation as threatening could not be determined, but the lack of target being mentioned should be addressed in future research by asking participants who was responsible for the inequitable social conditions to determine if the emotion experience was outward (toward the system) as intended, or internally focused (guilt) which would have provided a support for the vignette being perceived as a system threat among higher status group members.

Additional explanations for the unintended effects of moral outrage include consideration for volatility of experiencing moral outrage, suppression of emotions, and how moral outrage manifests in higher status group members. Recent research by Rushton and Thompson (2020) suggests that moral outrage can lead to prosocial behavior, but when it is not adequately channeled it can undermine this effect by heightening arousal without clear direction. When aroused, moral outrage may be desired to be reduced because it's psychologically distressing, which may allow for system justification to serve its palliative function to reduce distress associated with system threat (Jost, 2018; Rushton & Thompson, 2020). The present study intended for moral outrage to temporally precede perceptions of the system and justification beliefs, therefore preventing palliative function of justification to take place among higher status group members. Although attention may have been directed as an unjust system, perceptions of

stability for those in the moral outrage condition was related to higher system justification beliefs, similar to results in previous research (Jost et al., 2005). In the Jost and colleagues (2005) work, the assessment of system stability and legitimacy followed system justification (e.g., stereotyping) and the cyclical nature of the perception of a legitimate (and stable) system to justification, and justification to perception, may have maintained in the present research such that stability may have been threatened and was related to greater justification and reduced intention to provide help.

In theory, moral outrage is intended to cause outwardly negative evaluation of the system as responsible for inequality and motivate collective social action to reduce inequality (Thomas et al., 2009; Wakslak et al., 2007). However, previous research on moral outrage found that strong emotions such as outrage and anger may be suppressed by people given the intensity of these emotions (Solak et al., 2021). In brief, people who engage in suppressing emotions, especially for strong ones such as anger or outrage, may eliminate the link between emotion and system justification. Suppression was suggested to be used in instances of potential collective action or social change because these efforts require a large degree of effort (e.g., social, financial, psychological) and suppression may serve to prevent loss (Solak et al., 2021). Although feelings of anger were associated with support for collective action, when participants reported higher expressive suppression, the relationship between anger and action was negated as a function of system justification (Solak et al., 2021). In the current research, moral outrage may not have had the hypothesized effect because participants attempted to reduce emotional arousal, thus reporting similar levels of moral outrage as the control condition and allowing the palliative effect of system justification to take hold. Therefore, system justification may have been enacted

as lower stability was perceived and associated with greater system justification beliefs and lower intentions to provide help to those of lower status – thus maintaining the system.

In a separate assessment of system justification as it related to social change in response to inequality, high system justifiers had little to no change in arousal when viewing videos on homelessness and poverty (Goudarzi et al., 2020). Arousal was measured using skin conductance, and although people are generally reported to be inequality aversive, high justifiers demonstrated indifference (low levels of arousal) to viewing inequality in economic contexts compared to low justifiers (Goudarzi et al., 2020). Whether this indicates that high system justifiers may either redirect and reduce emotions quickly (effective suppression), or are truly indifferent, the hypothesized effects of a system-focused emotion (moral outrage) were not supported in the present work. Moral outrage was measured using self-report items, as opposed to other methods (e.g., skin conductance), so these alternative explanations for the impact of moral outrage and system justification among higher status group members could not have been investigated. However, participants in the moral outrage condition had a stronger relationship between perceptions of system stability and system justification when tested via the exploratory multigroup analysis, but not independent mean-level differences for either outcome. When assessed via internal analyses, high system justifiers did report significantly lower moral outrage than low justifiers, but this effect did not vary based on the experimental group manipulation.

Overall, the findings in Study 2 highlighted that moral outrage may have smaller effects than hypothesized. The main hypothesized model did not support the effect of moral outrage on the relationships between system legitimacy and justification beliefs, as well as subsequent helping intentions and behavior. However, the moral outrage manipulation may have triggered a system threat, which bolstered the relationship between perceptions of stability and justification

beliefs, as well as between system justification beliefs and helping intentions. Given the exploratory nature of the final model, findings should be interpreted with some caution, but future research should investigate the how moral outrage scenarios which highlight poverty are experienced by higher status group members in terms of ingroup vs. system responsibility, system threat, and the extent to which moral outrage is experienced across self-report and physiological measures. As such, findings from the present study may highlight that the effect of moral outrage on higher status group members may vary and result in doubling down on system justification and preventing system change through lower intentions to provide help.

Chapter IV

General Discussion

Group members often act on behalf of their group when group identity is salient whether an identity is primed (e.g., reporting income status) or an outgroup (or its members) are referenced (Hogg, 2018; Tajfel & Turner, 1986). When interacting with other groups, people will act to increase or retain a positive evaluation of their group, and therefore themselves (Hogg, 2018). When social status differences come into play, the disparate conditions under which some groups have more (or less) resources, power, etc. may also become salient. IHSR suggests that members of groups with higher status will act to retain their power and position by engaging in helping behavior which maintains the hierarchy and keeps lower status group members in their disadvantaged position (Nadler, 2002). The present research hypothesized that through perceptions of the current socioeconomic system, system justification among higher status group members is related to helping behavior serves to maintain the system and prevent meaningful change for lower status group members. However, moral outrage, a system-directed prosocial emotion, was hypothesized to attenuate these relationships through generating negative perceptions of the social system as responsible for inequity (as opposed to the higher status group), lower system justification beliefs, and increase autonomy-oriented helping behavior. In two studies, the present research used online samples of average and above-average social status adult to investigate how (a) system perceptions and justification beliefs relate to intergroup helping behavior directed towards those of lower status, and (b) the role of moral outrage in reducing the connection between system perceptions and motivation to justify and increasing autonomy-oriented helping behavior.

In Study 1, the effectiveness of moral outrage compared to a control condition was assessed on outcomes including system perceptions (legitimacy and stability), system justification beliefs, as well as helping intentions and behaviors. Although no hypotheses were supported in terms of statistical significance, descriptive statistics indicated the intended direction of the effect was found for legitimacy, system justification beliefs, and both dependency- and autonomy-oriented helping behaviors. Specifically, participants in the moral outrage condition reported descriptively lower means for perceptions of legitimacy, system justification beliefs, and dependency-oriented helping behavior, but greater autonomy-oriented helping behavior compared to those in the control condition. However, participants in the moral outrage condition also reported descriptively greater levels of stability and lower helping intentions which was the opposite of hypotheses, although not significant. As such, the effects of moral outrage on the various outcomes were small and the mean levels of moral outrage were high in both conditions, suggesting a potential ceiling effect in terms of measurement. In order to more fully assess the nature of moral outrage, prior to Study 2, the moral outrage manipulation was bolstered through having participants write about their personal or known experiences of their randomly-assigned vignette topic, either poverty or fishing (control condition). Separately, in order to better capture the variability of moral outrage both within and between conditions, the sensitivity of the moral outrage measure increased through expanding the response scale anchors to seven points (instead of five) and strengthening the intensity of the item wording (e.g., inequality makes me “sad” vs. “most upset”).

In Study 2, the changes to the manipulation did not result in significant mean-level differences between conditions on perceptions of system legitimacy, stability, system justification beliefs, and helping intentions and behaviors. Descriptively, participants in the

moral outrage condition reported greater means for helping intentions, autonomy-oriented helping behavior, and moral outrage compared to the control condition. However, they also reported greater means for legitimacy, system justification, and dependency-oriented helping behavior, which was not statistically significant. Similar to Study 1, the means for moral outrage in both conditions was near the ceiling of the response scale. Following, the multigroup analysis was not supported for the main hypothesized model, suggesting that there were not differences between the moral outrage and control condition on the overall relationships between study variables. Collapsed across groups, legitimacy had a positive relationship with system justification beliefs, which had a negative relationship with helping intentions. These findings were in line with the conceptual model based on research on the IHSR model and SJT suggesting that higher status group members use helping behavior to maintain the system (Jost, 2018; Nadler, 2002).

In the exploratory model that included perceptions of system stability, the multigroup analysis was supported. Following constraining pathways in a theoretical progression, a final model was supported which indicated that participants in the moral outrage condition had a strong negative relationship between stability and system justification beliefs, and in turn between system justification beliefs and helping intentions; these relationships were not significant among control group participants. Participants in the moral outrage condition may be doubling-down the relationship between perceptions of system stability and system justification beliefs after reading about how a system which benefits them has impacted others in a negative way. In context, this may suggest that moral outrage was not effective in generating prosocial behavior in the spirit of social change, but rather system maintenance. Although this final model was exploratory and requires further investigation, this may highlight that moral outrage is a

unique, but volatile emotion, which requires more direction and care when implementing in prosocial situations (Rushton & Thompson, 2020).

Previous research has highlighted moral outrage as one of many prosocial emotions which may spur help amongst higher status group members (Thomas et al., 2009; Wakslak et al., 2007). For example, when guilt was felt by higher status group members, they felt responsible and were motivated to reduce feelings of guilt rather than provide supportive help (Thomas et al., 2009). Other emotions may reinforce paternalistic views of recipients and indicate that they need to be taken care of and are dependent upon that help, thus help is used to reinforce the social system (Radke et al., 2020). However, moral outrage was proposed to direct the responsibility of inequality from the higher status group to the system (Thomas et al., 2009; Wakslak et al., 2007). Therefore, it was suggested that higher status group members would be motivated to unify with lower status group and thus provide autonomy-oriented help in order to enact social change against the current system (Thomas et al., 2009). Previous research found that moral outrage was related to support of redistributive policies (Wakslak et al., 2007). However, if system justification ideologies were made salient prior to experiencing moral outrage, it negated the support for social change. The present research attempted to use this approach differently, by inducing moral outrage prior to assessing perceptions of the current system in order to reduce system justification efforts (beliefs and dependency-oriented helping behavior) and increase autonomy-supportive helping behavior.

The hypothesized model was not able to be supported for the effects of moral outrage in reducing the connection between system perceptions and justification beliefs and subsequent helping intentions and behaviors. As noted previously, the moral outrage manipulation may have been experienced as a system threat, thus bolstering the relationship between system perceptions

(stability) and system justification beliefs, similar to results by Jost and colleagues (2005) on system threat. Therefore, moral outrage resulted in strengthening the negative relationship between system justification beliefs and helping intentions. Internal analyses of qualitative responses suggest that although participants reported negative emotional responses, they often did not identify a target of the emotion – whether the system, their group, or otherwise. When assessing high system justifiers, they reported greater moral outrage, but this did not depend on what experimental condition they were randomly assigned to. Overall, moral outrage may be a challenging emotion to harness and operate differently among higher status group members. As such, moral outrage should be channeled more effectively in future work to assess whether the emotion results in a weaker system justification motive and greater autonomy-supportive behavior.

Implications of the Present Research

Overall, the present research has implications for understanding the process by which members of higher status groups perceive the current socioeconomic system and the relationship of system justification beliefs to their intentions and the type of help they are likely to give to those of lower status. In both studies, moral outrage did not have a significant mean-level effect on system perceptions, justification, and helping intentions and behaviors. These findings do not support the previous research which found that moral outrage was related to greater social change efforts (Thomas et al., 2009; Wakslak et al., 2007). Across all hypotheses, moral outrage lent some descriptive support, but statistical significance was not achieved to determine the extent of the effects of moral outrage as a prosocial emotion. In one instance, when perceptions of system stability were included, moral outrage bolstered the relationship between stability and system justification. These effects were similar to that of a system threat where system

justification was related to reduced perceptions of stability (Jost et al., 2005). As such, post-hoc internal analyses provided an alternative approach that investigated the differences between high and low system justifiers on study outcomes. These analyses found that high justifiers reported greater perceptions of legitimacy than low justifiers. Furthermore, low justifiers had significantly greater intentions to provide help and endorsed both helping behaviors. Although they did not have different factor loadings, future research should explore the potential differences between perceptions of the system as well as of justification efforts (helping intentions, helping behavior, etc.), particularly in relation to moral outrage or other prosocial emotions among high status group members.

In terms of the main analyses, when expanding the context out to include helping intentions and behavior, moral outrage bolstered the negative relationship between justification beliefs and helping intentions. As such, under the IHSR model process coupled with SJT, higher status group may use perceptions of lower stability (or legitimacy) to engage in system justification and maintenance by providing dependency-oriented help, lending support to the integration of the model and theory (Jost, 2018; Nadler, 2002). In this instance, higher status group members who reported greater system justification beliefs had significantly lower intentions to provide help in the moral outrage condition. Therefore, rather than providing dependency-oriented help, their responses were associated with lower intentions to provide help in general.

Taken together, moral outrage had some impact on the relationships between the perceptions of the system and system justification beliefs, and system justification beliefs and helping intentions toward lower status group members – but not in the hypothesized way. Previous research has noted that intense emotions such as moral outrage may be too volatile and

result in unintended effects (Krauth-Gruber & Bonnot, 2020; Rushton & Thompson, 2020). In the present research, this may have played out by resulting in a system threat that limited higher status group members intentions to help those of lower social status. Therefore, the motivational principles behind system justification theory operating in an intergroup helping context may have been resistant to the effects of moral outrage and did not lead to the hypothesized social change and reduction of system inequality.

Note on COVID-19

Of note, COVID-19 emerged as a global pandemic in late 2019 and has had unprecedented and sustained impacts on all aspects of social life across the globe since. The present research was conceptualized, and data were collected during this time. Although applying empirical literature which occurred before and during this time to the present research, the impacts of COVID-19 are still under a vast research lens. Globally, and here within the US, the effect of the pandemic has exacerbated the economic, political, and social hierarchies that existed. News coverage highlighted loss of work, lack of access to healthcare and basic needs, amongst other outcomes. The subsequent effects of COVID-19 disproportionately impacted communities of color in the US, with African American communities suffering from double the mortality rate of the white population (Reyes, 2020). Furthermore, the incidence rate in a sample of US adults found that those residing in high socioeconomic areas had lower infection rates and in-hospital mortality rates compared to lower socioeconomic areas in New York (Little et al., 2021). Although these are some of many statistics, they highlight the exacerbation of healthcare disparities in the US along racial and class lines.

Although not directly measured in this work, it should be acknowledged that the historical effect of the pandemic may have played a role in how participants read, interacted, and

reported their attitudes, intentions, and beliefs. Given the global impact on the economic and social fabric of society, coupled with the fact that the effects of the pandemic were lower amongst those of higher socioeconomic status, system justification may have become more entrenched as resistance to social change occurred. As such, the manipulation which served to point out the inequality of the socioeconomic system and induce moral outrage used in the present research may not have had as large an effect as hypothesized. As noted by work on effective suppression and low arousal to inequality, higher status participants may reduce their moral outrage responses in order to avoid the negative arousal or had limited response physiologically (Goudarzi, et al., 2021; Solak et al., 2020). In the present work, this may have manifested through limited variability in response to the moral outrage measure based on the vignettes.

As theoretical and empirical work continues from this point forward regarding intergroup helping, the impact of COVID-19 on how we interact with each other in a stratified and unequal social hierarchy has changed should be considered. If system justification motives, with regard to high level systems such as socioeconomic status, are more fully entrenched as a result of the pandemic, interventions which attempt to disrupt these motives may have to be stronger or the systems in focus should be reduced to the participants' community, as opposed to the national system as in the present research. If those who were better off prior to the pandemic remained so, efforts to retain that status through system justification may be greater as a result. Future research may include measurement of how people have perceived their social status prior since the pandemic as a control when investigating system justification through intergroup helping. Lastly, measuring what types of prosocial behavior higher status group members engaged in since the pandemic may clue into how intergroup relations through helping may have shifted since the

pandemic and if more dependency-oriented behavior has reinforced the system-level inequality because of the pandemic. Overall, how the lives of those that have been unjustly impacted generationally by unjust social circumstances should be at the forefront of developing and implementing interventions for autonomy-supportive social change.

Limitations and Future Directions

The present research had some limitations which impacted the effectiveness of the moral outrage manipulation on the system perceptions, beliefs, and helping intentions and behaviors directed from higher status group members toward lower status group members. Although following Study 1 changes were made to the manipulation to increase strength, participants reported similar mean-level responses to the moral outrage measures in Study 2. In both studies, the mean responses were near the ceiling of the response scale. In terms of item wording, items on the moral outrage scale largely prompted participants to respond to how inequality was not fair and unenjoyable (bothersome, saddening, concerning, etc.). Considering that previous research suggesting people are generally inequality aversive, coupled with social desirability, it may have been difficult to capture variability in the measures' original and adapted form. To address the sensitivity in measurement, an expanded scale could be used in future research, such as a 100-point scale, which may capture more variability under the pretense that effect sizes of moral outrage manipulations are small. To address social desirability, future research should employ different methods to tap into moral outrage such as using a word completion task with incomplete words that may be filled in with examples such as "unfair", "upset", "unequal", "change", etc. which would be associated with moral outrage. Separately, rather than having participants self-report on a measure asking about the emotion directly, condition assignment

alone (moral outrage vs. control) could be used as the manipulation was constructed to have the intended effects therefore a measure of moral outrage may not be necessary.

Furthermore, both experiments were conducted using online samples. Although studies comparing online research data collection sites such as Prolific and MTurk generally provided reliable data (see Peer et al., 2017), the ability to induce and capture emotion inductions (e.g., moral outrage) in an online study may be challenging. A more intensive methodological approach which carefully channels or guides emotion induction may be warranted. For example, this could include having participants engage with study materials on the current state of inequality in their local or regional area as well as include helping behavior outcomes which are not just measured using self-report, but actual behavior (e.g., advocating for social change by signing a petition for a local community organization, donating a proportion of their study compensation, etc.). Hypothetically, the psychological proximity of a social system in the participants state or region may elicit more robust perceptions of the status quo, emotional responses, and helping behaviors which impact others more directly. As such, moral outrage with a more clearly defined and psychologically close system could lead to stronger effects along the hypotheses investigated in the present studies. In the case of both current studies, if system justification motives may be easier to enact when not in a direct helping situation where action is required, then a more closely aligned system to the participants could yield a deeper understanding of the effects of moral outrage on system justification and intergroup helping. Future research should frame socioeconomic conditions based on where a participant resides, report on current conditions, and measure helping behavior which would directly impact their community. Additionally, the participants should report on who they perceive as responsible for the inequality, whether the system, higher status groups, or another target. Overall, the present

research may lay the groundwork for more intensive methodological and theoretical testing to take place in future research, as some effects of moral outrage were observed.

Lastly, in this hypothesized structure moral outrage was compared to a neutral control condition. Other prosocial emotions such as empathy, compassion, and guilt should be assessed to determine if and where prosocial emotions may influence the relationships between system perception, system justification beliefs, and helping intentions and behaviors that were investigated in the present research. Although moral outrage had limited mean-level effects, the exploratory analyses indicated that moral outrage impacted the relationships between stability and system justification beliefs as well as beliefs and intentions to provide help. As such, other prosocial emotions may yield differing results to those observed in the present work and highlight which prosocial emotions may be better suited in reduce system justification motives and increase autonomy-supported helping behavior.

Conclusion

The present research investigated the theoretical connection between system justification and intergroup helping between higher status group members toward lower status group members and whether moral outrage could be a method of disrupting the relationships between the perceptions of the social system, system justification beliefs, and intergroup helping intentions and behavior. Specifically, among a sample of higher status group members and their use helping situations to retain their social status and prevent social change in lower status groups. Overall, moral outrage had limited impact on perceptions, beliefs, and behaviors. However, moral outrage bolstered the relationship between perceptions of the stability of the current socioeconomic system in the US and system justification beliefs, and the relationship between those beliefs and helping intentions – the opposite of what was hypothesized. Given that

moral outrage may be a quick, intense emotion, its use may need to be channeled more effectively if used as in intervention in helping situations. The longstanding social status structures in the US, with regard to socioeconomic conditions, pose a challenge for researchers and practitioners to alter, but future research should consider how emotion-based interventions may impact different aspects of system perceptions and beliefs and how they relate to intergroup helping from higher status group members toward lower status group members. In essence, focusing on bridging the gap between higher and lower social status group members should serve to increase autonomy-supportive behavior in helping situations where social change is warranted.

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APPENDICES

Appendix A. MacArthur Scale of Subject Social Status

Think of this ladder as representing where people stand in the United States.

At the **top** of the ladder are the people who are the best off – those who have the most money, the most education and the most respected jobs. At the **bottom** are the people who are the worst off – who have the least money, least education, and the least respected jobs or no job. The higher up you are on this ladder, the closer you are to the people at the very top; the lower you are, the closer you are to the people at the very bottom.

Where would you place yourself on this ladder?

Please place a large “X” on the rung where you think you stand at this time in your life, relative to other people in the United States.



Appendix B. Legitimacy and Stability Scale

Please rate the following items on the scale provided (1 = Strongly disagree to 7 = Strongly agree).

Legitimacy

1. The socioeconomic system in this country is fair.
2. Socioeconomic status is a just way to understand social status.
3. People generally agree that socioeconomic status is a legitimate indicator of social status.
4. Differences in socioeconomic status exist for a reason.

Stability

1. Socioeconomic status is likely to change in the future.
2. Socioeconomic status is a fixed characteristic (unlikely to change).
3. Socioeconomic status has been a part of how social status is judged for a long time.
4. The differences in socioeconomic status in society will be the same in the future.
5. There are realistic ways that socioeconomic status can be changed.

Appendix C. System Justification Scale

Please rate your agreement with the following statements on a 7-point scale from 1 = I completely disagree to 5 = I completely agree.

1. In general, you find society to be fair.
2. In general, the American political system operates as it should.
3. American society needs to be radically restructured.
4. The United States is the best country in the world to live in.
5. Most policies serve the greater good.
6. Everyone has a fair shot at wealth and happiness.
7. Our society is getting worse every year.
8. Society is set up so that people usually get what they deserve.

Note. Item 3 and 7 are reverse scored.

Appendix D. Deontic Justice Scale for Study 1

Please rate your agreement with the following statements on a 5-point scale where 1 = Strongly disagree to 5 = Strongly agree.

Moral Outrage

1. I feel sad when I see others being unfairly treated.
2. It bothers me when I see that others are not fairly treated.
3. I feel saddened by injustices done to others.
4. I am concerned by unfairness done to others.

Appendix G. Participant Recruitment Ad on Prolific for Study 1



Study about Social Attitudes and Behaviors

By [cgu.edu](https://cguedu.com)

\$1.64 • \$9.83/hr 10 mins 389 places

The purpose of this study is to investigate and increase understanding of differences in how people perceive, react, and behave in different situations, as well as some beliefs, attitudes, and behaviors.

Devices you can use to take this study:

Desktop Mobile Tablet

[Report study](#)

Appendix H. Deontic Justice Scale for Study 2

Please rate your agreement with the following statements on a 7-point scale where 1 = Strongly disagree to 7 = Strongly agree.

Moral Outrage

1. I feel most upset when I see others being unfairly treated.
2. It bothers me when I see that others are not fairly treated.
3. I feel outraged by injustices done to others.
4. I am concerned by unfairness done to others.
5. Even the slightest injustice toward others makes me upset.
6. It is unacceptable when other people experience injustice.